



User Guide (Ver. 4.0)

Model: D4RS, D8RS, D16RS, D4WRS, D8WRS, D16WRS

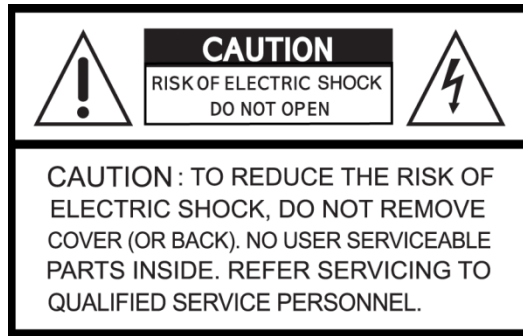
4, 8, 16 Channel Digital Video Recorder



About This User's Guide

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

Cautions



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 “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock, property damage, personal injury, or death.

WARNING

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

CAUTION

Changes or modifications not approved by the manufacture will void the warranty of the product.

Using an incompatible battery may increase the risk of fire or explosion.

Replace only with the same or equivalent type battery recommended by the manufacture.

Discard used batteries according to manufacturer’s instructions.

These Precautions must be Followed for Safety Reasons











Warning

- Do not use if the unit emits smoke.
- Do not disassemble the unit.
- Do not place any heavy or sharp objects on the unit.
- Do not place on uneven surface.
- Do not expose to shock or vibration.
- Do not move the unit when the unit is powered on.
- Do not block, and allow dust to accumulate in the air vents.
- Do not restrict airflow of the unit; doing so can damage the unit.
- Only qualified and experienced personnel should perform installation and servicing.
- Turn off the power of the DVR when connecting Cameras, Audio or Sensor Cables.
- The manufacture is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.
- The manufacture is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to repair the unit.
- The manufacture may not be held liable for any issues with the unit if the warranty seal is removed.

Product Components

Please make sure the following components are included as specified below.

<p>DVR Unit (D4WRS/D8WRS/D16WRS or D4RS/D8RS/D16RS)</p>	
<p>Remote Control</p>	
<p>Battery 1.5V (AAA x 2EA)</p>	
<p>Quick Start Guide</p>	
<p>Mouse for D4RS/D8RS/D16RS</p>	
<p>Software & Manual CD</p>	
<p>Adaptor (DC12V 3A for D4RS/D4WRS, DC12V 5A for D8RS/D16RS/ D8WRS/D16WRS) & Power cable (110V or 220V)</p>	
<p>Audio Cable for D8RS/D16RS/D8WRS/D16WRS</p>	

Specifications

ITEM			D4RS/D4WRS	D8RS/D8WRS	D16RS/D16WRS	
Video	Input	Channel, Input Level	4CH/ 8CH/ 16CH Composite, 1.0Vp-p, 75ohm			
		Signal Format	NTSC/PAL			
		Video Loss Check	Yes			
	Output	VGA	1 VGA (1024x768, 1280x1024)			
		CVBS	1 BNC	1 BNC	1 BNC	
		SPOT	Selectable	1 BNC	1 BNC	
Audio	Input & Output		4 CH Line input & 1 CH Line output			
	Audio Codec		G.711			
Sensor/ Alarm	Sensor Input		4 (NC / NO Selectable)			
	Alarm Out		1 Alarm Out by Sensor, Motion and Video Loss			
Record	Compression		H.264			
	Multi-operation		QUADPLEX (Playback/Record/Network/Backup)			
	Resolution	NTSC	D1	120fps	120fps	120fps
			Half D1	120fps	240fps	240fps
			CIF	120fps	240fps	480fps
		PAL	D1	100fps	100fps	100fps
			Half D1	100fps	200fps	200fps
			CIF	100fps	200fps	400fps
	Recording quality grade		LEVEL1 (L) ~ LEVEL5 (H)			
	Recording Mode		Continuous/Schedule/Motion/Manual/Sensor			
	Motion Detection		Motion detection setup by Grid			
	Recording by channel's Resolution		Yes			
	Pre Recording		1 fps for up to 20minutes before an event			
	Post Recording		10 seconds to 3 minutes after an event			
Display	Frame Rate (/Sec)		NTSC: 30fps/CH, 60 fields / PAL: 25fps/CH, 50 fields			
Playback	Multi-Decoding		1, 4	1, 4, 8	1, 4, 9, 16	
	Playback Speed	Single channel	×2, 4, 8, 16, 32, 64			
		Multi-channels	×2, 4, 8, 16, 32	×2, 4, 8, 16	×2, 4, 8	
	Search Mode		Timeline, Event, Archive, Log			
Storage	HDD	Interface Type	Serial ATA			
		Capacity of 1 HDD	D4RS/D4WRS: Max. 1 TB D8RS/D8WRS/D16RS/D16WRS: Max. 2 TB			
		Internal HDD No.	1			
	eSATA port (Storage Extension)		-	1	1	
	USB Port		2 (Front 1, Rear 1)			

	Backup	USB Flash drive	Video & Still Image		
		Network	Video & Still Image		
		Huge Backup	Yes (up to 24 hours)		
User I/F	Menu Display		GUI		
	Input Method		Remote control, Mouse		
RS-485	PTZ control		1 RS-485	1 RS-485	1 RS-485
Network	Dynamic DNS		Yes (Free DDNS)		
	Network Interface		10/100 base-TX Ethernet (RJ-45)	10/100/ 1000 base-TX Ethernet (RJ-45)	
	Max. Network Live Streaming		CIF 60fps/4CH	CIF 120fps/8CH	CIF 240fps/16CH
	Max. Network Playback Streaming		CIF 60fps/4CH CIF 30fps/1CH	CIF 120fps/8CH CIF 30fps/1CH	CIF 240fps/16CH CIF 30fps/1CH
Network Access	Web Viewer (1:1)		Live, Search, Backup, Remote Setup, PTZ control		
	Mobile Phone Viewer (1:1)		Live, Search, PTZ control		
	Multi-sites Monitoring SW (1:n)		Live, Search, Backup, Remote Setup, PTZ control		
Features	DLS (Day Light Saving)		Yes		
	EZSearch (Thumbnail Search)		Yes		
	EZRecord		Yes		
	EZCopy		Yes		
	S.M.A.R.T		Yes		
	Internal Beep		By Video Loss, HDD Error, S.M.A.R.T		
	Multi-Language		Yes		
	S/W Upgrade		USB Flash drive, Remote S/W Upgrade		
	NTP		Yes		
	MAC Viewer		Yes		
Power Source	Power Supply Voltage		DC 12V 3A	DC 12V 5A	
Allowable operation temperature During operation			+5°C - +40°C, During storage: -10°C - +50°C		
Allowable operation humidity			20 % - 80 %		
Weight	Unit Weight (Gross weight)		DxxRS: Around 3.74 lbs (Around 7 lbs)		
Dimension	Unit Dimension (W x H x D)		DxxRS: 13.6" x 2.56" x 10.48"		

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

Table of Contents

1. Main Features	10
2. Initial Boot up Process.....	11
2-1. Initial Boot up and Basic Time Setup	11
2-2. Setting Daylight Saving Time.....	11
2-3. Setting NTP (Network Time Protocol)	12
3. Name, Function and Connection	15
3-1. Front Panel.....	15
3-2. Connectors.....	15
3-3. Remote Control	17
4. Setting up the DVR.....	18
4-1. Setup – Main Live Screen.....	18
4-2. Setup – SYSTEM Mode	19
4-3. Setup – RECORD Mode.....	23
4-3-1. Recording Schedules	25
4-4. Setup – DEVICE Mode.....	26
4-4-1. Alarm-Out.....	27
4-4-2. Keyboard Controller & PTZ Setup	28
4-4-3. Spot Out.....	29
4-4-4. Motion Zone Setup	30
4-5. Setup – DISPLAY Mode	31
4-6. Setup – NETWORK Mode.....	33
4-6-1. Network Types	34
4-6-2. DDNS.....	34
4-6-3. Network Port and Web Port.....	35
4-6-4. Network Stream.....	35
4-7. Setup – USER MANAGEMENT Mode	36
4-8. Setup – STORAGE Mode.....	37
4-9. Setup - CONFIG Mode	40
4-9-1. Firmware Upgrade.....	42
5. Live, Search and Playback	43
5-1. Live View.....	43
5-1-1. PTZ Control.....	46
5-2. Digital Zoom in Live and Playback Screen.....	47
5-3. SEARCH Screen	47
5-3-1. EZSearch	48
5-3-2. Time Line Search	49
5-3-3. Event Search.....	49
5-3-4. Go To First Time	50
5-3-5. Go To Last Time	50

5-3-6. Go To Specific Time.....	50
5-3-7. Archive List.....	50
5-3-8. Log List	51
5-4. Play Mode	51
6. Back Up.....	52
6-1. Still Image Backup onto USB Flash Drive	52
6-2. Video Backup onto USB Flash Drive during playback.....	53
6-3. EZCopy: Video Backup onto USB Flash Drive during playback.....	54
6-4. Transferring Still Images or Video from the ARCHIVE List	55
6-5. Playback of Backup Video	56
6-5-1. AVI Format	56
6-5-2. NSF Format.....	56
7. Network Access Using the Multi-Sites Network Viewer	57
7-1. Overview	57
7-2. PC Requirements	57
7-3. Installation of the Program.....	58
7-4. Live Window.....	59
7-4-1. Main User Interface	59
7-4-2. Control Buttons	59
7-5. Search and Playback Window	61
7-5-1. Main User Interface	61
7-5-2. Main Control Panel.....	61
7-6. Setup of SpecoTech Multi Client	63
7-6-1. General	63
7-6-2. Event.....	64
7-6-3. Record	65
7-6-4. Display	66
7-6-5. Language	66
7-6-6. About.....	67
7-7. Remote Setup	68
7-7-1. System.....	69
7-7-2. Record	70
7-7-3. Device	71
7-7-4. Display	71
7-7-5. Network.....	72
7-7-6. User Management.....	72
7-7-7. Storage.....	73
7-7-8. Remote Upgrade.....	73
7-8. Operation	74
7-8-1. Addition, Delete, and Modify of DVR Sites.....	74
7-8-2. Connect and Disconnect	76

7-8-3. Still-image Capture During Live	77
7-8-4. Recording Video on Local PC During Live.....	78
7-8-5. Local Playback and Remote Playback.....	79
7-8-6. AVI Backup during Playback.....	81
8. Network Access Using the Web-Browser Viewer.....	83
9. Network Access Using the Smart Phone Viewer	85
9-1. App Viewer for iPhone	85
9-1-1. Live	85
10-3-2.PTZ Control.....	86
10-3-3. Playback	86
9-2. App Viewer for Android Phone	87
9-2-1. Live	87
9-2-2.PTZ Control.....	88
APPENDIX: Network Connection - LAN	89
APPENDIX: Network Connection – Internet and DDNS	91
APPENDIX: E-SATA CONNECTION	94

1. Main Features

- Easy Record, Copy and Setup
- Easy Search by Thumbnail Preview
- Easy Copy
- Recording Rate: 120fps @ D1
- H.264 high quality compression saves HDD space
- Simultaneous live view/playback while continuing to record/network transfer or backup
- Remote monitoring/recording/playback/configuration and control via internet
- 4 Channel Audio Recording

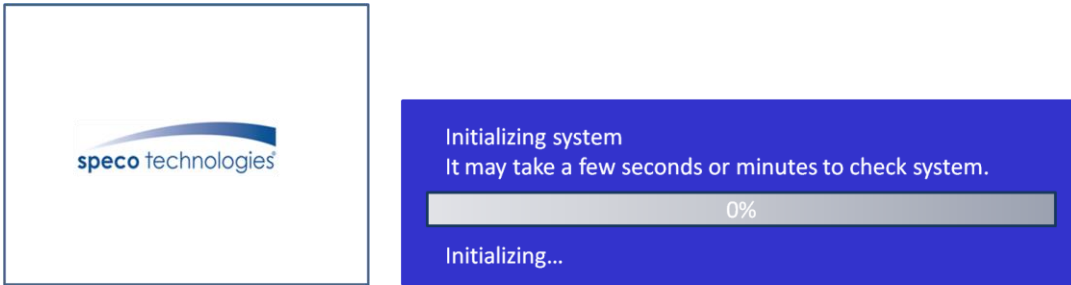
NOTE: Under federal law, The Fourth Amendment to the U.S. Constitution, Title III of the Omnibus Crime Control and Safe Streets Act of 1968, as amended by the Electronic Communications Privacy Act of 1986 (18 U.S.C. § 2510, *et seq.*), and the Foreign Intelligence Surveillance Act of 1978 (50 U.S.C. 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.

- Automatic camera detection (Plug & Play)
- 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
- 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
- S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology for HDD)

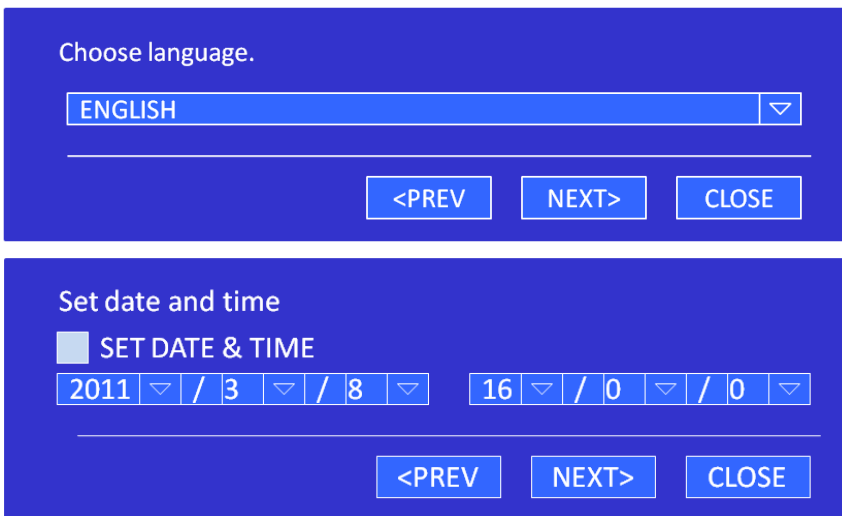
2. Initial Boot up Process

2-1. Initial Boot up and Basic Time Setup

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



2. After the system initializing is completed, select the language and set date and time as specified below.



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".



LOGIN - SETUP

USER

PASSWORD

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

SYSTEM

DESCRIPTION ...

LANGUAGE ENGLISH

DATE DISPLAY FORMAT YYYY/MM/DD

DATE & TIME SETUP

CLIENT ACCESS ON

NTP SETUP OFF

SEND EMAIL SETUP OFF

UNIT NAME DVR

3. Select ON from the DAYLIGHT SAVING dropdown menu.

DAYLIGHT SAVING

SET DATE & TIME 2011 / 3 / 8 16 / 0 / 0

2-3. Setting NTP (Network Time Protocol)

1. SETUP > SYSTEM > NTP SETUP > ON

SYSTEM

DESCRIPTION ...

LANGUAGE ENGLISH

DATE DISPLAY FORMAT YYYY/MM/DD

DATE & TIME SETUP

CLIENT ACCESS ON

NTP SETUP OFF

SEND EMAIL SETUP OFF

UNIT NAME DVR

2. Select the proper TIME_ZONE time.

PRIMARY SNTP SERVER: Pool.ntp.org
 SECONDARY SNTP SERVER: Time.nist.gov
 TIME_ZONE: GMT +0:00 (Lisbon/London/Monaco)
 CONNECTION MODE: TIME
 CONNECTION PERIOD: 03:00 AM

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.

3. Name, Function and Connection

3-1. Front Panel



DxxRS



DxxWRS

Figure 3.1.1. Front panel

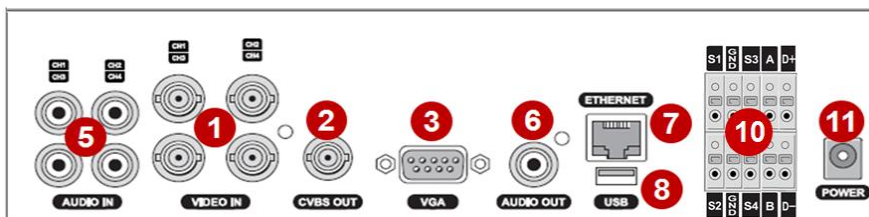
Table 3.1.1. Front LED and Port of DxxRS

Name	Description
POWER	LED light is on when power is applied to the system.
HDD	LED light is on when the system is recording video data.
USB Port	This USB port for archiving footage into a USB device. (USB 2.0 connector)

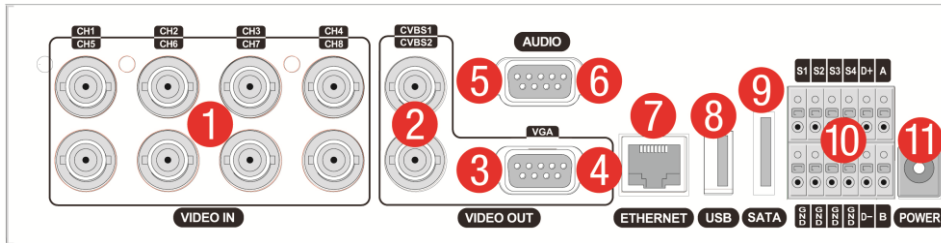
3-2. Connectors



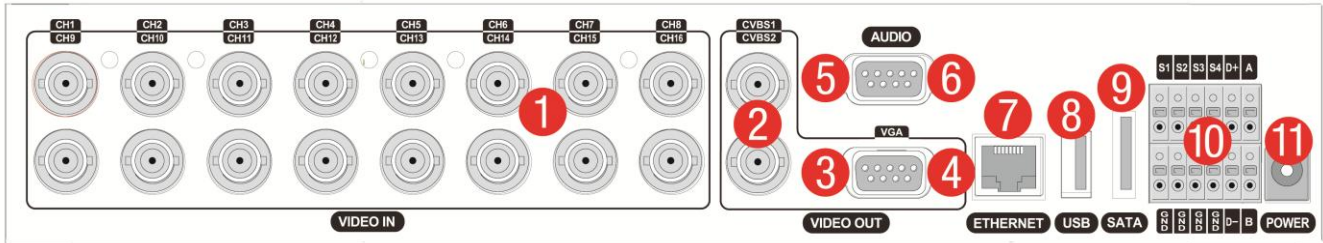
- Do not power this system on before all the connections are completed.
- Make sure all the connections are properly secured. Faulty connection may result in the system being damaged.



D4RS/D4WRS



D8RS/D8WRS

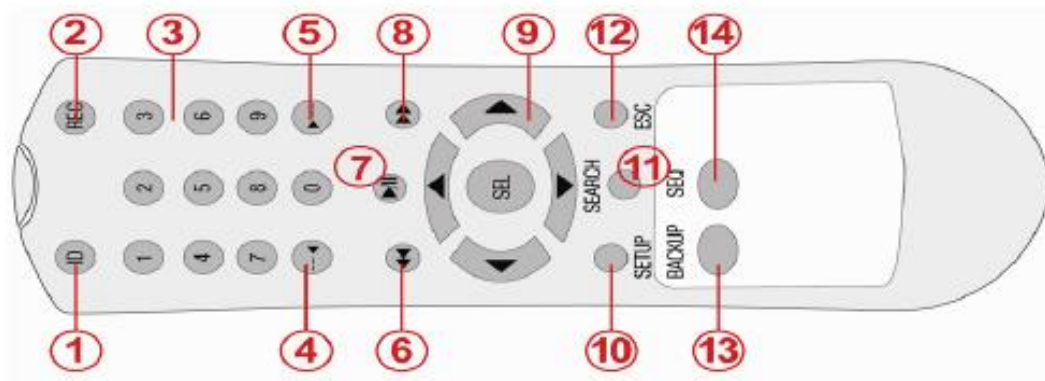


D16RS/D16WRS

Figure 3.2.1. Connectors

- ① VIDEO IN: Video input port.
- ② VIDEO OUT:
D4RS: Switchable (Composite Video Output or Spot Monitor)
D8RS, D16RS: CVBS1 – Composite Video Output / CVBS2 – Spot Monitor
- ③ VGA: VGA (Video Graphics Array) output port. Connects to the PC VGA monitor.
- ④ RS-232C (for D8RS/D16RS/D8WRS/D16WRS only): For engineering use only, the function is used by a gender through the VGA output.
- ⑤ AUDIO IN: Four connectors for audio input. D8RS/D16RS/D8WRS/D16WRS use an audio cable
- ⑥ AUDIO OUT: One connector for audio output. D8RS/D16RS/D8WRS/D16WRS use an audio cable.
- ⑦ ETHERNET: Network terminal
- ⑧ USB: USB terminal
- ⑨ E-SATA: External SATA port for extension storage.
- ⑩ SENSOR IN, ALARM OUT, RS-485: External sensor terminal, External alarm out terminal & RS-485 for PTZ Camera control
- ⑪ POWER: DC12V input
- ⑫ Cooling fan

3-3. Remote Control



Typical Remote Control

- ① ID: To set the remote control ID.
- ② REC: To start and stop manual recording
- ③ 0~9: To select channel (1,2,3,..) or to enter a DVR ID number or use as number key.
- ④ F/REW:
 - During playback – To move the playback position 60seconds back.
 - During Pause – To move the playback position 1 frame back.
- ⑤ F/ADV:
 - During playback – To move the playback position 60seconds forward .
 - During Pause – To move the playback position moves 1 frame forward
- ⑥ REW: To rewind the recording.
- ⑦ PLAY/PAUSE: To play or to pause the recording in playback mode
- ⑧ FF: To fast forward the recording.
- ⑨ Direction buttons: To move menu items or select a channel.
- ⑩ SETUP: To open the SETUP menu.
- ⑪ SEARCH: To go to SEARCH menu.
- ⑫ ESC:
 - During setup – To return to the previous 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.
- ⑬ BACKUP: To start a backup operations in live or playback mode
- ⑭ SEQ: To start auto sequencing the screen in full screen mode. (Toggle)

4. Setting up the DVR

The following sections detail the initial setup of the DVR.



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.

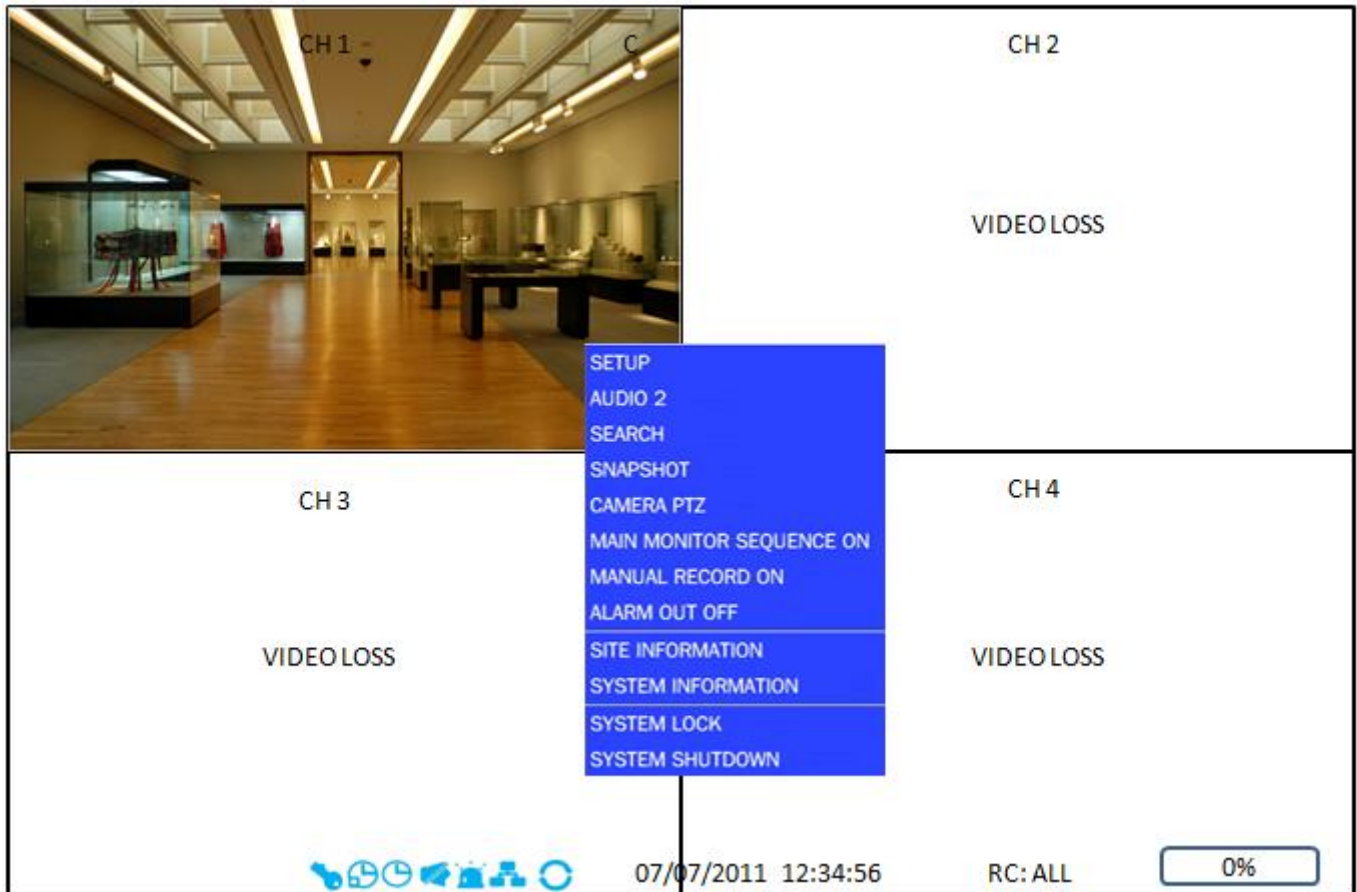


Table 4.1.1. Live Screen and Quick Operation Window

LOGIN - SETUP

USER

PASSWORD

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 DVR 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.

4-2. 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.

