

BLK-DH3 Series H.264 960H 4/8/16-Channel DVR User Manual

Products: BLK-DH3004D, BLK-DH3008D, BLK-DH3016D



PLEASE READ THIS MANUAL BEFORE USING YOUR RECORDER, and always follow the instructions for safety and proper use. Save this manual for future reference.



Operate this system only in environments where the temperature and humidity is within the recommended range. Operation in temperatures or at humidity levels outside the recommended range may cause electric shock and shorten the life of the product. Refer to the specifications for each system component for more information.

LEGAL NOTICE

Observint Technologies (Observint) products are designed to meet safety and performance standards with the use of specific Observint authorized accessories. Observint disclaims liability associated with the use of non-Observint authorized accessories.

The recording, transmission, or broadcast of any person's voice without their consent or a court order is strictly prohibited by law.

Observint makes no representations concerning the legality of certain product applications such as the making, transmission, or recording of video and/or audio signals of others without their knowledge and/or consent. We encourage you to check and comply with all applicable local, state, and federal laws and regulations before engaging in any form of surveillance or any transmission of radio frequencies.

The Black Line is a trademark of Observint Technologies.

Microsoft, Windows, Windows Media, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Android and Google Play are a trademark of Google Inc. Use of this trademark is subject to Google Permissions. Apple, iPhone, iPod touch, and iPad are registered trademarks of Apple Inc. Intel and Pentium are trademarks of Intel Corporation in the U.S. and/or other countries.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Observint disclaims any proprietary interest in trademarks and trade names other than its own.

No part of this document may be reproduced or distributed in any form or by any means without the express written permission of Observint.

© 2013, 2014 by Observint Technologies. All Rights Reserved.

11000 N. Mopac Expressway, Building 300, Austin, TX 78759
For Sales and Support, contact your distributor.

Table of Contents

SECTION 1	Introduction	1
SECTION 2	Hardware Overview and Setup	2
	2.1 Front panel controls and indicators (all models)	2
	2.2 Back panel connectors	4
	2.2.1 BLK-DH3004D	4
	2.2.2 BLK-DH3008D	5
	2.2.3 BLK-DH3016D	6
	2.2.4 RS485, sensor and alarm termination block	7
	2.3 Remote Control	8
	2.4 DVD-R/W Optical drive installation	9
	2.5 HDD installation	12
	2.5.1 Installing a 2nd internal HDD	16
SECTION 3	System Setup	18
	3.1 Starting the system for the first time	18
	3.1.1 Entering the SETUP menu	19
	3.2 DISPLAY menu	20
	3.3 RECORD menu	22
	3.3.1 Recording Schedules	23
	3.4 DEVICE menu	24
	3.5 STORAGE menu	27
	3.6 SYSTEM menu	28
	3.7 SECURITY menu	30
	3.8 NETWORK menu	33
	3.8.1 Network ports	35
	3.9 CONFIG menu	35
	3.10 QUICK SETUP menu	37
SECTION 4	Live, Search, and Playback	39
	4.1 SEARCH menu	41
	4.1.1 TIME-LINE search	42
	4.1.2 EVENT search	43
	4.1.3 GO TO FIRST TIME search	43
	4.1.4 GO TO LAST TIME search	43
	4.1.5 GO TO SPECIFIC TIME search	44

TABLE OF CONTENTS

	4.2 ARCHIVE search	44
	4.2.1 Log search	45
	4.3 PLAY mode	46
	4.4 Backup video clip	48
SECTION 5	PTZ Control	50
SECTION 6	Backup	51
	6.1 Still image BACKUP in Live mode	51
	6.2 Still image BACKUP in Playback mode	51
	6.3 Video BACKUP	52
	6.4 BACKUP still images or video from the ARCHIVE list	53
	6.5 Playing backed up video clips	54
SECTION 7	Remote Client Software	56
	7.1 PC Requirements	56
	7.2 Installing the Remote Client	56
	7.3 Remote Client initial display	57
	7.4 Setup	59
	7.4.1 General Setup	59
	7.4.2 Site Setup	60
	7.4.3 Event Setup	62
	7.4.4 Event Search Setup	62
	7.4.5 Record Setup	63
	7.4.6 Record Disk Setup	64
	7.4.7 Display Setup	64
	7.5 Connecting to a DVR	65
	7.5.1 Bidirectional Audio	65
	7.6 Remote Search mode and functions	66
	7.6.1 Searching for and playing video recorded by the DVR	67
	7.6.2 Backing up video from the DVR on the Remote Client PC	68
	7.6.3 Image capture	70
SECTION 8	Multi Client Software	71
	8.1 PC Requirements	71
	8.2 Installing the Multi Client	71
	8.3 Multi Client initial display	72
	8.3.1 Using Net Finder	74
	8.3.2 Event List	76

8.4	Setup	76
8.4.1	General Setup	76
8.4.2	Event Setup	77
8.4.3	Event Search Setup	77
8.4.4	Record Setup	78
8.4.5	Record Disk Setup	79
8.4.6	Display Setup	79
8.4.7	About Setup	80
8.5	Connecting to a DVR	80
8.5.1	Bidirectional Audio	81
8.5.2	Capture	81
8.5.3	Record	82
8.6	Remote playback and backup	82
8.6.1	Remote playback	82
8.6.2	Backing up video from the DVR on the Multi Client PC	85
8.7	Local playback	86
8.7.1	AVI backup during playback	88
SECTION 9	WebViewer	90
9.1	Connecting to the DVR with Firefox®, Chrome™ or Safari	90
9.2	Using WebViewer	93
9.3	Setup	96
9.3.1	Setup DISPLAY	96
9.3.2	Setup RECORD	97
9.3.3	Setup DEVICE	97
9.3.4	Setup STORAGE	99
9.3.5	Setup SYSTEM	99
9.3.6	Setup SECURITY	100
9.3.7	Setup NETWORK	101
9.3.8	Setup UPGRADE	102
9.3.9	Setup INFORMATION	102
9.4	DVR Search	102
9.4.1	Playing recorded video	104
9.5	Backup recorded video	105
9.5.1	Capture	105
SECTION 10	Blackhawk for Mac™	107



	10.1 Getting started	107
	10.1.1 Finding the DVR network settings	107
	10.1.2 Finding your Apple® Mac™ network settings	108
	10.1.3 Connecting to your DVR	109
	10.2 Installing and starting BlackHawk for MAC	109
	10.2.1 Connecting to your DVR	110
	10.3 Live window	110
	10.3.1 Using Site Entry registration	112
	10.4 Closing the application	113
	10.5 Search and Playback Video	113
	10.6 Search for and playback video	116
SECTION 11	BLACKHAWK Mobile Phone Apps	117
	11.1 BLACKHAWK for iPhone	117
	11.1.1 Installing BLACKHAWK	117
	11.1.2 Live viewing	117
	11.1.3 PTZ Control	119
	11.1.4 Playback	119
	11.2 BlackHawk for Android™	120
	11.2.1 Installing BlackHawk	121
	11.2.2 Live	121
	11.2.3 PTZ Control	122
	11.2.4 Playback	122
	11.2.5 Screen Shot and Viewer	124
SECTION 12	Specifications	125
APPENDIX A	DVR Compatible Hard Disk Drives	127
APPENDIX B	Estimated Storage Capacity	130
APPENDIX C	Device Log	131
APPENDIX D	DDNS setup with obsddnscenter.com	132
APPENDIX E	DVR Setup Menu Components	136

SECTION 1

Introduction

Features

- H.264 video compression
- HDMI 1080p Video Output
- QUADPLEX: Simultaneous live or playback while recording, network transfer, and backup
- USB 2.0 port for backup, firmware upgrade, configuration export/import, or USB mouse
- Individual channel operation such as FPS, quality, recording mode, & detection zone
- Various network access: network client SW, web viewer, smart phone APP, and CMS
- Remote setup and remote upgrade
- Remote access via PC, MAC®, or smart phones
- Recording by schedule, continuous, alarm, motion, or continuous
- Free DDNS server
- Bandwidth control
- E-mail event notification
- NTP (Network Time Protocol)
- Watermark
- Synchronized audio
- Bi-directional audio
- Time stamp over backup data
- Easy and various data backup via DVD, USB flash drive, USB external HDD, and network
- HDD S.M.A.R.T. status check and alert via e-mail or internal beep
- USB mouse, IR remote control
- Multi OSD languages
- AVI backup
- Network Access via WebViewer (embedded browser-based client), UMS Client (for monitoring a single DVR), Multi Client (for monitoring multiple DVRs concurrently), and smartphone apps for Apple® iPhone® and Android™.

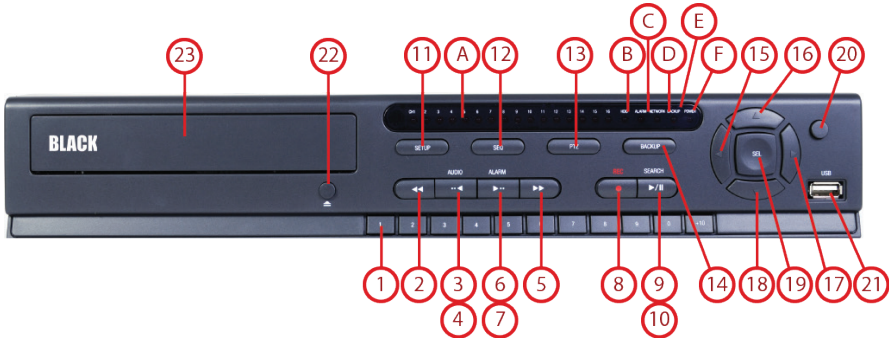
Your DVR includes:

- DVR with DVD-R/W drive and hard disk drive (HDD)
- Software CD containing the UMS Client, Multi Client, and the DVR user manual (this document)
- Remote Control
- Power Adaptor (12 Vdc, 5A) and cable
- Mouse
- Brackets, screws and cables for HDD and DVR (2 sets)
- Quick Start Guide document

SECTION 2

Hardware Overview and Setup

2.1 Front panel controls and indicators (all models)



4/8/16 Channel DVR Front Panel

Table 1. Front Panel LED Indicators

No.	Name	Description
A	CH1~16	Indicates that the channel is being recorded.
B	HDD	Indicates that the system is accessing the hard disk.
C	ALARM	Indicates when a sensor is triggered or motion is detected.
D	NETWORK	Indicates that a network client is connected.
E	BACKUP	Indicates that a USB or DVD-R/W storage device is storing images or video.
F	POWER	Indicates that the system is switched on.

Table 2. Front Panel Buttons

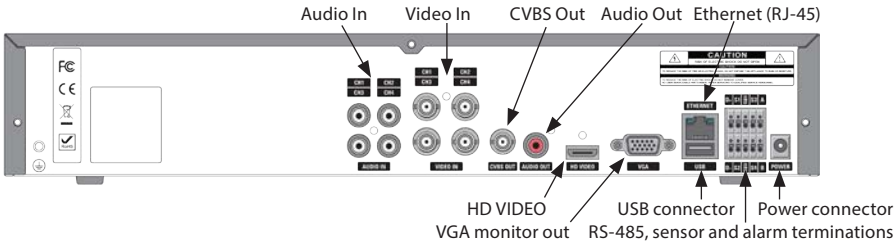
No.	Name	Description
1		Channel keys. For channel 10, press the 0 key. For channel 11, press the +10 and 1 key. For channel 16, press the +10 and 6 key.
2		Press to rewind the video in playback mode.
3		Press to select audio mode such as SINGLE (highlighted channel), MIX (combine all channels), or MUTE (all channels).

SECTION 2: HARDWARE OVERVIEW AND SETUP

No.	Name	Description
4		Jump/step backward. In playback mode, the playback position moves 60 seconds backward.
5		Press to fast forward the recording in playback mode.
6		Press to enable/disable ALARM operation.
7		Jump/Step forward. In playback mode, the playback position moves 60 seconds forward.
8		Press to start or stop manual recording.
9		Press to open the SEARCH menu in live display mode.
10		Press to play/pause the recording in playback mode.
11		Press to enter SETUP menu.
12		Enable/disable the automatic sequence display of channels in full screen, quad-split, and 9-split display mode.
13		Press to control Pan/Tilt/Zoom operations.
14		Press to capture live or playback mode video in JPEG format.
15	 (LEFT)	Press to move left or to change the values in Setup mode. When entering a password, it inserts a 4.
16	 (UP)	Press to move up the menu in Setup mode. When entering a password, it inserts a 1.
17	 (RIGHT)	Press to move right or to change the values in Setup mode. When entering a password, it inserts a 2.
18	 (DOWN)	Press to move down the menu in Setup mode. When entering a password, it inserts a 3.
19		Press to select desired menu item or to store the setup value.
20		Press for temporary storage of the changed value or to return to the previous menu screen.
21	USB Port	Use with a USB flash drive to archive still images and videos, and upgrade firmware, or use to connect a USB mouse to the DVR.
22		To open and close the insert tray, press the button
23	DVD Drive	To save video, insert a CD-R/DVD-R

2.2 Back panel connectors

2.2.1 BLK-DH3004D

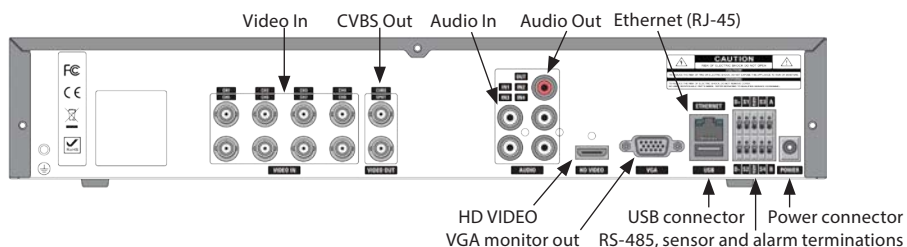


4-Channel DVR Rear Panel

Table 3. BLK-DH3004D Rear Panel Connectors

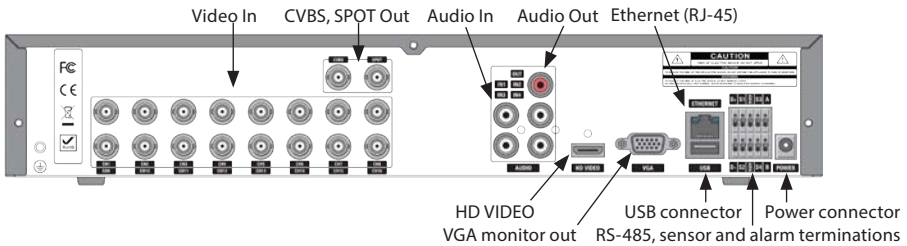
Name	Description
AUDIO IN	4 RCA connectors for audio input
VIDEO IN	4 BNC connectors for composite video input
CVBS	Composite video output
AUDIO OUT	1 RCA connector for audio output
ETHERNET	RJ-45 connector for LAN connection.
HD VIDEO	Connector for an HDMI monitor.
VGA	Connector for a VGA monitor.
USB	Use with a USB flash drive to archive still images and videos, and upgrade firmware, or use to connect a USB mouse to the DVR
RS-485, sensor and alarm terminations	See description below.
POWER connector	Connect DC12V 5A power adaptor

2.2.2 BLK-DH3008D

*8-Channel DVR Rear Panel***Table 4. BLK-DH3008D Rear Panel Connectors**

Name	Description
VIDEO IN CVBS, SPOT	8 BNC connectors for composite video input CVBS and SPOT composite video output
AUDIO IN AUDIO OUT	4 RCA connectors for audio input 1 RCA connector for audio output
HD VIDEO	Connector for an HDMI monitor.
VGA	Connector for a VGA monitor.
ETHERNET	RJ-45 connector for LAN connection.
USB	Use with a USB flash drive to archive still images and videos, and upgrade firmware, or use to connect a USB mouse to the DVR
RS-485, sensor and alarm terminations	See description below.
POWER connector	Connect DC12V 5A power adaptor

2.2.3 BLK-DH3016D



16-Channel DVR Rear Panel

Table 5. BLK-DH3016D Rear Panel Connectors

Name	Description
VIDEO IN CVBS, SPOT	16 BNC connectors for composite video input CVBS and SPOT composite video output
AUDIO IN AUDIO OUT	4 RCA connectors for audio input 1 RCA connector for audio output
HD VIDEO	Connector for an HDMI monitor.
VGA	Connector for a VGA monitor.
ETHERNET	RJ-45 connector for LAN connection.
USB	Use with a USB flash drive to archive still images and videos, and upgrade firmware, or use to connect a USB mouse to the DVR.
RS-485, sensor and alarm terminations	See description below.
POWER connector	Connect DC12V 5A power adaptor

2.2.4 RS485, sensor and alarm termination block

Use the back panel termination block to connect sensor, RS-485, and alarm out cables.



Pin block definitions:

D+, D-: RS-485 D+ and RS-485 D-

S1, GND: Sensor 1 input

S2, GND: Sensor 2 input

S3, GND: Sensor 3 input

S4, GND: Sensor 4 input

A, B: Alarm output

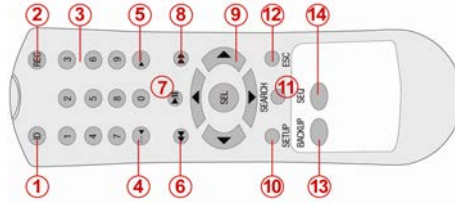
NOTE

S1 - S4 sensor inputs can be normally open (N.O.) or normally closed (N.C.). To configure the sensor type, go to **SETUP -> Device -> Sensor: Type**.

NOTE

A - B (alarm out) can be triggered by any single of combination of sensors and motion on or video loss in up to four camera channels. To configure alarm causing conditions, go to: **SETUP -> Device -> Alarm Out**.

2.3 Remote Control



Typical Remote Control

NOTE

The remote control provided with your DVR may appear different from the one shown above. However, the buttons function as described in the table below.

Table 6. Remote Control Button Functions

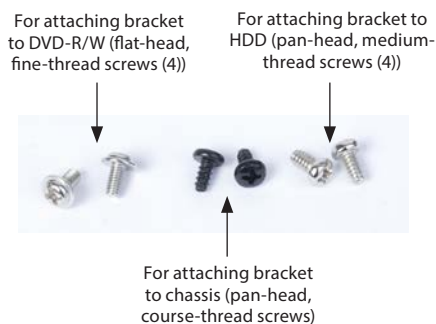
No.	Name	Function
1	ID	When a remote control ID number is setup in DVR, press this button before the number.
2	REC	To start and stop manual recording.
3	0 .. 9	To select channel (1, 2, 3, ...) or to enter a DVR ID number.
4	F/REW	During Playback – To move the playback position 60 seconds back. During Pause – To move the playback position 1 frame back.
5	F/ADV	During Playback – To move the playback position 60 seconds forward. During Pause – To move the playback position moves 1 frame forward.
6	REW	To rewind the recording. Press again to increase the rewind speed.
7	PLAY/PAUSE	To play or to pause the recording in playback mode.
8	FF	To fast forward the recording. Press again to increase the fast forward speed.
9	Direction Buttons	Press to move to menu items or select a channel.
10	SETUP	To open the SETUP menu.
11	SEARCH	To go to the 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)

2.4 DVD-R/W Optical drive installation

If your DVR does not include an internal DVD-R/W drive, use the following procedure to install one. The DVD-R/W can be used to archive stored data including video clips and snapshots. Your DVR will accommodate one standard-size desktop system DVD-R/W drive with a serial-ATA (SATA) interface. If your DVR was purchased without a DVD-R/W drive or HDD drive, a hardware kit, including mounting brackets, screws and cables is included with the DVR.



Mounting brackets (one pair per drive)



Screw types

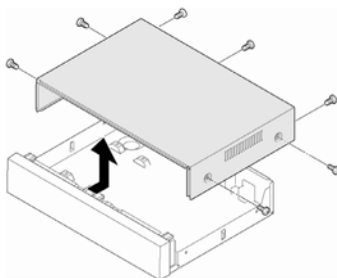
To install a DVD-RW drive, carefully follow the procedure below. Although this procedure is illustrated for a 16-channel DVR, it is identical for the 4- and 8-channel DVR.



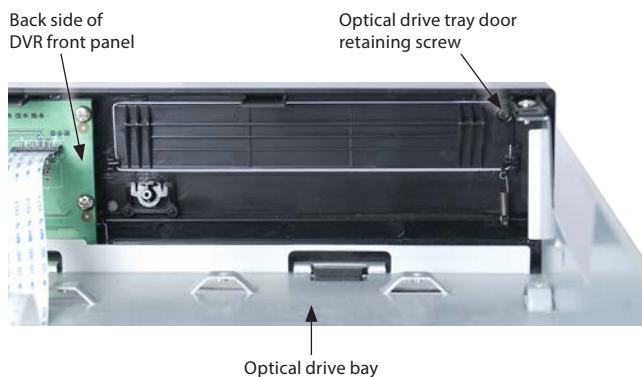
Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the DVD-R/W drive in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing.

1. If your DVR is powered on, use the menu system to perform a System Shutdown.
 - a. Right click anywhere on the live view screen, then click **SYSTEM SHUTDOWN** in the pop-up menu (see “3.1 Starting the system for the first time” on page 18), or click the SYSTEM SHUTDOWN icon on the taskbar.
 - b. Follow the on-screen instructions for shutting down the system.
2. Disconnect the power adapter from the back of the DVR.
3. Remove the top cover from the DVR by removing the three cover screws on the back of the chassis, and the two on each side. See the drawing below.

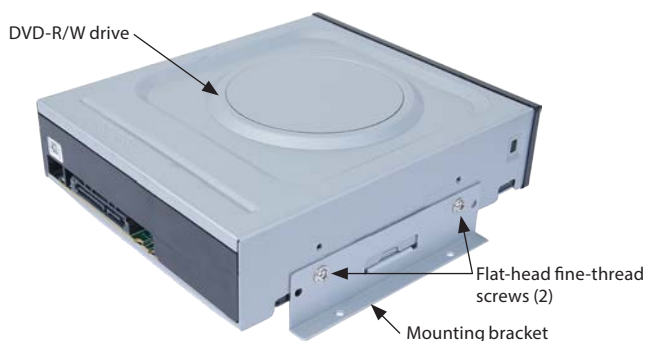
SECTION 2: HARDWARE OVERVIEW AND SETUP



4. Remove the optical drive tray door retain screw from the inside of the DVR front panel. See the picture below. Use a #1 Phillips screwdriver.



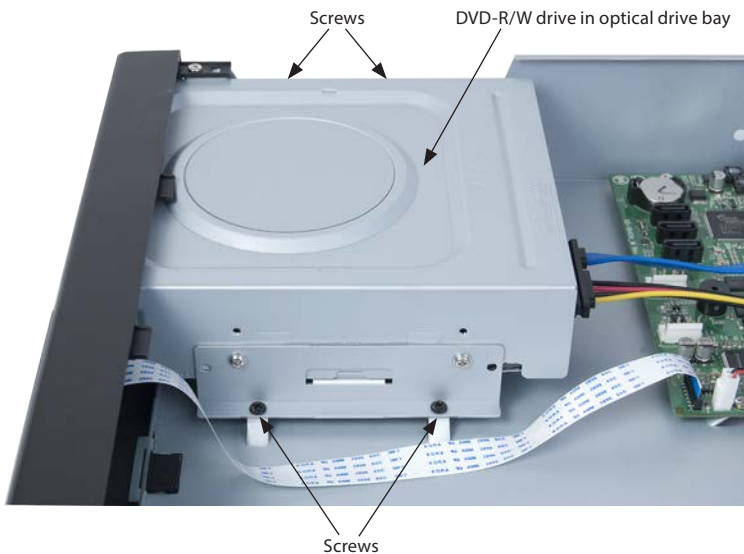
5. Attach a mounting bracket to each side of the DVD-R/W drive as shown below using the flat-head fine thread screws provided. Use two screws for each bracket. Tighten the screws until snug.



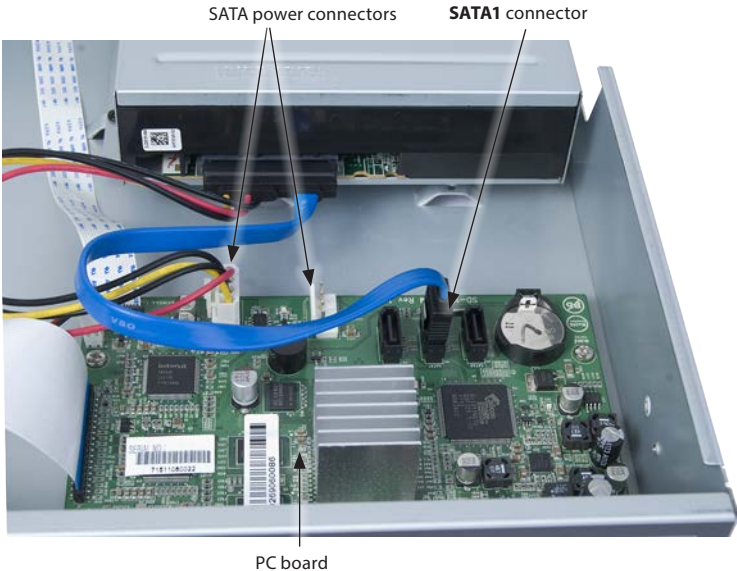
6. Plug a SATA data and power cable assembly into the mating connectors on the back of the DVD-R/W drive. Ensure the connector is fully seated.



7. Position the DVD-R/W drive in the optical drive bay as shown below. Secure the drive to the chassis with four screws through the mounting brackets, two on each side. Use black pan-head coarse-thread screws provided. Tighten the screws until snug.



8. Plug the SATA data cable (blue cable) into the **SATA1** connector on the PC board, then plug the SATA power cable into one of the SATA power connectors on the PC board.



Ensure that the data and power cable connectors are fully seated onto the connectors on the PC board.

9. Reinstall the DVR cover using the 7 screws removed earlier.
10. Reattach the power adapter to the back of the DVR.

2.5 HDD installation

The HDD is used to store video and snapshots recorded by the DVR. Normally, DVRs have one internal HDD and one internal DVD-R/W drive. However, a second internal HDD can be installed in place of the DVD drive, if needed.

Your DVR will accommodate one standard-size desktop system HDD with a SATA interface. When choosing an HDD to install, select one from the list provided in “APPENDIX A DVR Compatible Hard Disk Drives” on page 127 to ensure the best performance. If your DVR was purchased without an HDD, a hardware kit, including mounting brackets, screws and cables is included with the DVR.



Mounting Brackets (one pair per drive)

For attaching bracket
to DVD-R/W (flat-head,
fine-thread screws (4))

For attaching bracket to
HDD (pan-head, medium-
thread screws (4))



For attaching bracket
to chassis (pan-head,
course-thread screws)

Screw types

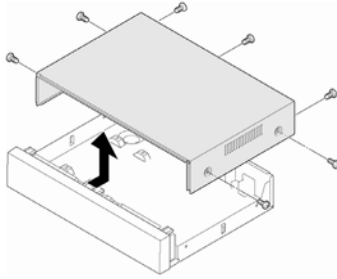
To install an HDD, carefully follow the procedure below. Although this procedure is illustrated for a 16-channel DVR, it is identical for a 4- or 8-channel DVR.



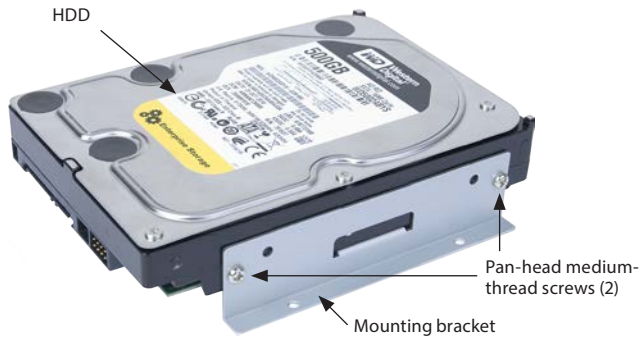
Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the HDD in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing.

1. If your DVR is powered on, use the menu system to perform a System Shutdown.
 - a. Right click anywhere on the live view screen, then click **SYSTEM SHUTDOWN** in the pop-up menu (see "3.1 Starting the system for the first time" on page 18), or click the SYSTEM SHUTDOWN icon on the task bar.
 - b. Follow the on-screen instructions for shutting down the system.
2. Disconnect the power adapter from the back of the DVR.
3. Remove the top cover from the DVR by removing the three cover screws on the back of the chassis, and the two on each side. See the drawing below.

SECTION 2: HARDWARE OVERVIEW AND SETUP



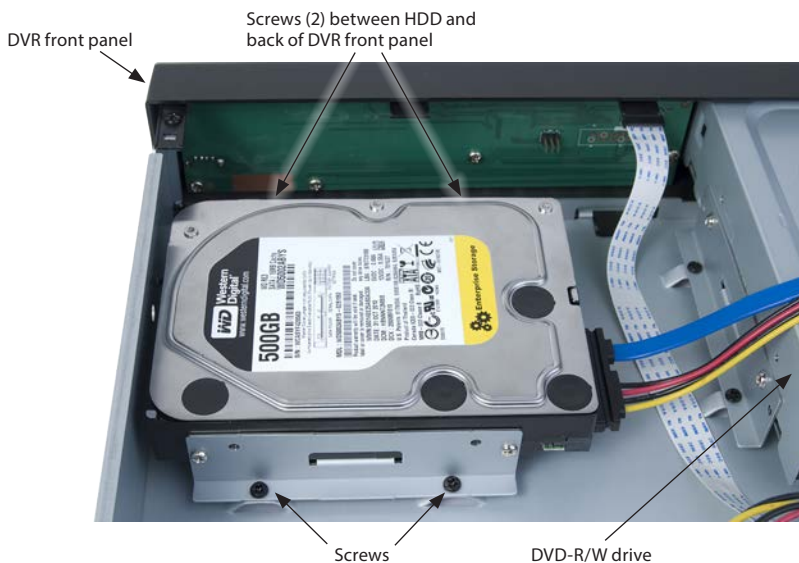
4. Attach a mounting bracket to each side of the HDD as shown below using the pan-head medium-thread screws provided. Use two screws for each bracket. Tighten the screws until snug.



5. Plug a SATA data and power cable assembly into the mating connectors on the back of the HDD. Ensure the connector is fully seated.

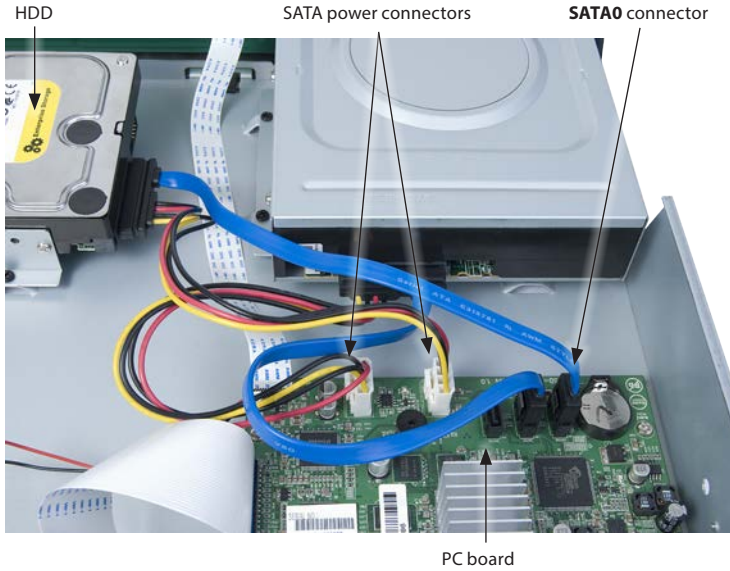


6. Position the HDD into the HDD bay as shown below. Secure the drive to the chassis with four screws through the mounting brackets, two on each side of the HDD. Use black pan-head coarse-thread screws provided. Tighten the screws until snug.



7. Plug the SATA data cable (blue cable) into the **SATA0** connector on the PC board, then plug the SATA power cable into one of the SATA power connectors on the PC board.

SECTION 2: HARDWARE OVERVIEW AND SETUP



Ensure that the data and power cable connectors are fully seated onto the connectors on the PC board.

8. Reinstall the DVR cover using the 7 screws removed earlier.
9. Reattach the power adapter to the back of the DVR.

2.5.1 Installing a 2nd internal HDD

The DVR can include two internal HDDs, with the second HDD installed in the DVD-R/W (optical) drive bay. To install a 2nd HDD, do the following.



Follow recommended electrostatic discharge (ESD) guidelines while performing this procedure. Install the HDD in a static-free environment, wearing a certified ESD wrist strap. If a static free environment and ESD wrist strap is not available, touch the bare metal of the DVR chassis frequently when installing the drive to dissipate the static charge naturally generated on your skin and clothing.

1. If a DVD-RW drive is installed in the optical drive bay, remove it by reversing the procedure included above in “2.4 DVD-R/W Optical drive installation” on page 9.
2. Attach the mounting brackets and data/power cable to the 2nd HDD. See “2.5 HDD installation” on page 12 above.

3. Position the HDD in the optical bay as shown below, and attach it to the chassis using 4 screws, 2 on each side.



4. Connect the HDD SATA data cable (blue) to the SATA1 connector on the PC board.
5. Connect the HDD SATA power cable to one of the mating connectors on the PC board.

NOTE

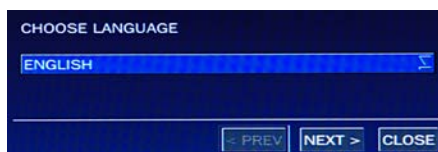
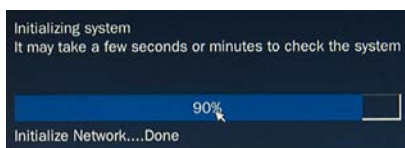
In a DVR with 2 HDDs, the primary HDD is connected to the SATA0 connector and the secondary HDD is connected to the SATA1 connector.

SECTION 3

System Setup

3.1 Starting the system for the first time

When booting the system for the first time, the following messages appear. After the initialization sequence completes, select your preferred language and set the date and time.

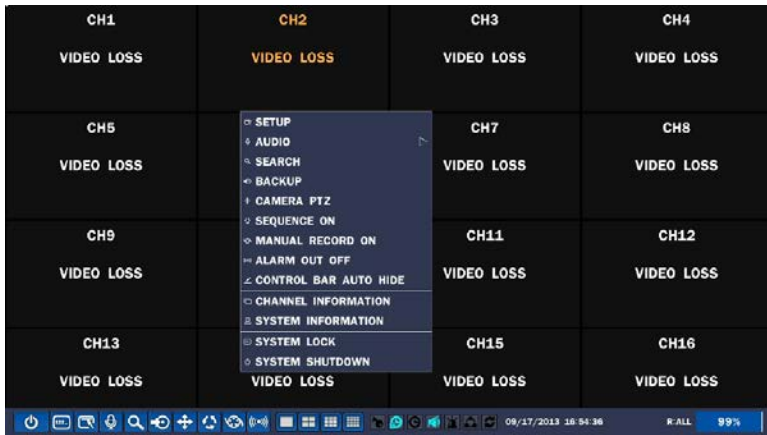


When the **Set date and time** window opens, use the drop down lists to select the **TIME ZONE** and **DAYLIGHT SAVINGS** time preference. Check the box show set the current date and time, if needed, then click **Finish**. The date and time setting is used to timestamp recordings.



NOTE

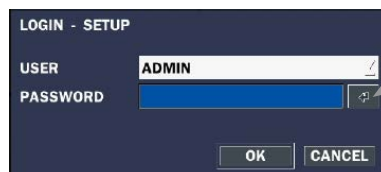
*If the DVR will be networked with access to the internet, you can configure it to automatically acquire date and time settings from an NTP (network time protocol) server. See the **System** configuration settings later in this manual.*



Typical System Desktop Display With One Camera Active

3.1.1 Entering the SETUP menu

1. To enter the SETUP menu, right click on the desktop or press the **SETUP** button on the remote control, then click the **SETUP** entry in the pop-up menu. A LOGIN window will open.
2. In the LOGIN window, open the virtual keyboard and enter the PASSWORD, or use the direction buttons on the front panel. The default password is "1111".



Virtual
Keyboard
Button

After entering the password in the virtual keyboard, click OK to close the keyboard display, then click OK again to login to the SETUP menus.

SECTION 3: SYSTEM SETUP



NOTE For improved security, change the password. You can select a new password through the SECURITY tab in the SETUP menu.

Open a menu by clicking the tab. To close the window, click **Cancel**. To save changes made to the menus before closing the window, click **OK**.

For a summary of the elements in each SETUP submenu (tab), refer to Appendix C.

Navigating the menus

You can navigate through the menu system, change option values, and click buttons with the mouse. Entry fields usually have drop-down menus you can open to select preset parameter values. Other parameters fields open submenus or keyboards you can use to enter names and other values. You can also navigate through the menu items using the direction button, ▲, ▼, ◀, or ▶ and change option values with the **SEL** button. Always select (or click) **OK** to save new settings and close the SETUP menus. Press the **ESC** button at any time to exit the SETUP menus.

NOTE In the following descriptions of the SETUP menus, the instructions for navigating the system includes use of the front panel buttons only. Using a mouse for menu navigation and setup of system options can be easier and faster.

3.2 DISPLAY menu

Opening the SETUP menu, or clicking the **DISPLAY** tab, opens the **DISPLAY** menu.

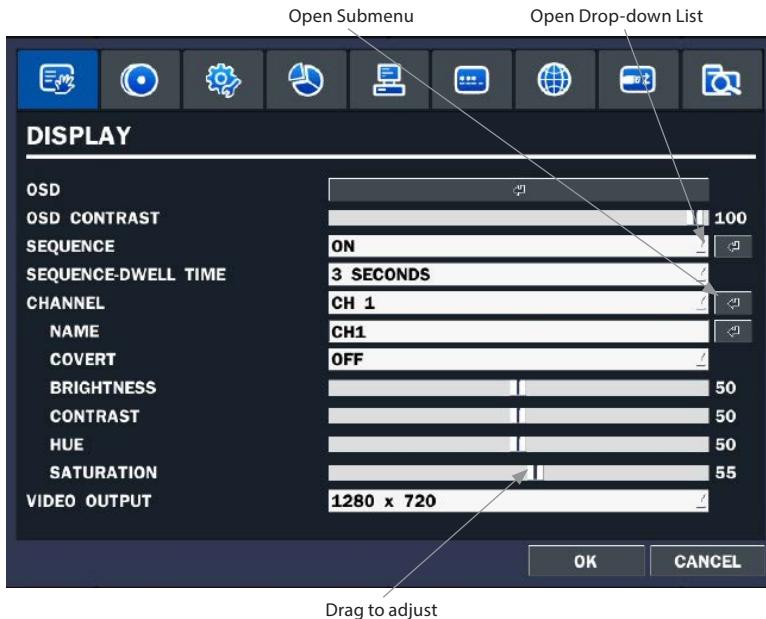


Table 7. DISPLAY menu options

Item	Description
OSD	Enable/disable the on-screen display.
OSD CONTRAST	Set the visibility level of the OSD. (0 ~ 100)
SEQUENCE	Enable/disable sequential display of video in full screen mode.
SEQ-DWELL TIME	Set the dwell time of each quad-split or 9-channel display in sequential display mode. (3 ~ 60 seconds)
CHANNEL	In the channel submenu, you can tune the display settings for all cameras at once, or setup each camera individually. Click the channel drop-down list to select the channel, then use the click the submenu buttons to NAME the channel and set the COVERT property (enable/disable live display mode). Drag the marker on the image adjustment bars to perfect the image. BRIGHTNESS: Change the brightness value of the selected channel. (0 ~ 100) CONTRAST: Change the contrast value of the selected channel. (0 ~ 100) HUE: Change the hue value of the selected channel. (0 ~ 100) SATURATION: Change the saturation value of the selected channel. (0 ~ 100) Click OK to save the settings and close the window.
VIDEO OUTPUT (HDMI / VGA)	Allows user to set monitor output resolution from 720p 50Hz / 60Hz, 1080i 50Hz / 60Hz, 1080p 50Hz / 60Hz. Click OK.

3.3 RECORD menu

Clicking the **RECORD** tab opens the **RECORD** menu.

RECORD

CHANNEL CH 1

RESOLUTION 960H

FRAME RATE 15 FPS

QUALITY LEVEL 5(H)

RECORDING CONTINUOUS

SENSOR RECORDING --

PRE RECORD 1 MINUTE(S)

POST EVENT RECORD 10 SECOND(S)

AUDIO OFF

SCHEDULE

OK **CANCEL**

Table 8. Menu Items in Recording Mode Setup

Menu Item	Description																																																																																																																																																
CHANNEL	In the Record Channel submenu, you can set the recording modes for all cameras at once, or setup each camera individually. Click the submenu button to open the setup window. Click a field to highlight it, click the down arrow in the field, then select the option you want from the drop-down menu. Click OK to save the settings and close the window. <table><tr><th></th><th>RESOLUTION</th><th>FRAME RATE</th><th>QUALITY</th><th>RECORDING</th><th>PRE RECORD</th><th>POST EVENT REC</th><th>AUDIO</th></tr><tr><td>ALL D1</td><td>8</td><td></td><td>LEVEL 5(H)</td><td>MOTION</td><td>15 SEC(S)</td><td>10 SEC(S)</td><td>OFF</td></tr><tr><td>1 D1</td><td>8</td><td></td><td>LEVEL 5(H)</td><td>MOTION</td><td>15 SEC(S)</td><td>10 SEC(S)</td><td>OFF</td></tr><tr><td>2 D1</td><td>11</td><td></td><td>LEVEL 5(H)</td><td>CONTINUOUS</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>OFF</td></tr><tr><td>3 D1</td><td>30</td><td></td><td>LEVEL 5(H)</td><td>MOTION</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>OFF</td></tr><tr><td>4 D1</td><td>26</td><td></td><td>LEVEL 5(H)</td><td>MOTION</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>OFF</td></tr><tr><td>5 D1</td><td>7</td><td></td><td>LEVEL 5(H)</td><td>MOTION</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>6 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>7 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>8 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>9 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>10 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>11 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>12 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>13 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>14 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>15 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr><tr><td>16 D1</td><td>1</td><td></td><td>LEVEL 5(H)</td><td>DISABLE</td><td>1 MIN(S)</td><td>10 SEC(S)</td><td>--</td></tr></table> OKCANCEL		RESOLUTION	FRAME RATE	QUALITY	RECORDING	PRE RECORD	POST EVENT REC	AUDIO	ALL D1	8		LEVEL 5(H)	MOTION	15 SEC(S)	10 SEC(S)	OFF	1 D1	8		LEVEL 5(H)	MOTION	15 SEC(S)	10 SEC(S)	OFF	2 D1	11		LEVEL 5(H)	CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF	3 D1	30		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	OFF	4 D1	26		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	OFF	5 D1	7		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	--	6 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	7 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	8 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	9 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	10 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	11 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	12 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	13 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	14 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	15 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--	16 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--
	RESOLUTION	FRAME RATE	QUALITY	RECORDING	PRE RECORD	POST EVENT REC	AUDIO																																																																																																																																										
ALL D1	8		LEVEL 5(H)	MOTION	15 SEC(S)	10 SEC(S)	OFF																																																																																																																																										
1 D1	8		LEVEL 5(H)	MOTION	15 SEC(S)	10 SEC(S)	OFF																																																																																																																																										
2 D1	11		LEVEL 5(H)	CONTINUOUS	1 MIN(S)	10 SEC(S)	OFF																																																																																																																																										
3 D1	30		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	OFF																																																																																																																																										
4 D1	26		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	OFF																																																																																																																																										
5 D1	7		LEVEL 5(H)	MOTION	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
6 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
7 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
8 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
9 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
10 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
11 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
12 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
13 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
14 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
15 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										
16 D1	1		LEVEL 5(H)	DISABLE	1 MIN(S)	10 SEC(S)	--																																																																																																																																										

Menu Item	Description
RESOLUTION	Select either CIF, Half D1, D1, or 960H.
FRAME RATE	Set the frame rate for the specified channel (1 ~ 15 fps). The sum of the frame rates from each channel cannot exceed the maximum frame rates for a specific recording resolution. See the Specifications section for the maximum video frame of your recorder.
QUALITY	Select the recording quality for the specified channel (Level 1 (low) to Level 5 (high)).
RECORDING	Assign the recording mode for each channel. Options are: Disable, Continuous, Motion, Sensor, Schedule.
PRE RECORD	Enable/disable pre-event recording. Options are OFF, 15 SEC, 30 SEC, 1 MIN, 3 MIN, 20 MIN.
POST EVENT RECORD	Set the post event recording time duration for the specified channel. (10 ~ 60 seconds)
SENSOR RECORDING	Enable setting up to 4 sensors for the specified channel.
AUDIO	Enable/disable audio recording for channel 1.. 4 only.
SCHEDULE	Click the submenu icon to open the recording schedule setup window. To configure this feature, see the sub-section Recording Schedules below.