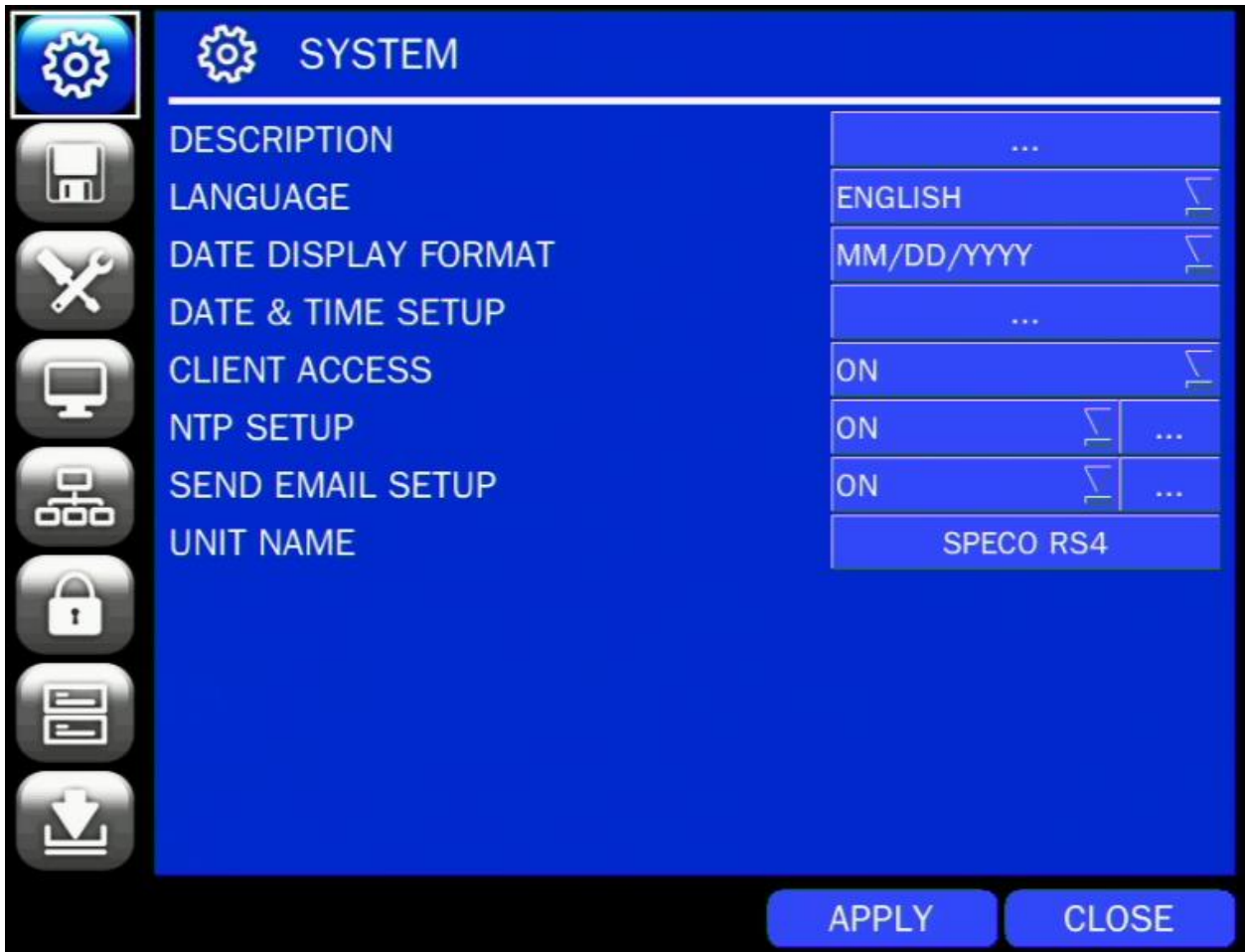
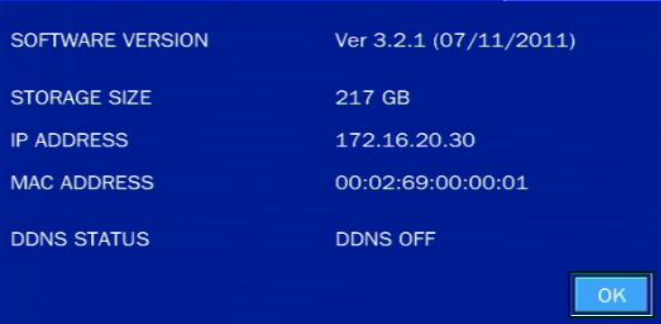


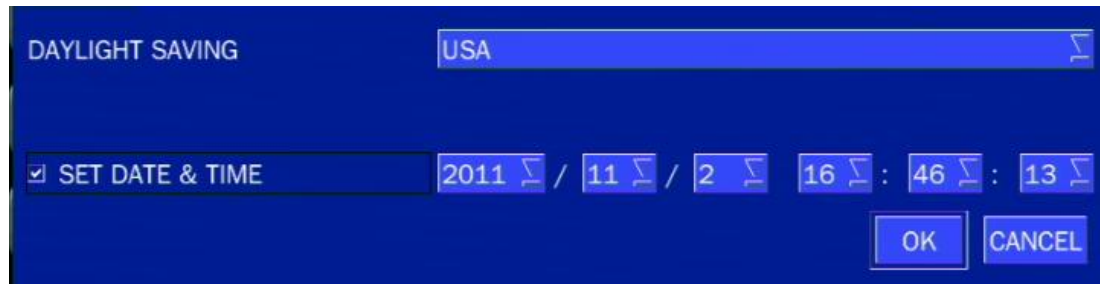
Figure 4.2.1. SYSTEM Setup Screen

Table 4.2.1. Menu Items in SYSTEM Setup Screen

Item	Description
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 control button on the remote control. Once a language is selected, the display language will change.
DATE DISPLAY 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

**DATE&TIME
SETUP**

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:

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
SETUP**

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 set their own time difference.

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.



DVR sends E-MAIL Notification when the NTP server time is faster than the system time with bellow 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

DVR ID: DVR

IP ADDRESS: 172.16.2.46”

SEND EMAIL

TRANSMISSION MODE	VIDEO	▼
IP NOTIFICATION	OFF	▼
MAIL BY MOTION	OFF	▼
MAIL BY VIDEO LOSS	OFF	▼
MAIL BY S.M.A.R.T.	OFF	▼
MAIL DVR STATUS	OFF	▼
MAIL PORT	25	...
SECURE OPTION	NONE	▼
MAIL TO		...
MAIL SERVER		...
ID		...
PASSWORD		...
MAIL FROM		...
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>		

TRANSMISSION MODE: Select the mail transmission mode (TEXT or VIDEO).

- On VIDEO mode, AVI video file is attached when the motion is detected.
- The AVI file contains the 1~2 second(s) pre-record and 1 second post record.

IP NOTIFICATION: Enable/disable sending e-mail when the IP address is changed.

MAIL BY MOTION: Enable/disable sending e-mail when the motion is detected.

MAIL BY SENSOR: Enable/disable sending e-mail when sensor input is received.

MAIL BY VIDEO LOSS: Enable/disable sending e-mail when the video loss is detected.

MAIL BY S.M.A.R.T.: Enable/disable sending e-mail when S.M.A.R.T. is triggered.

MAIL DVR STATUS: Enable/disable sending periodical e-mail of the system status.

PERIOD

DAILY

FIRST

SUN

0 H

OK

CANCEL

MAIL PORT: Assign Mail Port number.

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

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

MAIL SERVER: Enter the appropriate mail server information.

ID: Enter the appropriate mail server ID.

PASSWORD: Enter the appropriate mail server PASSWORD.

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

UNIT NAME Name the DVR (e.g. Factory)

This feature is to identify the name of the DVR under the same network.

4-3. 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.



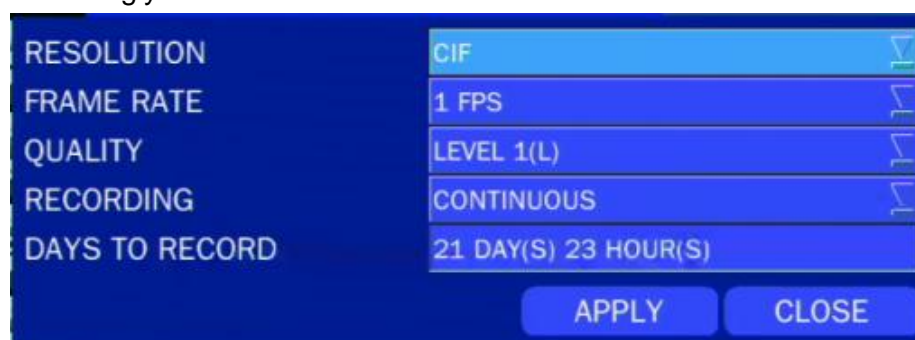
Figure 4.3.1. RECORD Setup Screen

Table 4.3.1. Menu Items in RECORD Setup Screen

Menu Item	Description				
SITE	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.				
	ALL	1	2	3	4
RESOLUTION	D1	D1	CIF	D1	HALF D1
FRAME RATE	20	20	30	20	30
QUALITY	LEVEL 4	LEVEL 4	LEVEL 5(H)	LEVEL 4	LEVEL 5(H)
RECORDING	MOTION	MOTION	CONTINUOUS	MOTION	SCHEDULE
PRE RECORD	15 SECON...	15 SECON...	15 SECON...	15 SECON...	15 SECON...
POST EVENT REC	19 SECON...	19 SECON...	19 SECON...	19 SECON...	19 SECON...
AUDIO	OFF	OFF	OFF	OFF	OFF
				OK	CANCEL

RESOLUTION	Select D1, Half D1 or CIF using the mouse or the control button on the remote control.
FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed the maximum frame rates for a specific recording resolution.
QUALITY	Select the recording quality for the selected channel. Options are; Level 1 (Low), Level 2, Level 3, Level 4, and Level 5 (High)
RECORDING MODE	Assign the recording mode for the selected channel. Options are: Continuous, Motion, Schedule or Disable.
SENSOR RECORDING	Select the sensor setting for the selected channel.
PRE RECORD	Enable/disable pre-event recording. Pre-event recording time is up to 20 minutes.
POST EVENT RECORD	Set the post event recording time duration for the specified channel. (10~30 seconds)
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	Set the recording schedule.
EZRECORD	Set the recording by EZRecord feature.

The EZRECORD has high priority than other setting values on RECORD. User can change the setting value such as resolution, frame rate, quality and recording type. By the setting value, the DAYS TO RECORD will change accordingly.



4-3-1. 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 or MOTION > HIGHLIGHT AREA

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

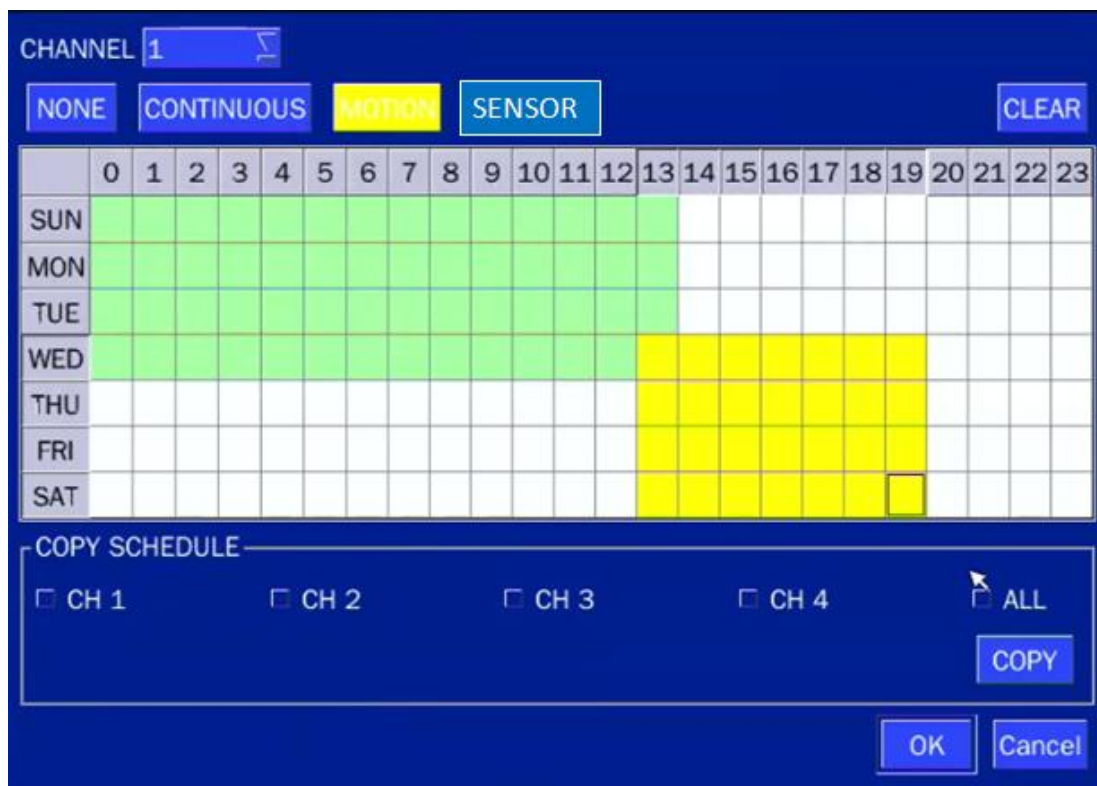


Figure 4.3.2. Schedule Recording Setup Screen

- **NONE:** Disable recording
- **CONTINUE:** CONTINUOUS recording (Highlighted in Green)
- **MOTION:** MOTION recording (Highlighted in Yellow)
- **SENSOR:** SENSOR recording (Highlighted in Red)

4-4. 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 4.4.1. DEVICE Setup Screen

Table 4.4.1. Menu Items in DEVICE Setup Screen

Item	Description
ALARM OUT	Set the sensor, motion, and video loss for triggering alarm relay HDD Error and Video Loss can trigger beeping.
CONTROLLER & PTZ	Set the PTZ baud rate, protocol, and ID.
SPOT-OUT	D4RS/D4WRS: CVBS OUT is switchable as Composite Video Output or Spot-Out according to the resolution of VIDEO OUTPUT (VGA). D8RS/D16RS/D8WRS/D16WRS: CVBS1 – Composite Video Output / CVBS2 – Spot-Out.
SITE	Select specified channel for motion zone setup.
MOTION ZONE	Select either Full Zone or Partial Zone for motion detection.
MOTION SENSITIVITY	Set the motion sensitivity for the selected channel. Control the motion sensitivity from 1 to 9.

	(9 – Highest sensitivity, 1 – Lowest sensitivity)
KEY TONE	Enable/disable key tone.
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
SENSOR	Select the type of each sensor. Option is Off, Normal Open or Normal Close.

4-4-1. Alarm-Out

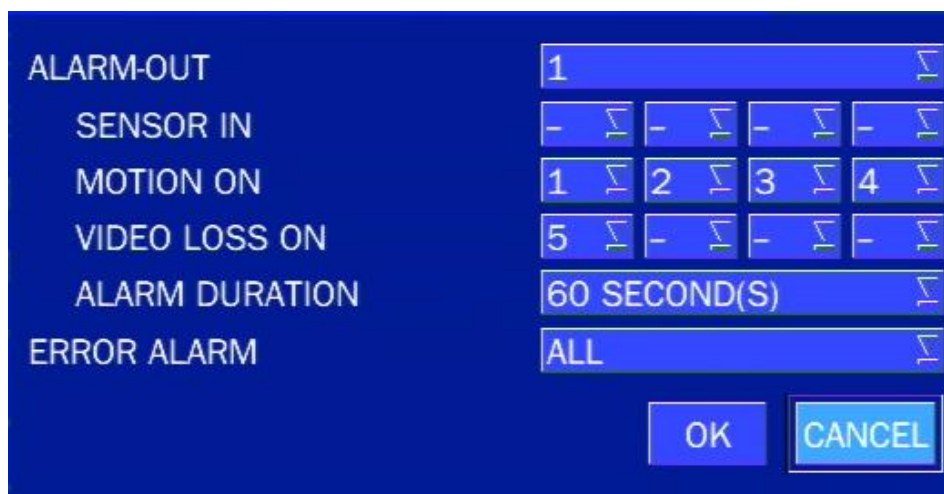


Figure 4.4.2. ALARM-OUT Setup Screen

Table 4.4.2. Item for ALARM-OUT Setup Screen

Item	Description
ALARM OUT	Only one Alarm-out is available.
SENSOR IN	Sensor input from 1 to 4.
MOTION ON	Camera motion detection from 1 to 4.
VIDEO LOSS ON	Camera video loss detection from 1 to 4.
ALARM DURATION	Set alarm dwell time from 5 to 60 seconds.
ERROR ALARM	Set the error type for the alarm activation. The options are OFF, ALL, HDD ERROR and VIDEO LOSS.

4-4-2. Keyboard Controller & PTZ Setup

To control the PTZ functions of the camera, connect the PTZ controller to the RS-485 port on the back of the chassis with CAT5 (or equivalent) cable.

- ① Connect the RS-485 cables of PTZ camera to the RS-485 port on the rear panel.

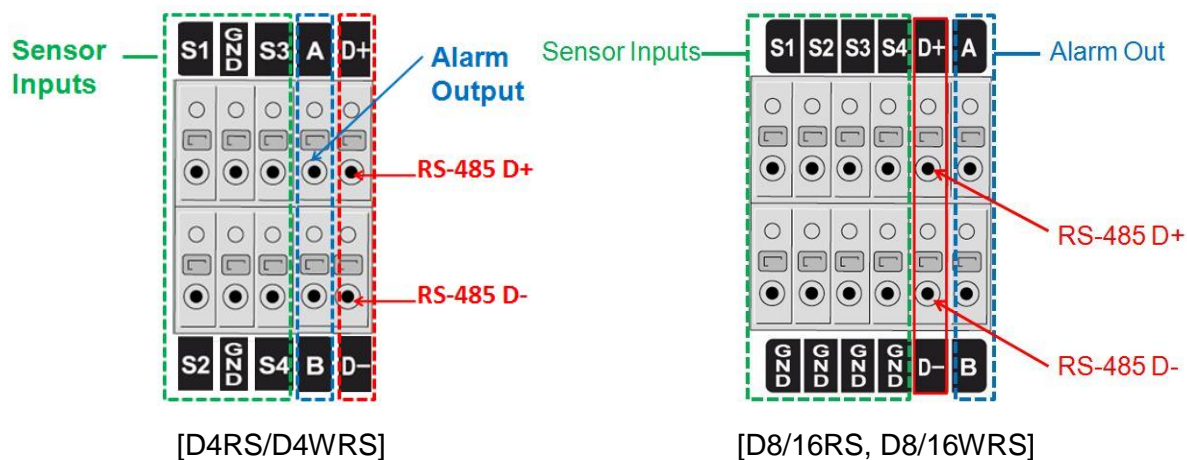


Figure 4.4.3. Device Mode Setup Screen



Figure 4.4.4. Device Mode Setup Screen

- ② Open the PTZ sub menu by selecting the submenu button.

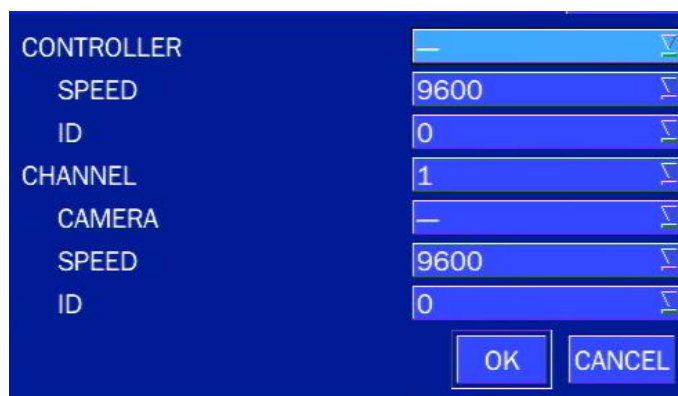


Figure 4.4.5. PTZ Control Setup Screen

Note: Connect PTZ cameras that support RS-485 directly to the RS-485 port. If the camera is controlled through an RS-232C interface, use an RS-232C to RS-485 to RS-232C signal converter.

Use the PTZ setup screen to select the following options for the camera PTZ controller:

- **CHANNEL:** Channel connected to a PTZ device
- **CAMERA:** Protocol Type
- **SPEED:** 19200, 14400, 9600, 4800, 2400 (Baud rate)
- **ID:** 0-63

Controller (Keyboard Controller): If a PTZ controller is used, select a controller protocol from Controller menu. Set SPEED (Baud Rate) and ID number.



Figure 4.4.6. Controller Selection Screen

4-4-3. Spot Out

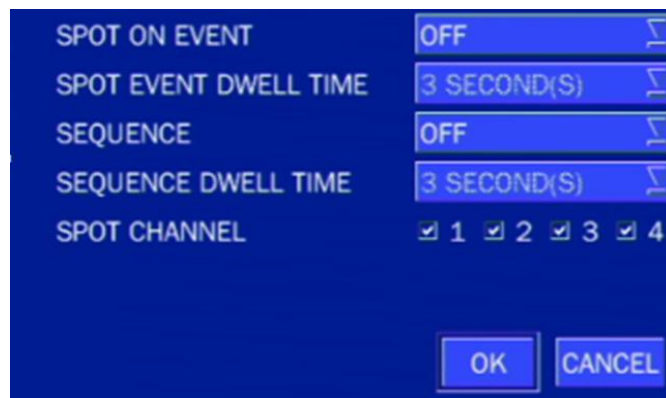


Figure 4.4.6. SPOT-OUT Setup Screen

Table 4.4.4. Menu Item in SPOT-OUT Setup Screen

Item	Description
SPOT OUT	Only 1 Spot Out is available to use. To use the Spot out function on D4RS, Video Resolution has to be setup as 1280x1024 (Video Resolution Output can be setup on DISPLAY MENU.)
SPOT TYPE	SPOT 1 supports only FULL type. (1 channel only)
SPOT ON EVENT	Enable/disable channel change if an event occurs on a channel.

SPOT EVENT	Set the dwell time for the display of the event activated channel.
DWELL TIME	(1-10sec)
SEQUENCE	Enable/disable sequential display of spot channel in full screen. If select ON, the selected channel will be displayed on the monitor periodically.
SEQUENCE	Set the dwell time for the spot channel display.(1-10sec)
DWELL TIME	
SPOT CHANNEL	Select a channel for spot monitoring using the mouse or the control button on the remote control and press OK button.

4-4-4. Motion Zone Setup

Select MOTION ZONE using the mouse or the control button on the remote control and select either PARTIAL ZONE or FULL ZONE using the mouse control. The default value is FULL ZONE.

If FULL ZONE is selected, the motion zone grid screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.

FULL ZONE: The motion sensor is active on the whole screen.

PARTIAL ZONE: The motion sensor is active in the set detection frame.

Select the motion detection position using the mouse or the control button on the remote control. Then left click on the mouse or left click and drag the mouse pointer to select or deselect the area. Highlighted area indicates the partial motion detection zone. Press the ESC button or right click on the mouse to return to the previous menu.

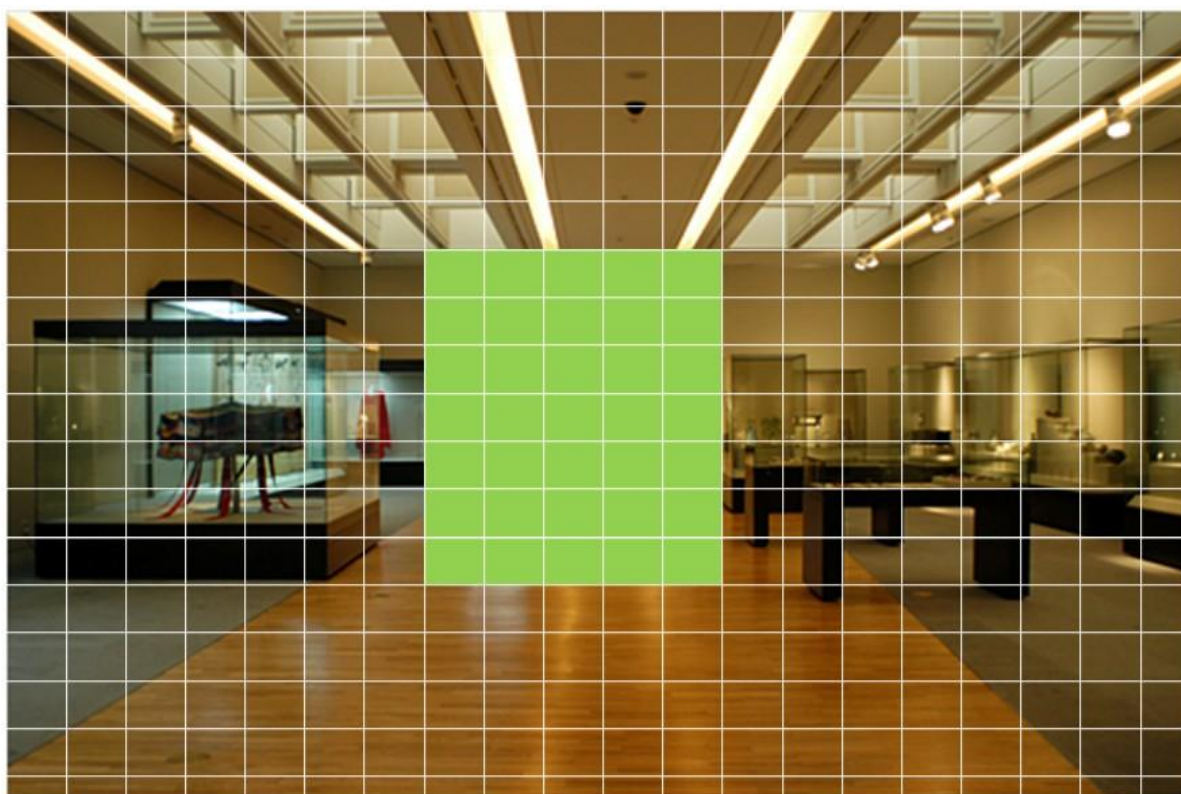


Figure 4.4.7. Motion Zone Grid Screen

4-5. Setup – DISPLAY Mode

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.

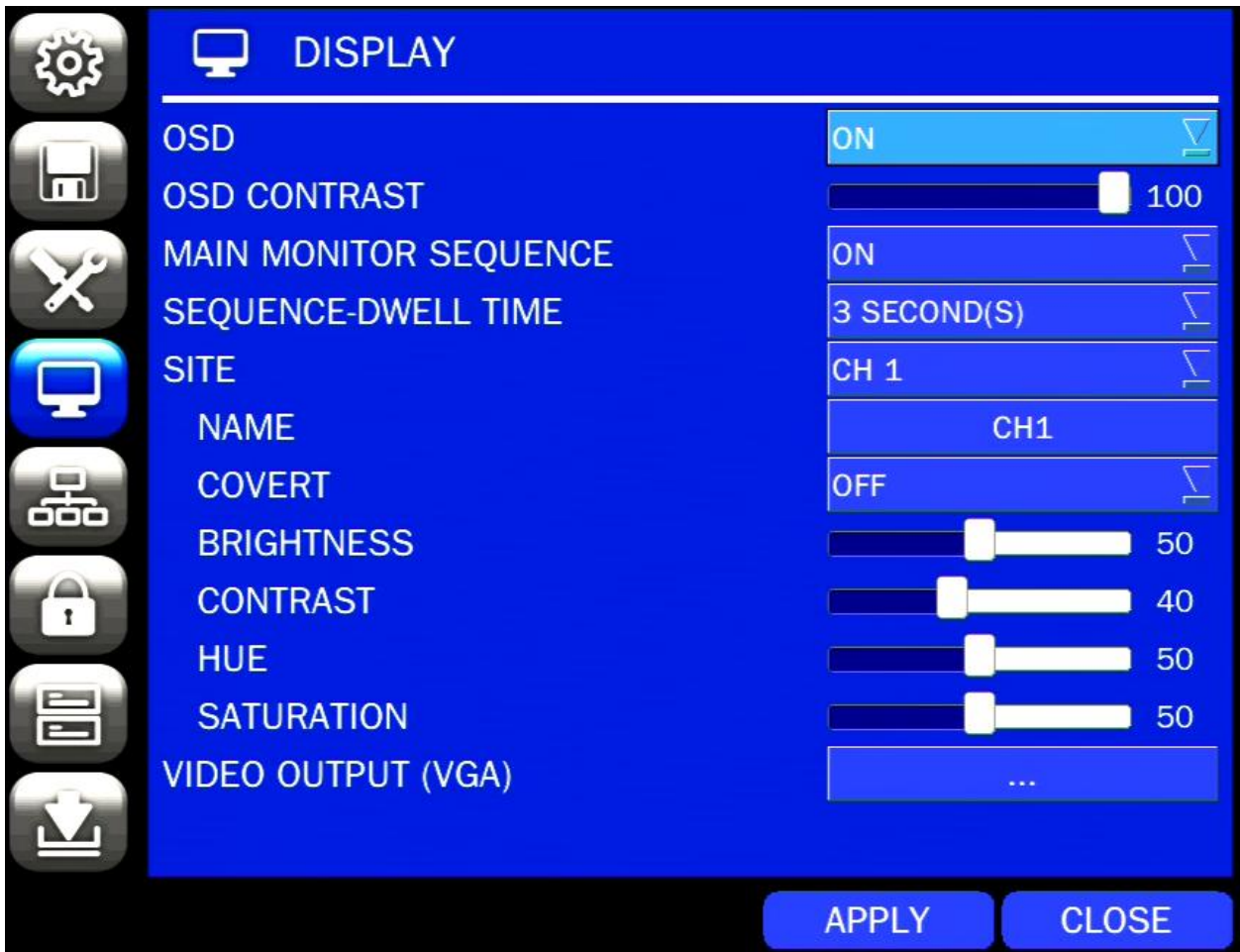


Figure 4.5.1. DISPLAY Setup Screen

Table 4.5.1. Menu Items in DISPLAY Setup Screen

Item	Description
OSD	Enable/disable on-screen-display.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD) (0~100)
MAIN MONITOR SEQUENCE	Enable/disable sequential display of video in full screen mode.
SEQUENCE DWELL TIME	Set the dwell time of each, single channel display in sequential display mode (3~60seconds)
SITE	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 36 characters.