3.3.1 Recording Schedules

To setup a weekly recording schedule, click the SCHEDULE submenu bar in the RECORD menu. A recording mode (NONE, CONTINUOUS, MOTION, or SENSOR) can be applied to any hour of the week for each camera.

CHANNEL 1

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

COPY SCHEDULE

☒ CH 1 ☒ CH 2 ☒ CH 3 ☒ CH 4 ☒ ALL
☒ CH 5 ☒ CH 6 ☒ CH 7 ☒ CH 8
☒ CH 9 ☒ CH 10 ☒ CH 11 ☒ CH 12
☒ CH 13 ☒ CH 14 ☒ CH 15 ☒ CH 16

Table 9. RECORD menu SCHEDULE setup

Menu Item	Description
CHANNEL	Select the channel for the schedule you are setting.
MODE	Click the recording mode (NONE, CONTINUOUS, MOTION, or SENSOR) to apply to the schedule, then drag the mouse cursor across the days and hours in the grid you want to use that mode. Time slots are color coded for the record mode applied to them: CONTINUOUS - green, MOTION - yellow, and SENSOR - red, NONE - white.
COPY SCHEDULE	To copy the schedule you setup to other cameras, click the camera channel number(s), then click COPY . You can also use the front panel buttons, ▲, ▼, ◀, ▶, and SEL buttons to perform these selections.

Click **OK** to save your settings.

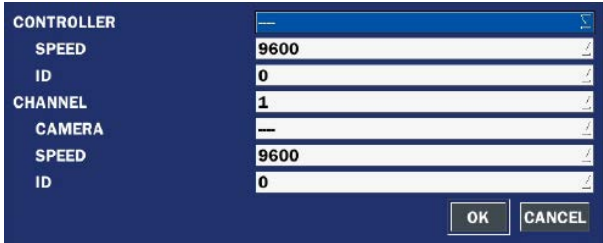
3.4 DEVICE menu

Clicking the **DEVICE** tab opens the **DEVICE** menu. To return to **SETUP** menu, press the **ESC** button.

Setting	Value
ALARM OUT	1
CONTROLLER & PTZ	
SPOT OUT	
CHANNEL	CH 1
MOTION ZONE	FULL ZONE
MOTION SENSITIVITY	5
PRIVACY ZONE	
KEY TONE	OFF
REMOTE CONTROLLER ID	0
SENSOR	1
TYPE	OFF
VIDEO INPUT TRIMMING	OFF

OK **CANCEL**

Table 10. Menu Items in Device Setup Screen

Item	Description
ALARM OUT	Set the sensor, motion, and video loss for each alarm.  ALARM OUT: 1 only. ALARM DURATION: Set the alarm dwell time. (5 ~ 60 seconds or infinite (continuous)).
CONTROLLER AND PTZ	To control the PTZ functions of the camera, connect the PTZ controller to the RS-485 port on the back of the chassis with CAT 5 (or equivalent) cable. Setup the CONTROLLER AND PTZ submenu SPEED and ID to match the controller and camera configuration.  CHANNEL: Channel connected to a PTZ device CAMERA: Set the PTZ protocol for the camera SPEED: Baud rate: 19200, 14400, 9600, 4800, 2400 ID: 0 ~ 63
SPOT OUT	Enable/disable display of the channel when an event is active.  SPOT ON EVENT: Enable/disable display of the channel when an event is active. SPOT EVENT DWELL TIME: Set the dwell time for the event activated channel (1 ~ 10 sec). SEQUENCE: Enable/disable sequential display of spot channel(s) in full screen. If ON, the spot channel is displayed. SEQUENCE-DWELL TIME: Set the dwell time for the spot channel display (1 ~ 10 sec). SPOT CHANNEL: Select a channel for spot monitoring using the mouse or the control button on the remote control and press OK button.
CHANNEL	Select specified channel for motion zone setup.

SECTION 3: SYSTEM SETUP

Item	Description
MOTION ZONE	Select either Full Zone or Partial Zone for motion sensing. FULL ZONE: The motion sensor is active on the whole screen. Set the level of sensitivity for MOTION SENSITIVITY. PARTIAL ZONE: Selecting Partial Zone for the channel, then clicking the submenu button, opens a widow containing the camera image overlaid with a 22 x 15 block areas. You can select motion sensing for the blocks in the areas individually by clicking on them, or you can select a larger area by dragging the mouse cursor across a rectangle of blocks. Block areas selected for motion sensing are hashed green. To disable motion sensing on a selected block, click on it.  To return to the Device menu, right click on the screen, or press the ESC button on the front panel.
MOTION SENSITIVITY	Set the motion sensitivity for the specified channel. (1 ~ 9).
PRIVACY ZONE	Set the privacy zone for the specified channel. Privacy zones block a partial area of the video image from live viewing and recording. You can set up to 4 privacy zones. To set privacy zones:  - Click the PRIVACY submenu bar. - Press the left mouse button, then drag the mouse along the diagonal of a rectangular area you want to privatize. A gray rectangle will be formed. Release the mouse button. - Right click the mouse to open the privacy menu, then click the region number you want to assign to the rectangle. The rectangle will be set to the color related to the Region number. - Repeat these steps to mark up to 4 privacy zones. Click Quit to close the submenu. To delete a zone, click on the zone you want to delete, Right-click to open the privacy zone submenu, then click Delete this Region.
KEY TONE	Enable/disable tone when key is pressed.
REMOTE CONTROL ID	Select an ID for the remote control device. - Select ID number. - On the remote control, press the same number as the ID set in the DVR. - An icon will be displayed on Live screen that corresponds to the remote control. (0 ~ 99)
SENSOR	Select sensor number. (1 .. 4)
TYPE	Set the type of sensor for the specified channel. Options: OFF, N/O (normal open sensors), N/C (normal closed sensors).
VIDEO INPUT TRIMMING	When the resolution of input video is less than 960 x 480, such as 940 x 480, the right and left part in black can be trimmed.

3.5 STORAGE menu

Clicking the **STORAGE** tab opens the storage menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.

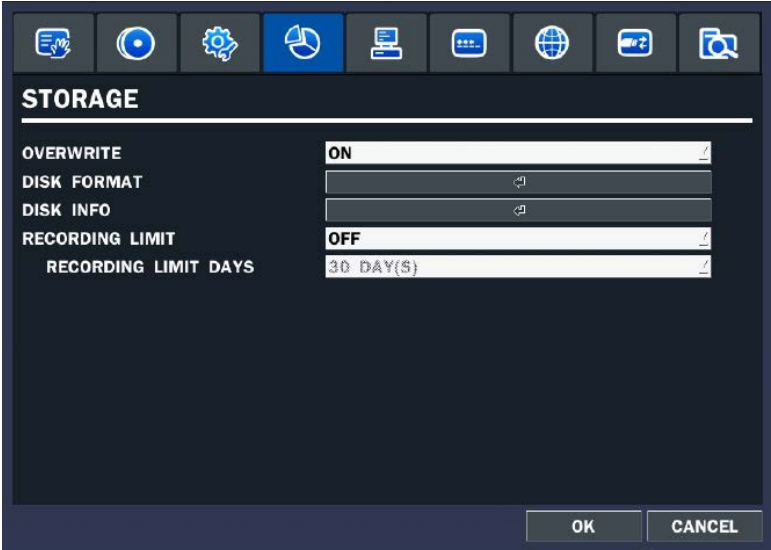


Table 11. Menu items in STORAGE setup screen

Item	Description
OVERWRITE	If enabled, the DVR will continue recording when the drive is full, overwriting the oldest information first. If disabled, recording will stop when the hard drive is full.
DISK FORMAT	Select YES or NO to format the hard drive (disk). Caution: Formatting the hard drive will erase all information on the disk. Archive all data that you may need before formatting the disk.

SECTION 3: SYSTEM SETUP

Item	Description
DISK INFO	Click the submenu button to view hard drive information  Click DETAIL to show the performance health of the drives.  Click HELP to explain the data shown in the DETAIL display.
RECORDING LIMIT	Enable/disable a recording limit (days).
RECORDING LIMIT DAYS	Set the recording limit in days (1- 90 days). If set to 1 day, data older than 24 hours will be removed.

3.6 SYSTEM menu

Clicking the SYSTEM tab opens the system menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.

SYSTEM

DVR-ID: DVR

DESCRIPTION:

LANGUAGE: ENGLISH

DATE FORMAT: MM/DD/YYYY

SET DATE & TIME:

CLIENT ACCESS: ON

NTP: OFF

SEND EMAIL: OFF

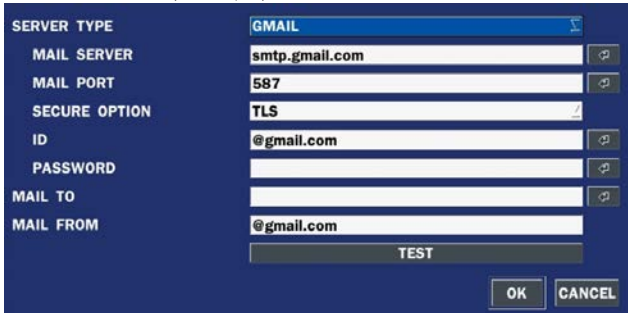
SYSTEM EVENT NOTIFICATION:

OK CANCEL

Table 12. Menu Items in SYSTEM Setup Screen

Item	Description
DVR ID	Select the submenu button to open the virtual keyboard, then click your way to a new name for your DVR. The DVR ID can have a most 10 characters. Click OK when finished.
DESCRIPTION	Click the DESCRIPTION submenu button to open an information showing a summary of your DVR. Press the SEL button to view system information (hardware version, software version, storage size, IP address, MAC address, and DDNS status). NOTE: This window shows the software version number. Click OK to close the window.
LANGUAGE	Open the drop-down list to select your preferred menu system language. Several language options are available.
DATE FORMAT	Select the date format using the ▲, ▼, ◀, and ▶ buttons. Options include: YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY.
SET DATE & TIME	Click the submenu button to open the DATE & TIME setup window. Click each field and select the current value from the drop-down list. In the DAYLIGHT SAVINGS list, select OFF, USA, EU (European union) or OTHERS. Click OK to commit the settings. TIME ZONE: GMT -8:00 (Los Angeles/Vancouver) DAYLIGHT SAVING: OFF ■ SET DATE & TIME: 2013 / 9 / 27 20 : 57 : 57 OK CANCEL
CLIENT ACCESS	Enable (ON) or Disable (OFF) remote access through network client software.

SECTION 3: SYSTEM SETUP

Item	Description
NTP	Click the NTP field and select ON, then click the submenu button to open the NTP setup menu. Use this feature to synchronize the clocks of computer systems over variable-latency data networks. PRIMARY SNTP SERVER: Use the virtual keyboard to enter the address of the primary NTP time server. SECONDARY SNTP SERVER: Use the virtual keyboard to enter the address of the secondary NTP time server. TIME ZONE: Select the offset from GMT (Greenwich Mean Time). CONNECTION MODE: Select an NTP time server connection mode (INTERVAL/TIME). CONNECTION PERIOD: 1 ~ 24. 
SEND EMAIL	Click the SEND MAIL field and select ON, then click the submenu button to show the setup options. SERVER TYPE: You can select one of several server types to host the mail server account, including GMAIL, HOTMAIL, AOL, YAHOO. You can also select MANUAL for a server not listed. Selecting a server type partially populates the menu with presets required for the account. MAIL SERVER: Use the virtual keyboard to enter the mail server information. MAIL PORT: Port number of the mail server. SECURE OPTION: Select security method: NONE, SSL or TLS ID: Use the virtual keyboard to specify the user ID for the mail server. PASSWORD: Use the virtual keyboard to specify the connection password for the mail server. MAIL TO: Use the virtual keyboard to enter the email address of the recipient. MAIL FROM: Use the virtual keyboard to specify the email address sent to the destination host. 

3.7 SECURITY menu

Clicking the **SECURITY** tab opens the security menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.

NOTE

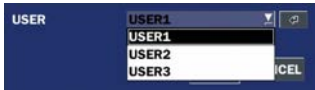
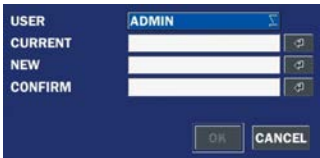
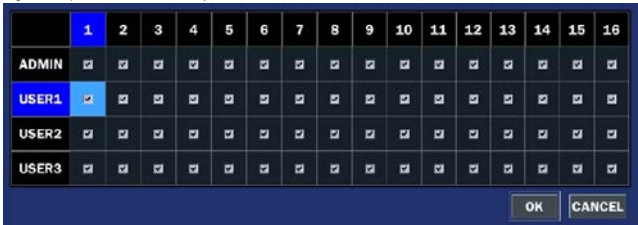
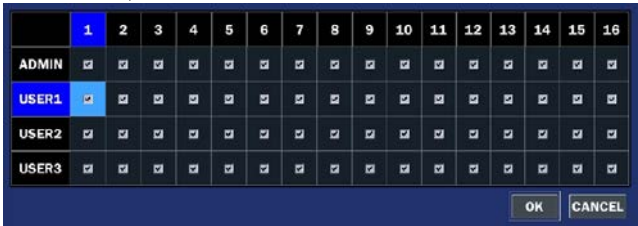
You must be a user with **Admin** permissions to configure the **SECURITY** menu.



Table 13. Menu Items in PASSWORD Setup Screen

Item	Description																																										
USER AUTHENTICATION	Click the User Authentication submenu button to open the PASSWORD and PERMISSION menu. Check or uncheck boxes to allow permissions to different users for access to areas of the system. <table><thead><tr><th></th><th>PASSWORD</th><th>SETUP</th><th>PB</th><th>PTZ</th><th>REC OFF</th><th>NETWORK</th></tr></thead><tbody><tr><td>PASSWORD CHECK</td><td></td><td>☒</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>ADMIN</td><td>1111</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>USER1</td><td>1111</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>USER2</td><td>1111</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr><tr><td>USER3</td><td>1111</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td><td>☒</td></tr></tbody></table> OKCANCEL In the PASSWORD CHECK row, check the box to require a password for all users. In the username rows (ADMIN, USER1, etc.), check the box to allow users to access that function. Press ESC to return to the SECURITY menu. Options are defined as: SETUP: Access to the SETUP menus PB: Control video Playback PTZ: Control and configure PTZ (Pan/Tilt/Zoom) device settings R/OFF: Control manual recording (ON/OFF) NETWORK: Change network settings		PASSWORD	SETUP	PB	PTZ	REC OFF	NETWORK	PASSWORD CHECK		☒	☒	☒	☒	☒	ADMIN	1111	☒	☒	☒	☒	☒	USER1	1111	☒	☒	☒	☒	☒	USER2	1111	☒	☒	☒	☒	☒	USER3	1111	☒	☒	☒	☒	☒
	PASSWORD	SETUP	PB	PTZ	REC OFF	NETWORK																																					
PASSWORD CHECK		☒	☒	☒	☒	☒																																					
ADMIN	1111	☒	☒	☒	☒	☒																																					
USER1	1111	☒	☒	☒	☒	☒																																					
USER2	1111	☒	☒	☒	☒	☒																																					
USER3	1111	☒	☒	☒	☒	☒																																					

SECTION 3: SYSTEM SETUP

Item	Description
USER NAME	Open the submenu to select a particular username to configure. By default, the ADMIN user has all privileges; these cannot be changed. 
USER PASSWORD	Click the User Password submenu button to open the password setup menu. To change a password, select a user from the drop-down list, then enter the current, new, and confirm password fields. Click OK when finished. The factory default Admin user password is 1111. 
PLAYBACK AUTHORITY	Click the User Playback Authority submenu button to open the setup menu. Check boxes to assign playback rights to users for viewing video clips of camera channels. By default, all boxes are checked for all users. 
NETWORK LIVE AUTHORITY	Click the User Network Live Authority submenu button to open the setup menu. Check boxes to assign live viewing rights of camera channels to users. By default, all boxes are checked for all users. 

NOTE

For improved system security, it is strongly recommended that you change the factory default passwords during the initial setup of your system.

3.8 NETWORK menu

Clicking the NETWORK tab opens the setup menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.

NOTE You must be a user with **Admin** permissions to configure the NETWORK menu.

For additional guidelines for determining network settings, refer to the DVR Networking Guide provided with your system. This guide is also available through your support team.

The screenshot shows the NETWORK menu interface. At the top is a navigation bar with icons for Home, Live View, Settings, Reports, System, Network, and Search. The NETWORK icon is highlighted. Below the navigation bar, the title 'NETWORK' is displayed. The settings are organized into two columns:

- PORT**: 5445
- NETWORK AUDIO PORT**: 5446
- WEB PORT**: 80
- 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)**: (empty)
- DDNS**: OFF
- NETWORK STREAM**: (empty)

At the bottom right, there are 'OK' and 'CANCEL' buttons.

Table 14. Menu Items in the NETWORK menu

Item	Description
PORT	Click the submenu button to open a keypad for entering the port number (default: 5445)
NETWORK AUDIO PORT	Port for audio streaming: NETWORK PORT + 1.
WEB PORT	Click the submenu button to open a keypad for entering the web sever port number (default: 80)

SECTION 3: SYSTEM SETUP

Item	Description																																																																								
NETWORK TYPE	Select a type of network connection. Options are: DHCP or STATIC. NOTE: Depending on the type selected, the options in the network menu will change appropriately. DHCP: If selected, the DVR automatically acquires its network settings from a DHCP server. This address may change without notice. STATIC: If selected, you must configure the network settings manually. These settings remain in effect until manually changed. IP: Enter the IP address assigned to the DVR. GATEWAY: Enter the Gateway IP address assigned for the DVR. SUBNET MASK: Enter the Subnet Mask for the subnet where the DVR is connected. DNS: Enter the DNS primary and secondary server addresses.																																																																								
DDNS	To use DDNS, open the drop-down list and select either: SERVER1, to use a Type 1 free DDNS that is serviced by obsddns.com (preferred) . Enter your preferred hostname in the field provided using the pop-up keyboard, or click AUTO. See "APPENDIX D DDNS setup with obsddnscenter.com" on page 132 for more information. DDNS HOST NAME TEST HOST DOMAIN NAME test.obsddns.com AUTO OK CANCEL SERVER2: for use with an alternate general-purpose DDNS. Observint recommends that only SERVER1 be used for a DDNS server																																																																								
NETWORK STREAM	Click the submenu button to open network stream setup submenu This menu is used to configure the resolution, frame rate, and quality at which live video from each camera can stream across the network. The total data rate permissible is dependent on the model of your DVR. Refer to the Specifications section for more information. CSet the preferred options using the drop-down lists, then select OK. <table><thead><tr><th></th><th>RESOLUTION</th><th>FRAME RATE</th><th>QUALITY</th></tr></thead><tbody><tr><td>ALL</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>1</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>2</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>3</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>4</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>5</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>6</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>7</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>8</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>9</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>10</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>11</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>12</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>13</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>14</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>15</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr><tr><td>16</td><td>CIF</td><td>30</td><td>LEVEL 5(H)</td></tr></tbody></table> ■ USE MOBILE OK CANCEL		RESOLUTION	FRAME RATE	QUALITY	ALL	CIF	30	LEVEL 5(H)	1	CIF	30	LEVEL 5(H)	2	CIF	30	LEVEL 5(H)	3	CIF	30	LEVEL 5(H)	4	CIF	30	LEVEL 5(H)	5	CIF	30	LEVEL 5(H)	6	CIF	30	LEVEL 5(H)	7	CIF	30	LEVEL 5(H)	8	CIF	30	LEVEL 5(H)	9	CIF	30	LEVEL 5(H)	10	CIF	30	LEVEL 5(H)	11	CIF	30	LEVEL 5(H)	12	CIF	30	LEVEL 5(H)	13	CIF	30	LEVEL 5(H)	14	CIF	30	LEVEL 5(H)	15	CIF	30	LEVEL 5(H)	16	CIF	30	LEVEL 5(H)
	RESOLUTION	FRAME RATE	QUALITY																																																																						
ALL	CIF	30	LEVEL 5(H)																																																																						
1	CIF	30	LEVEL 5(H)																																																																						
2	CIF	30	LEVEL 5(H)																																																																						
3	CIF	30	LEVEL 5(H)																																																																						
4	CIF	30	LEVEL 5(H)																																																																						
5	CIF	30	LEVEL 5(H)																																																																						
6	CIF	30	LEVEL 5(H)																																																																						
7	CIF	30	LEVEL 5(H)																																																																						
8	CIF	30	LEVEL 5(H)																																																																						
9	CIF	30	LEVEL 5(H)																																																																						
10	CIF	30	LEVEL 5(H)																																																																						
11	CIF	30	LEVEL 5(H)																																																																						
12	CIF	30	LEVEL 5(H)																																																																						
13	CIF	30	LEVEL 5(H)																																																																						
14	CIF	30	LEVEL 5(H)																																																																						
15	CIF	30	LEVEL 5(H)																																																																						
16	CIF	30	LEVEL 5(H)																																																																						

3.8.1 Network ports

When you connect one or more DVRs to a network through an IP sharing device, each DVR must be assigned a unique TCP port number for access from outside the LAN. Additionally, the IP sharing device must be configured to forward the assigned port to the specific DVR.