COVERT Enable/disable display of the specified video channel in live display.

**VIDEO OUTPUT
(VGA)**



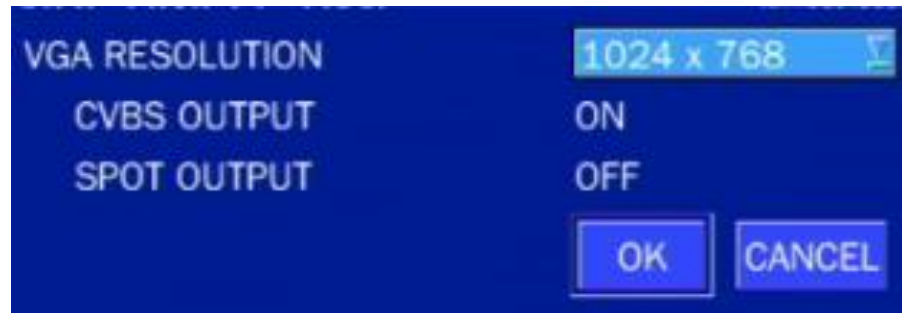
D4RS/D4WRS

When VGA REOSLUTION is set at 1024 x 768,

- CVBS OUTPUT(Simultaneous Video Output): ON
- SPOT OUTPUT: OFF

When VGA RESOLUTION is set as 1280 x1024,

- CVBS OUTPUT(Simultaneous Video Output): OFF
- SPOT OUTPUT: ON



D8RS/D16RS/D8WRS/D16WRS

CVBS1: Composite Video Output

CVBS2: Spot-Out port

4-6. 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.

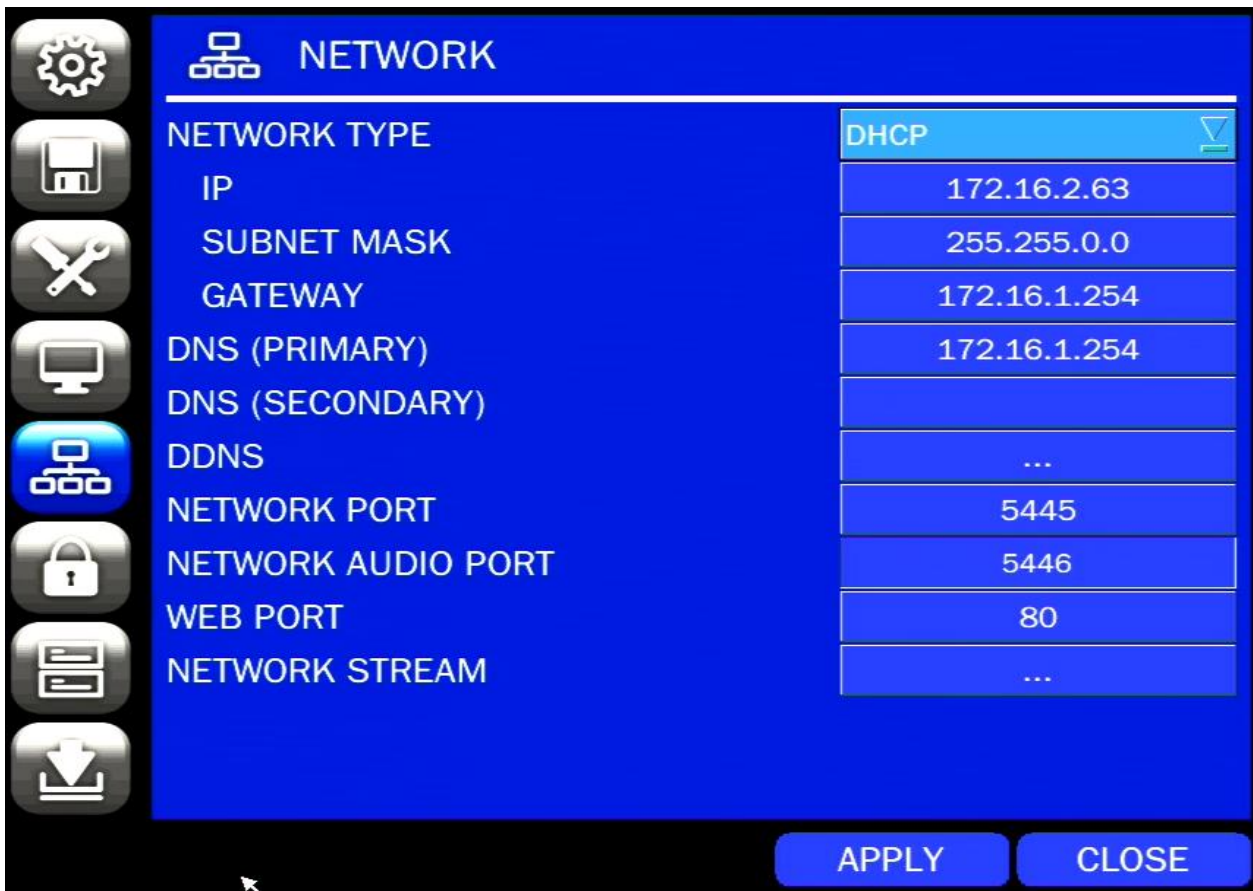


Figure 4.6.1. NETWORK Setup Screen

Table 4.6.1. Menu Items in NETWORK Setup Screen

Item	Description
NETWORK TYPE	DHCP: DVR will automatically retrieve an IP address. STATIC: Network information must be manually configured.
IP	Enter IP address that is assigned for the DVR
SUBNET MASK	Enter Subnet Mask that is assigned for the DVR
GATEWAY	Enter Gateway that is assigned for the DVR.
DNS (PRIMARY)	Enter Primary DNS address that is assigned for the DVR
DNS (SECONDARY)	Enter Secondary DNS address that is assigned for the DVR
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.
NETWORK PORT	Enter the port number.
NETWORK AUDIO PORT	Display the network audio port (NETWORK PORT + 1).

WEB PORT	Enter the port number for connection using web.
NETWORK STREAM	Set the value for network streaming.

4-6-1. Network Types

4-6-1-1. DHCP

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

4-6-1-2. STATIC

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

- IP ADDRESS: The fixed IP address of the DVR 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.

4-6-2. DDNS

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.

Once the setting is completed, the DDNS address will be:

<http://hostname.ddns.specoddns.net>

For example, if you enter the host name as “D4RS”, then the address will be:

<http://d4rs.ddns.specoddns.net>

Select NETWORK>DDNS. The menu displays as below.

Figure 4.6.3. NETWORK Setup Screen – DDNS

Table 4.6.2. DDNS

Item	Description
ENABLE DDNS	Enable/disable the Dynamic Domain Name Service.

HOST NAME	This item allows the user to setup a domain name manually, using virtual keyboard displays as shown.
SUBMIT/UPDATE	When manual host name input is done, move the cursor to this item and select ON to submit the settings.
ezDDNS	Enable/disable ezDDNS to register the host name automatically.

4-6-3. Network Port and Web Port

Connecting DVR/DVRs through an IP sharing device, each DVR 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 DVR only within the same LAN, the TCP port number does not need to be changed.

Network access beyond a router

To access DVR 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 DVR 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.

4-6-4. Network Stream

User can set the RESOLUTION, FRAME RATE, and the QUALITY for the network stream.

- D4RS: Up to 60 fps @CIF for 4 channels.
- D8RS: Up to 120 fps @CIF for 8 channels.
- D16RS: Up to 240 fps @CIF for 16 channels.

<Note> Individual Channels can be set with different RESOLUTION, FRAME RATE, and QUALITY.

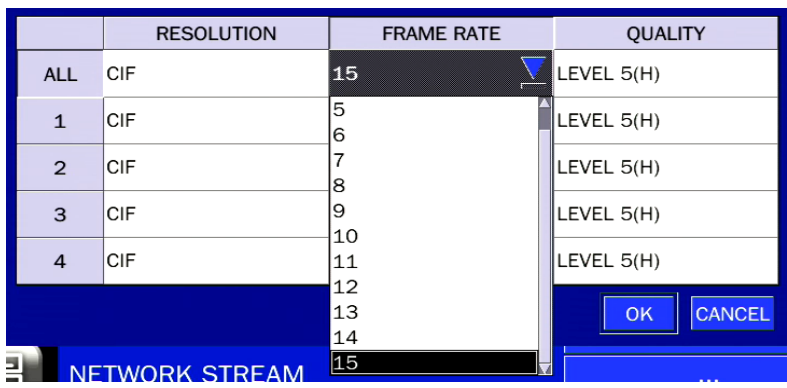


Figure 4.6.4. NETWORK Setup Screen – Network Stream

4-7. Setup – USER MANAGEMENT Mode

In the SETUP menu, select the USER MANAGEMENT tab. Then, the USER MANAGEMENT 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.

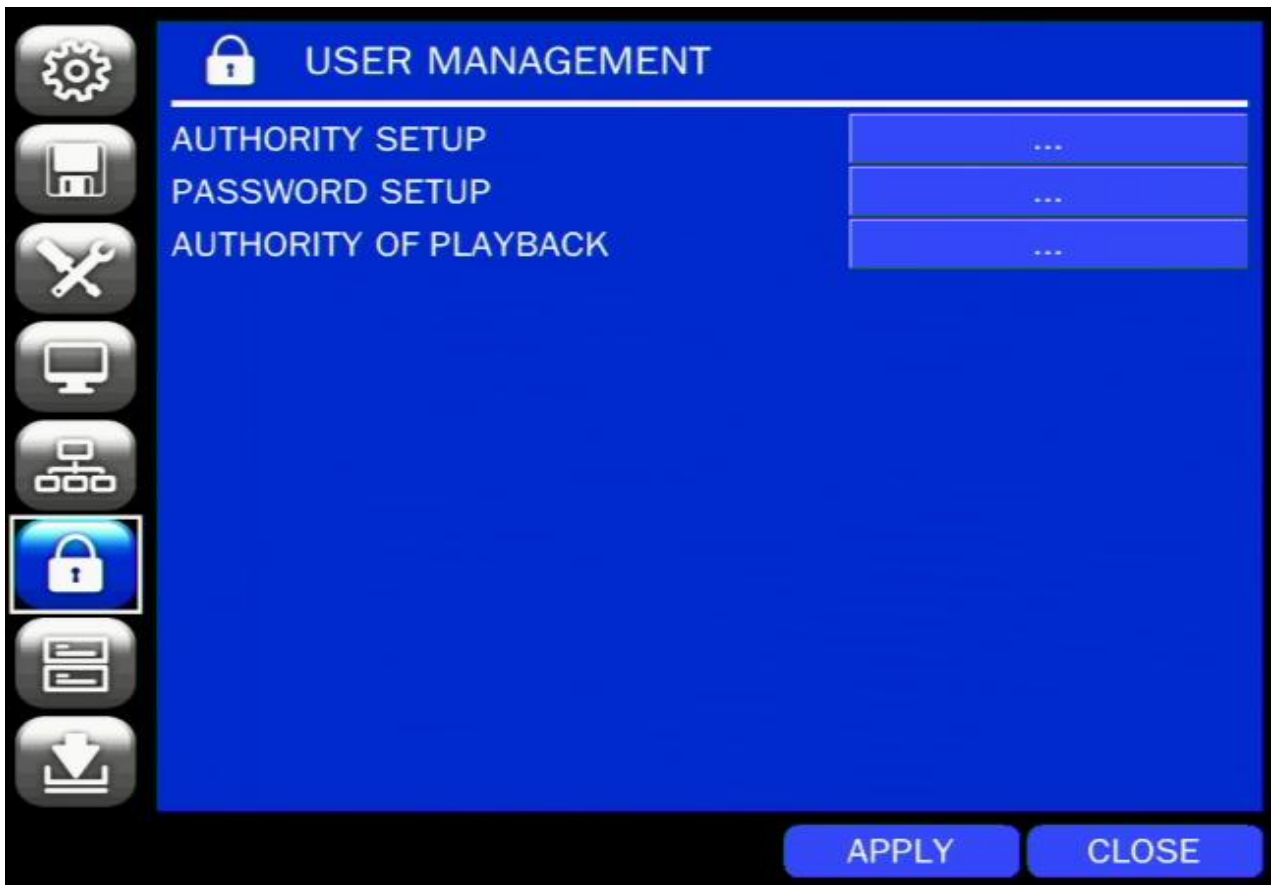


Figure 4.7.1. USER MANAGEMENT Setup Screen

Table 4.7.1. Menu Items in USER MANAGEMENT Setup Screen

Item	Description
AUTHORITY SETUP	Only the Admin will have access to the menu.
	PASSWORD CHECK: Select the Checkbox to enable the functions or leave the Checkbox blank to disable the functions.
	<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 • R/OFF: Enable/Disable of manual Record • NETWORK: Enable/Disable of access to Network
	Selected Checkbox: The DVR will ask for a password when the given function is selected for all users.
	Blank Checkbox: The DVR will not ask for a password when the given function is selected for all users.

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

OK Cancel

ADMIN, USER1, USER2, USER3:

Selected Checkbox: The user can access the function.

Blank Checkbox: The user can not access the function.

PASSWORD SETUP

Options are ADMIN, USER1, USER2 and USER3.

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.



AUTHORITY OF PLAYBACK

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

4-8. 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 4.8.1. STORAGE Setup Screen

Table 4.8.1. Menu Items in STORAGE Setup Screen

Item	Description
OVERWRITE	When enabled, the DVR 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	You will have an option of YES or NO for formatting the Hard Drive. After formatting HDD, the DVR will reboot. 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;

HDD SIZE : 435 GB (FREE : 311 GB)
HDD LAST TIME : 07-12-2011 16:41:00

	Model Name	Temperature	Health (Good/Normal/Bad)
HDD 1	HDD AAABBB1234567890	46 °C (114 °F)	Good

OK DETAIL

**RECORDING
LIMIT**

Enable/disable recording limit.

**RECORDING
LIMIT DAYS**

Set the recording limit days. (1- 90 days)

If the RECORDING LIMIT DAYS are set to 1, the data will be overwritten after 24 hours.

S.M.A.R.T

Set the alarm and beep by setting the HDD temperature limit.

Alarm will trigger alarm output.

Buzzer will trigger beeping from the internal speaker.

TEMPERATURE LIMIT 45 °C (113 °F) [v]
ALARM ON [v]
BUZZER ON [v]

OK CANCEL

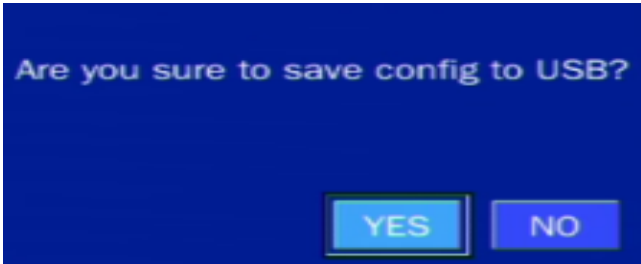
4-9. Setup - CONFIG Mode

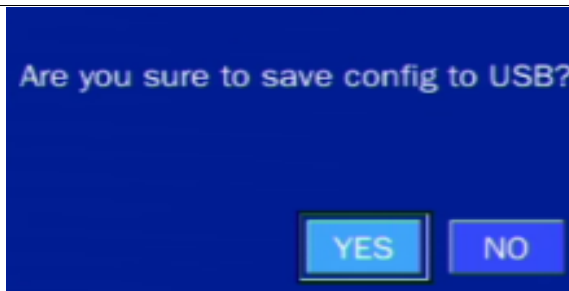
In the SETUP menu, select the CONFIG tab. Then, the configuration menu is displayed as pictured below. Navigate through the menu items using the mouse or the control button on the remote control and change the value of the menu item.



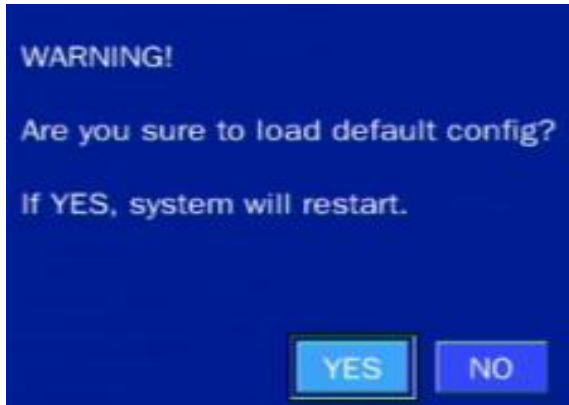
Figure 4.9.1. CONFIGURATION Setup Screen

Table 4.9.1. CONFIGURATION Setup

Item	Description
EXPORT TO USB	User can save the current configuration (Setting values) of the DVR to the USB flash drive. Plug in the USB flash on the front panel and press the button to start the saving process.
	
IMPORT FROM USB	User can upload the configuration of the DVR to another DVR using the USB Flash drive. Plug in the USB flash drive on the front panel and press the button to start the loading process.

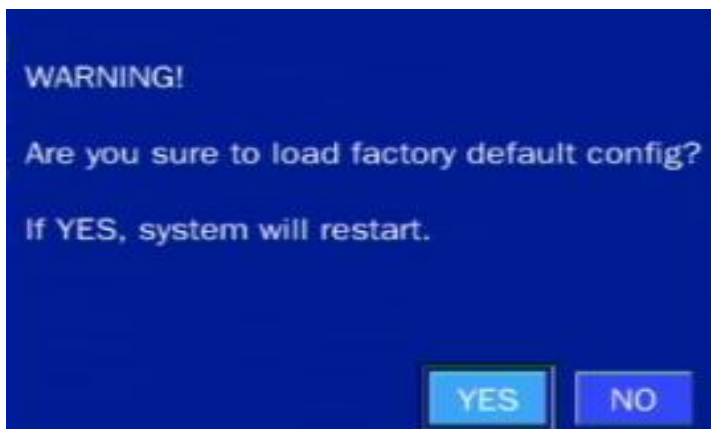


**LOAD
DEFAULT** Press the button to reset the system to the default settings.



The following settings such as **Language, DVR 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.

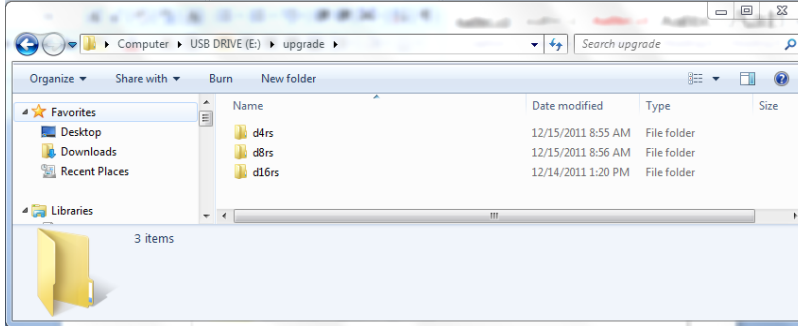
**LOAD
FACTORY
DEFAULT** Press the button to reset the system to the factory default settings.



**SOFTWARE
UPGRADE** Upgrade software to the latest version.
After connecting USB flash drive to USB port on the DVR, click SEARCH.
It will automatically find the upgrade file.

4-9-1. Firmware Upgrade

1. Create a new folder named “upgrade” in the USB flash drive root directory.
2. Create sub-folder for each model under “upgrade” folder and copy each firmware.
 - “d4rs” for D4RS and D4WRS: “main_D4RS_speco_*. *_201****”
 - “d8rs” for D8RS and D8WRS: “main_D8RS_speco_*. *_201****”
 - “d16rs” for D16RS and D16WRS: “main_D16RS_speco_*. *_201****”



3. Plug in the USB flash drive on the rear panel.
4. Navigate to CONFIG menu of SETUP.
5. Select SOFTWARE UPGRADE.
6. Follow the procedure from Figure 4.9.2 to Figure 4.9.4.

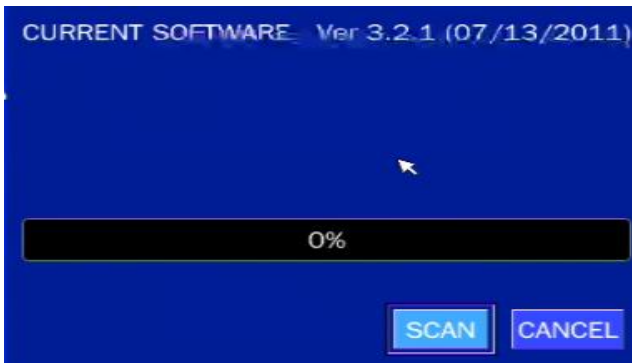


Figure 4.9.2

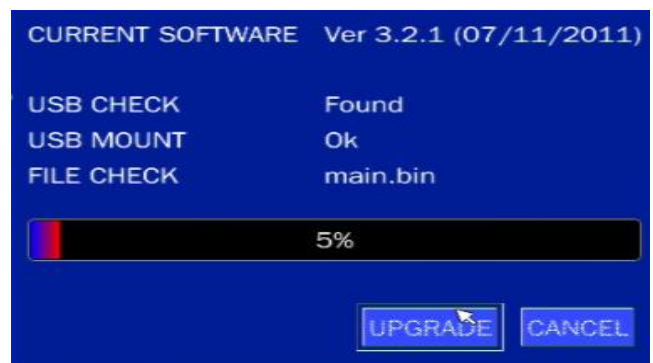


Figure 4.9.3

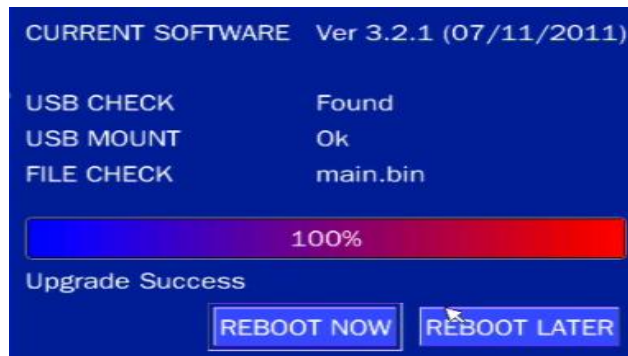


Figure 4.9.4

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.

5. 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 DVR, 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
	Indicates the DVR is locked. Note) to unlock, right click on the live view screen and click on Unlock.
	Audio mute. To select audio output, press the Audio after click the right button on the mouse. Toggle from Audio 1 to 4, mute in order.
	Indicates that alarm is set. To set the alarm function, press the Alarm button on the front panel.
	Indicates that alarm output is activated.
	Event indicator. When there is an event (motion recording, video loss, HDD fail, S.M.A.R.T), this icon will be highlighted.

	Indicates that a network client is connected to the DVR.
	Indicates that sequencing mode is enabled.
2009/04/14 17:23:40	Displays the current date and time.
RC: ALL	Remote control ID display. If a remote ID is not set, the message "ALL" is displayed.
 15%	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. (Only for D8RS and D16RS model.)

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

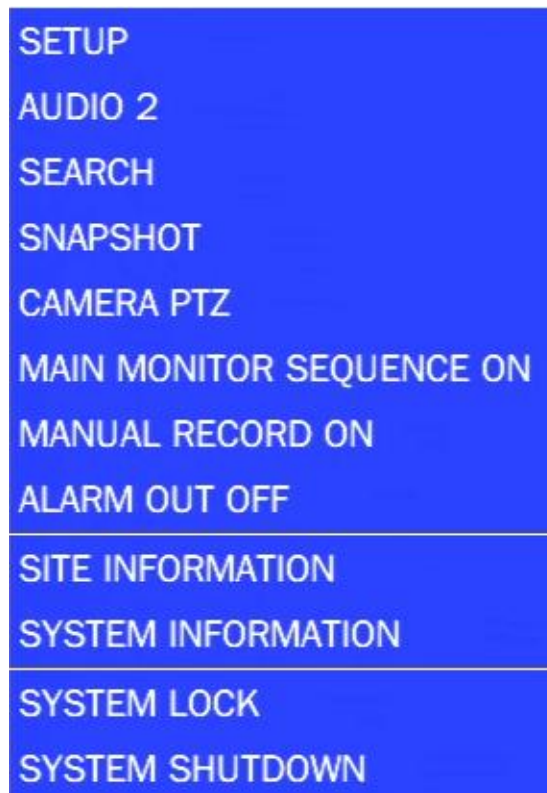



Figure 5.1.2. Quick Operation Window

Table 5.1.2. Menu Items in Quick Operation Window

Icon	Description																
SETUP	Setup button. Click this button to go to a setup menu.																
AUDIO	Audio button. Click this button to set an audio reception type; (Channel 1 through 4, Audio Mute).																
SEARCH	Search button. Click this button to enter the search menu.																
SNAPSHOT	Snapshot button. Click this button to create a snapshot. (JPEG STILL IMAGE)																
CAMERA PTZ	Pop up the PTZ user interface.																
MAIN MONITOR SEQUENCE ON/OFF	Sequence button. Click this button to use a sequence function.																
MANUAL RECORD ON/OFF	Manual Record button. Click this button to enable manual recording.																
ALARM OUT ON/OFF	Click this button to enable/disable Alarm outputs																
SITE INFORMATION	Press the button to view the record setting of a selected channel. <div data-bbox="507 846 1305 1281" data-label="Image"> <table border="1"> <tr> <td>CHANNEL NUMBER</td> <td>15</td> </tr> <tr> <td>SITE NAME</td> <td>CH15</td> </tr> <tr> <td>RESOLUTION</td> <td>D1</td> </tr> <tr> <td>FRAME RATE</td> <td>6 FPS</td> </tr> <tr> <td>QUALITY</td> <td>LEVEL 4</td> </tr> <tr> <td>RECORDING TYPE</td> <td>CONTINUOUS</td> </tr> <tr> <td>VIDEO SIGNAL</td> <td>NTSC</td> </tr> </table> </div>	CHANNEL NUMBER	15	SITE NAME	CH15	RESOLUTION	D1	FRAME RATE	6 FPS	QUALITY	LEVEL 4	RECORDING TYPE	CONTINUOUS	VIDEO SIGNAL	NTSC		
CHANNEL NUMBER	15																
SITE NAME	CH15																
RESOLUTION	D1																
FRAME RATE	6 FPS																
QUALITY	LEVEL 4																
RECORDING TYPE	CONTINUOUS																
VIDEO SIGNAL	NTSC																
SYSTEM INFORMATION	Press the button to view the system information. <div data-bbox="507 1352 1315 1778" data-label="Image"> <table border="1"> <tr> <td>SOFTWARE VERSION</td> <td>Ver 3.2.1 (07/11/2011)</td> </tr> <tr> <td>STORAGE SIZE</td> <td>217 GB</td> </tr> <tr> <td>NETWORK TYPE</td> <td>STATIC</td> </tr> <tr> <td>IP ADDRESS</td> <td>172.16.20.30</td> </tr> <tr> <td>MAC ADDRESS</td> <td>00:02:69:00:00:01</td> </tr> <tr> <td>DDNS STATUS</td> <td>DDNS OFF</td> </tr> <tr> <td>UNIT NAME</td> <td>SPECO RS4</td> </tr> <tr> <td>REMOTE CONTROLLER ID</td> <td>0</td> </tr> </table> </div>	SOFTWARE VERSION	Ver 3.2.1 (07/11/2011)	STORAGE SIZE	217 GB	NETWORK TYPE	STATIC	IP ADDRESS	172.16.20.30	MAC ADDRESS	00:02:69:00:00:01	DDNS STATUS	DDNS OFF	UNIT NAME	SPECO RS4	REMOTE CONTROLLER ID	0
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MAC ADDRESS	00:02:69:00:00:01																
DDNS STATUS	DDNS OFF																
UNIT NAME	SPECO RS4																
REMOTE CONTROLLER ID	0																
SYSTEM LOCK	Lock/Unlock Setup button.																
SYSTEM SHUTDOWN	Click this button to showdown system.																