NOTE

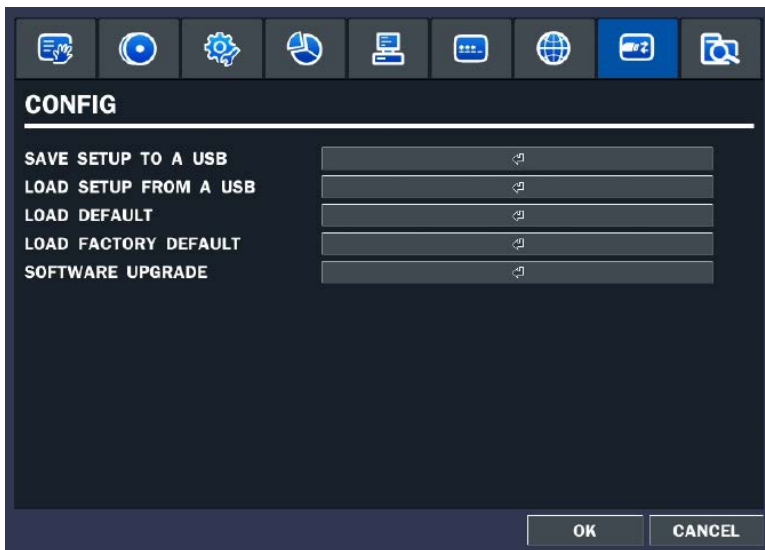
This port number is listed next to the Port menu option in the Network Setup screen. If you access the DVR only from within the same LAN, the TCP port number does not need to be changed.

Network access beyond a router

To access the DVR beyond a router (firewall), you must open TCP ports for commands, for live channels, and for storage channels. The default DVR port numbers are 5445 and the web port number 80. If this port is not opened properly, you cannot access the DVR outside a router.

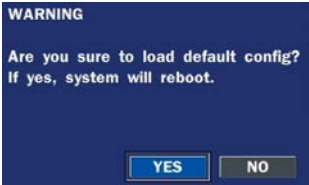
3.9 CONFIG menu

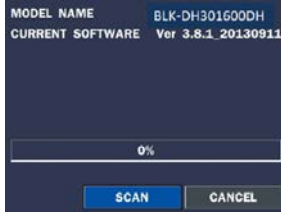
Clicking the **CONFIG** tab opens the system configuration menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.



SECTION 3: SYSTEM SETUP

Table 15. CONFIG menu items

Item	Description
SAVE SETUP TO A USB	Click the submenu icon. To save the current system configuration to the USB flash drive, plug the flash drive into the USB port on the front panel, click OK to confirm the operation, then follow the on-screen prompts to complete the save. NOTE: If the message "CHECK USB" appears, repeat the process until "SAVE SUCCESS" is shown. 
LOAD SETUP FROM A USB	Click the submenu icon. To upload a saved DVR configuration from a USB flash drive, plug the flash drive into the front panel USB port, click OK to confirm the operation, then follow the on-screen prompts to complete the upload. 
LOAD DEFAULT	Click the submenu icon. Select YES to load the system default settings. NOTE: The following items are not reset: 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. 
LOAD FACTORY DEFAULT	Click the submenu icon. Select YES to reset the system to the factory default settings. 

Item	Description
SOFTWARE UPGRADE	Click the submenu icon. Select SCAN to search the USB file for firmware, then follow the on-screen instructions to complete the upload. 

3.10 QUICK SETUP menu

Clicking the **QUICK SETUP** tab opens the system quick setup menu. Navigate through the menu items using mouse. You can also navigate the menus with the ▲, ▼, ◀, and ▶ buttons, and press **SEL** to select options.



QUICK SETUP

■ **USE QUICK SETUP**

INPUT DESIRED DAYS **10**

CUSTOMER SETTINGS

RESOLUTION **01**

FRAME RATE **1 FPS**

QUALITY **LEVEL 1(L)**

RECORDING **CONTINUOUS**

DAYS TO RECORD **10 DAY(S) 6 HOUR(S)**

APPLY

OK CANCEL

The QUICK SETUP parameters have higher priority than similar settings on the RECORDING and NETWORK menus.

SECTION 3: SYSTEM SETUP

Table 16. QUICK SETUP menu items

Item	Description
USE QUICK SETUP	Select the Checkbox to use the Quick Setup.
INPUT DESIRED DAYS	When you enters the DESIRED DAYS to record, the system displays the recommended resolution, frame rate, quality and recording type after calculating the capacity of the installed HDD(s). At that time, the priority is followed by the order of the items; resolution, frame rate, quality and recording type.
CUSTOMER SETTINGS	You can change the setting value for the resolution, frame rate, quality and recording type. By the setting value, the DAYS TO RECORD will change.

SECTION 4

Live, Search, and Playback

In the Live screen, video inputs from the cameras are displayed. The On-screen display (OSD) features as configured in the Display Setup screen. OSD icons that indicate the status of the DVR are shown along the bottom of the screen.

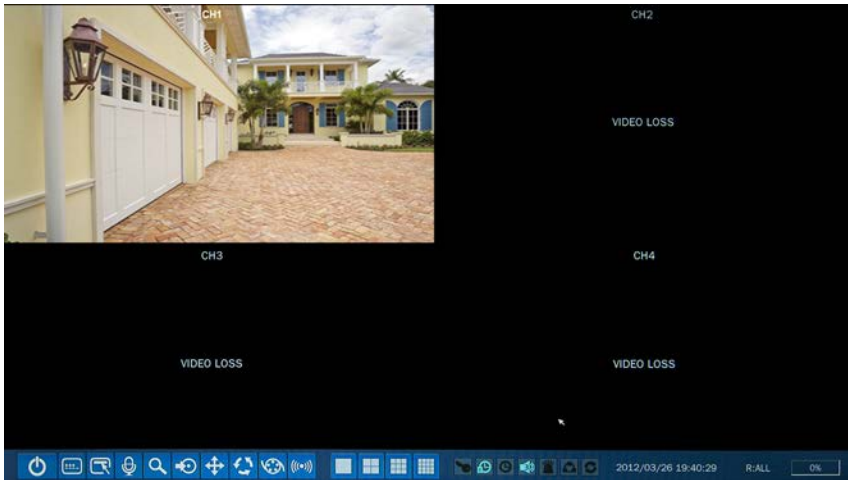
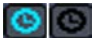


Table 17. Status Indicator Icons in Live Viewing Screen

Icon	Description
	Power Off. To power off the system, click this icon then follow the on-screen instructions.
	Lock/Unlock SETUP button.
	Setup button. Click this button to open the SETUP menu.
	Audio button. Click this button to set the audio reception type: audio mute, single audio channel, or 4 audio channels. To set a single audio channel, first select a specific channel on the live screen.
	Search button. Click this button to open the search menu.
	Backup button. Click this button to perform a backup.
	PTZ button for control of PTZ cameras. When this button is clicked, a PTZ control window will open.

SECTION 4: LIVE, SEARCH, AND PLAYBACK

Icon	Description
	Sequence button. Click this button to use a sequence function.
	Manual Record button. Click this button to begin recording.
	Alarm-out function on/off button. When an alarm is in progress, click this button to stop reporting the alarm.
	Click the split screen icon to change the current split screen mode.
	Indicates that the lock is set.
	Indicates that alarm is set. To set the alarm function, press the Alarm button on the front panel.
	Indicates that the alarm output is activated.
	Audio mute. To set audio mute, press the Audio button on the front panel.
	Single audio channel. To set audio single channel for the selected channel only, press the Audio button on the front panel.
	To mix audio channels, press the Audio button on the left side.
	Event indicator. When there is an event (motion recording, video loss, HDD fail, S.M.A.R.T.), this icon will be highlighted bright.
	Indicates that a network client is connected to the DVR.
	Indicates that sequencing mode is enabled.
2009/04/14 17:23:40	The current date and time.
R:A	Remote control ID display. If a remote ID is not set, the message "A(all)" is displayed.
 15%	Displays the amount of recording space used on the hard disk from 0-99%.
	Indicates that HDD is recycled (full and overwriting oldest data with new data).
	Continuous recording in progress.
	Manual recording in progress. To set Manual recording mode, press the Record button on the front panel.
	Motion alarm recording in progress.
	Sensor recording in progress.

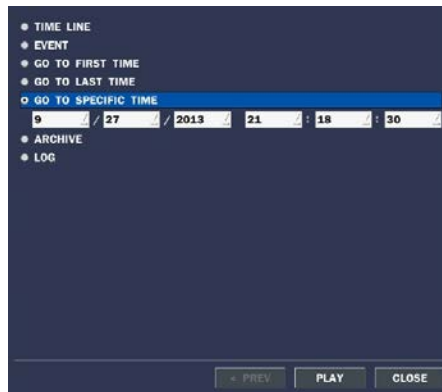
OSD menu

You can open the on-screen display menu with the mouse by right-clicking anywhere on the Live screen. Options in the OSD menu are also represented by the icons in the tray at the bottom of the screen. See “Table 17. Status Indicator Icons in Live Viewing Screen” on page 39 for a description of these icons.



4.1 SEARCH menu

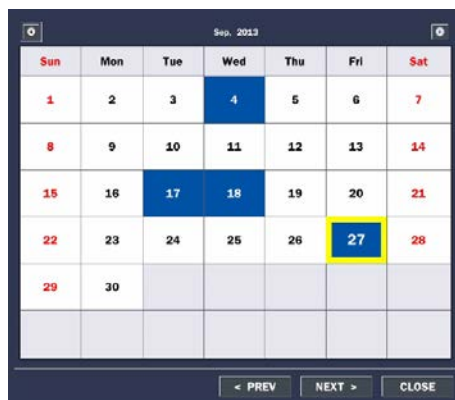
To open the SEARCH menu, press the SEARCH button on the front panel or click the SEARCH icon on the Live screen.



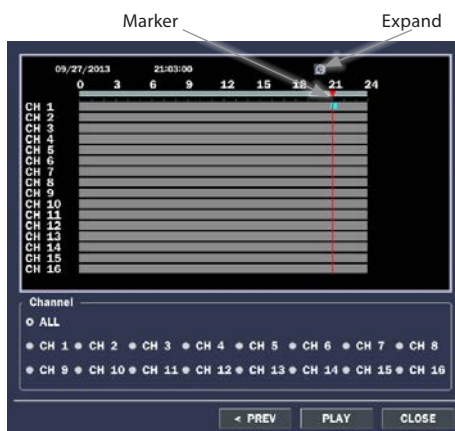
Recorded data can be searched in the following ways: TIMELINE, EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, ARCHIVE, and LOG.

4.1.1 TIME-LINE search

The TIME-LINE search window is used to find stored video by using the time line bar. Select TIME LINE in the SEARCH menu, then select NEXT. A calendar window will open.



The highlighted days in the calendar window indicate that data was recorded at that time. The day selected is highlighted blue. Select the day of interest, then select NEXT.



In the TIME LINE window, the highlighted bars show the time of day when data was recorded. Drag the marker to the time when you want to begin playing a recording, click the channel number of interest, then click **PLAY** to play the video. Press the **PREV** to return to the SEARCH window. To expand the timeline, click the clock icon in the top of the window. To stop the video playback, press the **ESC** button on the front panel.

4.1.2 EVENT search

Use EVENT search to quickly find recordings associated with specific events. To open the EVENT search window, select **EVENT** on the **SEARCH** window, then select **NEXT**. A calendar window will open (see above).

The highlighted days in the calendar window indicate that video was recorded at that time. Select the day of interest, then select **NEXT**.



The screenshot shows a window titled "LOG" with a "DATE" column. The list contains 16 entries, all dated 09/27/2013 at 20:54:24, except for the last entry which is at 20:55:36. The entries are: System Start, Video In : CH1, Video Loss : CH2, Video Loss : CH3, Video Loss : CH4, Video Loss : CH5, Video Loss : CH6, Video Loss : CH7, Video Loss : CH8, Video Loss : CH9, Video Loss : CH10, Video Loss : CH11, Video Loss : CH12, Video Loss : CH13, Video Loss : CH14, Video Loss : CH15, and Video Loss : CH16. The last entry is "Setup : Enter". At the bottom, it says "25 log(s) found" and "BACKUP". Navigation buttons "< PREV", "NEXT >", and "CLOSE" are at the bottom right.

LOG	DATE
System Start	09/27/2013 20:54:23
Video In : CH1	09/27/2013 20:54:24
Video Loss : CH2	09/27/2013 20:54:24
Video Loss : CH3	09/27/2013 20:54:24
Video Loss : CH4	09/27/2013 20:54:24
Video Loss : CH5	09/27/2013 20:54:24
Video Loss : CH6	09/27/2013 20:54:24
Video Loss : CH7	09/27/2013 20:54:24
Video Loss : CH8	09/27/2013 20:54:24
Video Loss : CH9	09/27/2013 20:54:24
Video Loss : CH10	09/27/2013 20:54:24
Video Loss : CH11	09/27/2013 20:54:24
Video Loss : CH12	09/27/2013 20:54:24
Video Loss : CH13	09/27/2013 20:54:24
Video Loss : CH14	09/27/2013 20:54:24
Video Loss : CH15	09/27/2013 20:54:24
Video Loss : CH16	09/27/2013 20:54:24
Setup : Enter	09/27/2013 20:55:36

In the Event list window, click the event of interest, then click **NEXT** to play the video. Press the **ESC** button to stop playing the video and return to the event list window.

The submenu button in the upper right corner opens a channel selection window where you can select the specific channel you want to play. Select the channel, then press the **PREV** button to return to the **SEARCH** window.

4.1.3 GO TO FIRST TIME search

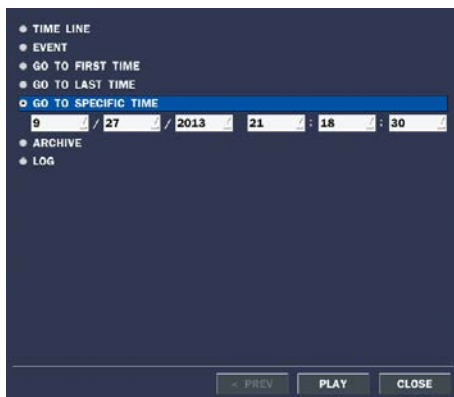
You can access from the oldest recorded data on the DVR by selecting **GO TO FIRST TIME** on the **SEARCH** window. Click **PREV** to return to the **SEARCH** window.

4.1.4 GO TO LAST TIME search

You can access from the last minute recorded data on the DVR by selecting **GO TO LAST TIME** on the **SEARCH** window. Click **PREV** to return to the **SEARCH** window.

4.1.5 GO TO SPECIFIC TIME search

In the SEARCH window, select GO TO SPECIFIC TIME, then use the mouse with the drop-down lists or the ▲, ▼, ◀, and ▶ buttons to enter the starting time of the video you want to play.



To stop playing video, press the front panel **ESC** button or click the ☒ icon. If no video was recorded at the time you entered, a NO DATA EXIST message will appear.



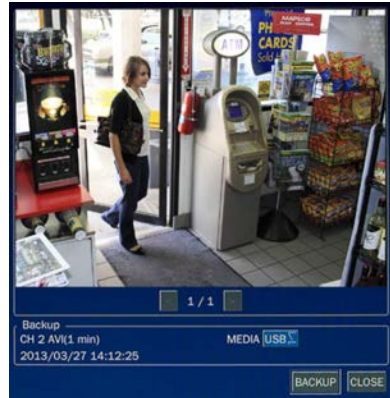
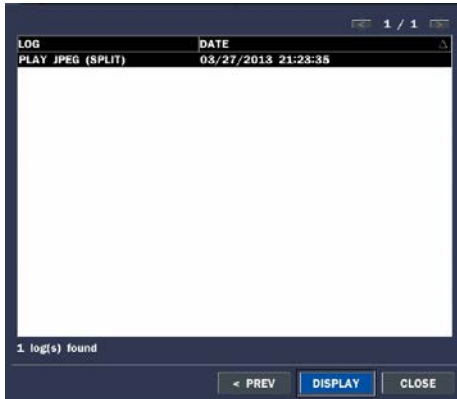
4.2 ARCHIVE search

Backed up data can be retrieved through the Archive search and then backed up to portable media for use away from the DVR.

NOTE

Before you can search for an Archived video clip, clips must first be backed up. See **Backup video clip** below.

To perform an Archive search (search of backed up recorded video or photo), select **ARCHIVE** in the SEARCH window. A calendar window will open. The highlighted days in the calendar window indicate that data was backed up on those days. The data backed up may be recorded (timestamped) on a different day. Select the day when the data was archived, then select **NEXT**.

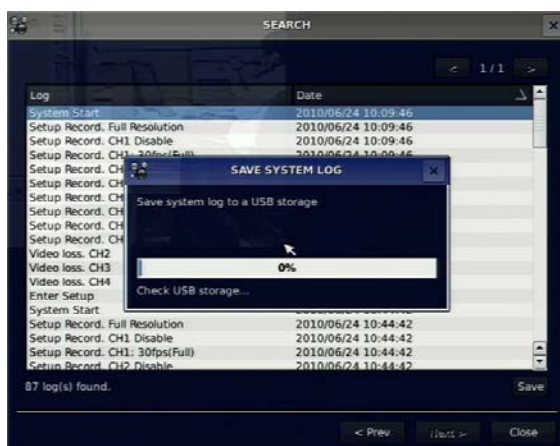
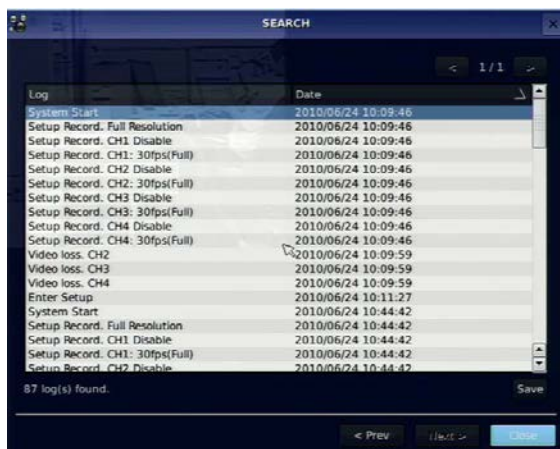


In the archive LOG list, select the file entry with the date and time when the data was backed up, then select **DISPLAY**. In the ARCHIVE IMAGE window, the timestamp of the recorded is shown in the **Backup** frame. Select the image and MEDIA location, then click **BACKUP**. To close the ARCHIVE IMAGE window, press **ESC** or click **CLOSE**.

4.2.1 Log search

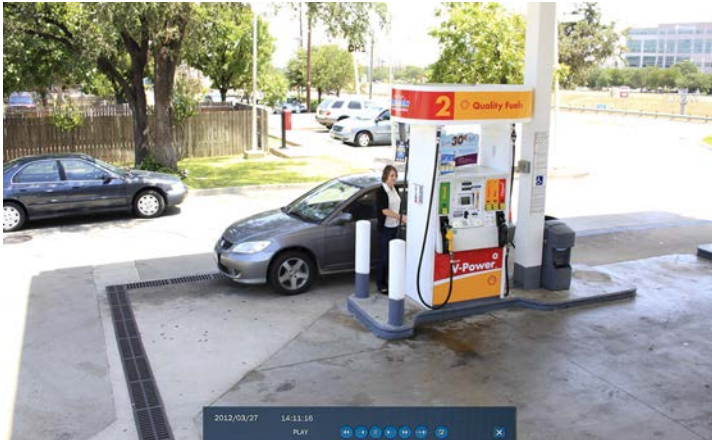
You can access the system LOG list search screen by selecting LOG on the SEARCH window. The system log can then be exported to an external device.

SECTION 4: LIVE, SEARCH, AND PLAYBACK



4.3 PLAY mode

Playing a recorded event changes the DVR mode from SEARCH to PLAY. While in PLAY mode, you can return to the SEARCH screen by pressing the front panel **ESC** button or clicking the  icon.



Playback controls are located at the bottom of the screen.

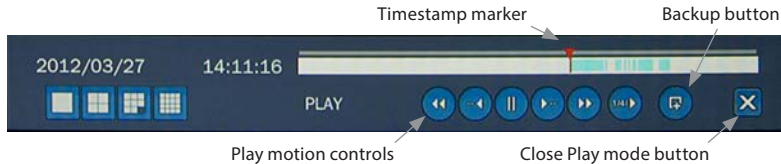


Table 18. Playback controls (PLAY Mode)

Icon	Description
	Go to the previous menu screen or search window, or exit from the menu.
	Select to rewind the recording. Select again to increase the rewind speed.
	Jump/step backward. The playback position moves 60 seconds back.
	Select to play or pause a recording.
	Jump/step forward. Playback position moves 60 seconds ahead.
	Select to fast forward the recording at 1x, 2x, or 4x speed of normal. Select again to increase the fast forward speed.
	Select to backup video clip..