5-1-1. PTZ Control

Table 5.1.3. Menu Items in PTZ Control Window

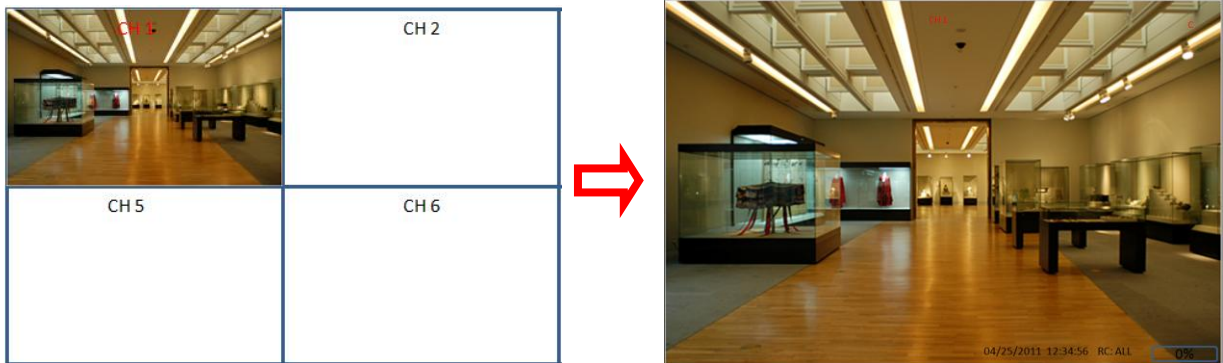
Item	Description
INITIALIZE	Initialize the PTZ settings of the selected camera
PAN/TILT	Select PAN/TILT using the ▲▼◀ and ▶ button, then press SEL . Adjust the tilt (UP/DOWN)/pan (LEFT/RIGHT) position using the ▲▼◀ and ▶ buttons.
ZOOM/FOCUS	Select ZOM/FOCUS using the▲▼◀ and ▶ buttons, then press SEL . Adjust the zoom (UP/DOWN)/ focus (LEFT/RIGHT)position using the ▲▼◀ and ▶ buttons.
OSD	Select OSD to enter the menu. Control keys are Right, Left, UP, Down, Select, Far (REW KEY), and Near (FF KEY). Press the ESC button to return to the previous menu. Press the PTZ button to close the OSD menu.
AUTOSCAN	Press the right key(▶) to start auto scan. Press the left key (◀) to stop auto scan.
PRESET	Select PRESET, then press the left key(◀). A number input window will appear. Set the number (3digits) using the number key, then press the SEL to confirm the preset number for the current position. Press the right key (▶) and enter the number (3digits) to go to the preset position.
TOUR	Select TOU and press the right (▶) key. A number input window will open. Select a number (1digit) using a number key, then press SEL to start the tour. Press the left (◀) key to stop the tour. Preset the number of the tour group in the OSD menu.
NUMBER	For the TOUR and PRESET menu.
	Press ESC to return to the main menu



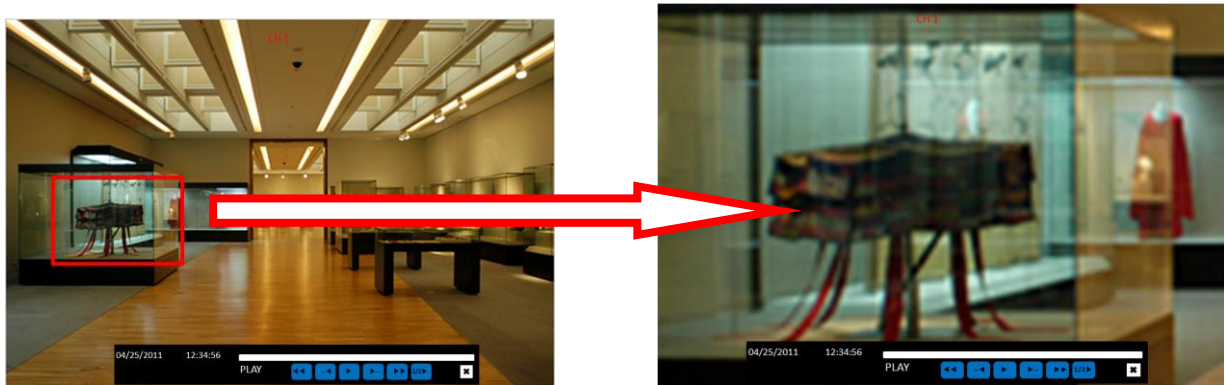
5-2. Digital Zoom in Live and Playback Screen

RS 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 EZSEARCH, 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. EZSearch

The EZSearch window is used to find stored video with ease using the thumbnail playback screen.



Figure 5.3.2. Calendar Screen

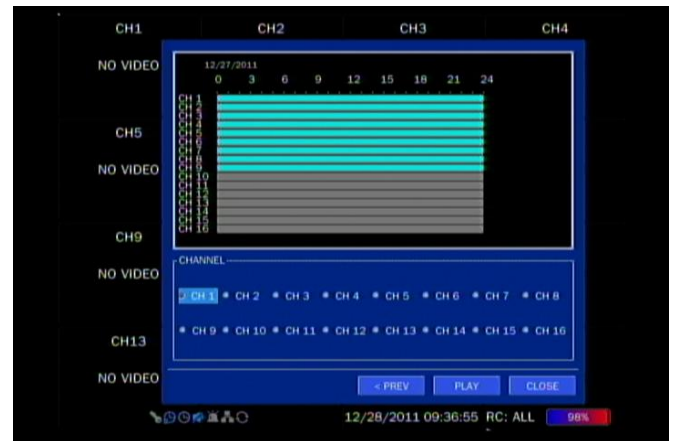


Figure 5.3.3. Channel Selection Screen



Figure 5.3.4. 24 Hourly Thumbnail Screen

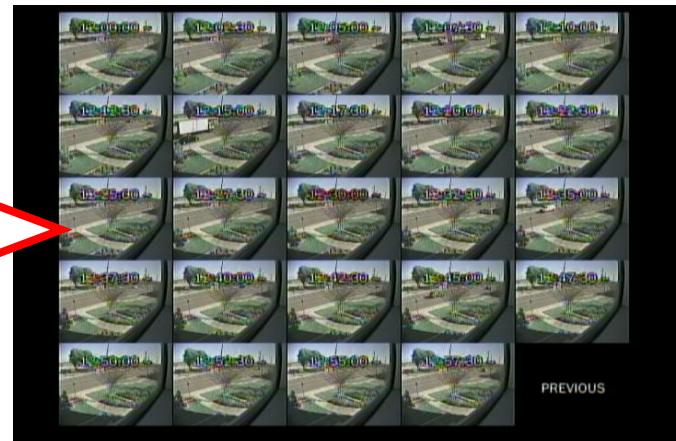


Figure 5.3.5. Minute Thumbnail Screen



Figure 5.3.6. Play Mode Screen

1. When the EZSearch 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. The recorded data is broken down into hourly preview.
3. Select the desired hour thumbnail. Then, the recorded data is broken down into minute preview.
4. Select the desired minute thumbnail and begin playback.

5-3-2. Time Line Search

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

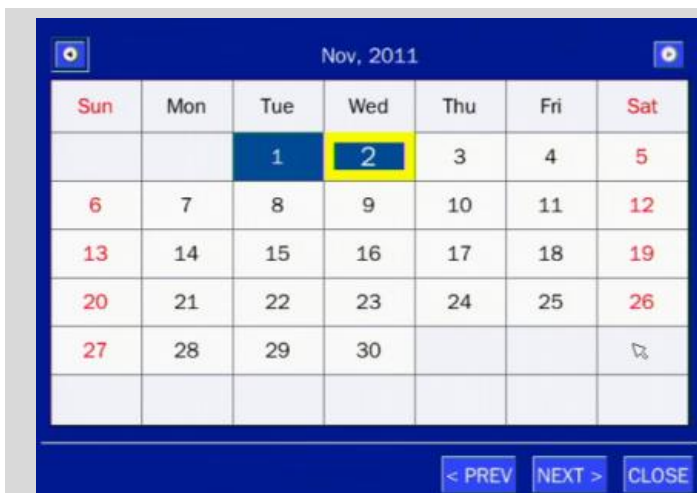


Figure 5.3.7. Calendar Screen

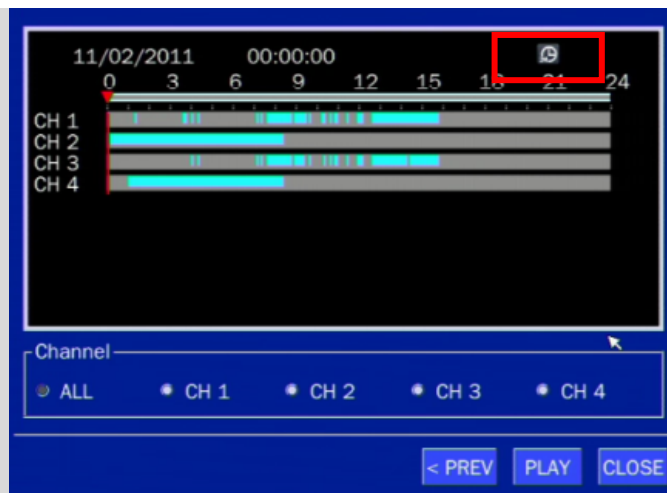


Figure 5.3.8. Time-Line Search Screen

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 a 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.



Figure 5.3.9. 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 5.3.10. Press the PREV to return to the SEARCH window.



Figure 5.3.10. Event Search Screen

5-3-4. Go To First Time

You can access from the oldest recorded data on the DVR 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 DVR 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.

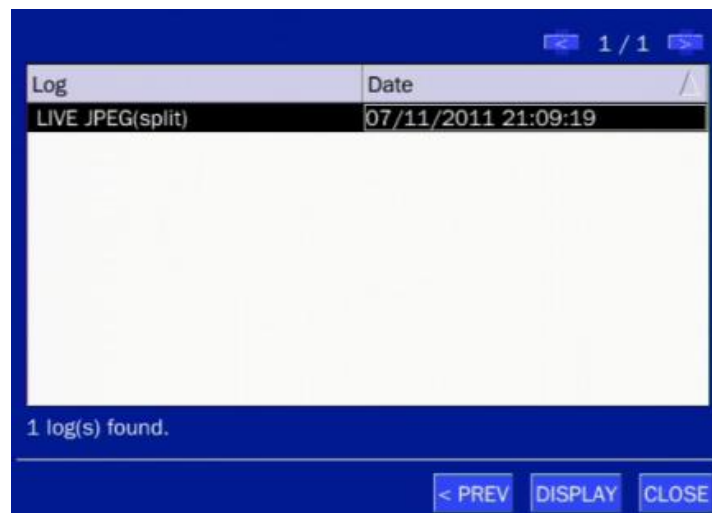


Figure 5.3.11. Archive Search Screen

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 5.3.12. 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
	<ul style="list-style-type: none"> • 1x, 2x, 4x, 8x, 16x, 32x speeds for D4RS/D4WRS • 1x, 2x, 4x, 8x, 16x for D8RS/D8WRS • 1x, 2x, 4x, 8x for D16RS/D16WRS Single Channel backward playback speed 1x, 2x, 4x, 8x, 16x, 32x, 64x
	Jump/Step backward. The playback position moves 60 seconds backward.

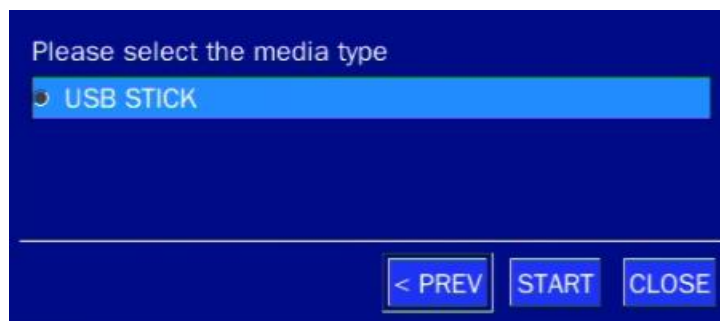
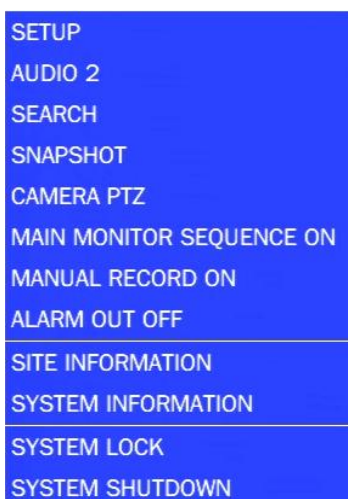
	Press to play or pause recorded video.
	Jump/Step forward. Playback position moves 60 seconds forward.
	<ul style="list-style-type: none"> • 2x, 4x, 8x, 16x, 32x speeds for D4RS/D4WRS • 2x, 4x, 8x, 16x for D8RS/D8WRS • 2x, 4x, 8x for D16RS/D16WRS Single Channel forward playback speed 1x, 2x, 4x, 8x, 16x, 32x, 64x
	Slow Mode play. Forward playback speed x1/4, x1/2
	Press to backup the video.
	EZCopy button.
	Return to the previous menu screen, search window, or exit from the Menu.

6. Back Up

6-1. Still Image Backup onto USB Flash Drive

Still images can be captured and archived onto a USB flash drive or an USB external hard drive in live mode or while playing back recorded video.

1. Select a specific channel, which wants to backup on live screen.
2. When you press SNAPSHOT button on Quick operation window, the media selection window screen will display.





3. Once you press START button, the system will capture a still image and archive onto a USB flash drive.

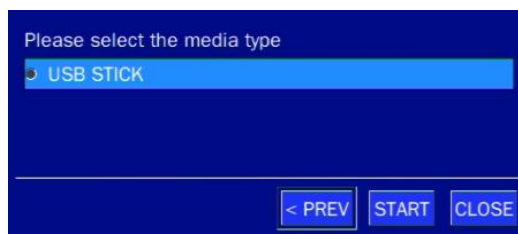


NOTICE
USB Flash Drive must be in FAT32 file format.

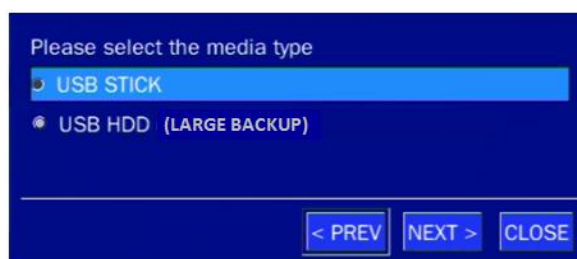
6-2. Video Backup onto USB Flash Drive during playback

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

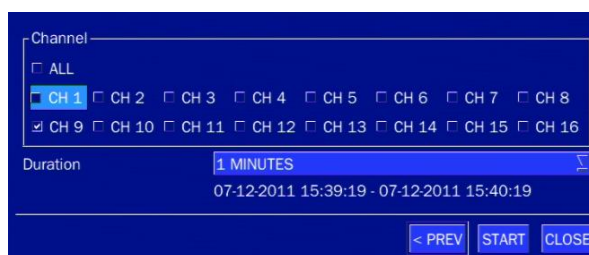
1. When you press  BACKUP button on the selected channel or all channels, the DVR will ask whether to archive a Still Image, a NSF or AVI and select the proper media type.



2. Select USB STICK (Flash Drive) to back up less than an hour.
Select USB HDD (Large Backup) to back up from 1 hour to 24 hours.



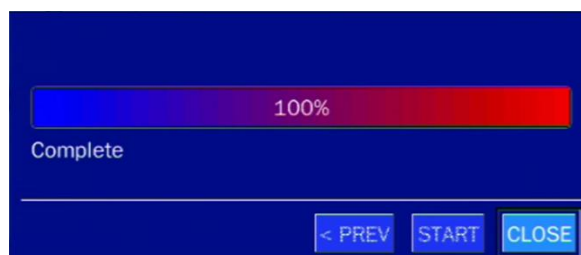
3. Once you select the channel and duration, the system will start to archive the data to the USB drive.



4. The following image shows the progress of archiving the data.



5. The following shows the image to complete the backup. Select lose to return to the previous screen.

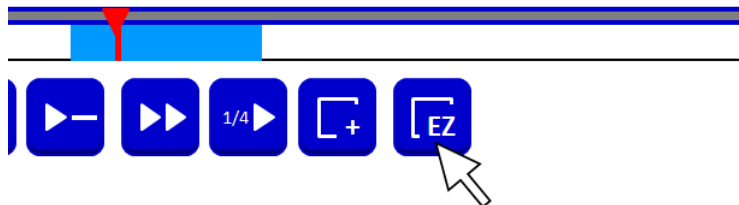


6-3. EZCopy: Video Backup onto USB Flash Drive during playback

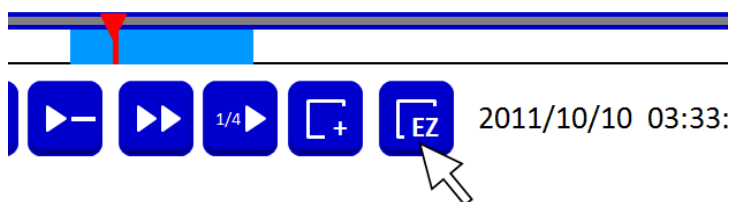
Using EZCopy feature, Video can be easily archived onto the USB flash drive or a hard drive.


In playback mode, press the  **EZCOPY** button to launch the backup function.

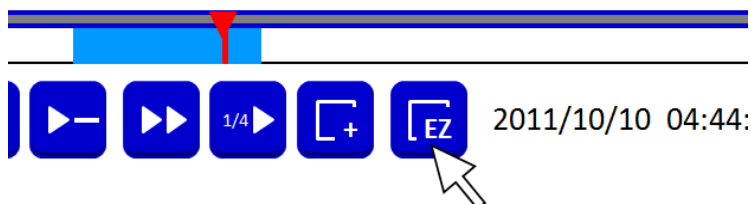
1. Press EZCOPY button on the selected channel or all channels.



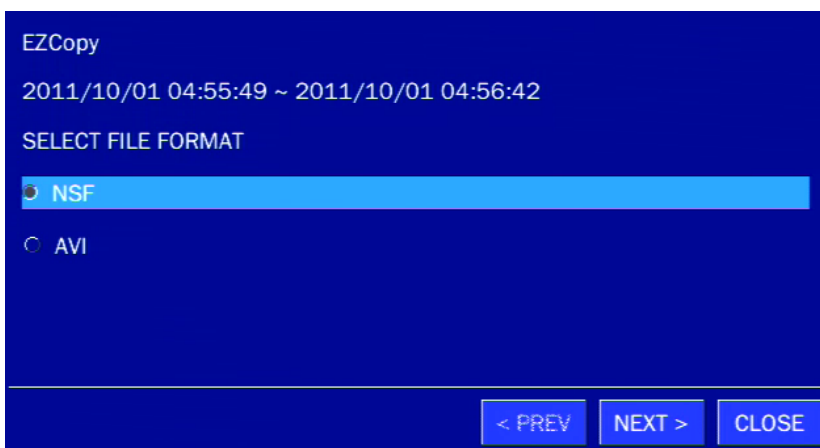
2. Then, EZCOPY START time will display.



3. Move  time bar cursor to the time of end of backup and press EZCOPY button. Then, EZCOPY STOP time will display.



4. EZCOPY window will display. The DVR will ask whether to archive a Still Image, a NSF or AVI.



5. After backup format is selected, also select media type and channel(s) to archive the data to the media.

6-4. Transferring Still Images or Video from the ARCHIVE List

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

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

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

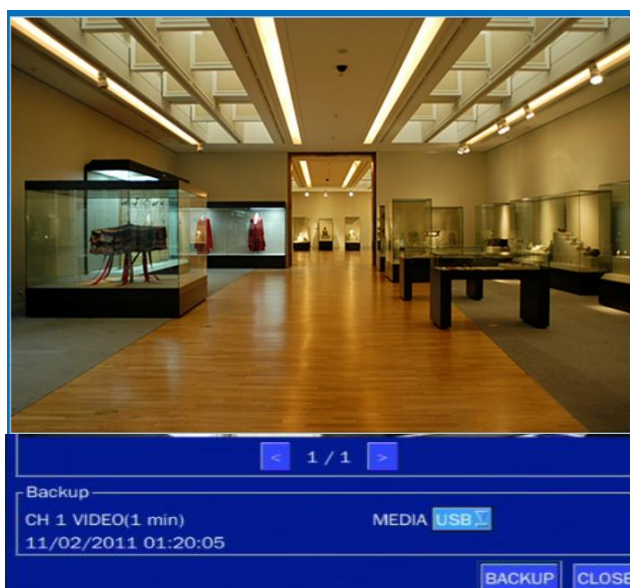
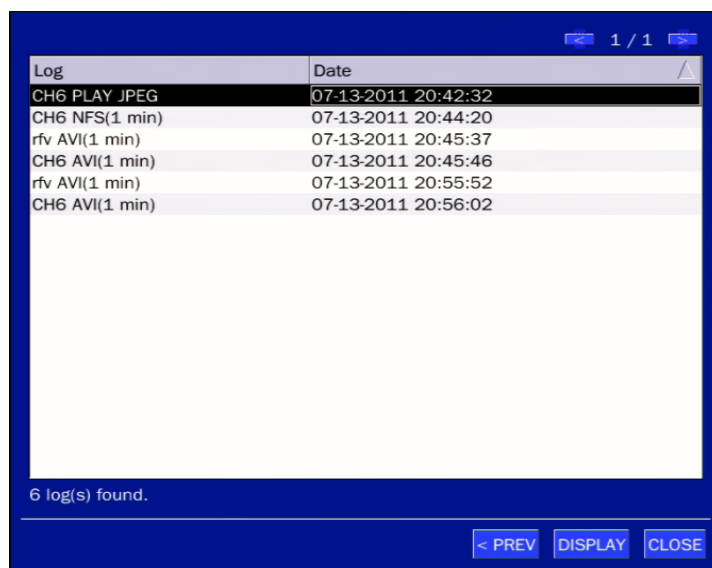


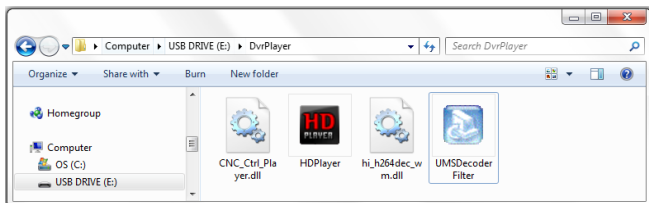
Figure 6.3.1. Archive Search Screen

6-5. Playback of Backup Video

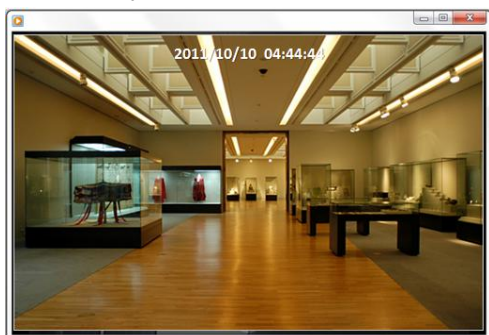
6-5-1. AVI Format

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

1. Please install the UMSSDecoderFilter that the DVR copies “DvrPlayer” folder on USB flash drive with the video. UMSSDecoderFilter is exported to the “/DvrPlayer” folder of the USB drive.



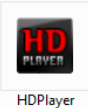
2. Otherwise, the video and time stamp over video cannot be displayed properly in Windows Media Player™.

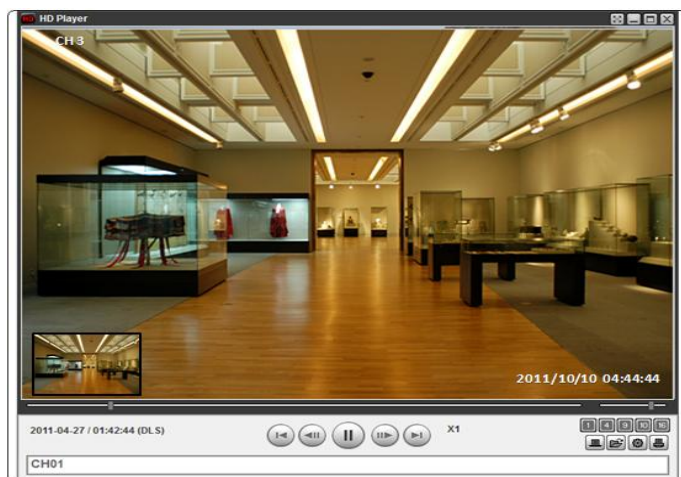


Timestamp On AVI. The subtitle is embedded to the video clip file.

The subtitle is embedded to the AVI file. To display a subtitle, user must install a special filter “UMSSDecoderFilter”.

6-5-2. NSF Format

NSF format: NSF format video can be played back using the  HDPlayer that the DVR copies to “DvrPlayer” folder on USB flash drive with video. Use the mouse scroll to use digital zoom in and out feature.



7. Network Access Using the Multi-Sites Network Viewer

7-1. Overview

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

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

On the program, user may control PTZ cameras on the DVRs. By attaching a microphone and speaker system to devices on site, the user may make bi-directional audio communication over the network.

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

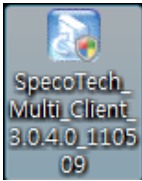
Recommended PC Requirements

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.

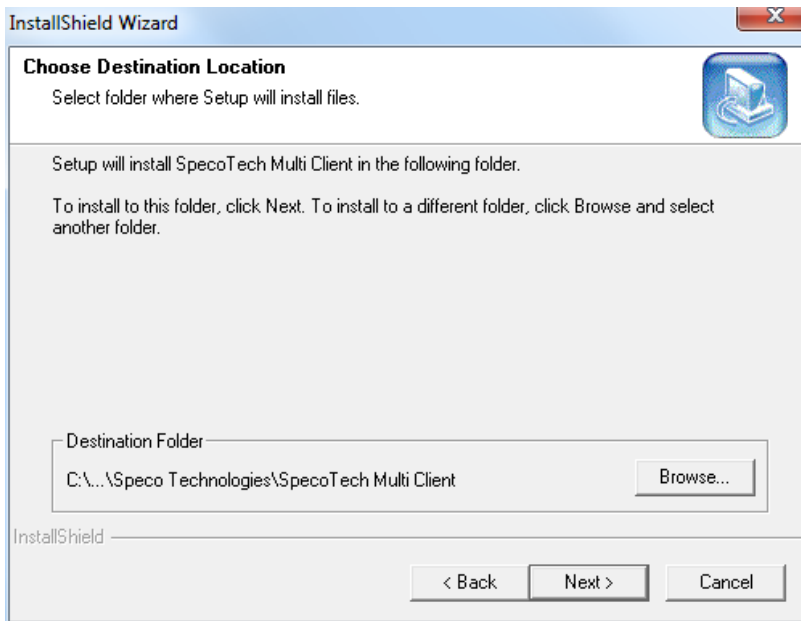
Before installing the program, check the PC specifications. The DVR remote software may not perform correctly if the PC does not meet the minimum requirements.