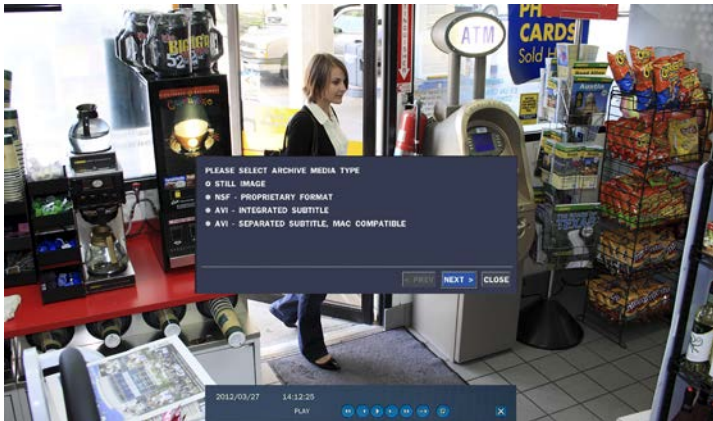
4.4 Backup video clip

You can archive the video clip by clicking the Backup button in Play mode (see the screen above). The system adds all backed-up video clips to the Archive search list. The Backup button is located on the play control bar.



To backup the clip:

1. Click the **Backup** button.
2. Select the type of backup you want to perform. You can save a still image, or a video clip in one of the formats listed. Click **NEXT** to continue.



Media types include:

STILL IMAGE: JPEG image is archived and backup on the media.

NSF: The backup video will be archived in a proprietary format that can only be played with HDPLAYER, an exclusive player.

AVI-SUBTITLE: The backup video will be archived in AVI format with an integrated time data stamp.

AVI-SEPARATED SUBTITLE: The backup video will be archived in AVI format with time data subtitle. This format can be played on an Apple® Mac™ computer.

3. Select the device you want to backup (archive) to. All archive devices are listed in the media window. Click **NEXT** to continue.



4. Click **NEXT** to save the video clip.

Allow the backup operation to complete before continuing.

SECTION 5

PTZ Control

To control the PTZ functions of the camera, select **Camera PTZ** on the OSD menu. Use the ▲, ▼, ◀, and ▶ buttons to select the channel of the PTZ camera and features you want to control.

Table 19. Button functions in PTZ control

Item	Description
INITIALIZE	Initialize the PTZ settings of the selected camera.
PAN / TILT	Select PAN/TILT using the ▲ ▼ ◀ and ▶ button, then and press SEL . Adjust the tilt (UP/DOWN)/pan (LEFT/RIGHT) position using the ▲, ▼, ◀, and ▶ buttons.
ZOOM / FOCUS	Select ZOOM/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 (3 digits) 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 (3 digits) to go to the preset position.
TOUR	Select TOUR and press the right (▶) key. A number input window will open. Select a number (1 digit) 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.



The Preset, Tour, OSD, and Autoscan function are only available on some camera models.

SECTION 6

Backup

Still images and video clips can be backed up in both Live mode and Playback mode, and written to a USB flash drive (with FAT32 format) or CD/DVD. A CODEC installer (CODEC required for playing AVI files with Windows Media Player) is also written to the backup device.

6.1 Still image BACKUP in Live mode

Still images can be captured and backed up onto the USB drive or CD/DVD while in Live mode. To initiate a backup in Live mode:

1. Right click on the desktop, then select BACKUP.
2. Select the media type you want to backup to.



If you want to backup the image to a USB flash drive, insert the drive into the USB port on the back or front of the DVR. If you want to backup to a CD or DVD, place a blank CD-R/W or DVD-R/W disk into the DVD drive. If no DVD-RW drive is installed in the DVR, the only backup option is USB.

3. Click **START**. A progress bar will open to show the status of the backup. Allow the backup process to complete before continuing.

6.2 Still image BACKUP in Playback mode

Still images can be captured and backed up onto the USB drive or CD/DVD while in video playback mode. To initiate a backup during playback:

1. Click the BACKUP button () to launch the backup (archive) function.



2. Select the media type for the backup. **STILL IMAGE**.
3. Select the destination of the backup. The screen shown below list all options available for your DVR.



If you want to backup the image to a USB flash drive, insert the drive into the USB port on the back or front of the DVR. If you want to backup to a CD or DVD, place a blank CD-R/W or DVD-R/W disk into the DVD drive. If no DVD-RW drive is installed in the DVR, the only backup option is USB.

4. Click **START**. A progress bar will open to show the status of the backup. Allow the backup process to complete before continuing. When the DVR backs up to a USB drive, it will create a directory on the flash drive with a date-coded named in the format "YYYYMMDD" (ex. "20110210") and write the file there.

6.3 Video BACKUP

Recorded video can be backed up onto the USB flash drive or CD/DVD-RW drive in playback mode. To perform the backup:

1. In playback mode, press the **BACKUP** button to launch the archiving function.

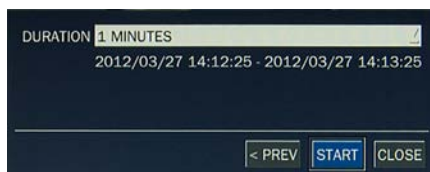
- When the BACKUP window opens, select **NSF** (native video format), or **AVI** (video format), then select **Next**.



- In the media window, select the media type you want to backup to. If no DVD-RW drive is installed in the DVR, the only backup option is USB.



- In the BACKUP window, select the channels to backup (if shown), the duration (from the drop-down list). If the display you are backing up has multiple camera channels, check the boxes for the channels you want to save. Click **Start**



- Select **START**. When the backup is complete, a message will appear. When the DVR backs up to a USB flash drive, it will create a directory on the flash drive with a date-coded name in the format "YYYYMMDD" (ex. "20120327") and write the file there.

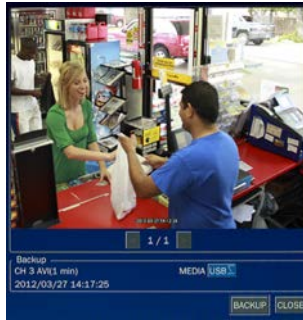
6.4 BACKUP still images or video from the ARCHIVE list

Video clips and images stored in the ARCHIVE list on your hard drive can be copied to a USB flash drive or a CD/DVD. To perform the copy:

- Use the mouse or the ▲, ▼, ◀, ▶, and SEL buttons to open the SEARCH window and select ARCHIVE. A calendar window will open. Dates highlighted in the calendar window indicate that archived data exists for those days.

SECTION 6 : BACKUP

2. In the calendar window, select a date, then select **Next**.
3. Scroll through the archive list and highlight the file of interest. Select **DISPLAY**.
4. In the ARCHIVE IMAGED window, select the media (USB or CD/DVD-R). If you want to copy the file to a USB flash drive, insert the drive into the USB port on the back or front of the DVR. If you want to backup to a CD or DVD, place a CD-R/W or DVD-R/W disk into the DVD drive.



5. Select **BACKUP** to copy the file to the media drive.
6. When the backup is complete, select **CLOSE** button to return to the LOG list window.

6.5 Playing backed up video clips

Video clips are backed up from the DVR in AVI or NSF format. AVI files can be played in Microsoft® Windows® with Window Media® Player and other players compatible with AVI formatted files. A CODEC installer, written to the backup device with the AVI file, should be executed before playing AVI files with Media Player.

NSF files can be played with the HD Player software. HD Player is downloaded to your USB device when you select an NSF backup and are writing the backup file to a "USB HDD (HUGE BACKUP)". To open HD Player from your USB HDD device, open the directory named DvrPlayer, then run the HDPlayer executable file.



HD Player screen

SECTION 7

Remote Client Software

Remote Client software is used to remotely monitor a single DVR. It can be used to display live images from your cameras, search for and play back recorded data, monitor alarms, control PTZ devices, and capture and backup data.

NOTE

In a high bandwidth network, a maximum of four users can access one DVR simultaneously. In a low bandwidth network it is recommended that only one user access the DVR at a time.

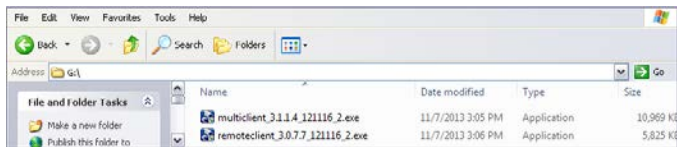
7.1 PC Requirements

For the Remote Client software, the minimum PC requirements are:

- **CPU:** Intel® Pentium® IV, 1.4 GHz or higher
- **Memory:** 512MB (1GB or larger is recommended.)
- **VGA memory:** 16 MB (64 MB or larger is recommended.)
- **Resolution:** 1024 x 768
- **Supported operating systems:** Microsoft® Windows® 2000, Windows XP Professional, Windows XP Home, Windows 7
- **DirectX®:** DirectX 8.1 or higher

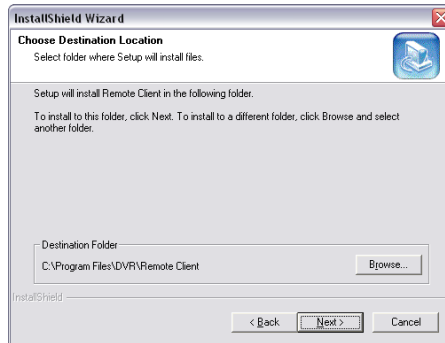
7.2 Installing the Remote Client

1. Insert the provided CD in the CD drive. Open a file list of the CD, then double-click “remoteclient(xxxxxx).exe” to install the file.

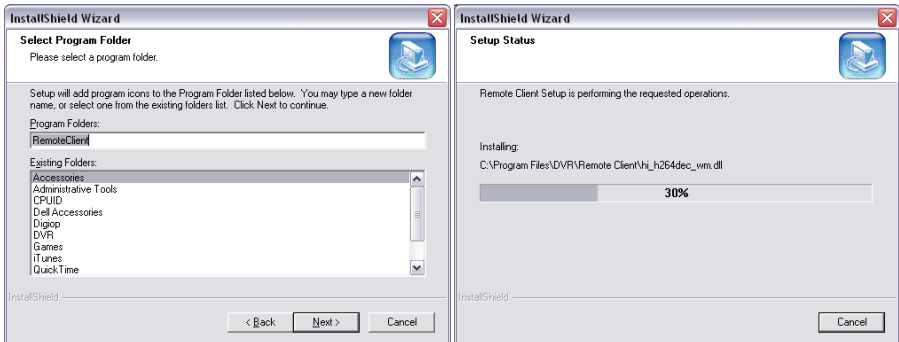


CD Contents (typical)

2. Browse for the preferred destination location in the InstallShield Wizard window, then click **Next**.



3. Select the preferred program folder, then click **Next**. The setup status screen will open.



4. Select a Program Folder, then click **Next**. The Remote Client will be installed and a Remote Client icon will appear on the desktop.
5. Close the InstallShield window.

7.3 Remote Client initial display

To open the Remote Client, double-click the icon on the desktop, or open it through the Windows **Start** menu.

SECTION 7: REMOTE CLIENT SOFTWARE

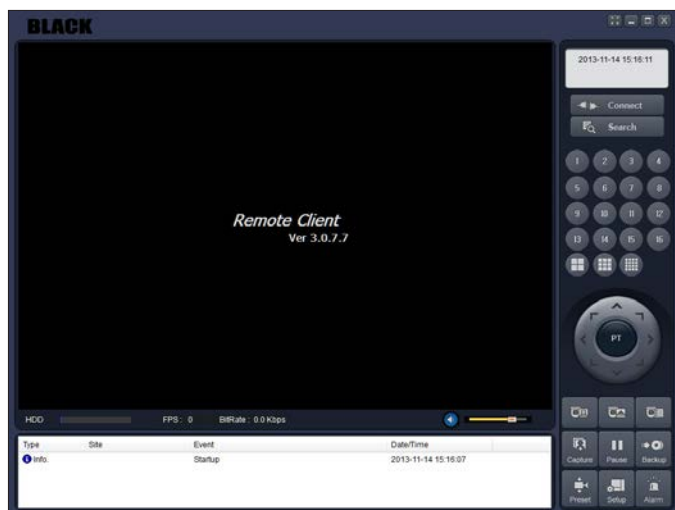
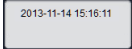
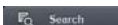


Table 20. Remote Client window components

Button	Function	Description
	WINDOW CONTROL	Buttons for expanding the image to full screen (press ESC to return to normal viewing), minimizing the window, expanding window to full screen, and closing the window.
	DATE & TIME	Displays the current date and time.
	CONNECT/DISCONNECT	Connect/disconnect a DVR.
	SEARCH/LIVE	Switches from Live mode to Search mode.
	KEYPAD	Select a channel. Click the channel button, or double-click the channel on the Live view screen.
	SPLIT-SCREEN MODE	Select a split-screen mode 4-, 9-, or 16-channel display,.
	PAN/TILT - /ZOOM/ FOCUS	Control the PAN/TILT and ZOOM/FOCUS features on the remote camera. To switch between the PT and ZF dials, click the button in the center.

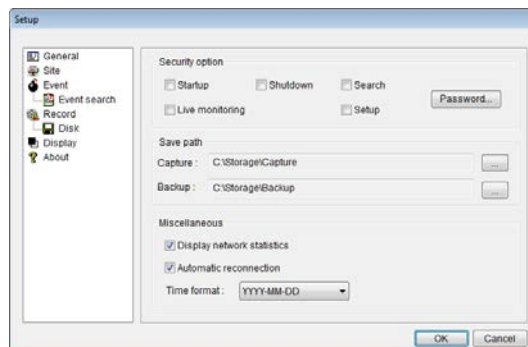
Button	Function	Description
	PTZ camera functions: Scan, Tour, Menu Controls	These icons invoke Scan, Tour and Menu Controls setup in a PTZ camera.
	FUNCTIONS	CAPTURE: Capture a still image of the screen. PLAY/PAUSE: Play/freeze live video BACKUP: Initiate backup operation (record on/off). PRESET: Select camera position preset. SETUP: Open the setup menus. ALARM: The ON/OFF button of the alarm output of the DVR. When an alarm is active, this button is red.
	HDD USAGE	DVR HDD space used Indicator.
	NETWORK BANDWIDTH	Shows the transferred frames and network bandwidth.
	AUDIO	Adjust the volume. Click the (speaker) icon on the left to mute the volume.
	LOG WINDOW	

7.4 Setup

The Remote Client includes several setup options, including presets for the DVRs you want to connect to. To open the setup menus, click the **Setup** button.

7.4.1 General Setup

When the Setup menu is opened, the **General** options are displayed.



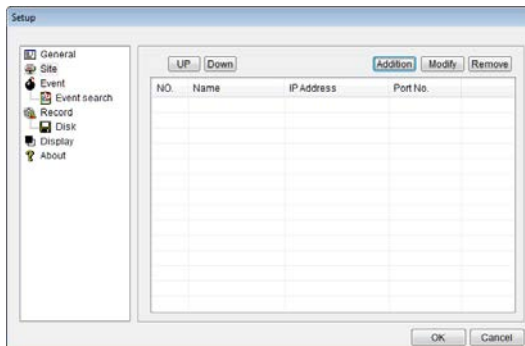
General options include:

- **Security Option:** Set a password for security options. If set, you must enter the password when accessing any of the security functions.
- **Save Path:** Specify the location backup and still image captures are saved.
- **Automatic reconnection:** If a user selects this function, the client will automatically try to connect to the previously connected IP address if the network connection is lost.
- **Time Format:** Select the format for displaying the time.

After entering all fields in the **Site Additions** window, click **OK** to save your entries and exit the Setup menus.

7.4.2 Site Setup

To open the Site menu, click the **Site** entry in the left frame of the **Setup** window.



Initially, no site (DVR) is listed. To add a site, click the **Addition** button.

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

- Site Name:
- IP Address:
- Port No.:
- ID:
- Password:
- Channels:
- ☒ Display Device Channel name
- Table with 2 columns: Ch No., Name

1	CH-1
2	CH-2
3	CH-3
4	CH-4
5	CH-5
6	CH-6
- Buttons: OK, Cancel

In the Site Addition menu, enter:

- **Site Name:** Enter an appropriate name for the DVR you will connect to.
- **IP Address:** Enter the IP address and web port number (if other than 80).
- **Port No.:** Enter the port number for the DVR. The default DVR port number is 5445.
- **ID:** Enter your login ID (login name).
- **PASSWORD:** Enter the password associated with the login ID. The default login ID and password are **Admin** and **1111**.
- **Channels:** Enter the number of channels supported by your DVR (4, 8, or 16).

After entering all fields in the **Site Additions** menu, click **OK** to save your entries.

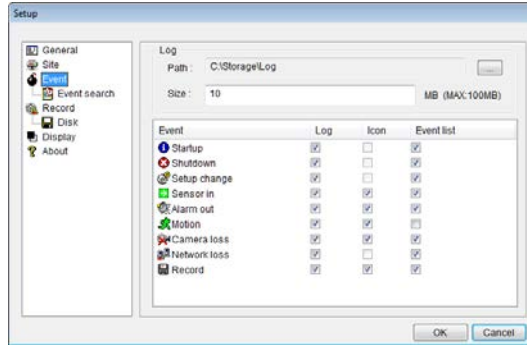
The 'Setup' window displays the following information:

- Left sidebar: General, Site, Event, Event search, Record, Disk, Display, About
- Buttons: UP, Down, Addition, Modify, Remove
- Table with 4 columns: NO., Name, IP Address, Port No.

1	Desk	192.168.75.5	5445
- Buttons: OK, Cancel

7.4.3 Event Setup

To open the Event menu, click the **Event** entry in the left frame of the **Setup** window. The Event menu allows you to configure how the client will display and log event information received from the DVR.



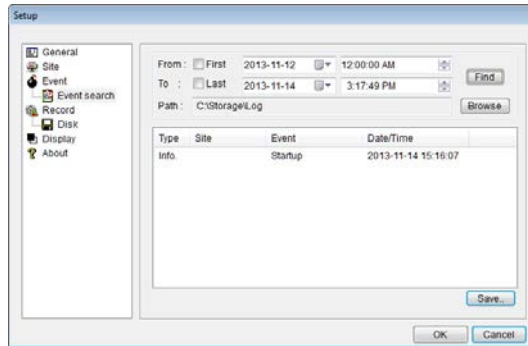
In the Event Setup menu, set the following:

- **Log Path:** Click the browse button to identify where event log files are saved.
- **Log Size:** Set the maximum size in megabytes of the event log file space.
- **Event Log:** For each event type, select the checkbox to save the event data in the log file.
- **Event Icon:** For each event type, select the checkbox to display the event on live video.
- **Event List:** For each event type, select the checkbox to show the event in the Event List in live mode.

After entering all fields in the **Site Additions** menu, click **OK** to save your entries and exit the Setup menus.

7.4.4 Event Search Setup

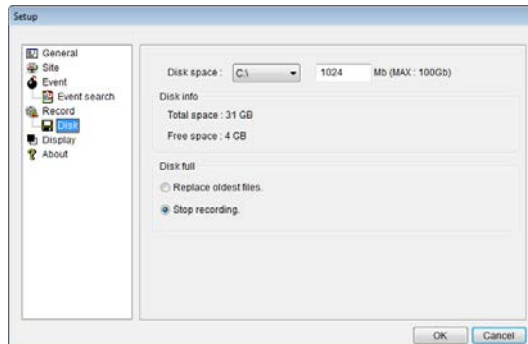
The Event Search window is used to display a list of the logged events that occurred during a specified time period. Use the drop down lists to choose the **From** and **To** times, then browse to the location of the log file. To save the list of events to another file, click **Save**. An event timestamp can be used to easily find the video recordings of the event.



After entering all fields in the **Event Search** menu, click **OK** to save your entries and exit the Setup menus.

7.4.5 Record Setup

To open the Record menu, click the **Record** entry in the left frame of the **Setup** window. The Record menu allows you to configure the conditions that trigger live video recording.



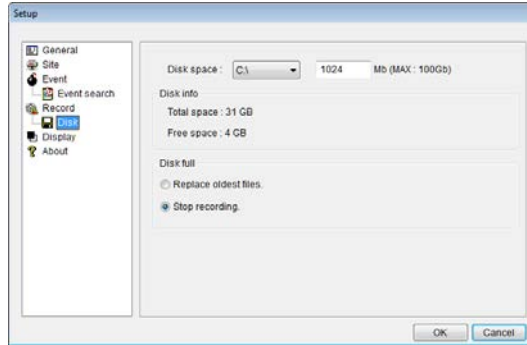
In the Record menu, set the following:

- **Record Condition:** Select **Always** or **Event**, then **Auto record**.
- **Event:** If Event was selected as the Record Condition, select the type of event and the duration of the recording.
- **Channels:** Select the channels to be recorded during the conditions selected above.

After entering all fields in the **Record** menu, click **OK** to save your entries and exit the Setup menus.

7.4.6 Record Disk Setup

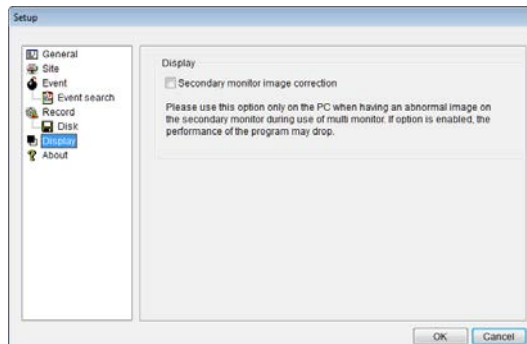
To open the Record Disk menu, click the **Disk** entry in the left frame of the **Setup** window. Use the Disk menu to select the location where recorded data is saved, and the amount of space on the disk to allocate for recordings.



In the Disk menu, select the storage drive from the drop down list, then enter the size of the storage buffer in megabytes. Choose either **Replace oldest files** or **Stop recording** when the disk is full. Click **OK** to save your entries and exit the Setup menus.

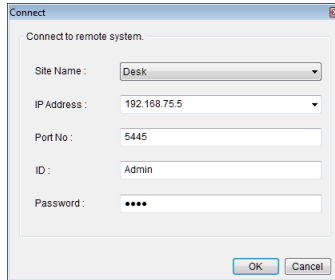
7.4.7 Display Setup

Use the Display Setup menu in multi-monitor systems to correct the image on a secondary monitor. Use of this feature may degrade the performance of the DVR.

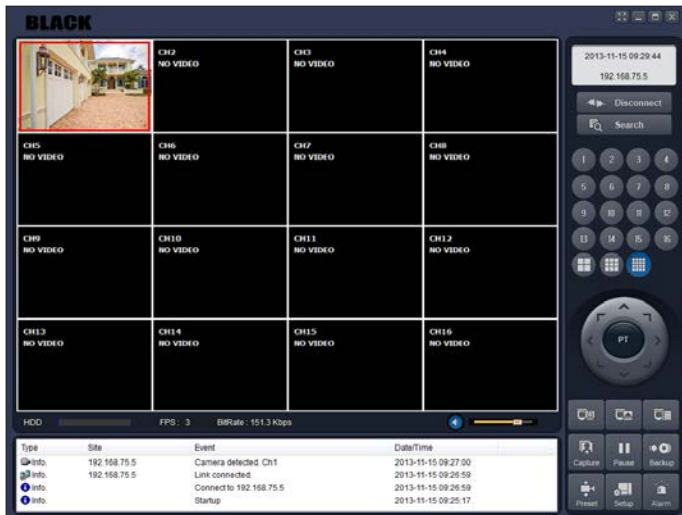


7.5 Connecting to a DVR

To connect to a DVR, click the **Connect** button. The **Connect** dialog window will open. The **Connect** window is filled by the entry made in the **Setup Site** menu.



In the **Connect** window, use the drop down lists to select the DVR you want to connect to, then click **OK**. A Live view window from your DVR will be displayed.



7.5.1 Bidirectional Audio

The Remote Client supports bidirectional audio between the client PC and a DVR. To use bidirectional audio, the client PC must have a microphone and speakers. At the DVR, connect a microphone to the audio-in connectors, and a pair of amplified speakers to the audio-out connectors.

7.6 Remote Search mode and functions

After connecting to the DVR, the Remote Client can be used to search for and playback recorded video. Video clips can then be backed up to a USB drive or local hard disk. To open the **Search** screen, click the **Search** button.

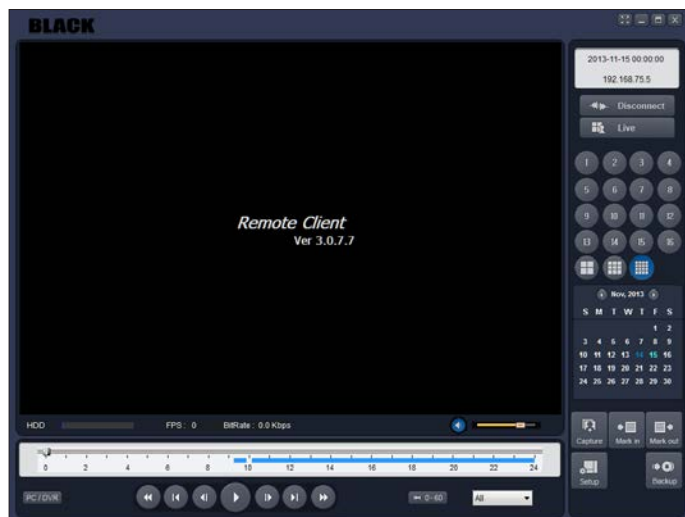
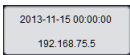
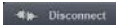


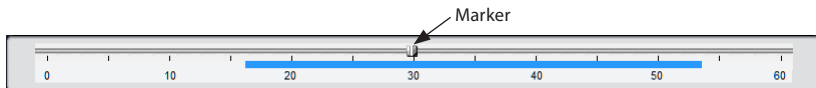
Table 21. Remote Client Search window components

Button	Function	Description
	WINDOW CONTROL	Buttons for expanding the image to full screen (press ESC to return to normal viewing), minimizing the window, expanding window to full screen, and closing the window.
	DATE & TIME	Displays the current date and time.
	CONNECT/DISCONNECT	Connect/disconnect network connection.
	LIVE/SEARCH	Switches from search mode to live mode.
	KEYPAD	Select a channel. Click the channel button, or double-click the channel on the live view screen. NOTE: The number of channel buttons shown indicates the capacity of the DVR.

Button	Function	Description
	SPLIT-SCREEN MODE	Select a split-screen mode 4-, 9-, or 16-channel display.
	CALENDAR	In the calendar frame, dates with recorded video are colored in dark blue. Click the date of the recorded video you want to find or play. The date selected is indicated in light blue.
	FUNCTIONS	CAPTURE: Capture a still image of the screen/camera. MARK IN: Set the start time at the marker position MARK OUT: Set the end time at the marker position SETUP: Display the setup screen of the network viewer. BACKUP: Backup the video clip from MARK IN time to MARK OUT time
	HDD USAGE	DVR HDD space used Indicator.
	AUDIO	Adjust the volume. The audio is on or muted by clicking the speaker icon.
	TIMELINE Bar	Displays a timeline for the date selected in the calendar frame. Time spans when video is recorded are marked in blue. To expand the display for an hour when video was recorded, drag the marker to the hour you want to expand, then click the 0 - 60 button (located below the time line).
	PLAYBACK BUTTONS	Use the playback buttons to control video playback. The playback buttons are labeled with the standard icons used for video play control.

7.6.1 Searching for and playing video recorded by the DVR

1. At the Remote Client, connect to the DVR.
2. Press the **SEARCH** button. The client will change from live mode to search mode.
3. In the calendar frame, click the date when video was recorded.
4. Drag the marker on the timeline to the time at which you want to play recorded video. To expand the hour within which the marker lies, click the **0 - 60** button below the time line.



5. Click the **PLAY** button to begin playing video at the marker position.

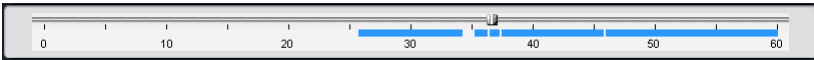
7.6.2 Backing up video from the DVR on the Remote Client PC

Video recorded in the DVR can be backed up on the PC where the Remote Client is installed. Video clips are saved in AVI format.

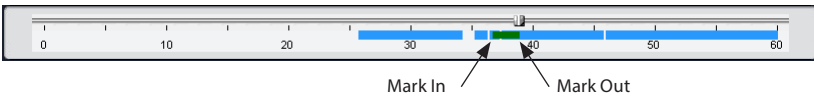
1. At the Remote Client, connect to the DVR.
2. Click the **SEARCH** button. The client will change from live mode to search mode.
3. In the calendar frame, click the date when the video was recorded.
4. Drag the marker on the timeline to the time at which you want to play recorded video.



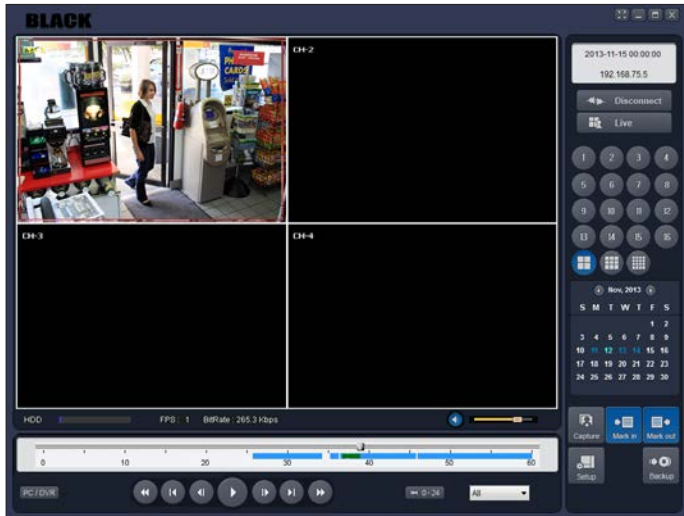
To expand the hour within which the marker lies, click the **0 - 60** button below the time line.



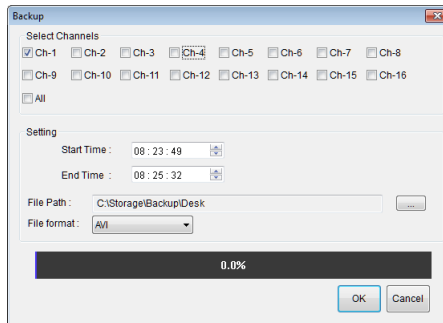
5. Play the video to determine the time where you want to start backing up a clip, then pause the playback and click the **MARK IN** button.
6. Continue playing the video to determine the time where you want to end the clip, then stop the playback and click the **MARK OUT** button. The time span between the MARK IN and MARK OUT times will be highlighted in dark green.



7. Click the **PLAY** button to view the video clip you marked.



8. To backup the video clip you marked, stop the video playback, then press the **BACKUP** button. The **Backup** menu window will open.

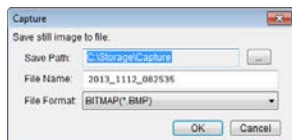


9. In the **Backup** menu, select the options you want, then click **OK**.
10. A pop-up window will appear when the backup operation is complete. Click **OK** to close the backup operation.

NOTE Video backup can take several minutes to complete, depending on the number of channels selected and the duration of the clip.

7.6.3 Image capture

A still image of a screen can be captured in either Live mode or Search mode, then saved as a BMP or JPEG file. To capture a still image of the screen, click the **Capture** button. A Capture menu will open.



In the **Capture** menu, select the options you want, then click **OK**. An image of the screen will be saved at the location you specified.

SECTION 8

Multi Client Software

Multi Client software can monitor several DVRs (sites) simultaneously. It can display to up 256 live video channels on one screen, playback video clips, control PTZ cameras, monitor alarms, and be configured with 2-way audio communication through the DVR.

NOTE

In a high bandwidth network, a maximum of four users can access one DVR simultaneously. In a low bandwidth network only one user should access the DVR at a time.

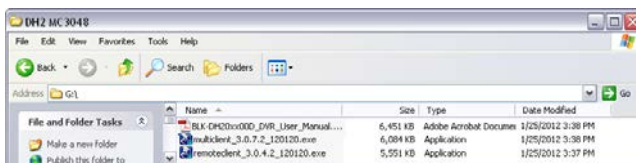
8.1 PC Requirements

For the Multi Client software, the minimum PC requirements are:

- **CPU:** Intel® Pentium® IV, 2GHz or faster
- **Memory:** 512MB (1GB or larger is recommended.)
- **VGA memory:** 16MB (64MB or larger is recommended.)
- **Resolution:** 1024 x 768
- **Disk space:** 1GB
- **Supported operating systems:** Microsoft® Windows® 2000, Windows XP Professional, Windows XP Home, Windows 7
- **Network:** 10/100BASE-T network
- **DirectX:** DirectX 8.1 or higher

8.2 Installing the Multi Client

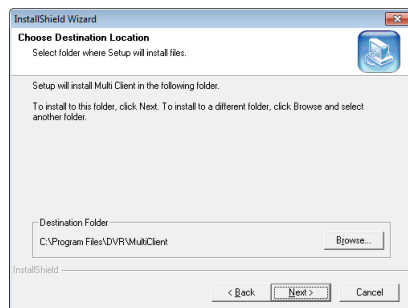
1. Insert the provided CD in the CD drive. Open a file list of the CD, then double-click “multiclient(xxxxxx).exe” to install the file.



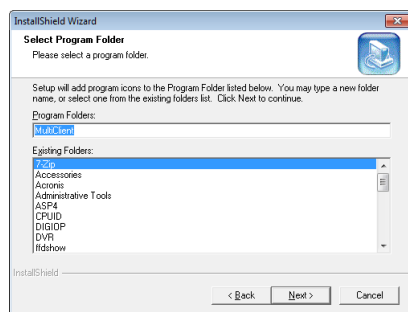
CD Contents (typical)

2. Browse for the preferred destination location in the InstallShield Wizard window, then click **Next**.

SECTION 8: MULTI CLIENT SOFTWARE



3. Select the program folder and click **Next**. The setup status screen is displayed. Allow the application to fully install before continuing.



4. Select a Program Folder for the **Start** menu, then click **Next**. The Multi Client will be installed and a “Multi Client” icon will be displayed on the desktop.
5. Close the InstallShield window.

8.3 Multi Client initial display

To open the Multi Client, double click the icon on the desktop or open it through the Windows **Start** menu.

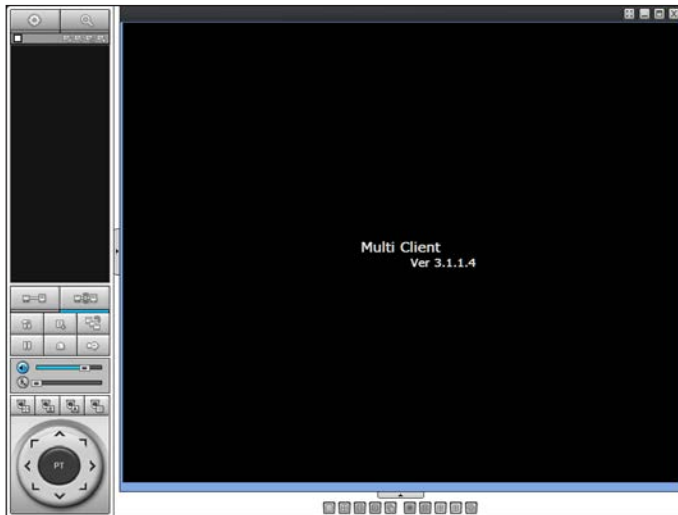


Table 22. Multi Client screen components

Button	Function	Description
	WINDOW CONTROL	Buttons for expanding the image to full screen (press ESC to return to normal viewing), minimizing the window, expanding window to full screen, and closing the window.
	LOCAL PLAYBACK	Search for video files recorded on the local PC.
	REMOTE PLAYBACK	Search for video files recorded on the DVR.
	SITE CONTROLS: Refresh, Site Addition, Site Delete, Net Finder	Icons in the upper-right corner of the screen. Applies control to sites selected in the site list below. These icons link to: refresh thumbnail, site addition, site delete, net finder (site modify)
	SITE LIST	List of sites added to the DVR. The site list appears in the pane beneath the site controls icons.
	CONNECT	Click to connect to sites selected in the frame above.
	DISCONNECT	Click to disconnect to sites selected in the frame above.
	SETUP	Open the setup menus
	CAPTURE	Capture a still image of the screen.
	EVENT LIST	Opens the list of events logged by the Multi Client.

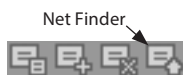
SECTION 8: MULTI CLIENT SOFTWARE

Button	Function	Description
	PAUSE	Freezes the screen
	ALARM	
	RECORD	Enable/disable recording of live video.
	SPEAKER, MICROPHONE	Controls for adjusting the volume of the speaker and microphone.
	PTZ camera functions: Camera Preset, Scan, Tour, Menu Controls	These icons invoke Preset, Scan, Tour and Menu Controls setup in the PTZ camera.
	PAN/TILT - /ZOOM/ FOCUS	Control the PAN/TILT and ZOOM/FOCUS features on the remote camera. To switch between the PT and ZF dials, click the button in the center.
	CHANNEL SPLIT	Use to select the number of channels (1/4/9/16) shown on the screen.
	SITE SPLIT	Use to select the number of DVRs (1/4/9/16) shown on the screen.

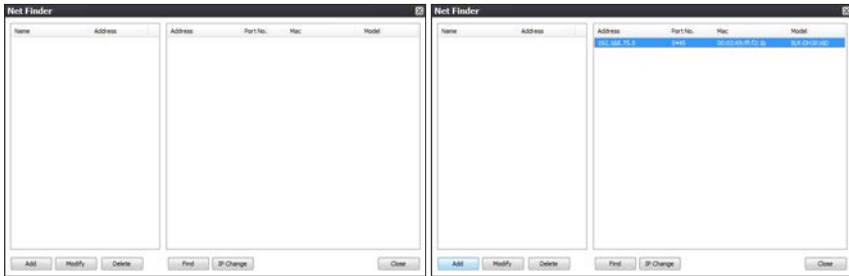
8.3.1 Using Net Finder

The Net Finder feature discovers BLK-DH30xx DVRs on the subnet, and can be used to quickly add it to Multi Client. To use Net Finder:

1. Click the Net Finder icon in the upper left corner of the window.



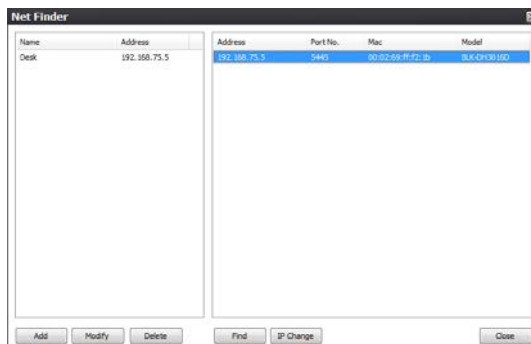
2. In the Net Finder window, click the **Find** button to list the BLK-DH30xx DVRs on your network. Net Finder will list the DVRs added to Multi Client in the left frame, and DVRs discovered on the network in the right frame.



3. In the Net Finder right pane, click the DVR you want to add, then click the **Add** button.
4. In the Site Addition window, add a **Site Name** and an administrative **ID** and **Password**. In the screen above, the site name entered is Desk.

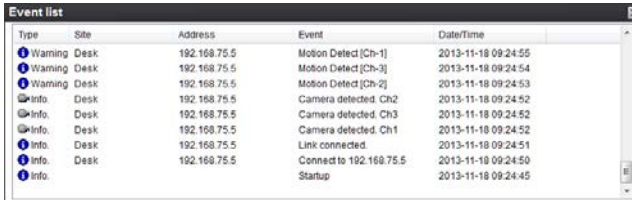
The Net Finder window will the site added to the left frame.

5. Click **OK** to save your settings. The site you added will appear in the left frame of the Net Finder window, and the site list frame on the left side of the Multi Client window. Click **Close** to return to the main window.



8.3.2 Event List

Clicking the Event List icon opens the Event List window for the current Multi Client session.



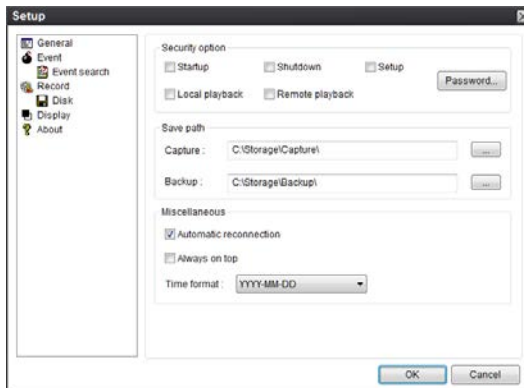
Type	Site	Address	Event	Date/Time
Warning	Desk	192.168.75.5	Motion Detect [Ch-1]	2013-11-18 09:24:55
Warning	Desk	192.168.75.5	Motion Detect [Ch-3]	2013-11-18 09:24:54
Warning	Desk	192.168.75.5	Motion Detect [Ch-2]	2013-11-18 09:24:53
Info	Desk	192.168.75.5	Camera detected: Ch2	2013-11-18 09:24:52
Info	Desk	192.168.75.5	Camera detected: Ch3	2013-11-18 09:24:52
Info	Desk	192.168.75.5	Camera detected: Ch1	2013-11-18 09:24:52
Info	Desk	192.168.75.5	Link connected	2013-11-18 09:24:51
Info	Desk	192.168.75.5	Connected to 192.168.75.5	2013-11-18 09:24:50
Info	Desk	192.168.75.5	Startup	2013-11-18 09:24:45

8.4 Setup

The Multi Client includes several setup options. To open the setup menus, click the **Setup** button.

8.4.1 General Setup

When the Setup menu is opened, the **General** options are displayed.



Setup

- General (selected)
- Event
- Event search
- Record
- Disk
- Display
- About

Security option

☐ Startup
 ☐ Shutdown
 ☐ Setup

☐ Local playback
 ☐ Remote playback

Save path

Capture: C:\Storage\Capture1

Backup: C:\Storage\Backup1

Miscellaneous

☒ Automatic reconnection

☐ Always on top

Time format: YYYY-MM-DD

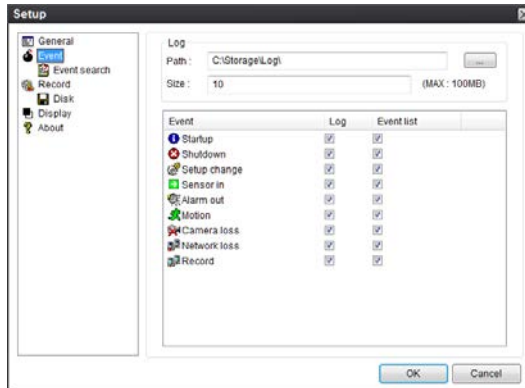
General options include:

- **Security Option:** Set a password for security options. If set, you must enter the password when accessing selected security functions.
- **Save Path:** Specify the location backup and still image captures are saved.
- **Automatic Reconnection:** If a user selects this function, the client will automatically try to reconnect to the previously connected IP address if the network connection is lost.
- **Time Format:** Select the format for displaying the time.

After entering all fields in the **Site Additions** window, click **OK** to save your entries and exit the Setup menus.

8.4.2 Event Setup

To open the Event menu, click the **Event** entry in the left frame of the **Setup** window. The Event menu allows you to configure how the client will display and log event information received from the DVR.