7-3. Installation of the Program

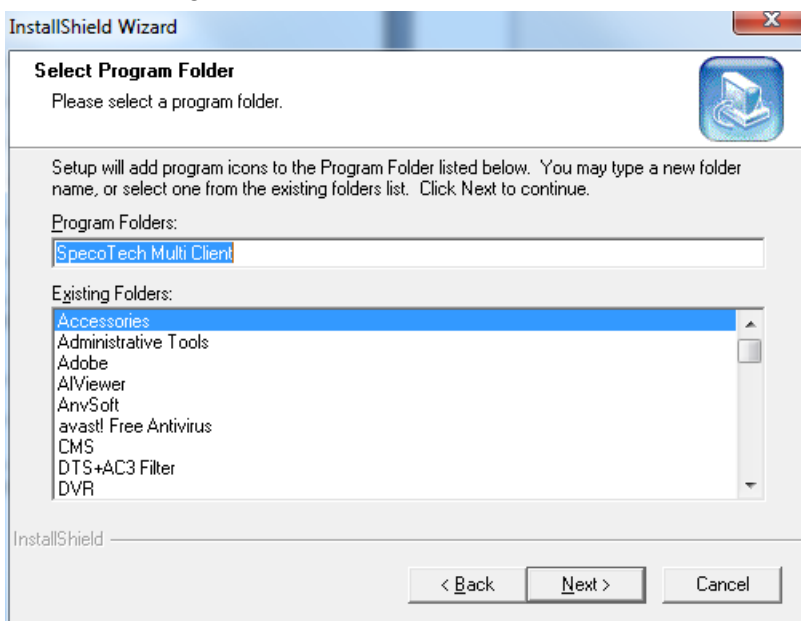
1. Insert the provided CD in the CD drive and double-click “SpecoTech Multi Client (XXXX).exe”



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



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



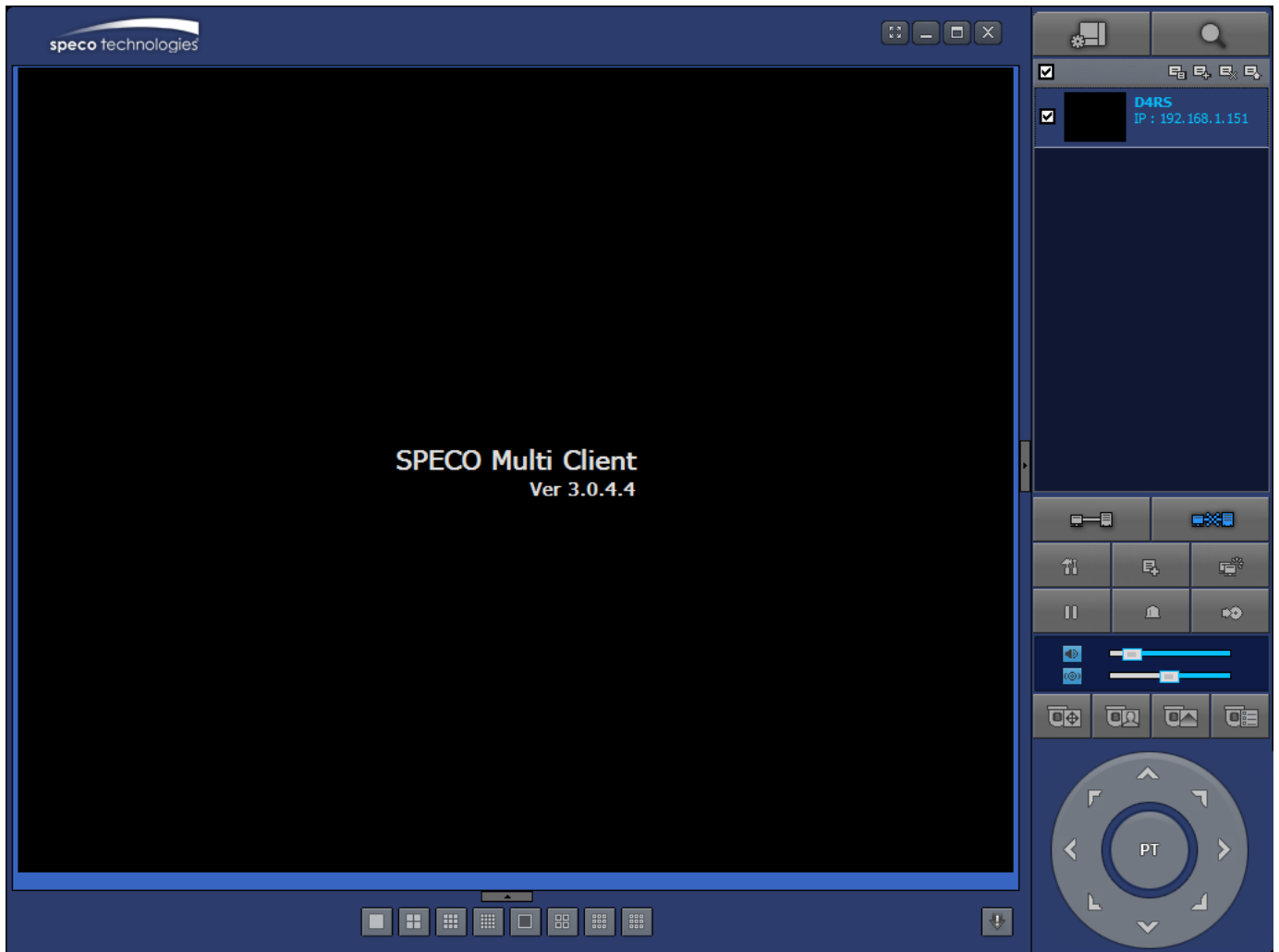
4. The installation status screen is displayed.
5. After the installation is completed, “**SpecoTech Multi Client**” icon displays on the desktop screen.





7-4. Live Window







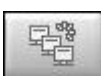



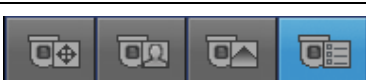
When installation is completed, double click the “SpecoTech Multi Client” icon on your desktop to start the program.

7-4-1. Main User Interface



7-4-2. Control Buttons

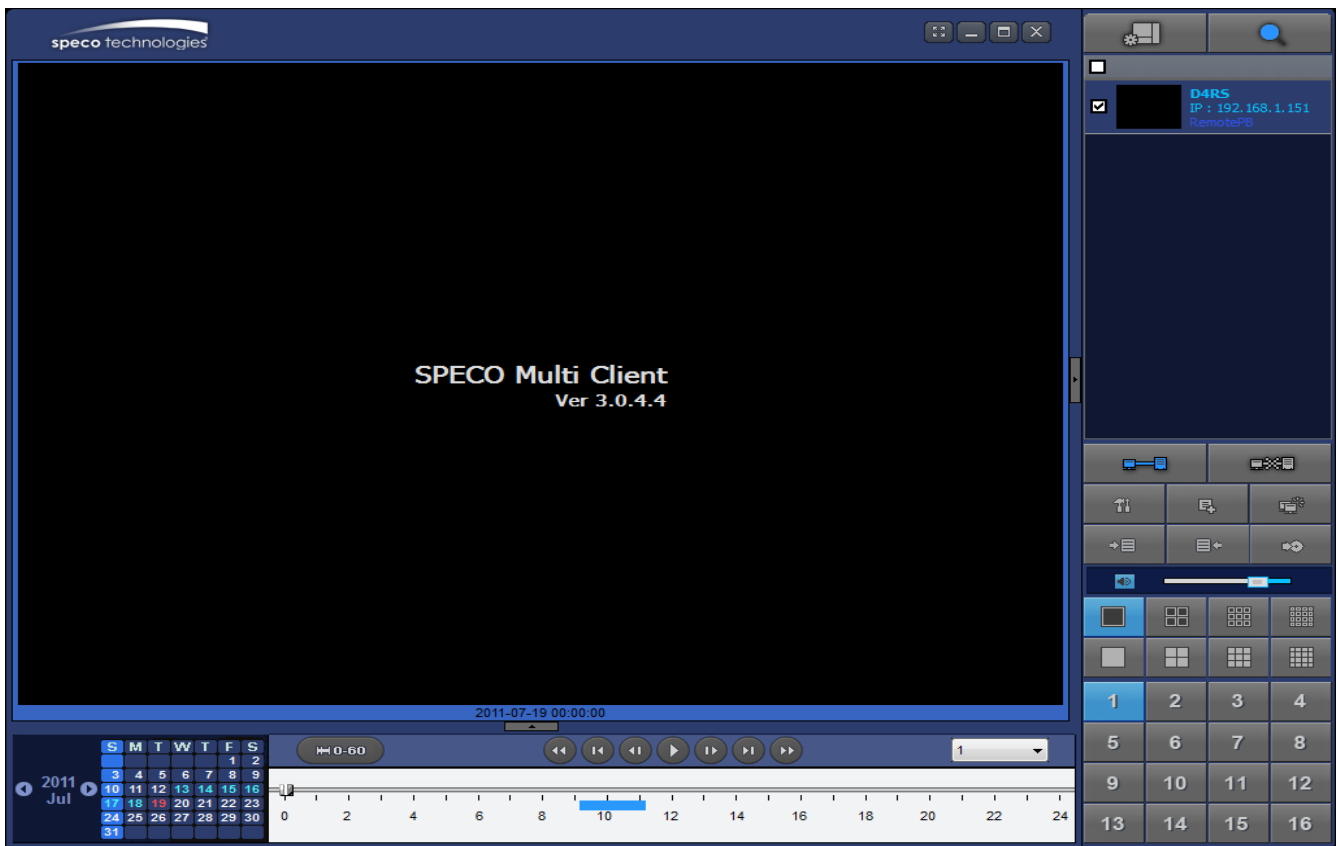
Button	Description
 LOCAL PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the local PC.
 REMOTE PLAYBACK	Click this icon to run a playback window to search and play videos that are recorded in the remote DVR.

 <p>SITE MANAGEMENT</p>	<p> THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of the connected sites.</p> <p> SITE ADDITION: Click this icon to open 'Site Addition' window.</p> <p> SITE DELETE: Click this icon to delete site from the index window, after disconnect a site.</p> <p> NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.</p>
 <p>CONNECT</p>	<p>Click this icon to connect the selected site/sites.</p>
 <p>DISCONNECT</p>	<p>Click this icon to disconnect the selected site/sites.</p>
 <p>SETUP</p>	<p>Click this icon to setup configuration of UMS MULTI CLIENT.</p>
 <p>CAPTURE</p>	<p>Click this icon to capture a still image.</p>
 <p>EVENT LIST</p>	<p>Opens list of events logged by the UMS Multi Client.</p>
 <p>PAUSE</p>	<p>Click this icon to play/pause live video.</p>
 <p>ALARM ON</p>	<p>Click this icon to turn on/off alarm outputs.</p>
 <p>RECORD ON</p>	<p>Enable or disable recording of live video to local disk, which has set in setup menu.</p>
 <p>AUDIO</p>	<p>Use the volume control bar to set the audio level.</p>
 <p>MIC</p>	<p>Use the microphone volume control bar to set the micro phone level.</p>
 <p>PRESET/TOUR/SCAN/MENU</p>	<p>User can control PRESET/TOUR/SCAN/MENU</p>
 <p>CHANNEL SPLIT</p>	<p>To select the numbers of display channel/channels (Single, quad, 9 channels, and 16 channels) of highlighted site.</p>
 <p>DVR SITE SPLIT</p>	<p>To select the numbers of DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) on main display screen.</p>







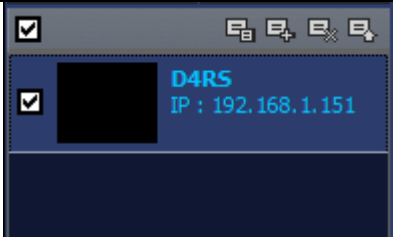




7-5. Search and Playback Window














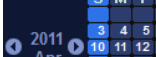

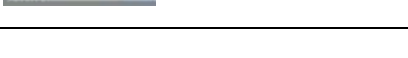

7-5-1. Main User Interface

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 DVR.
    	<p> THUMBNAIL REFRESH: Click this icon to refresh and renew thumbnail image of the connected sites.</p> <p> SITE ADDITION: Click this icon to open 'Site Addition' window.</p> <p> SITE DELETE: Click this icon to delete site from the index window, after disconnect a site.</p> <p> NET FINDER: Select the site from the index window and click this icon to modify the information of specific site.</p>

 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 SpecoTech Multi Client.
 CAPTURE	Click this icon to capture a still image.
 EVENT LIST	Opens list of events logged by the UMS Multi Client.
 EZCopy Start	Click this icon to set the beginning time for backup of the recorded video in AVI format.
 EZCopy End	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 DVR/DVRs (1 DVR, 4 DVRs, 9 DVRs, 16 DVRs) 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. 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.
	Playback buttons.
	Digital Zoom Window in Live and Playback. (Only available in Single Channel Viewing)

7-6. Setup of SpecoTech 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.

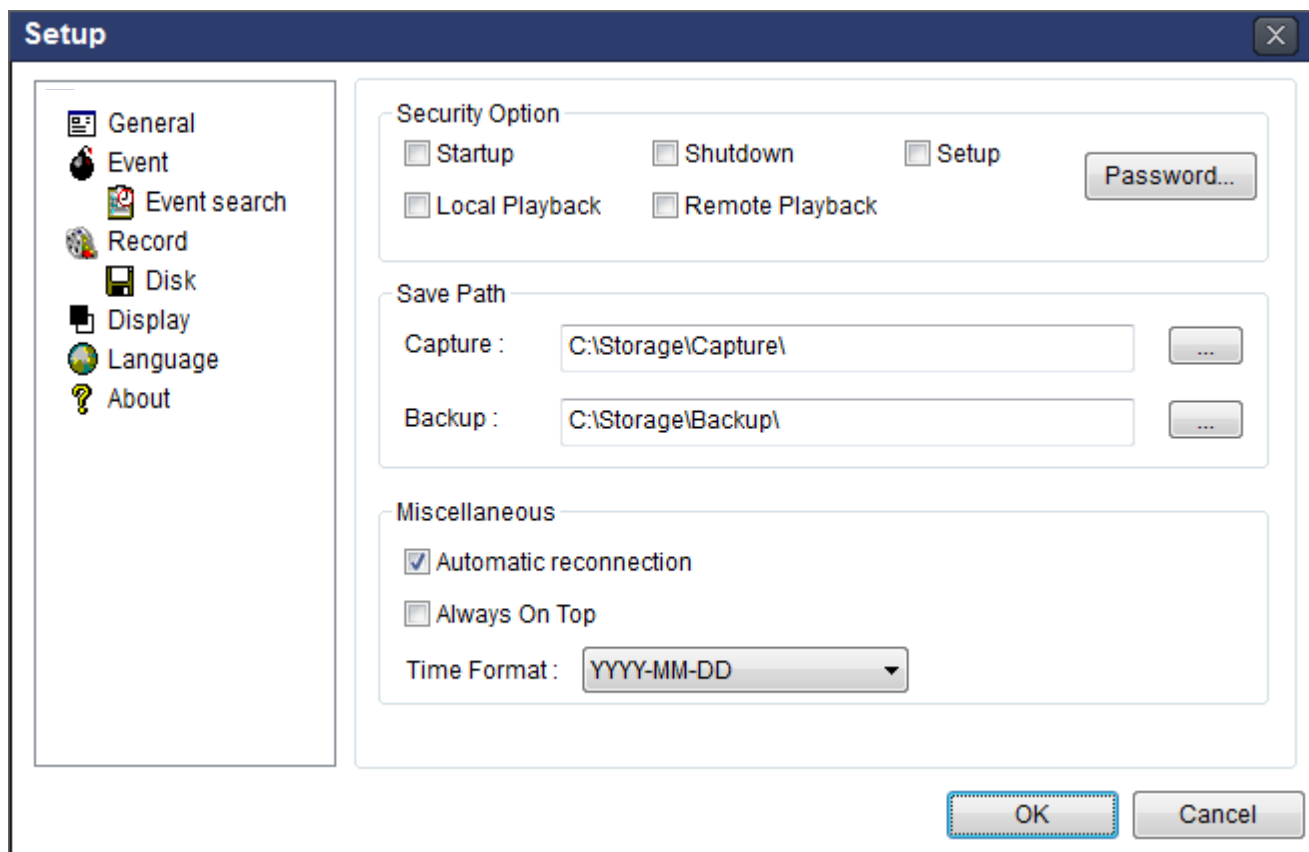
Save Path: Specify the location to save captured still image for Capture and Backup data.

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 DVR, 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.



The screenshot shows the 'Setup' window with a dark blue title bar and a close button (X) in the top right corner. On the left side, there is a vertical navigation pane with icons and labels for 'General', 'Event', 'Event search', 'Record', 'Disk', 'Display', 'Language', and 'About'. The main area is divided into three sections:

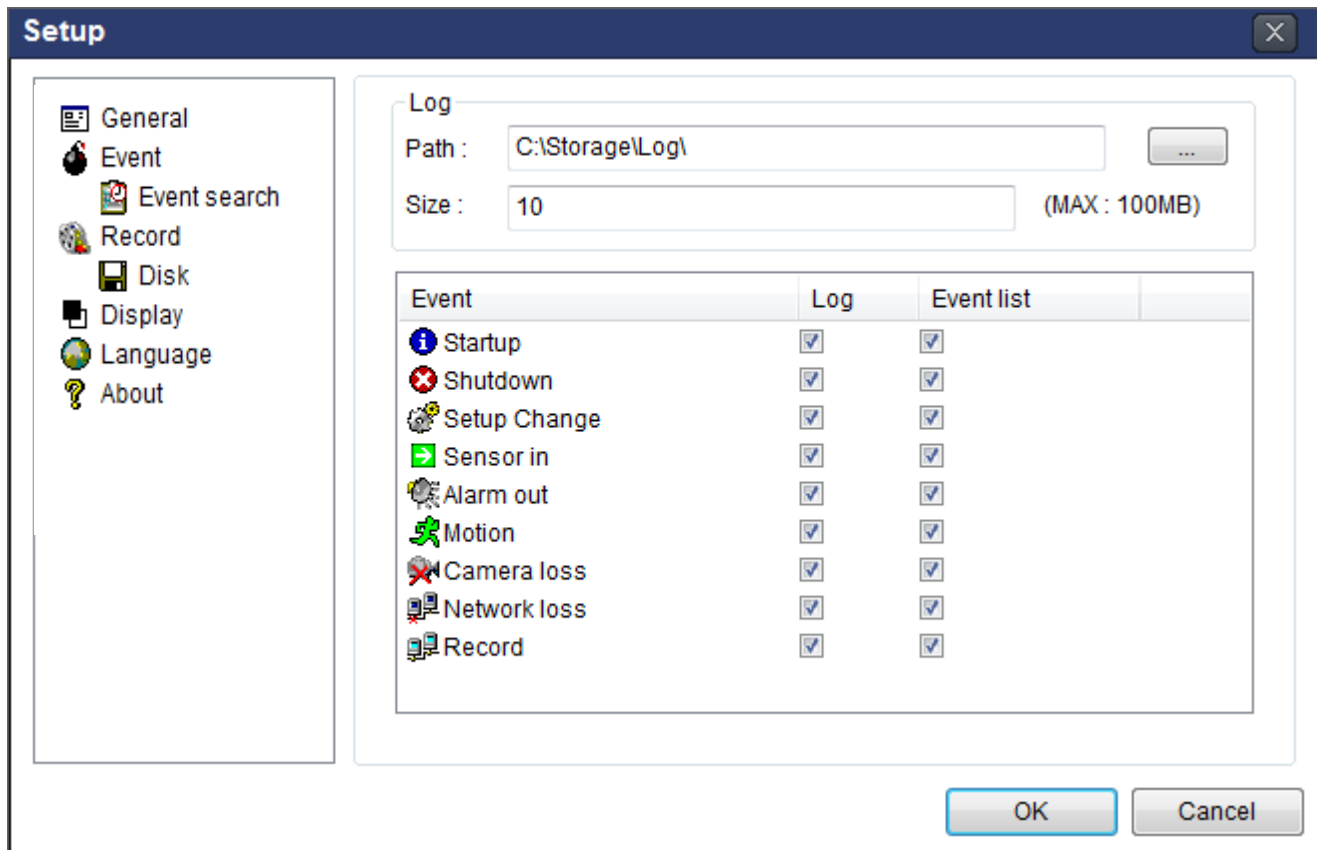
- Security Option:** Contains checkboxes for 'Startup', 'Shutdown', 'Setup', 'Local Playback', and 'Remote Playback'. A 'Password...' button is located to the right of the 'Setup' checkbox.
- Save Path:** Contains two text input fields. The 'Capture' field is set to 'C:\Storage\Capture\' and the 'Backup' field is set to 'C:\Storage\Backup\'. Each field has a browse button (three dots) to its right.
- Miscellaneous:** Contains a checked checkbox for 'Automatic reconnection', an unchecked checkbox for 'Always On Top', and a 'Time Format' dropdown menu currently set to 'YYYY-MM-DD'.

At the bottom right of the window, there are 'OK' and 'Cancel' buttons.

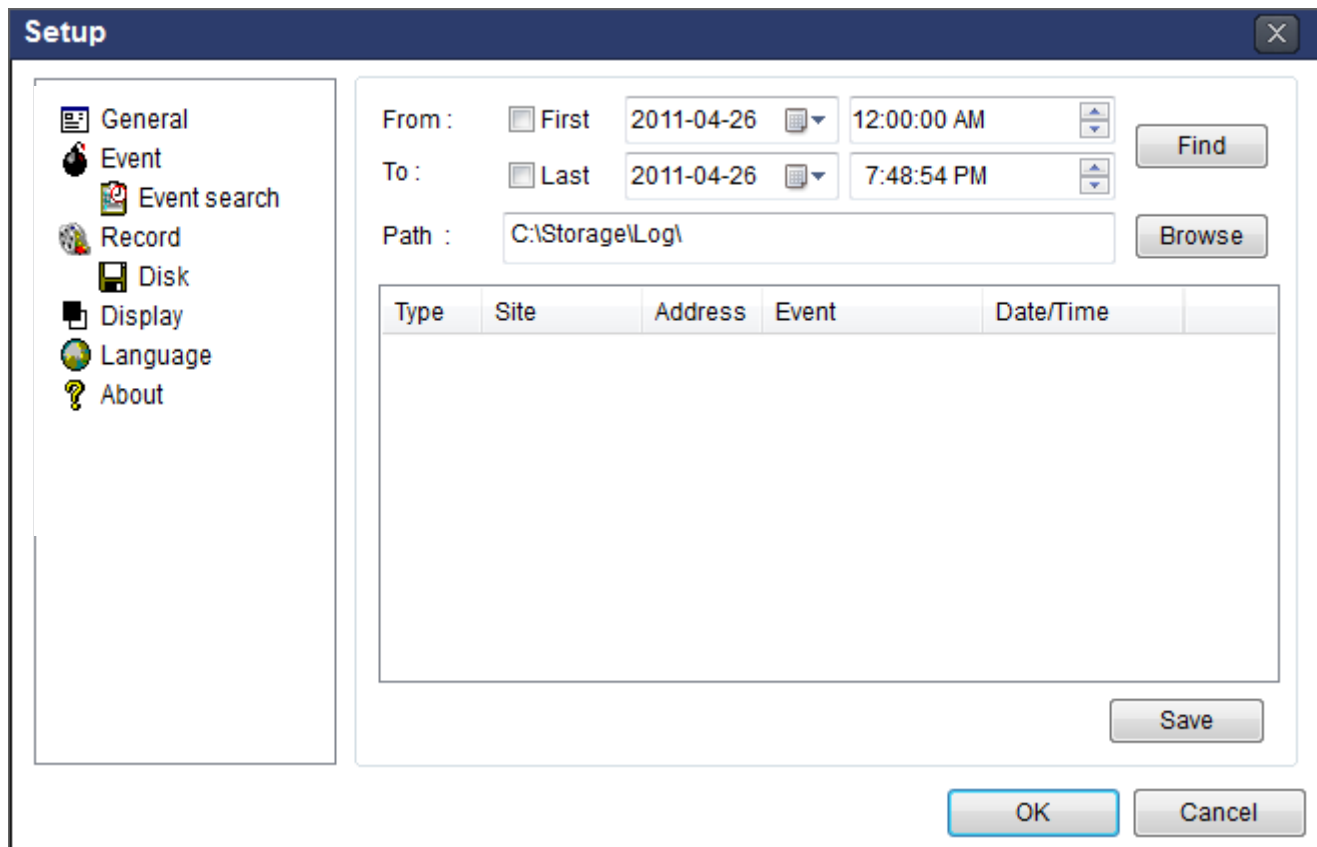
7-6-2. Event

Event log can be archived and searched.

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

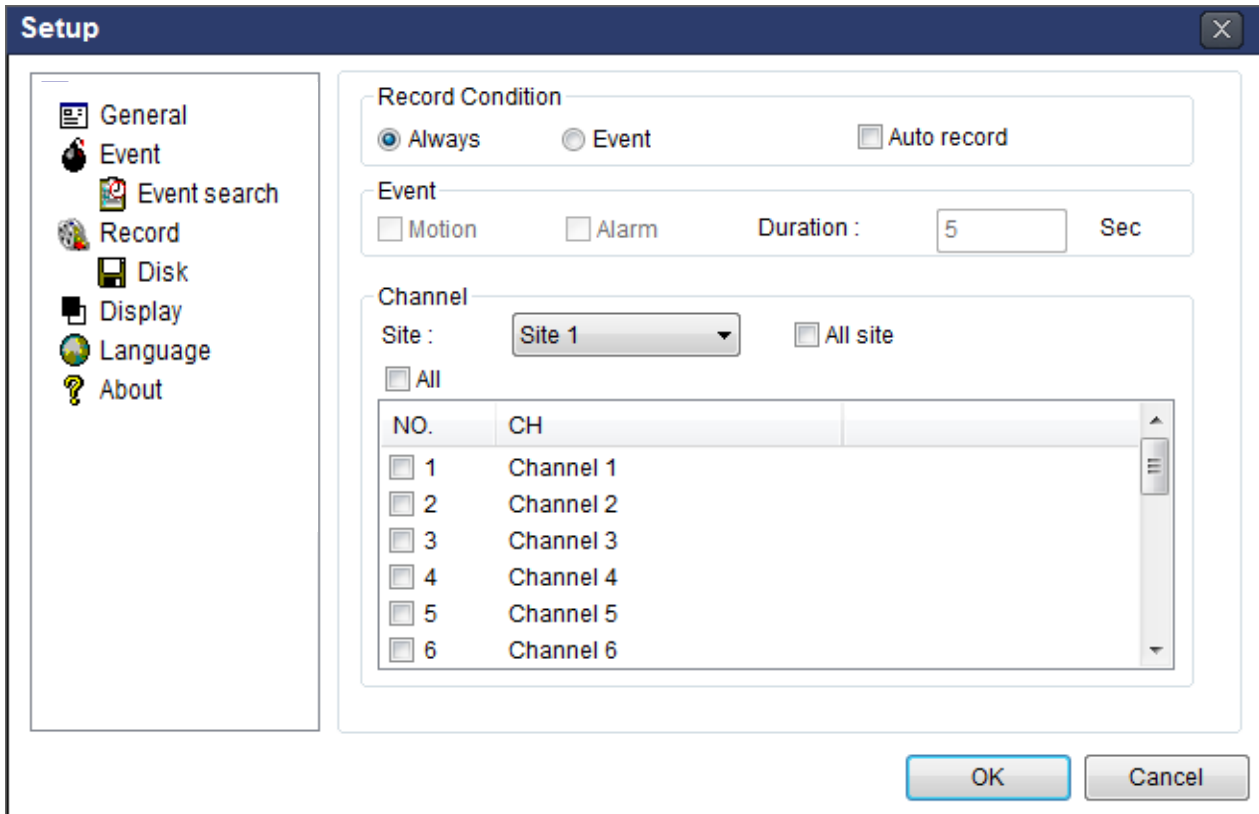


Event Search: Event log can be searched from the selected time.