In the Event Setup menu, set the following:

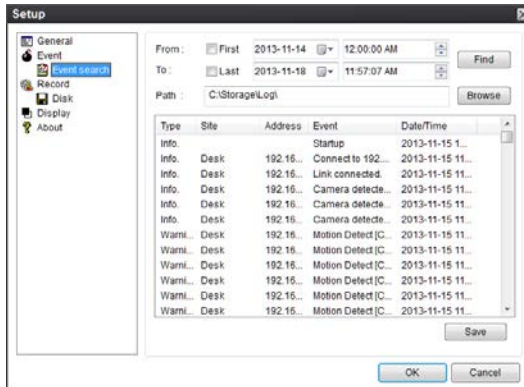
- **Log Path:** Click the browse button to identify where event log files are saved.
- **Log Size:** Set the maximum size in megabytes of the event log file space.
- **Event Log:** For each event type, select the checkbox to save the event data in the log file.
- **Event List:** For each event type, select the checkbox to show the event in the Event List in live mode.

After entering all fields in the **Site Additions** menu, click **OK** to save your entries and exit the Setup menus.

8.4.3 Event Search Setup

The Event Search window is used to display a list of the logged events that occurred during a specified time period. Use the drop-down lists to choose the **From** and **To** times, then browse to the location of the log file. Click **Find**. To save the list of events to another file, click **Save**. An event timestamp can be used to easily find the video recordings of the event.

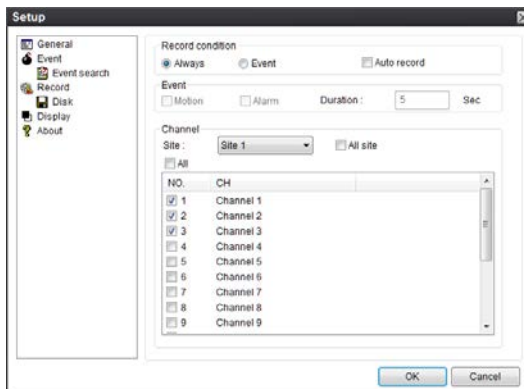
SECTION 8: MULTI CLIENT SOFTWARE



After entering all fields in the **Event Search** menu, click **OK** to save your entries and exit the Setup menus.

8.4.4 Record Setup

To open the Record menu, click the **Record** entry in the left frame of the **Setup** window. The Record menu allows you to select the conditions with which live video from the cameras is recorded.



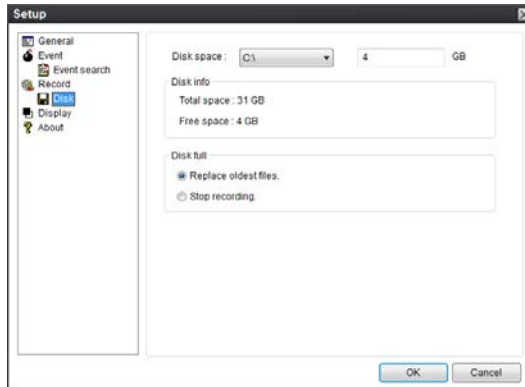
In the Record menu, set the following:

- **Record Condition:** Select **Always** or **Event**, then **Auto record**.
- **Event:** If Event was selected as the Record Condition, select the type of event and the duration of the recording.
- **Channels:** Select the channels to be recorded during the conditions selected above.

After entering all fields in the **Record** menu, click **OK** to save your entries and exit the Setup menus.

8.4.5 Record Disk Setup

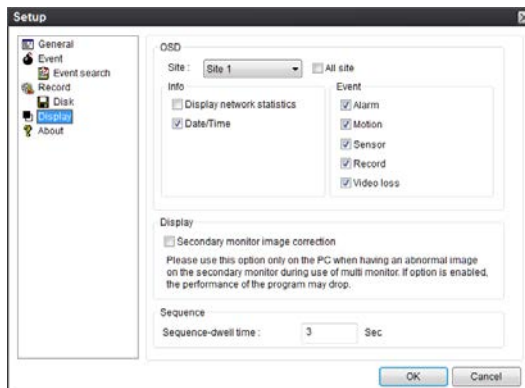
To open the Record Disk menu, click the **Disk** entry in the left frame of the **Setup** window. The Disk menu allows you to select the location where recorded data is saved, and the amount of space on the disk to allocate for recordings.



In the Disk menu, select the storage drive from the drop down list, then enter the size of the storage buffer in megabytes. Choose either **Replace oldest files** or **Stop recording** when the disk is full. Click **OK** to save your entries and exit the Setup menus.

8.4.6 Display Setup

To open the Display menu, click the **Display** entry in the left frame of the **Setup** window. The Display menu allows you to select the kinds of information and events messages that appear on the screen. Each site you connect to can be configured differently.



After selecting the preferred options in the **Display** menu for each site, click **OK** to save your entries and exit the Setup menus.

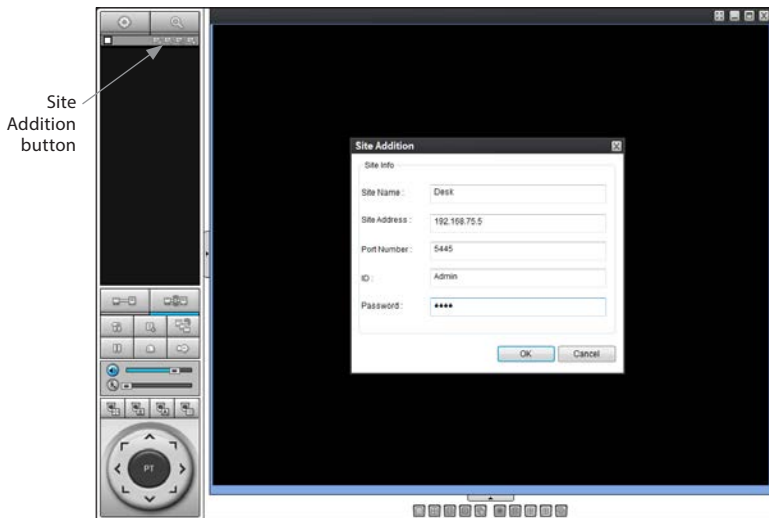
8.4.7 About Setup

The About Setup screen displays the version level of the Multi Client Software. The abbreviated copyright statement is also shown.

8.5 Connecting to a DVR

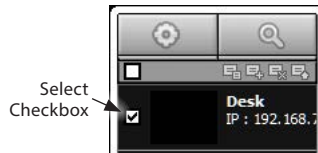
To connect to a DVR for the first time:

1. Click the **Site Addition** button. The **Site Addition** dialog window will open.



2. In the **Site Addition** menu, enter:
 - **Site Name:** Enter an appropriate name for the DVR you will connect to.
 - **IP Address:** Enter the IP address and web port number (if other than 80).
 - **Port No:** Enter the port number for the DVR. The default DVR port number is 5445.
 - **ID:** Enter your login ID (login name). The default administrator ID is **Admin**.
 - **PASSWORD:** Enter the password associated with the login name. The default administrator password is **1111**.

3. After entering all fields in the **Site Additions** menu (see above) click **OK** to save your entries. An entry for the DVR you added will appear in the site list frame (below the Site Addition icon).
4. Click the checkbox in the entry you added to the site list.



5. Click the **Connect** button to connect to the DVR.



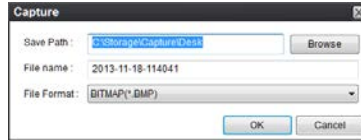
Multi Client DVR Live View

8.5.1 Bidirectional Audio

The Multi Client supports bidirectional audio between the client PC and a DVR. To use bidirectional audio, the client PC requires connections for a microphone and speakers. At the DVR, connect a microphone to the audio-in connectors, and a pair of amplified speakers to the audio-out connectors.

8.5.2 Capture

A still-image of a screen can be captured in either Live mode or Search mode and saved as a BMP or JPEG file. To capture a still image of the screen, click the **Capture** button. A **Capture** menu will open.



In the **Capture** menu, select the options you want, then click **OK**. An image of the screen will be saved at the location you specified. By default, captured images are saved in the directory specified in the **Setup / General** menu. However, the Save Path can be changed in the **Capture** menu if necessary.

8.5.3 Record

Video recording of the live screen can be manually started and stopped by clicking the **Record** button. When video is being recorded, the **Record** button is highlighted blue. To stop recording, click the **Record** button again. By default, recorded video is saved in the path specified in the **Setup / General** menu.

8.6 Remote playback and backup

The Multi Client can be used to search for and playback video clips in the DVR. Video clips can then be backed up to a local USB drive or disk.

NOTE

*The Event List may provide valuable information on when alarms and other events occurred. To open the Event List, click the **Events List** button.*

8.6.1 Remote playback

To search for and recorded video from the DVR:

1. At the Multi Client initial screen, connect to the DVR.
2. Click the **Remote playback** button. The client will open a Search mode window.

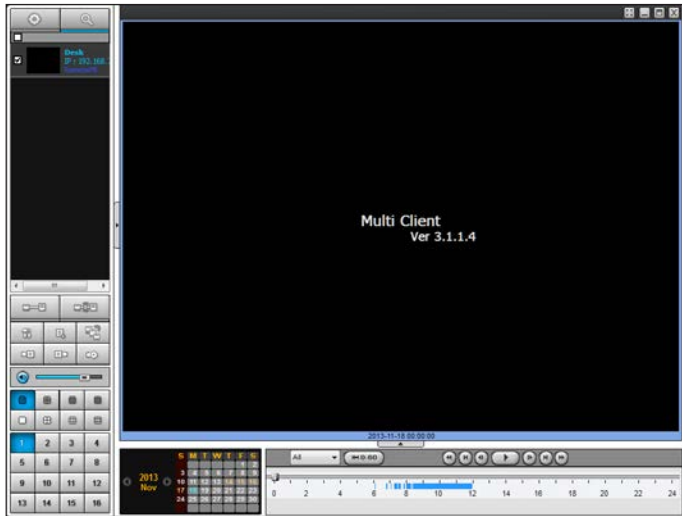
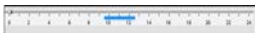


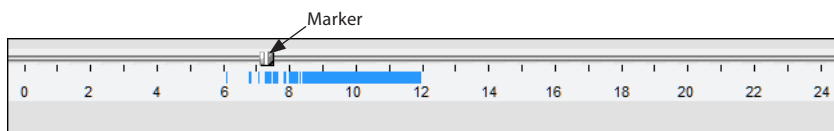
Table 23. Multi Client search window components

Button	Function	Description
	FUNCTIONS	SETUP: Opens the Setup menu CAPTURE: Capture a still image of the screen/camera. EVENT LIST: Displays logged DVR events. MARK IN: Set the start time at the marker position MARK OUT: Set the end time at the marker position BACKUP: Opens a menu to backup the section of video between the MARK IN time and MARK OUT time
	AUDIO	Adjust the volume. The audio is on or muted by clicking the speaker icon.
	MULTI-DVR DISPLAY/ MULTI-CHANNEL DISPLAY MODE	Display multiple DVRs Select a split-screen mode 1-, 4-, 9-, or 16-channel display,
	Channel select	Select a channel.
	CALENDAR	In the calendar frame, days with recorded video are colored in light tan. Click the date of the recorded video you want to find or play. Dates colored tan have data recorded. The date colored blue is the date selected; the timeline shows when data was recorded on that day.

SECTION 8: MULTI CLIENT SOFTWARE

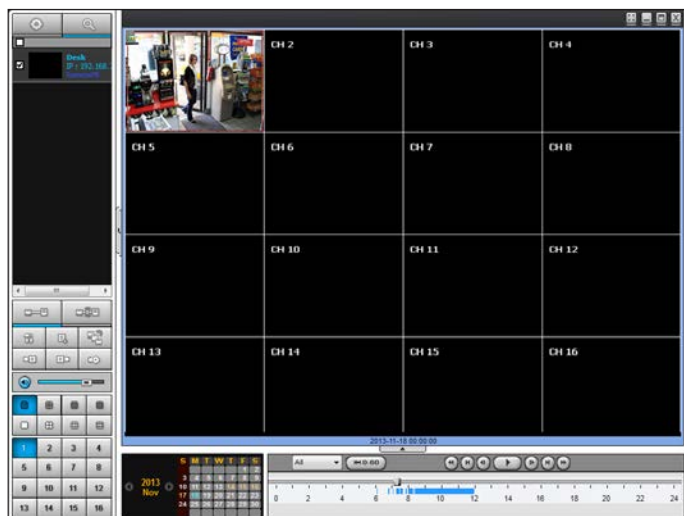
Button	Function	Description
	TIMELINE Bar	Displays a timeline for the date selected in the calendar frame. Time spans when video is recorded are marked in blue. To expand the display for an hour when video was recorded, drag the marker to the hour you want to expand, then click the 0 - 60 button (located below the time line).
	PLAYBACK BUTTONS	Use the playback buttons to control video playback. The playback buttons are labeled with the standard icons used for video play control.

3. Select the DVR (checkbox) of the unit you want to see recorded video from.
4. In the calendar frame, click the date when the video of interest was recorded.
5. Drag the marker on the timeline to the time at which you want to play recorded video.



To expand the hour within which the marker lies, click the **0 - 60** button above the timeline.

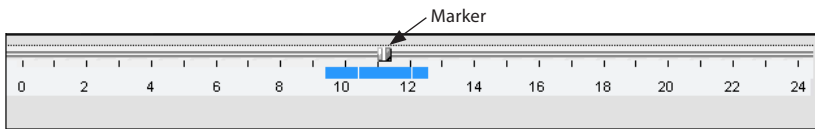
6. Click the **PLAY** button to begin playing video at the marker position.



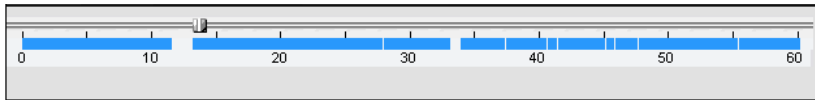
8.6.2 Backing up video from the DVR on the Multi Client PC

Video recorded in the DVR can be backed up on the PC where the Multi Client is installed. Video clips are saved in AVI or NFS format.

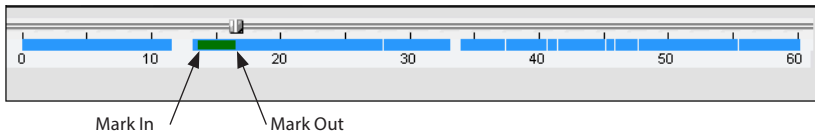
1. At the Multi Client, connect to the DVR.
2. Click the **Remote playback** button. The client will change from Live mode to the Search mode.
3. Select the DVR (checkbox) of the unit you want to see video from.
4. In the calendar frame, click the date when the video of interest was recorded.
5. Drag the marker on the timeline to the time at which you want to play recorded video.



To expand the hour within which the marker lies, click the **0 - 60** button above the timeline.

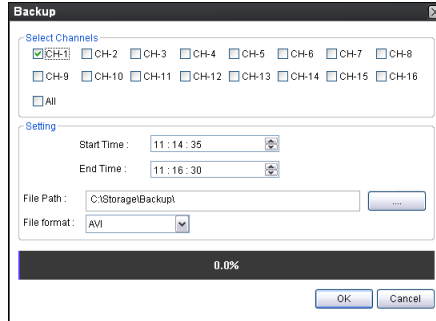


6. Play the video to determine the time where you want to start backing up a clip, then stop the playback and click the **MARK IN** button.
7. Continue playing the video to determine the time where you want to end the clip, then stop the playback and click the **MARK OUT** button. The time span between the MARK IN and MARK OUT times will be highlighted in dark green.



8. To backup the video clip, click the **BACKUP** button. The **Backup** menu window will open.

SECTION 8: MULTI CLIENT SOFTWARE



9. In the **Backup** menu, select the options you want, then click **OK**.
10. A pop-up window will appear when the backup operation is complete. Click **OK** to close the Backup operation.

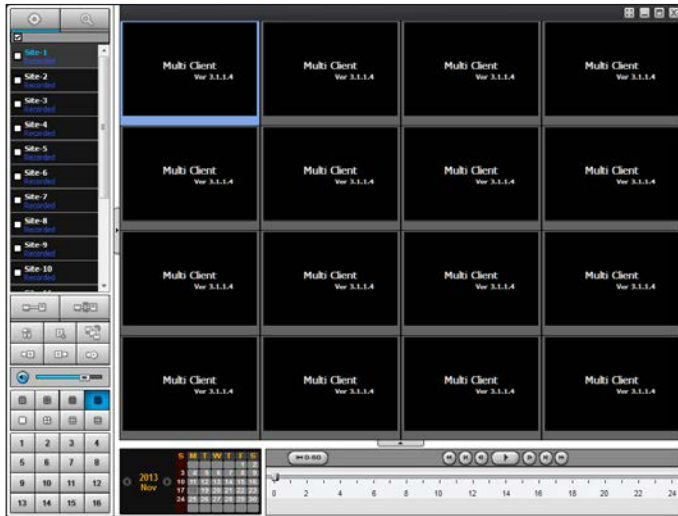
NOTE

Video backup can take several minutes to complete, depending on the number of channels selected and the duration of the clip.

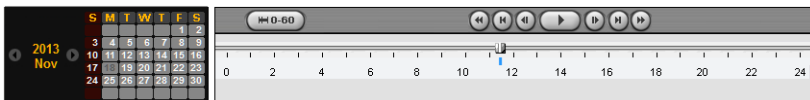
8.7 Local playback

Use the Local Playback feature to play video recorded by the Multi Client record feature and saved on the local PC. To play these recordings:

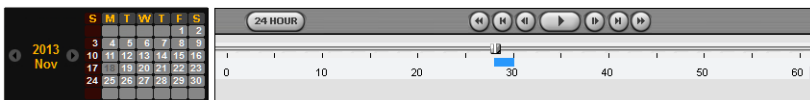
1. Click the **Local playback** button. The playback window will open.



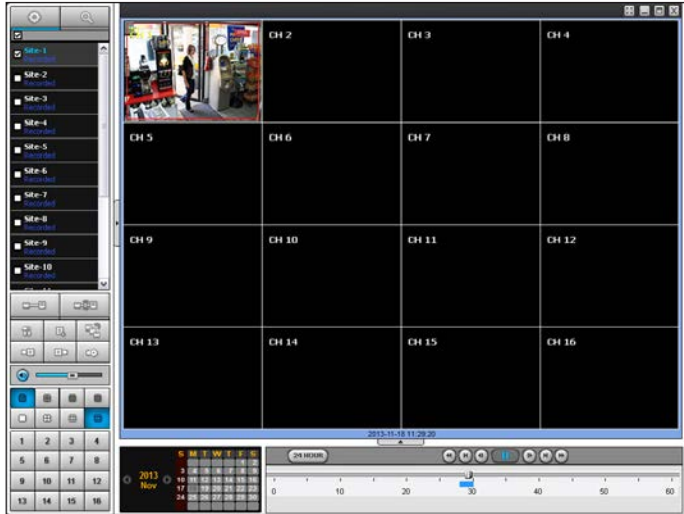
2. In the directory frame, select the site(s) you want to play recordings of. The calendar will indicate which days have recorded video files on the local PC.
3. Click the day of the recording you want to play, then drag the marker to the time when video was recorded.



Click the 0 - 60 button above the timeline to expand the time scale.



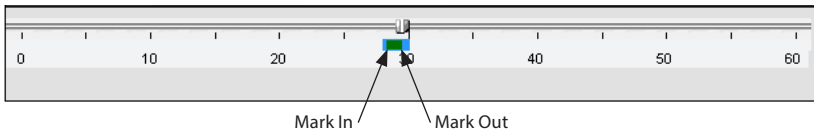
4. Use the video control buttons above the timeline to play the video.



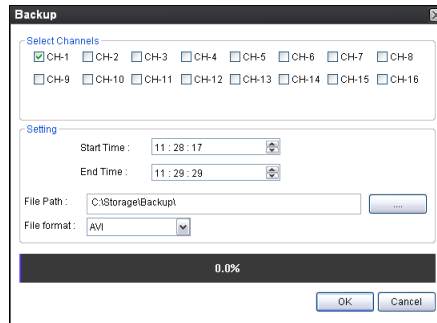
8.7.1 AVI backup during playback

Video recorded by the Multi Client is saved on the local PC in .NDB file format. To save the video clip of a recorded file in .AVI file format (compatible with most media players), perform a backup operation:

1. Play the video file that contains the segment you want to save in .AVI format. (See **Local playback** above.)
2. Play the video to determine the time where you want to start backing up a clip, then stop the playback and click the **MARK IN** button.
3. Continue playing the video to determine the time where you want to end the clip, then stop the playback and click the **MARK OUT** button. The time span between the MARK IN and MARK OUT times will be highlighted in dark green.



4. To backup the video clip, press the **BACKUP** button. The **Backup** menu window will open.



5. In the **Backup** menu, select the options you want, including the AVI file format, then click **OK**.
6. A pop-up window will appear when the backup operation is complete. Click **OK** to close the Backup operation.

NOTE Video backup can take several minutes to complete, depending on the number of channels selected and the duration of the clip.

NOTE If your media player cannot play the file backed-up in AVI file format, it probably doesn't use the correct CODEC. Update your H.264 CODEC and retry playing the file.

SECTION 9

WebViewer

WebViewer, the browser-based administrative interface to the DVR, can be used with Mozilla® Firefox®, Google® Chrome™, and Apple® Safari. It is a tool used to monitor and administer the DVR remotely. To use this feature, the DVR must first be configured and connected to a network. The URL (internet address) of the DVR depends on the path used to connect to it.

If your computer is networked on the same local network as the DVR you are accessing, the URL is the IP address shown in the DVR **System Information** window. In the example shown below, the URL is the IP ADDRESS: 192.168.75.5.

MODEL NAME	BLK-DH3016D
SOFTWARE VERSION	Ver 3.8.1_20130911
STORAGE SIZE	435 GB
NETWORK TYPE	STATIC
IP ADDRESS	192.168.75.5
MAC ADDRESS	00:02:69:FF:F2:1B
DDNS STATUS	Not Ready
DVR ID	DVR
REMOTE CONTROLLER ID	0

OK

If you are accessing your DVR across the internet, your DVR may be addressed through a port forwarded by a router or a device that connects the network with the DVR to the Internet, or through a connection to a DDNS web service such as obsddns.com (preferred). To use this service for accessing your DVR across the internet, refer to obsddns.com for more information.