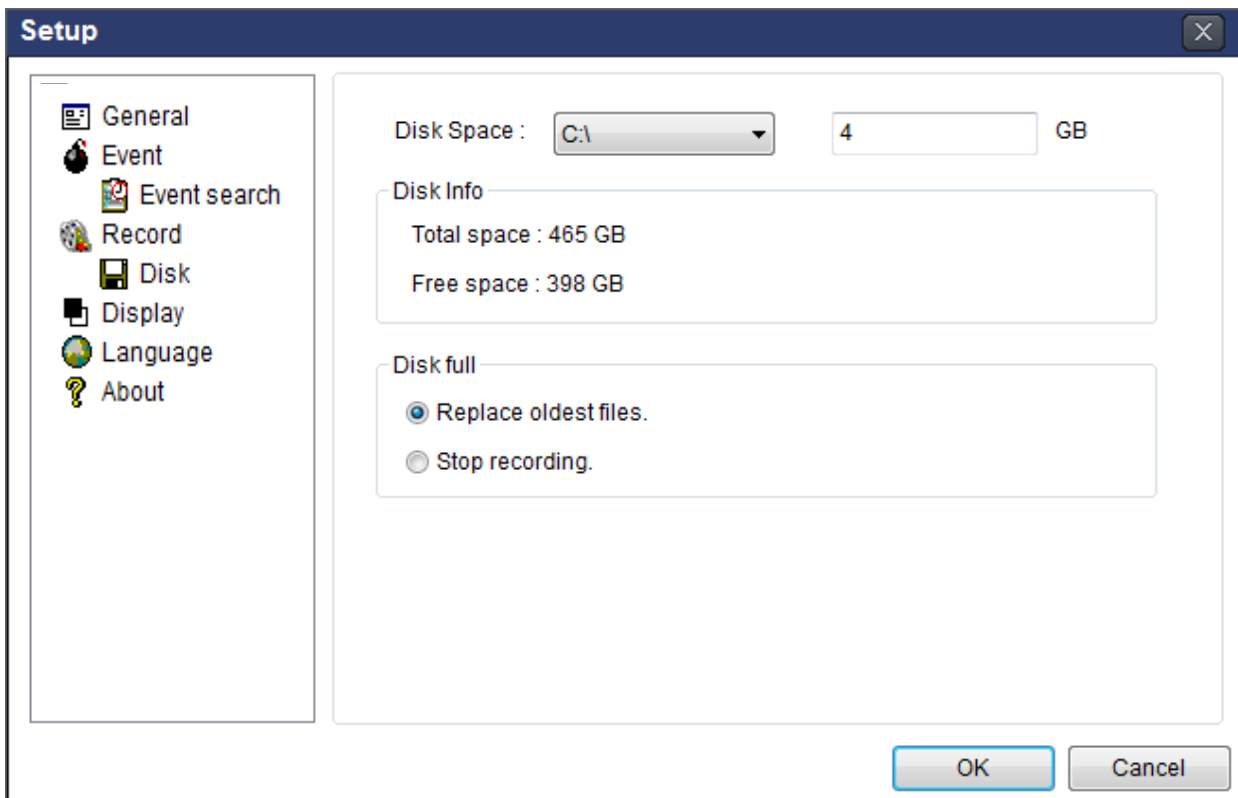


7-6-3. Record

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

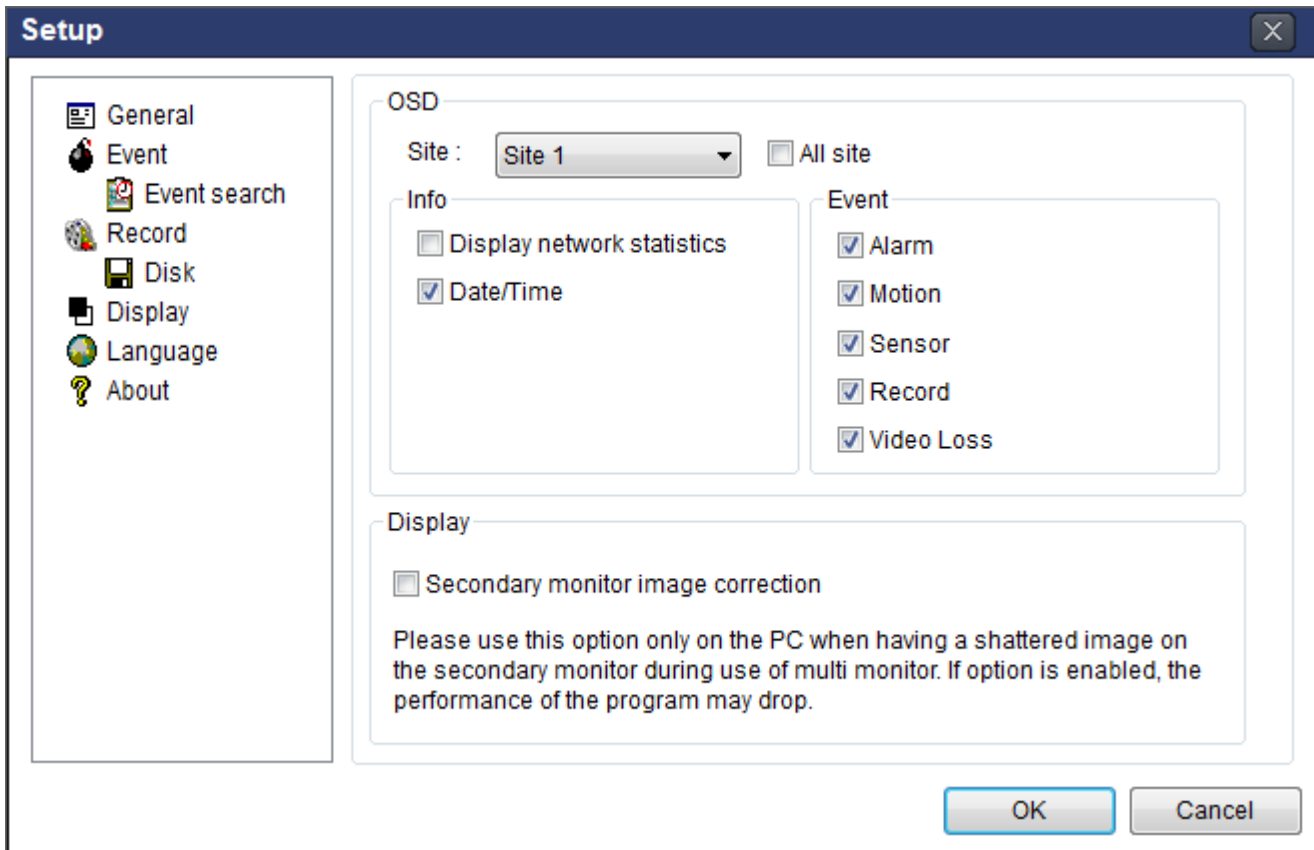


Record Local Storage Setup: You can select the local disk to record and the amount of disk space you want to allow the program to use for recording. You can also select the option to overwrite data or stop recording when the maximum amount of disk space is full.



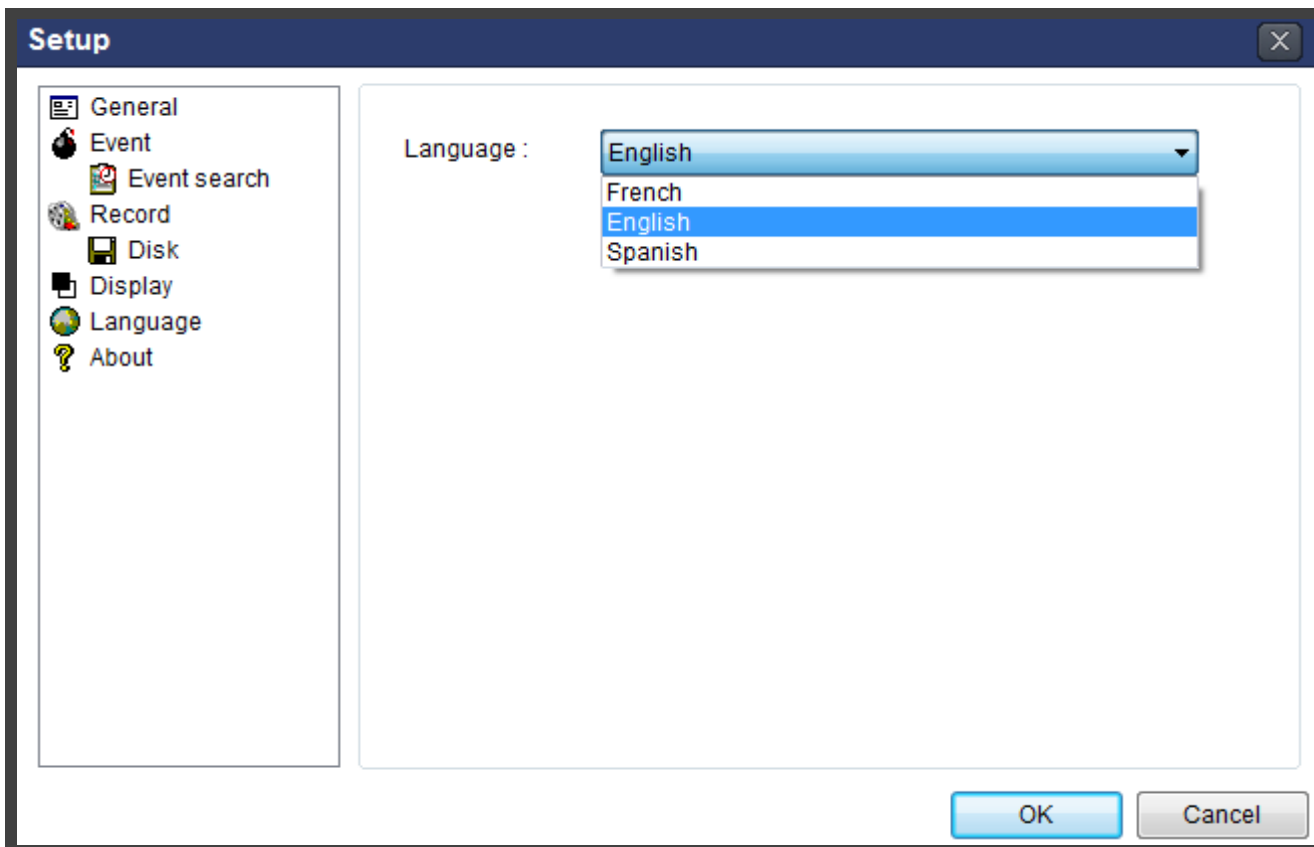
7-6-4. Display

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



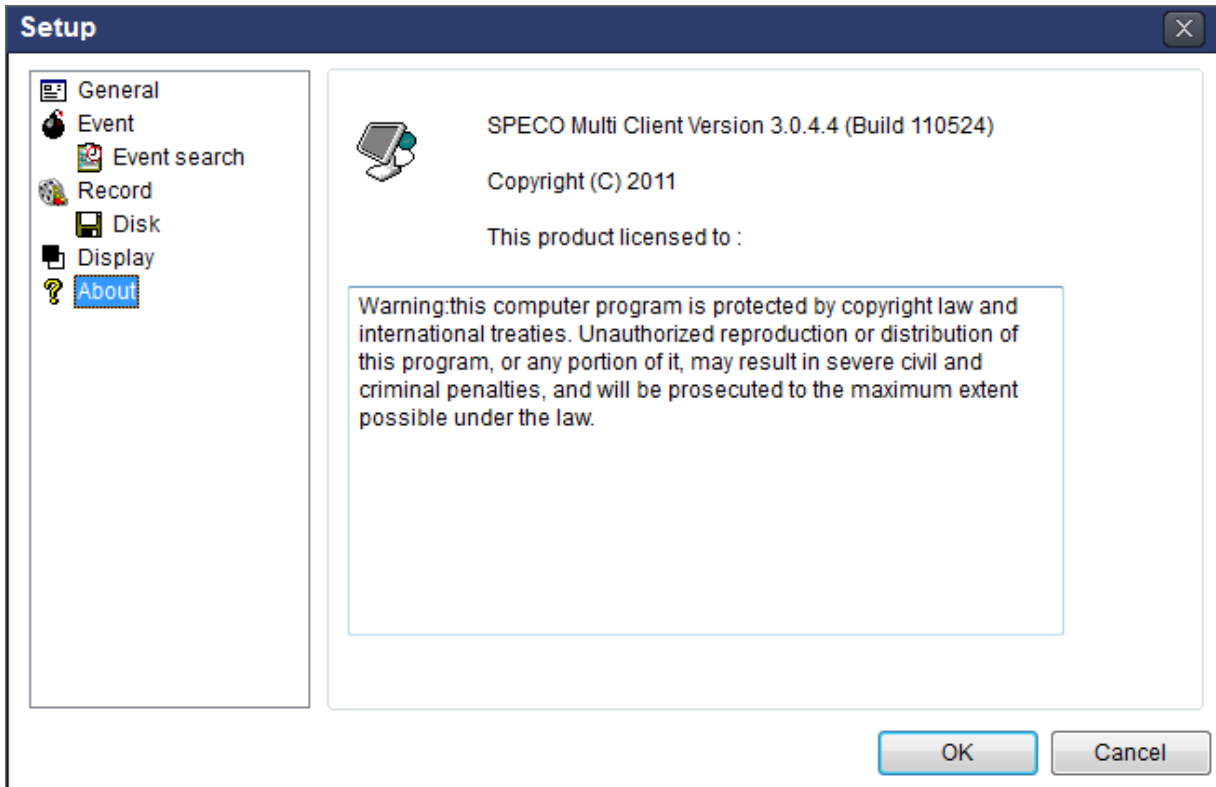
7-6-5. Language

English, French and Spanish is selectable.



7-6-6. About

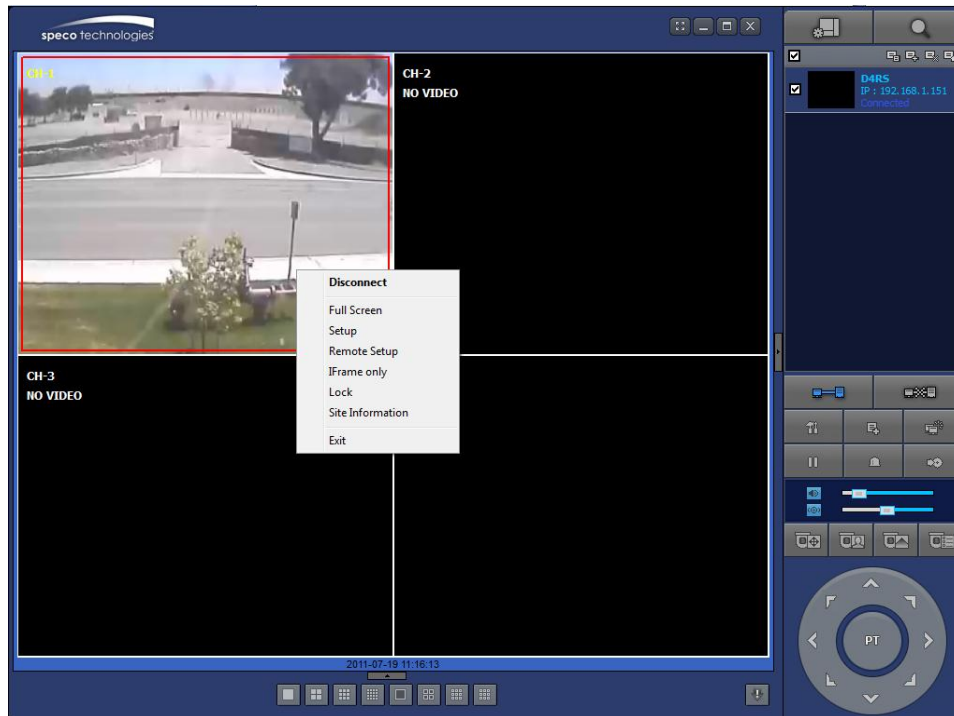
“About” provides network client version information.



7-7. Remote Setup

The menu settings for the DVR 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 DVR when prompted. (NOTE: The default password is 1111)
Setting is the same as with the DVR menu setting. Refer to the corresponding pages for details on the setting items.



NOTICE

Web Setup is prohibited when user in the Setup Menu on the DVR.



7-7-1. System

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

SYSTEM	RECORD	DEVICE	DISPLAY	NETWORK	USER MANAGEMENT	STORAGE	UPGRADE
DATE DISPLAY FORMAT	MM/DD/YYYY						
CLIENT ACCESS	<input checked="" type="radio"/> ON <input type="radio"/> OFF						
NTP SETUP	OFF						
PRIMARY SNTP SERVER	Pool.ntp.org						
SECONDARY SNTP SERVER	Time.nist.gov						
TIME ZONE	GMT +0:00 (Lisbon/London/Monaco)						
CONNECTION MODE	TIME						
CONNECTION PERIOD	03:00 AM						
SEND EMAIL SETUP	ON						
TRANSMISSION MODE	VIDEO						
IP NOTIFICATION	OFF						
MAIL BY SENSOR	OFF						
MAIL BY MOTION	OFF						
MAIL BY VIDEO LOSS	ON						
MAIL BY S.M.A.R.T.	OFF						
MAIL BY STATUS	ON						
PERIOD	DAILY						
	FIRST	SUN	16 H				
MAIL PORT	25						
SECURE OPTION	NONE						
MAIL TO							
MAIL SERVER							
ID							
PASSWORD							
MAIL FROM							
UNIT NAME							

- **DATE DISPLAY 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.
 - **TRANSMISSION MODE:** Select the mail transmission mode (TEXT or VIDEO).
 - **IP NOTIFICATION:** Enable/disable sending e-mail when the IP address is changed.
 - **MAIL BY SENSOR:** Enable/disable sending e-mail reports when an alarm event is triggered.
 - **MAIL BY MOTION:** Enable/disable sending e-mail when the motion is detected.
 - **MAIL BY VIDEO LOSS:** Enable/disable sending e-mail when the video loss is detected.
 - **MAIL BY S.M.A.R.T.:** Enable/disable sending e-mail reports when S.M.A.R.T. is triggered
 - **MAIL DVR STATUS:** Enable/disable sending periodical e-mail of the system status.
 - **MAIL PORT:** Mail port setting.
 - **SECURE OPTION:** Select a secure mail server connection. (**SSL or TLS**)
 - **MAIL TO:** Input the appropriate email address to enable sending e-mail reports
 - **MAIL SERVER:** Input the SMTP server name as well as the user ID and password.
 - **MAIL FROM (Return Mail Address):** Set the source e-mail address to be notified to the destination.
- **USER NAME:** Name the DVR

7-7-2. Record

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

The screenshot shows a configuration interface with a top navigation bar containing tabs: SYSTEM, RECORD, DEVICE, DISPLAY, NETWORK, USER MANAGEMENT, STORAGE, and UPGRADE. The RECORD tab is active. The interface is divided into two main sections. The top section is for channel-specific settings, with 'SITE' set to 'CH1'. Below this are several rows of settings, each with a label on the left and a dropdown menu on the right: RESOLUTION (D1), FRAME RATE (6 FPS), QUALITY (LEVEL 5(H)), RECORDING MODE (MOTION), SENSOR RECORDING (four dropdown menus, all set to '-'), PRE RECORD (1 MINUTE(S)), POST EVENT RECORD (10 SECOND(S)), and AUDIO (radio buttons for ON and OFF, with OFF selected). The bottom section is for 'EZRecord' settings, with an 'APPLY EZRecord' button on the right. Below this are: RESOLUTION (D1), FRAME RATE (6 FPS), QUALITY (LEVEL 5(H)), RECORDING (MOTION), and DAYS TO RECORD (1 DAY(S) 1 HOUR(S)).

These settings apply to the specified channel only.

- Recording Setup
 - **RESOLUTION:** Sets the resolution for the recordings. The set value applies to an individual channel.
 - **FRAME RATE:** Sets the recording rate.
 - **QUALITY:** Sets the image quality in 5 levels.
 - **RECORDING:** Sets the recording mode.
 - **RECORDING MODE:** CONTINUOUS, SCHEDULE, MOTION
 - **PRE RECORD:** Sets whether to perform or not pre recording.
 - **POSE EVENT RECORD:** Sets the duration of the event recording.
 - **AUDIO:** Sets whether to perform or not audio recording.

These settings apply to all channels.

- **EZRECORD**
 - **RESOLUTION:** Sets the resolution for the recordings. The set value applies to an individual channel.
 - **FRAME RATE:** Sets the recording rate.
 - **QUALITY:** Sets the image quality in 5 levels.
 - **RECORDING MODE:** Sets the recording mode.
 - **RECORD DAYS:** By the setting value, the Recording Days will change accordingly.

7-7-3. Device

Select **Device** to set Spot Out, Enable/Disable CVBS Out, motion zone.

SYSTEM	RECORD	DEVICE	DISPLAY	NETWORK	USER MANAGEMENT	STORAGE	UPGRADE
ALARM-OUT							
SENSOR IN		-	-	-	-	-	-
MOTION ON		-	-	-	-	-	-
VIDEO LOSS ON		-	-	-	-	-	-
ALARM DURATION		5					
ERROR ALARM		OFF					
CONTROLLER		----					
SPEED		9600					
ID		0					
PTZ							
CHANNEL		CH1					
CAMERA		----					
SPEED		9600					
ID		0					
MOTION							
SITE		CH1					
MOTION ZONE		FULL ZONE					
MOTION SENSITIVITY		5					
KEY TONE		<input checked="" type="radio"/> ON <input type="radio"/> OFF					
REMOTE CONTROLLER ID		0					
SENSOR		1					
TYPE		OFF					

- **ALARM OUT:** Set the sensor, motion, and video loss for triggering alarm relay HDD Error and Video Loss can trigger beeping.
- **CONTROLLER:** Set the controller baud rate and ID.
- **PTZ:** Set the PTZ baud rate, protocol, and ID.
- **MOTION: Setup the motion detection area and the sensitivity.**
 - **SITE: Select the channel**
 - **MOTION ZONE:** FULL Zone or PARTIAL Zone
 - **MOTION SENSITIVITY:** 1~9 (High sensitivity level)
- **KEYTONE:** Sets On or Off of Key Tone.
- **REMOTE CONTROLLER ID:** Sets an ID number on the supplied remote control for its identification.
- **SENSOR:** Select the type of each sensor.

7-7-4. Display

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

SYSTEM	RECORD	DEVICE	DISPLAY	NETWORK	USER MANAGEMENT	STORAGE	UPGRADE
OSD							
OSD CONTRAST			100				
MAIN MONITOR SEQUENCE			<input checked="" type="radio"/> ON <input type="radio"/> OFF				
SEQUENCE-DWELL TIME			3 SECOND(S)				
SITE			CH1				
NAME			CH1				
COVERT			OFF				
BRIGHTNESS			50				
CONTRAST			50				
HUE			50				
SATURATION			50				

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.

- **MAIN MONITOR SEQUENCE:** Setting for automatically switching the displayed video.
- **SEQUENCE DWELL TIME:** Sets the interval for automatically switching the screens.
- **SITE:** Name, Covert, Brightness, Contrast, Hue, Saturation

These settings apply to the specified channel only.

7-7-5. Network

SYSTEM	RECORD	DEVICE	DISPLAY	NETWORK	USER MANAGEMENT	STORAGE	UPGRADE
NETWORK TYPE	DHCP						
IP	192.168.1.22						
SUBNET MASK	255.255.255.0						
GATEWAY	192.168.1.1						
DNS (PRIMARY)	192.168.1.1						
DNS (SECONDARY)							
DDNS	ON						
HOST NAME	hostname						
SUBMIT/UPDATE	ON						
ezDDNS	ON						
NETWORK PORT	5445						
NETWORK AUDIO PORT	5446						
WEB PORT	80						
NETWORK STREAM	CH1						
RESOLUTION	CIF						
FRAME RATE	10 FPS						
QUALITY	LEVEL 5(H)						

- **NETWORK TYPE**
 - **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.
 - **HOST NAME:** Allows the user to setup a domain name manually
 - **SUBMIT/UPDATE:** Select ON to submit the settings
 - **ezDDNS:** Enable/disable ezDDNS to register the host name automatically
- **NETWORK PORT:** When connecting multiple DVRs 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 STREAM:** Set the Resolution, Frame Rate, and the Quality.

7-7-6. User Management

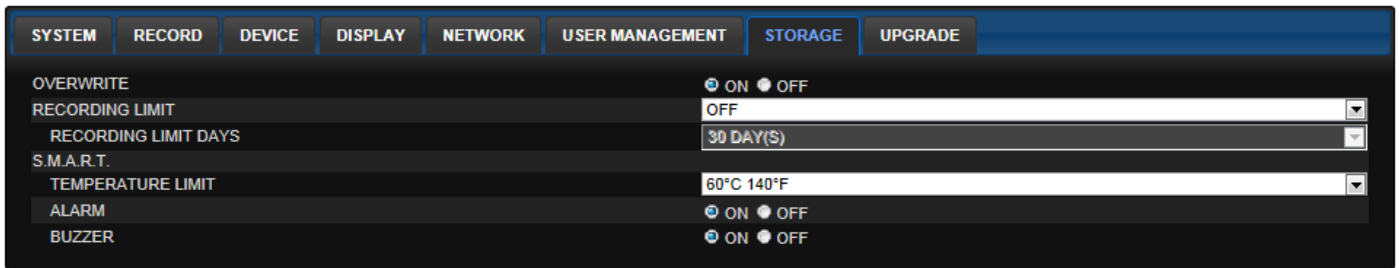
Select the **USER MANAGEMENT** tab to change the USER MANAGEMENT password.

SYSTEM	RECORD	DEVICE	DISPLAY	NETWORK	USER MANAGEMENT	STORAGE	UPGRADE
USER	ADMIN						
CHANGE	KEEP						
NEW PASSWORD							
CONFIRM PASSWORD							

- **USER**
 - **CHANGE:** If logged in as ADMIN, user can change password for ADMIN and USER1/2/3.
 - **NEW PASSWORD:** Enter new password.
 - **CONFIRM PASSWORD:** Re-enter new password to confirm.

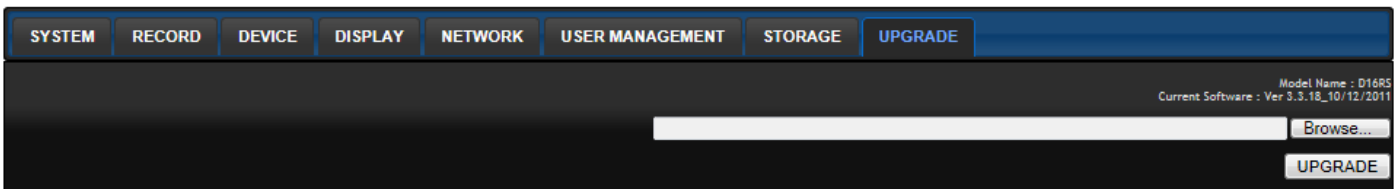
7-7-7. Storage

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



- **OVERWRITE:** To continue recording by overwriting when the hard disk becomes full, check the checkbox.
- **RECORD LIMIT:** Sets whether to limit or not the recording data storage period.
- **S.M.A.R.T.:** Sets the TEMPERATURE LIMIT of the Hard Disk to trigger the ALARM and the BUZZER.

7-7-8. Remote Upgrade




Shows the current Firmware version installed on DVR.

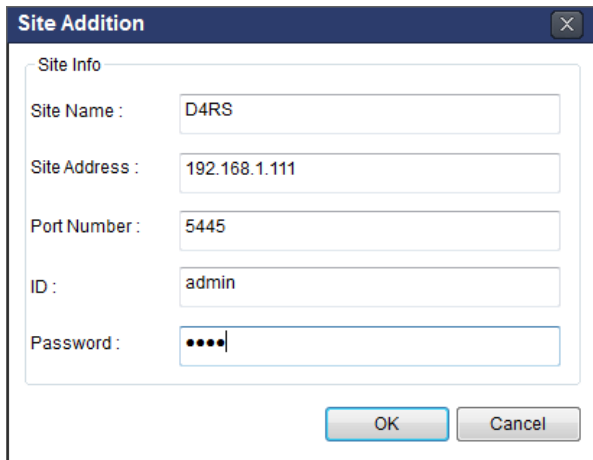
- **Browse:** Select BROWSE to locate the firmware file.
- **Upgrade:** Select UPGRADE to upgrade the firmware of the DVR.

7-8. Operation

7-8-1. Addition, Delete, and Modify of DVR Sites

7-8-1-1. Addition of Sites

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

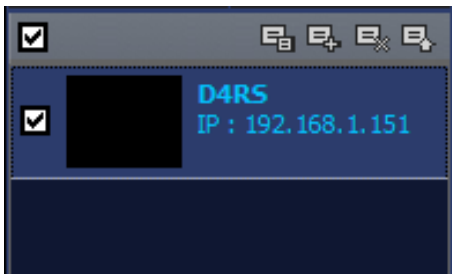


The 'Site Addition' dialog box contains the following fields:

Field	Value
Site Name	D4RS
Site Address	192.168.1.111
Port Number	5445
ID	admin
Password	••••

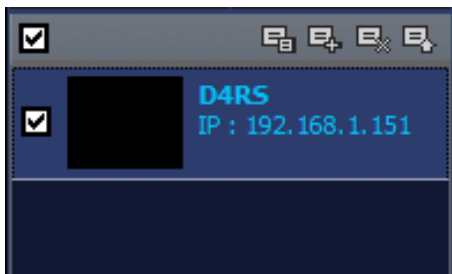
Buttons: OK, Cancel


- **Site Name:** Input a name that properly describes a site.
 - **IP Address:** Input IP address (Public IP address of a router that DVR is connected.) or Domain name
 - **Port Number: Default Port Number is “5445”.**
 - **ID:** Input ID of DVR. **Default ID is “admin”.**
 - **Password:** Input network password of DVR. **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

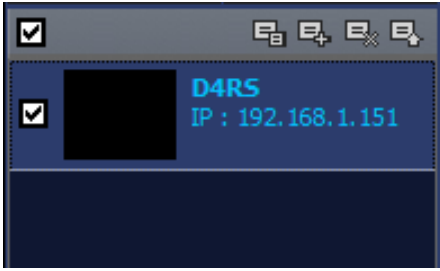
1. Select the site/sites to delete from the directory window.




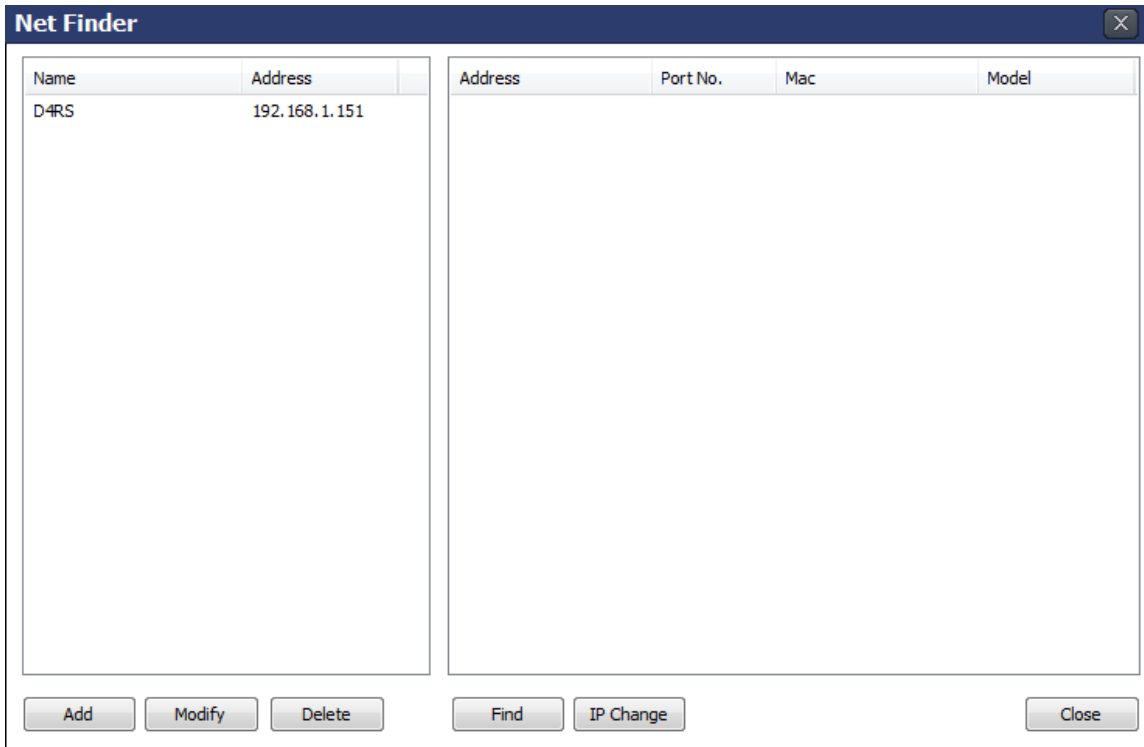
2. Click  SITE DELETE button. And then the selected site/sites is/are deleted.

7-8-1-3. Modify of Sites

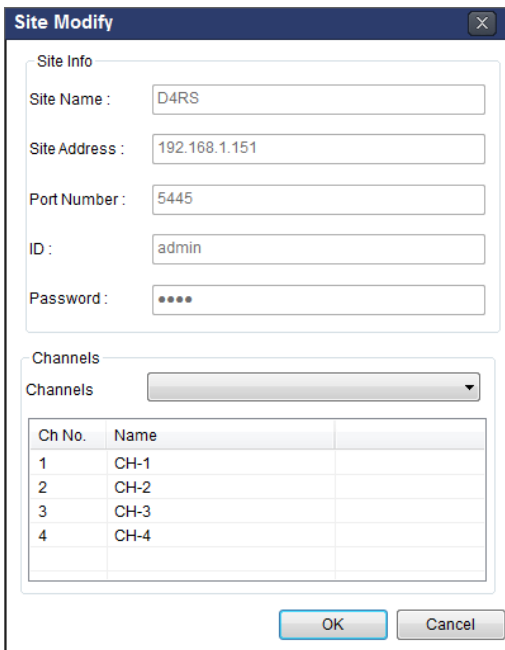
1. Select the site/sites to modify from the directory window.



2. Click  NET FINDER button. And then the following window will be displayed as below.



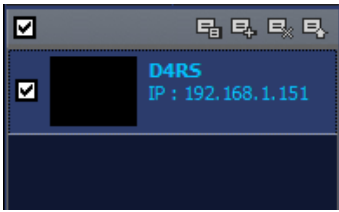
3. Click MODIFY button. And then the modified information is displayed as below.




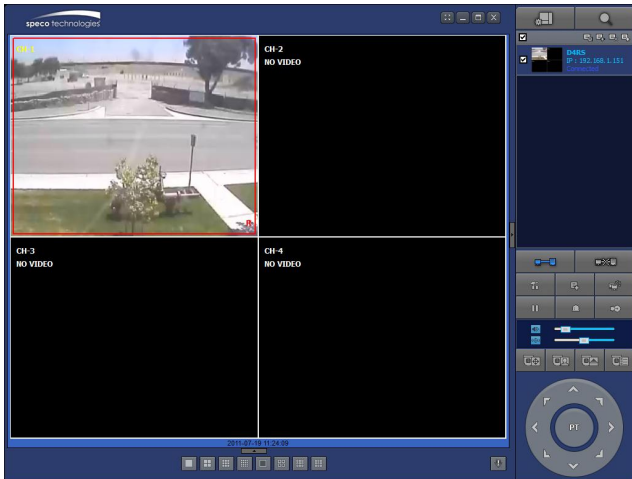
7-8-2. Connect and Disconnect

7-8-2-1. Connect

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

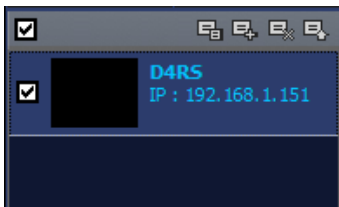


2. Click  CONNECT button, and then site/sites displays/display as connected.



7-8-2-2. Disconnect

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

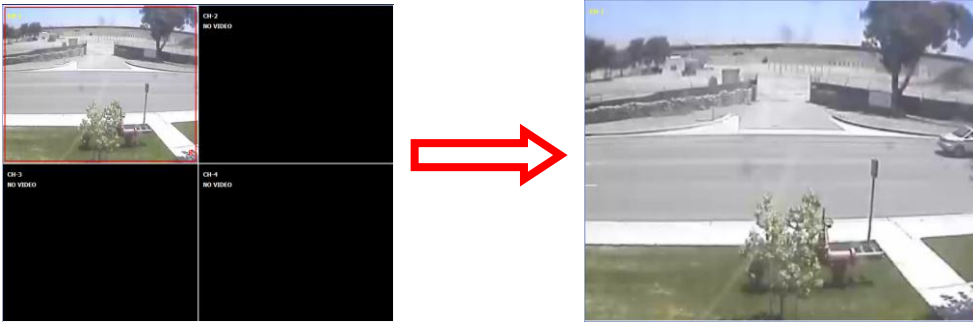



2. Click  DISCONNECT button, and then selected site/sites disconnected.

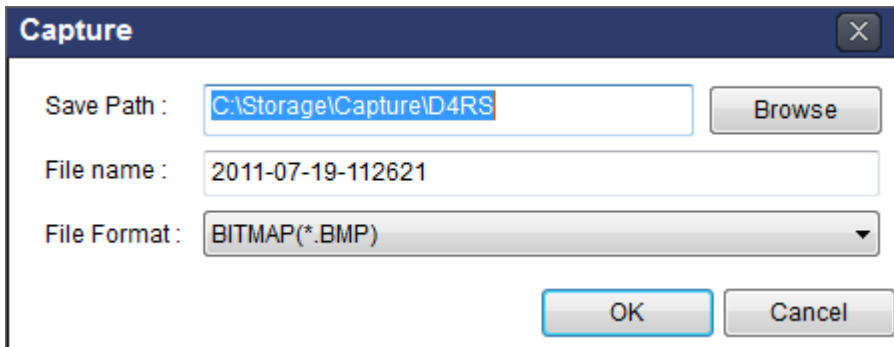


7-8-3. Still-image Capture During Live

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

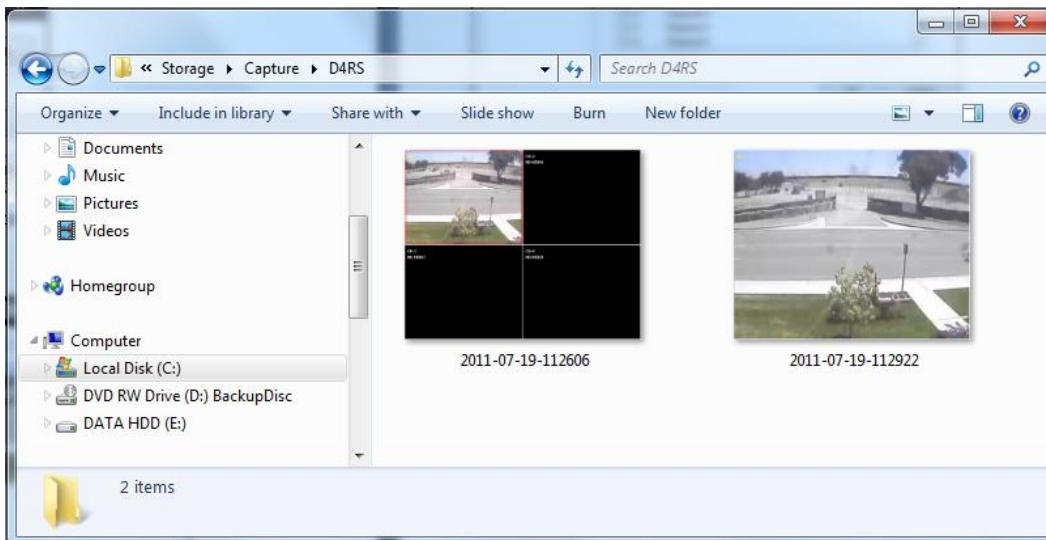


2. Click  CAPTURE button. And then a Capture window will be displayed as below.




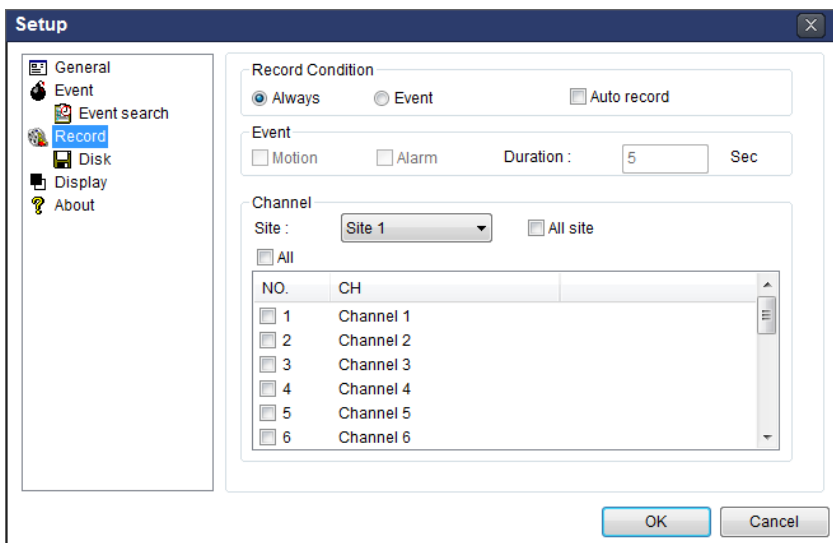
3. Set Save Path, File Name, and File Format. And then click OK button.

4. Still image is saved as set in Capture window.

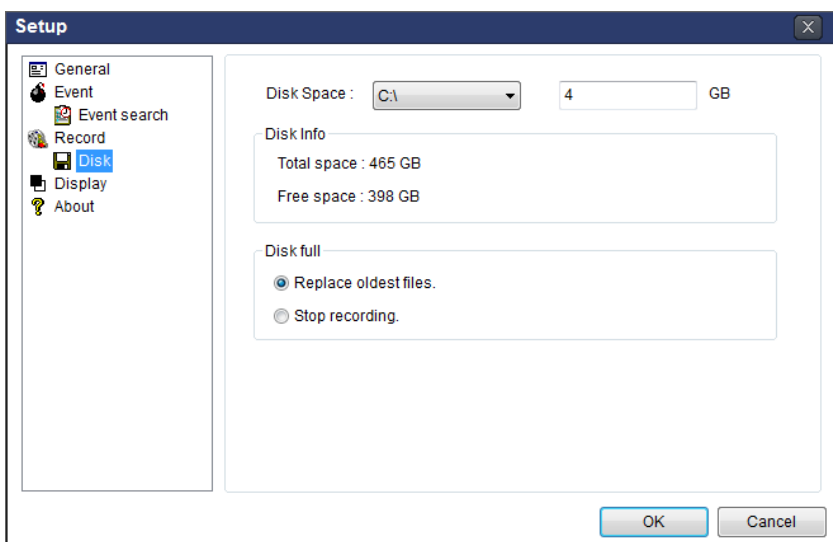



7-8-4. Recording Video on Local PC During Live

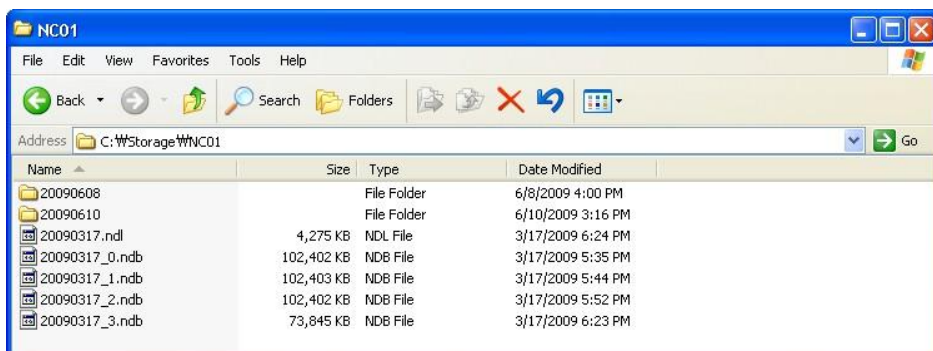
1. Click  SETUP button. And then a setup window will be displayed as below.
2. Select Record and set the values.



3. Select Disk and set the values.




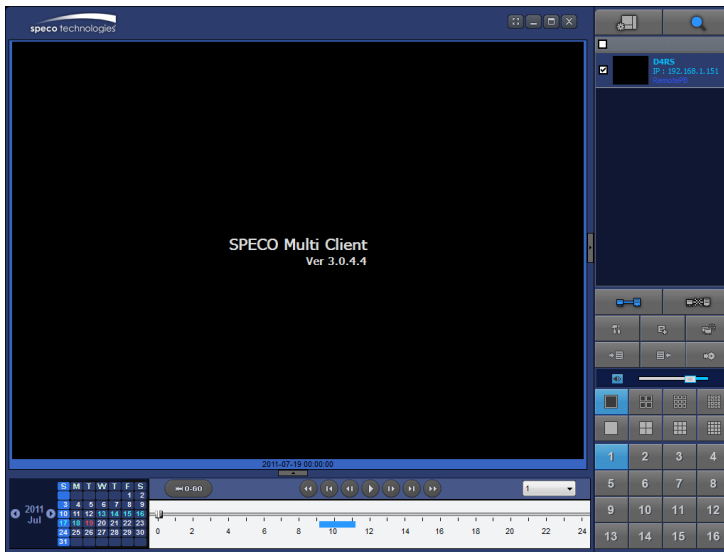
4. Click  RECORD ON button. And the color of button is changed.
5. Live video data is recorded as set in Record and Disk setup. These video data can be searched and play-backed with Local Playback.




7-8-5. Local Playback and Remote Playback

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

1. Click  LOCAL PLAYBACK. And then Playback Window will be displayed over the Live Window.

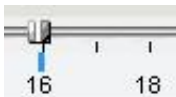


2. Select site/sites to connect from the directory window.

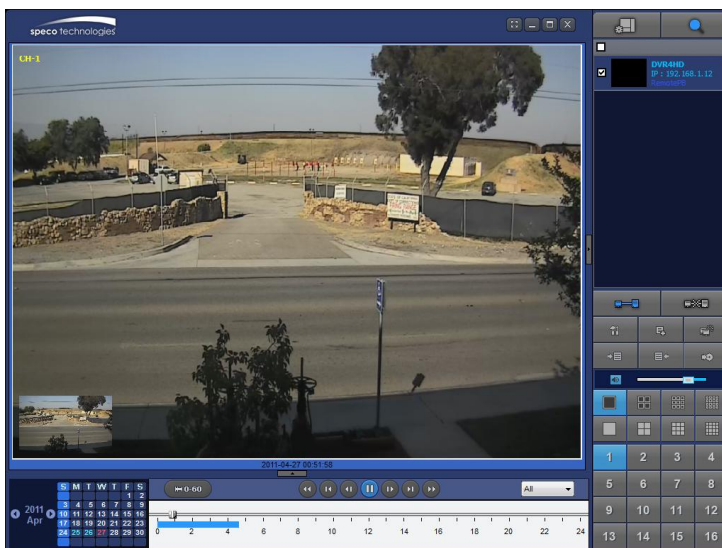
3. Click  CONNECT button. And then Green bar displays on Search calendar and timeline scale window.



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




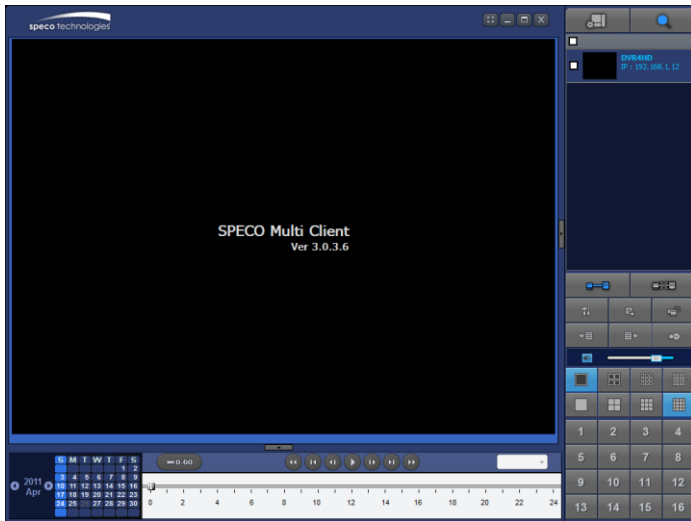
7. Video data that is recorded on local PC will be play-backed.




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

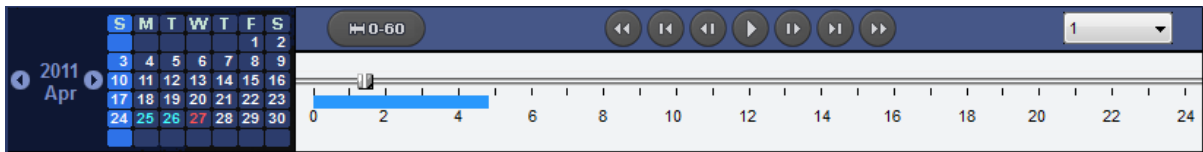
7-8-5-2. Playback of Recorded Video on Remote DVR

1. Click  REMOTE PLAYBACK. And then Playback Window will be displayed over the Live Window.

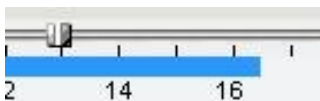


2. Select the site to connect from the directory window.

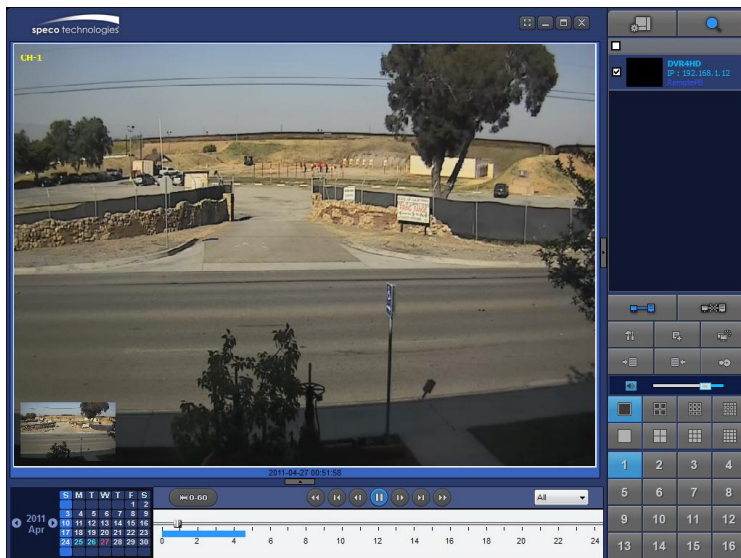
3. Click  CONNECT. And then Green bar displays on Search calendar and timeline scale window.



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 DVR is play-backed.



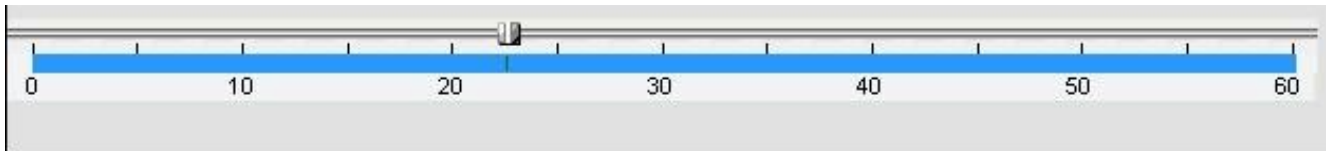
7-8-6. AVI Backup during Playback


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

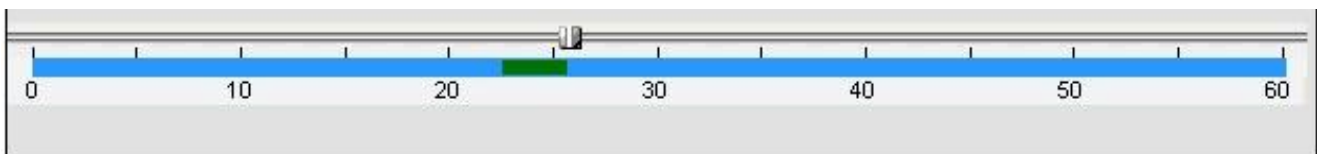
1. Double-click the target channel to backup.
2. Select the beginning time by using the search calendar and timeline scale bar.




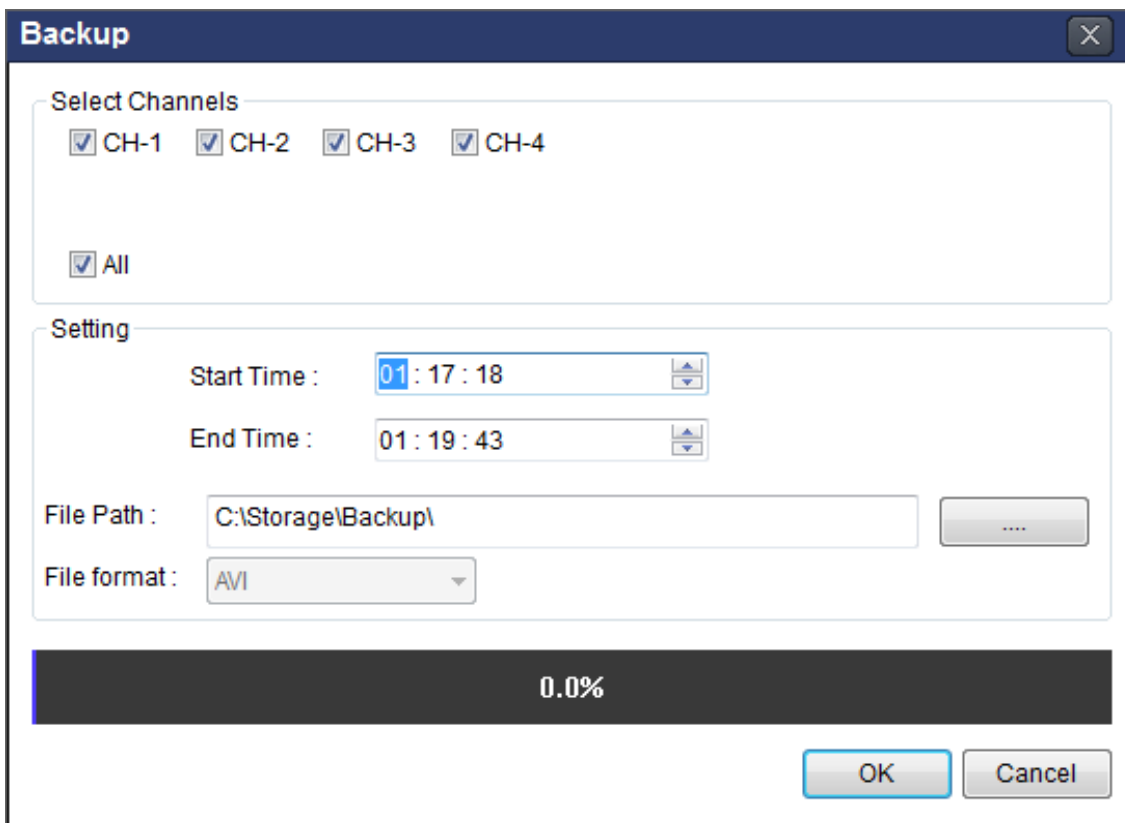
3. Click  EZCOPY START button on the timeline scale to select the beginning point of the backup.



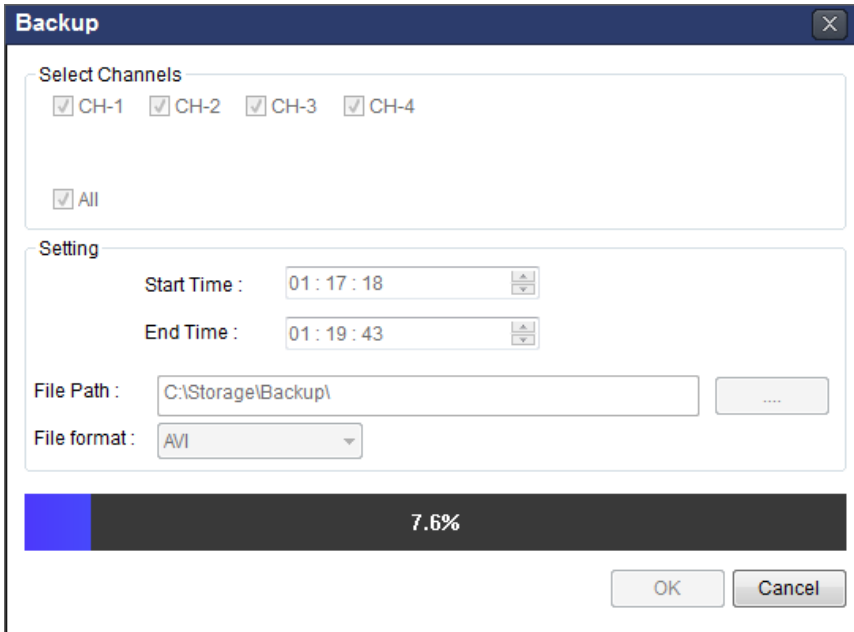
4. Click  EZCOPY END button on the timeline scale to select the ending point of the backup. Then, the selected starting point and the ending point on the timeline scale bar will be marked in green.



5. Click  BACKUP. And then the BACKUP window will be displayed 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 using Window Media Player™ or other media player that is compatible with AVI format video.



8. Network Access Using the Web-Browser Viewer

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

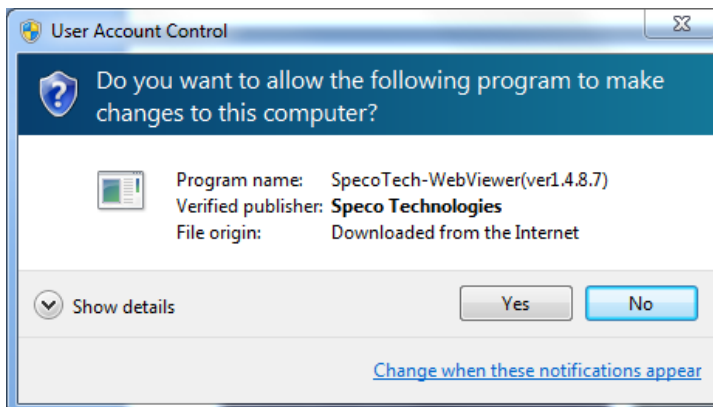
1. Check the IP address of the DVR from SETUP>SYSTEM>DESCRIPTION>IP ADDRESS or
2. Input the IP address or Domain name address that you pre-registered.



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



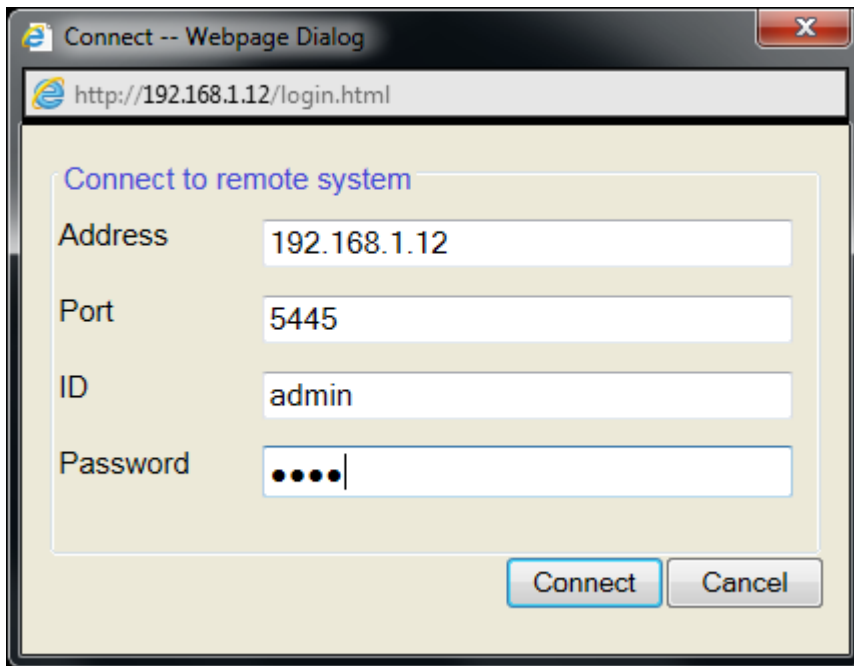
4. Click "Install" to download and install the ActiveX control.



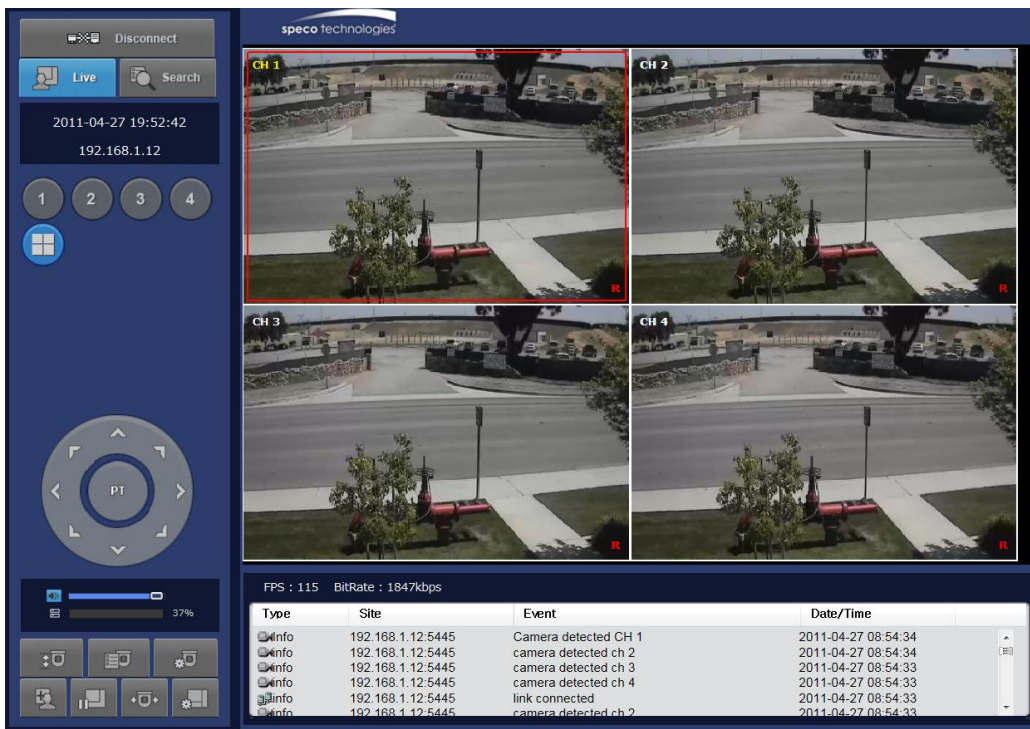
5. The Web Browser Viewer will be displayed as below after the ActiveX installation



6. Click the CONNECT button on the Left upper corner of web-viewer. Then "Connect" dialog is displayed.



- **Site Name:** Input a name that properly describes a site.
 - **IP Address:** Input IP address (Public IP address of a router that DVR is connected.) or Domain name
 - **Port Number: Default Port Number is “5445”.**
 - **ID:** Input ID of DVR. **Default ID is “admin”.**
 - **Password:** Input network password of DVR. **Default Password is “1111”.**
7. Then the cameras connected to the DVR are displayed on the screen.
 8. Use mouse scroll to digitally zoom in and out from a single channel display.



9. Network Access Using the Smart Phone Viewer



Notice

Data Usage will be applied if there is no Wi-Fi connection. Please check with your Phone Carrier.

9-1. App Viewer for iPhone

1. Enter the Apple App Store.





2. Search "Speco Player" in the App Store.

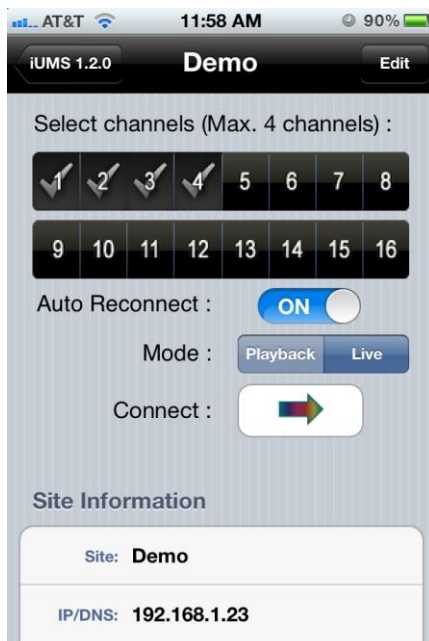


Notice

SPECO **Player** is for the RS, WRS and HD series DVRs. SPECO VIEWER is not compatible with the T Series DVR's (TH, TN or TL) or the PC Series DVR's.

9-1-1. Live

1. Open the installed "Speco Player" 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 the channels to monitor up to 4 channels. Select Mode as 'Live'  and click 'Connect' .



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



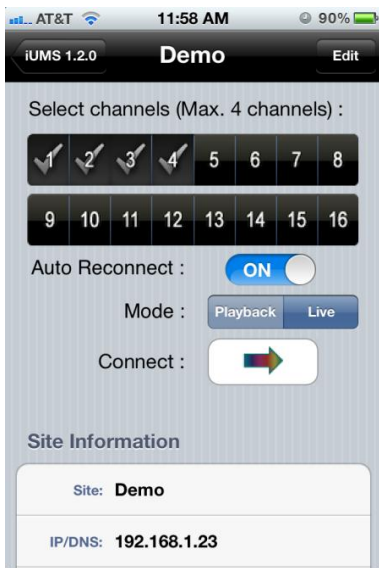
10-3-2. PTZ Control

To control the PTZ functions of the camera, tap the menu button. Then PTZ menu icons will display. Using the PTZ icon on the screen, control PTZF control.

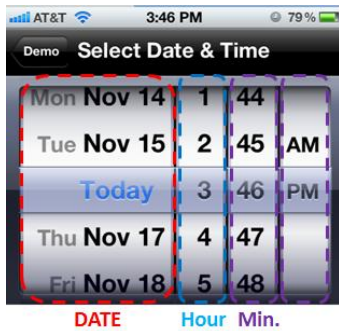


10-3-3. Playback

1. Select the registered device and select the channels up to 4 channels to search and playback. Select Mode as 'Playback' and click 'Connect'. Then the search window will display.



2. Select the date, hour, minute, AM/PM and click 'Connect & Play'.



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



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



9-2. App Viewer for Android Phone

1. Enter the Android Market.



2. Search "Speco Player" in the Android Market and install the "Speco Player" app.

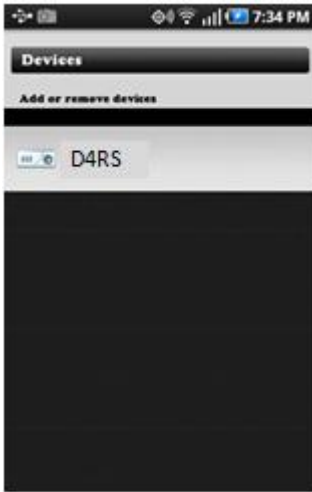


Notice

SPECO **Player** is for the RS, WRS and HD series DVRs. SPECO VIEWER is not compatible with the T Series DVR's (TH, TN or TL) or the PC Series DVR's.

9-2-1. Live

1. Open the installed "Speco Player" 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 the channels to monitor up to 4 channels. Then press SELECT button.



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

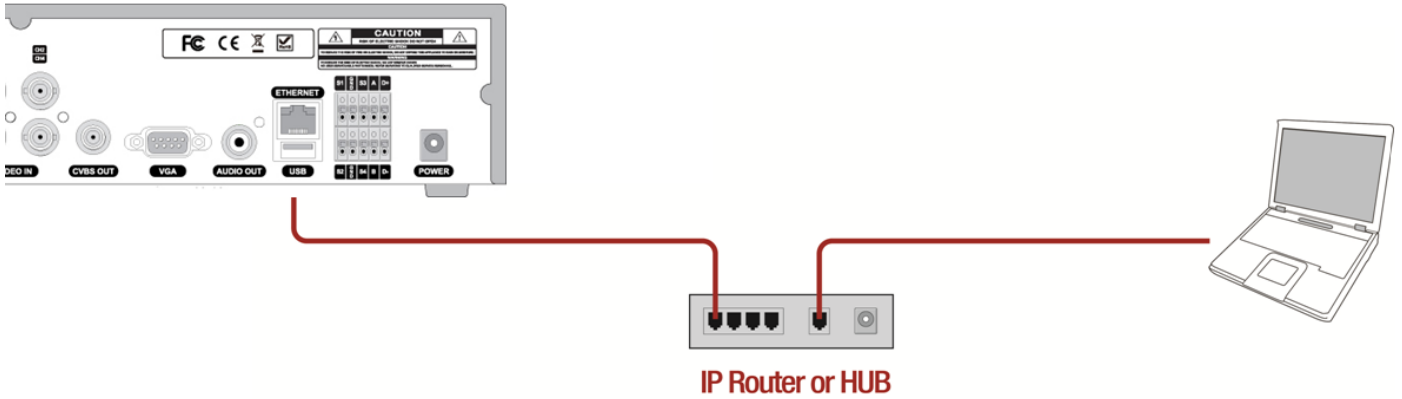


9-2-2.PTZ Control

To control the PTZ function of the camera, tap the channel screen, then the channel name will be highlighted in Yellow. Using the PTZ menu icons on the screen, control PTZF control.



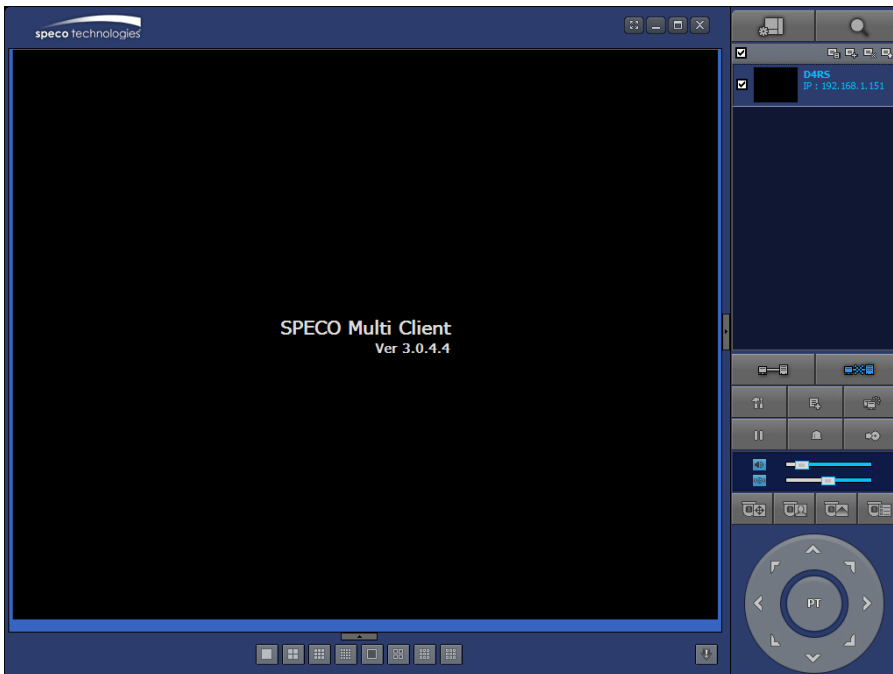
APPENDIX: Network Connection - LAN

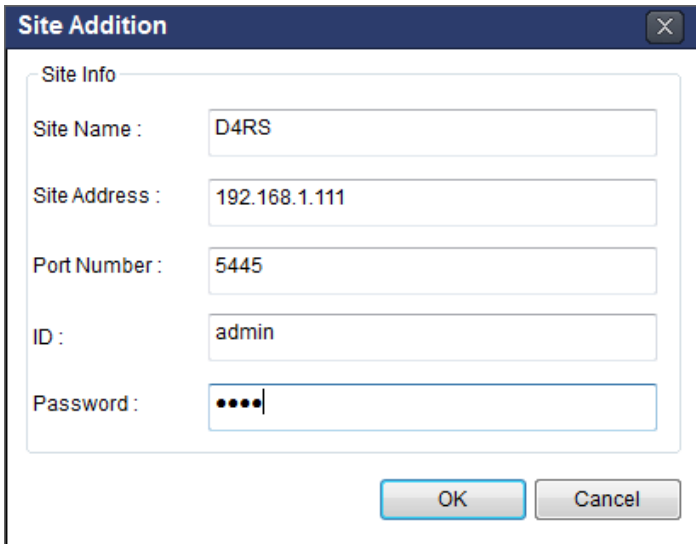


1. Install the network client software from the supplied CD.
2. Check the IP address from SETUP > SYSTEM > DESCRIPTION or SETUP>NETWORK of DVR.



3. Run the network client software.





Site Addition

Site Info

Site Name : D4RS

Site Address : 192.168.1.111

Port Number : 5445

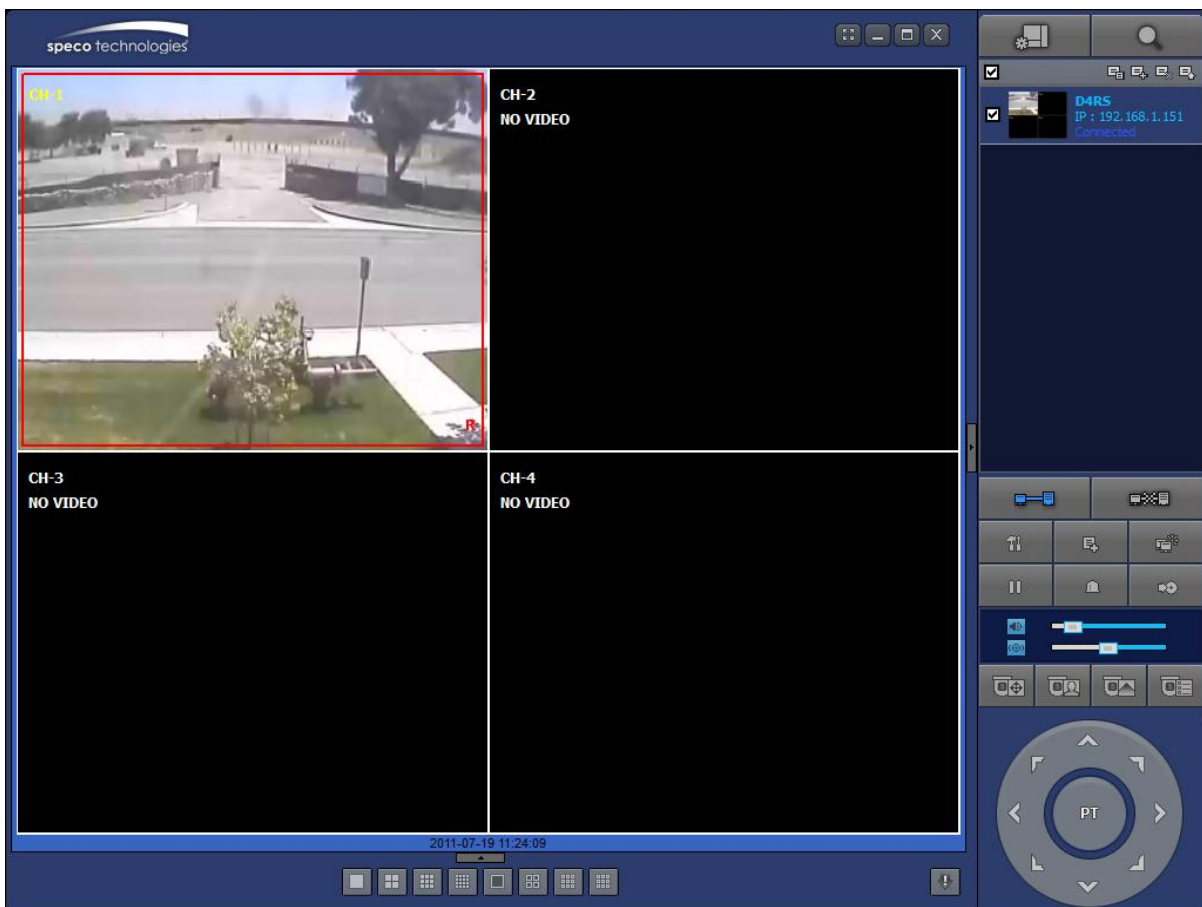
ID : admin

Password : ●●●●

OK Cancel

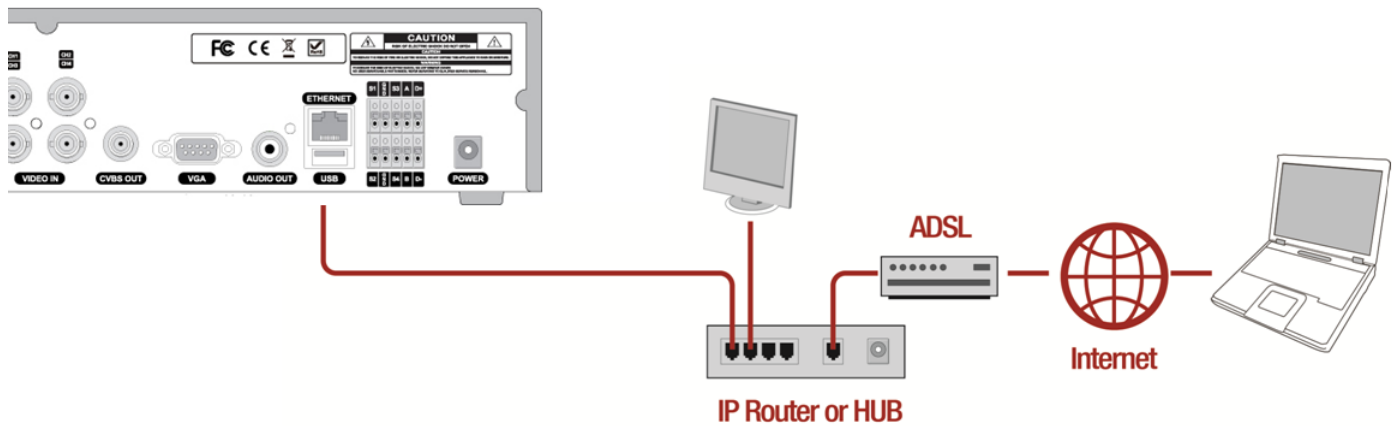
4. Input Site Name, Site Address (IP address), Port Number, and Password on the connect window.
 - **Site Name:** Input a name that properly describes a site.
 - **IP Address:** Input IP address
 - **Port Number: Default Port Number is “5445”.**
 - **ID:** Input ID of DVR. **Default ID is “admin”.**
 - **Password:** Input network password of DVR. **Default Password is “1111”.**

5. Select a site by checking the box, and Press  button to connect to the site.



APPENDIX: Network Connection – Internet and 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>DDNS and set the DDNS SERVER to ON.



If you set **ezDDNS** to ON, the host name is automatically generated and registered.

2. Go to SETUP>NETWORK>DDNS>HOST NAME. Manually enter a domain name using the virtual keyboard and click ENTER button.



- When a manual host name is completed, Go to SETUP>NETWORK>DDNS>SUBMIT/UPDATE and select ON to submit the settings on the SPECOD DNS.

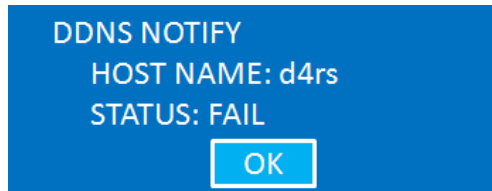
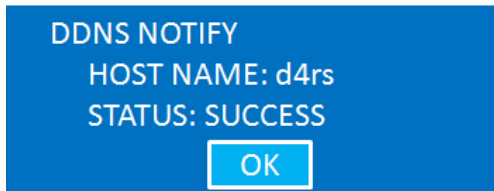
Once the setting is completed, the DDNS address will be:

<http://hostname.ddns.specoddns.net>

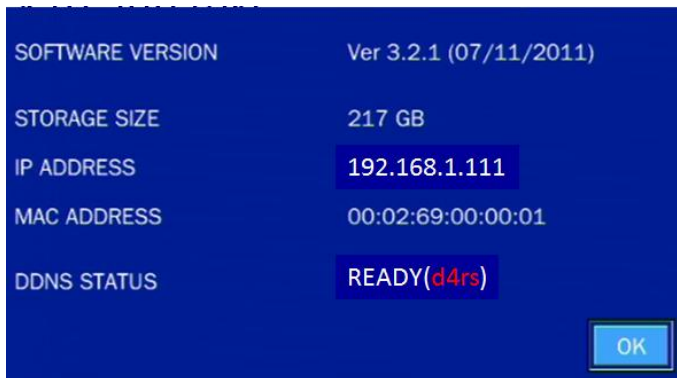
For example, if you enter the host name as "D4RS", then the address will be:

<http://d4rs.ddns.specoddns.net>

- When DDNS setting is done, click the APPLY button. Otherwise DDNS setting will not be applied.
- When you exit SETUP menu, DDNS NOTIFY window will pop up.



- DDNS registration status can be checked from SYSTEM INFORMATION or SETUP>SYSTEM>DESCRIPTION>DDNS STATUS



- Check the NETWORK PORT (Default: 5445), WEB PORT (Default: 80), and the IP Address of the DVR from SETUP>NETWORK.

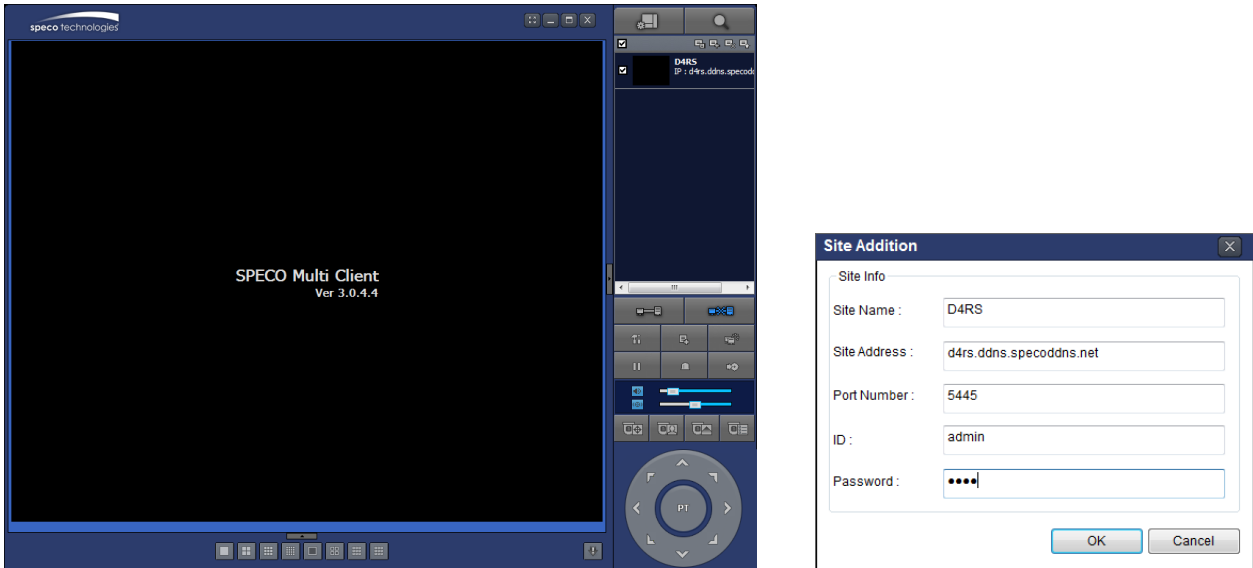


8. Port forward the NETWORK PORT (Default: 5445) and WEB PORT (Default: 80) of the private IP Address of the DVR on the network router.



Please refer to the user manual and guide for the detailed steps for port forwarding for specific router model.

6. Run the network client software.



7. Input Site Name, Site Address (IP address), Port No., and Password on the connect window.

- **Site Name:** Input a name that properly describes a site.
- **IP Address:** Domain name or Public IP address of a router that DVR is connected.
- **Port Number:** Default Port Number is “5445”.
- **ID:** Input ID of DVR. Default ID is “admin”.
- **Password:** Input network password of DVR. Default Password is “1111”.

8. And select the OK button. Then, press  button after checking the left check box.



APPENDIX: E-SATA CONNECTION



Please read the following instructions before using the E-SATA port. Failure to do so may cause serious damage to the recorded video. SPECO is not responsible for data loss caused by improper usage.

- Use **ONLY** a new HDD or a HDD that is pre-formatted on a PC.
- Turn off the DVR before plugging the E-SATA HDD.
- **DO NOT** disconnect the E-SATA port while the DVR power is on.
- The purpose of the E-SATA port is to extend recording capacity.
- Once connected, **DO NOT** remove or disconnect the E-SATA port from the DVR.
- The E-SATA port is does not support the hot swappable function.