9.1 Connecting to the DVR with Firefox®, Chrome™ or Safari

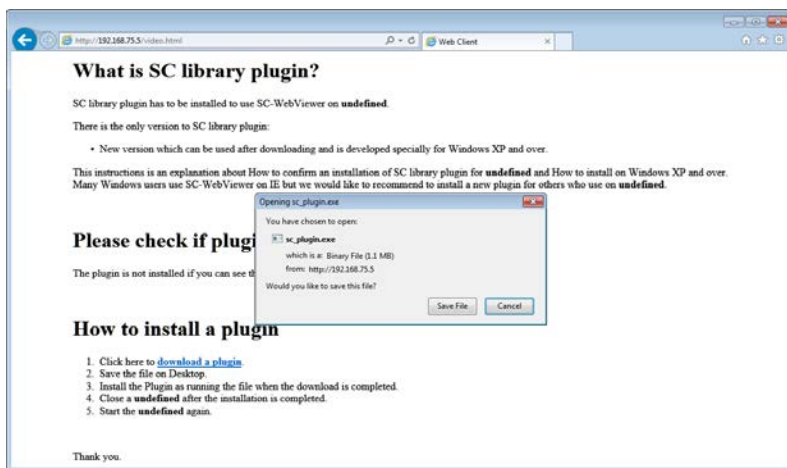
After your DVR is setup on a local LAN, you can use Mozilla® Firefox®, Google Chrome™, and Apple® Safari (browser) to open to connect directly to your DVR through the WebViewer interface. This connection provides increases flexibility for monitoring and configuring your security system.

To user WebViewer for the first time, the plugin sc_plugin.exe is downloaded from the DVR and installed on your computer. Subsequent logins This plugin is

Before you can connect to the DVR with your browser, the (default) security settings in IE are modified slightly to allow it to install an software from the DVR.

1. At your PC, load your browser (Mozilla® Firefox®, Google Chrome™, or Apple® Safari).

- Open the URL ***http://<url of DVR>***. For the DVR used for this document, the URL of the DVR, from a computer on the same LAN, is its IP address. Therefore, in the address field of the browser, enter: ***http://192.168.75.5***. The following screen will open.

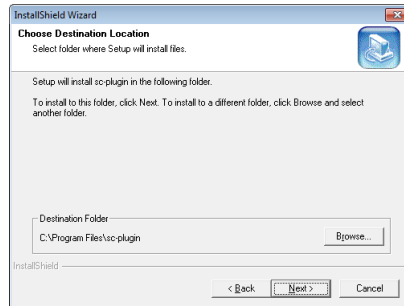


- In the message window shown above, select the Save option to **Save** the ***sc_plugin.exe*** file, then click **Next** in the InstallShield Wizard window.
- Open the containing folder of the download, then run the ***sc_plugin.exe*** file.
- When the following window open, click **Next**.

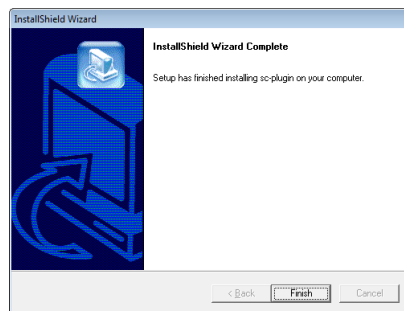


- In the **Choose Destination Location** window, browse for the location where you want to install ***sc_plugin***, then click **Next**.

SECTION 9: WEBVIEWER



7. In the **Start Copying Files** window, click **Next**.
8. Click **Finish** in the **InstallShield Wizard Complete** window to close the installer.



9. After clicking **Finish** in the previous step, if the following pop-up window opens, click **Install** then continue with the next step. If the window did not open, direct your browser to the IP address of the DVR appended with `cnc_plugin.html`. For the example used above, open: http://192.168.75.5/cnc_plugin.html.



10. After installing the SC Technologies application, verify that the WebViewer window appears within the browser.

9.2 Using WebViewer

The WebViewer initial screen appears within the browser window after you successfully address the DVR. To use this interface, you must log into (Connect) to the DVR. The screen features of the WebViewer initial screen are described below.

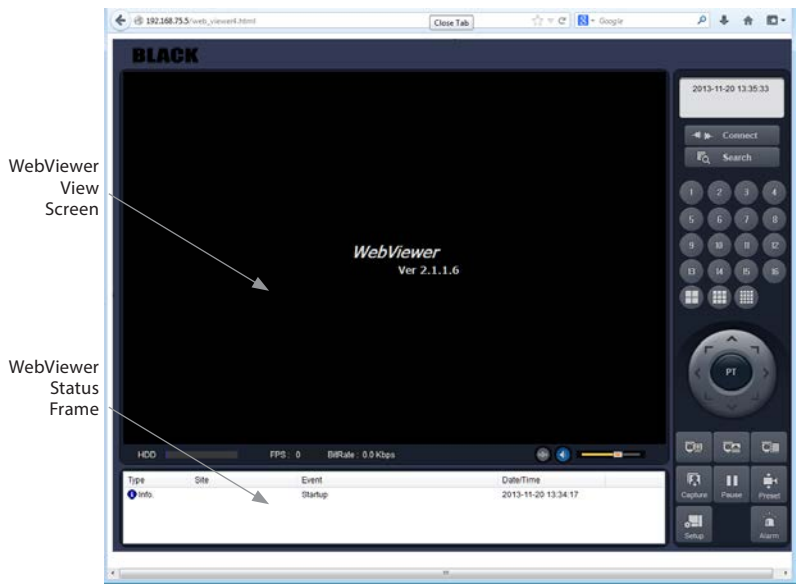


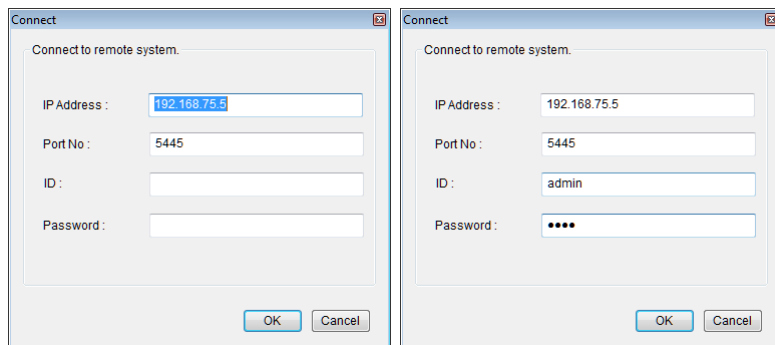
Table 24. WebViewer Live window components

Button	Function	Description
	TIMESTAMP	Timestamp window. When WebViewer is not connected, it shows the PC time. When WebViewer is connected and showing live video, it indicates the DVR timestamp. When WebViewer is playing video, it is the timestamp of the video frame.
	CONNECT / DISCONNECT	Used to initiate a connection to a DVR, or disconnect from a DVR.
	SEARCH / LIVE	Used to switch between the search window and the live mode window.

SECTION 9: WEBVIEWER

Button	Function	Description
	CHANNEL SELECT	Used to select and display one channel.
	SPLIT SCREEN SELECT	Used to select the screen split: 2x2, 3x3, 4x4
	PTZ DIRECTIONAL CONTROL	Click the center button until PT appears. Click the PTZ camera to select it, then click the directional icons to move the camera in that direction.
	PTZ Zoom/Focus Control	Click the center button until ZF appears. Click the PTZ camera to select it, then click the upper and lower icons to zoom in and out, click the right and left icons to focus.
	AutoScan, Tour, OSD Setup buttons	AutoScan changes the dial control to play/stop the autoscan feature, and select the camera channel to autoscan. Tour displays channels sequentially in full screen mode. OSD Setup opens the WebViewer on-screen display controls menus.
	Mic On/Off, Audio On/Off, Volume Control	Use these features to control the audio system. When the Mic and Audio icons are gray, those components are disabled.
	Capture, Pause, Preset, Setup buttons	Capture: used to capture a photo of the screen. PAUSE: use to freeze the screen in live mode, or freeze playback. Preset: Setup: Opens the DVR Setup menu system

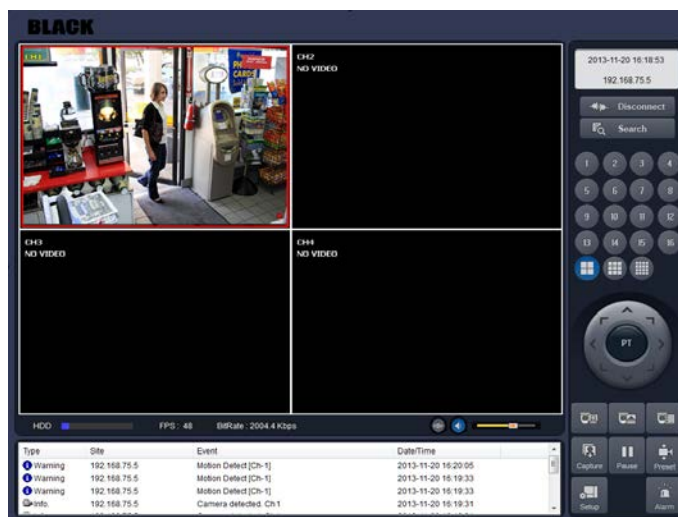
- Click the **Connect** button. A **Connect** webpage dialog menu window will open.



In the Webpage Dialog menu, enter:

- **Server address:** For access across a local network (WebViewer PC on the same subnet as the DVR), use the DVR IP address. For access from the internet, use the DDNS URL (if available) or router/modem IP address with forwarded port number.
- **Port:** Port number of the DVR (default = 5445)
- **ID:** Username. The default username for the DVR is **Admin**.
- **Password:** Password for the user ID. For ID Admin, the default password is **1111**.

12. Click **Connect** to connect to your DVR. After connecting to the DVR, the connection status will appear in the Status frame, and the DVR camera views will appear in the view screen.



9.3 Setup

The Setup feature enables you to configure your DVR through WebViewer. The Setup menu system includes the following submenus: Display, Record, Device, Storage, System, Network, and Upgrade. Components in these submenus are similar to those in the DVR SETUP submenus (refer to Section 3 for definitions).

To enter the Setup menus after connecting to your DVR, click the **Setup** button in the lower right corner of the window, enter your administrative password in the WEB SETUP window, then click **LOGIN**. After several seconds, the DISPLAY menu will appear.

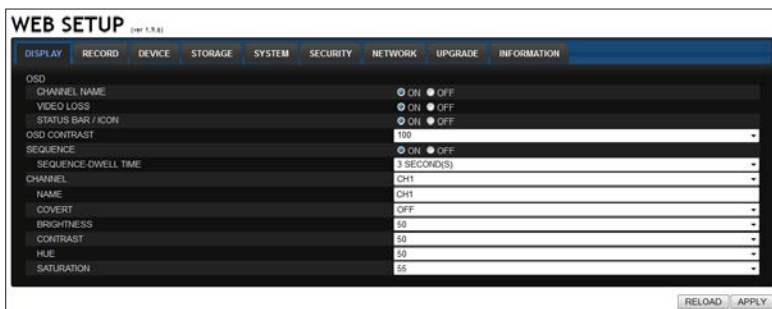


The image shows a web browser window titled "WEB SETUP (ver 1.0.0)". In the center, there is a label "PASSWORD: *****" followed by a text input field containing eight asterisks. To the right of the input field is a button labeled "LOGIN".

After making changes to a menu, click the **APPLY** button. To revert to the current settings (the original settings or the settings during the previous APPLY), click **RELOAD**. To exit the Setup menus, click the ☒ icon in the upper right corner to close the window.

9.3.1 Setup DISPLAY

Use the Display submenu to setup the sequential viewing of the channel and adjust the video quality of the display.



The image shows the "WEB SETUP (ver 1.0.0)" interface with the "DISPLAY" tab selected. The top navigation bar includes tabs for DISPLAY, RECORD, DEVICE, STORAGE, SYSTEM, SECURITY, NETWORK, UPGRADE, and INFORMATION. The main content area lists various display settings:

- OSD: CHANNEL NAME (radio buttons for ON/OFF), VIDEO LOSS (radio buttons for ON/OFF), STATUS BAR / ICON (radio buttons for ON/OFF).
- OSD CONTRAST: 100 (dropdown menu).
- SEQUENCE: (radio buttons for ON/OFF).
- SEQUENCE Dwell TIME: 1 SECONDS (dropdown menu).
- CHANNEL: CH1 (dropdown menu).
- NAME: CH1 (text input field).
- COVERT: OFF (dropdown menu).
- BRIGHTNESS: 50 (slider).
- CONTRAST: 50 (slider).
- HUE: 50 (slider).
- SATURATION: 55 (slider).

At the bottom right, there are two buttons: "RELOAD" and "APPLY".

9.3.2 Setup RECORD

Use the Record submenu to setup the recording mode for each camera channel.

WEB SETUP (ver. 1.9.4)

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

CHANNEL: CH1

RESOLUTION: 960H

FRAME RATE: 12 FPS

QUALITY: LEVEL 5(H)

RECORDING: MOTION

SENSOR RECORDING: - - - -

PRE RECORD: 15 SECONDS

POST EVENT RECORD: 10 SECONDS

AUDIO: ☒ ON ☐ OFF

SCHEDULE: NONE

	10	11	12	13	14	15	16	17	18	19	20	21	22	23
NONE														
CONTINUOUS	C	C	C	C	C	C	C	C	C	C	C	C	C	C
MOTION	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SENSOR														
TUE	M	M	M	M	M	M	M	M	M	M	M	M	M	M
WED	M	M	M	M	M	M	M	M	M	M	M	M	M	M
THU	M	M	M	M	M	M	M	M	M	M	M	M	M	M
FRI	M	M	M	M	M	M	M	M	M	M	M	M	M	M
SAT	M	M	M	M	M	M	M	M	M	M	M	M	M	M

RELOAD APPLY

In the Record menu, you can schedule recording modes across the week. In the window above, time slots marked with “M” (yellow) are select for motion recording. For time slots marked with “C” (green), continuous recording of the selected camera channel occurs. During time slots marked with “S” (red), recording occurs when a sensor is activated.

9.3.3 Setup DEVICE

Use the Device submenu to setup the Device, Alarm out, PTZ, and Spot Out configuration.

SECTION 9: WEBVIEWER

WEB SETUP (page 1 of 8)

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

ALARM-OUT	1
ALARM DURATION	5
CONTROLLER	---
SPEED	2400
ID	0
PTZ	
CHANNEL	CH1
CAMERA	PELCO D-PROTOCOL
SPEED	2400
ID	1
SPOT OUT	
SPOT ON EVENT	OFF
SPOT EVENT DWELL TIME	3 SECONDS(S)
SEQUENCE	OFF
SEQUENCE DWELL TIME	3 SECONDS(S)
SPOT CHANNEL	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
MOTION	
CHANNEL	CH1
MOTION ZONE	FULL ZONE
MOTION SENSITIVITY	5
KEY TONE	● ON ● OFF
REMOTE CONTROLLER ID	0
SENSOR	1
TYPE	OFF

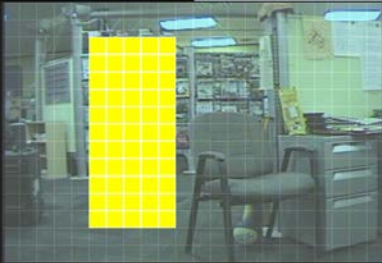
RELOAD APPLY

The **MOTION ZONE** parameter has two options: FULL ZONE (the entire camera image) and PARTIAL ZONE. If you select PARTIAL ZONE, you can identify the areas (cells) of the image for each camera channel that should be monitored for motion detection. To select a cell, click on it. Cells selected for motion sensing are marked in yellow. To deselect a cell, click on it again. This feature is more efficient for the DVR to process. Selecting PARTIAL ZONE opens the following graphical display.

MOTION

CHANNEL CH1

MOTION ZONE PARTIAL ZONE



MOTION SENSITIVITY 5

KEY TONE ● ON ● OFF

REMOTE CONTROLLER ID 0

SENSOR 1

TYPE OFF

RELOAD APPLY

You can also set the motion sensitivity of the area(s) selected in the image.

9.3.4 Setup STORAGE

Use the Storage submenu to setup the recording configuration of the DVR HDD.

The screenshot shows the 'WEB SETUP' interface with the 'STORAGE' tab selected. The interface has a dark theme with a blue header bar. The 'STORAGE' tab is highlighted in blue. Below the header, there are several configuration options for the HDD. The 'OVERWRITE' option is set to 'ON'. The 'HDD SIZE' is 435 GB (FREE: 424 GB). The 'HDD START TIME' is 11/14/2013 17:45:00 and the 'HDD LAST TIME' is 11/18/2013 17:12:00. The 'HDD 1' section shows the 'MODEL NAME' as ST3500410SV, 'TEMPERATURE' as 37 Celsius (98 Fahrenheit), 'HEALTH (GOOD/NORMAL/BAD)' as GOOD, 'REALLOCATED SECTORS' as 0, 'CURRENT PENDING SECTORS' as 0, 'UNCORRECTABLE SECTORS' as 0, and 'SPIN RETRY SECTORS' as 0. The 'RECORDING LIMIT' is set to 'OFF' and the 'RECORDING LIMIT DAYS' is set to '30 DAY(S)'. At the bottom right, there are 'RELOAD' and 'APPLY' buttons.

Option	Value
OVERWRITE	ON
HDD SIZE	435 GB (FREE: 424 GB)
HDD START TIME	11/14/2013 17:45:00
HDD LAST TIME	11/18/2013 17:12:00
HDD 1	
MODEL NAME	ST3500410SV
TEMPERATURE	37 Celsius (98 Fahrenheit)
HEALTH (GOOD/NORMAL/BAD)	GOOD
REALLOCATED SECTORS	0
CURRENT PENDING SECTORS	0
UNCORRECTABLE SECTORS	0
SPIN RETRY SECTORS	0
RECORDING LIMIT	OFF
RECORDING LIMIT DAYS	30 DAY(S)

9.3.5 Setup SYSTEM

Use the System submenu to setup the system ID and access control, Date / Time, Send Email configuration, and NTP server access credentials.

SECTION 9: WEBVIEWER

WEB SETUP
(ver 1.3.8)

DISPLAY
RECORD
DEVICE
STORAGE
SYSTEM
SECURITY
NETWORK
UPGRADE
INFORMATION

DVR ID
DATE FORMAT
CLIENT ACCESS
NTP
PRIMARY SNTP SERVER
SECONDARY SNTP SERVER
TIME ZONE
CONNECTION MODE
CONNECTION PERIOD
SEND EMAIL
SERVER TYPE
MAIL SERVER
MAIL PORT
SECURE OPTION
ID
PASSWORD
MAIL TO
MAIL FROM
SEND MAIL TEST
SYSTEM EVENT NOTIFICATION

DVR
MM/DD/YYYY
ON OFF
OFF
Pool.ntp.org
Time.nist.gov
GMT-8:00 (Los Angeles/Vancouver)
TIME
03:00 AM
OFF
MANUAL
25
NONE
APPLY MAIL SETTING & TEST

HEALTH CHECK	
PERIOD	DAILY
	FIRST SUN 0 H
HDD TEMPERATURE	60°C 140°F
HDD BAD SECTORS	10%
HDD ALMOST FULL	90%

EVENTS AND NOTIFICATION	ALARM-OUT	BEEP	E-MAIL
HEALTH CHECK	-	-	YES
RESTART	-	-	YES
SHUTDOWN	-	-	YES
PANIC RECORD	-	-	YES
ALARM-IN	OFF	-	NO
MOTION DETECTION	OFF	-	NO
VIDEO LOSS	OFF	NO	NO
HDD TEMPERATURE	1	YES	NO
HDD BAD SECTORS	-	-	YES
HDD ALMOST FULL	-	-	YES
HDD FULL	-	-	YES
HDD FAILURE	OFF	NO	YES

RELOAD
APPLY

9.3.6 Setup SECURITY

Use the Security submenu to configure system permissions for each user ID.

WEB SETUP (ver 1.9.6)

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

USER AUTHENTICATION

	PASSWORD	SETUP	PB	PTZ	R/OFF	NETWORK
PASSWORD CHECK		☐	☐	☐	☐	☐
ADMIN	****	☐	☐	☐	☐	☐
USER1	****	☒	☒	☒	☒	☒
USER2	****	☒	☒	☒	☒	☒
USER3	****	☒	☒	☒	☒	☒

USER PASSWORD CHANGE
 NEW PASSWORD
 CONFIRM PASSWORD

PLAYBACK AUTHORITY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ADMIN	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
USER1	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
USER2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
USER3	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

NETWORK LIVE AUTHORITY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ADMIN	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
USER1	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
USER2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
USER3	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

RELOAD APPLY

9.3.7 Setup NETWORK

Use the Network submenu to setup the Network IP address, subnet, DNS/DDNS configuration, and ports assigned to the DVR. The screen shown below includes the setup options for DHCP networks. The screen for configuring static ethernet settings for your DVR is similar; it includes fields for the static IP addresses.

WEB SETUP (ver 1.9.6)

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

PORT 5445

NETWORK AUDIO PORT 5446

WEBPORT 80

NETWORK TYPE STATIC

IP 0.0.0.0

SUBNET MASK 0.0.0.0

GATEWAY 0.0.0.0

1st DNS 168.126.63.1

2nd DNS 168.126.63.2

DDNS SERVER1 SERVER1

SERVER1

DDNS HOST NAME hostname

HOST DOMAIN NAME hostname.oboddns.com

SERVER2

DDNS SERVER NAME www.id.dyndns.org

DDNS ID user_id

DDNS PASSWORD *****

DDNS INTERVAL 60 MINUTE(S)

NETWORK STREAM CH1

RESOLUTION CIF

FRAME RATE 15 FPS

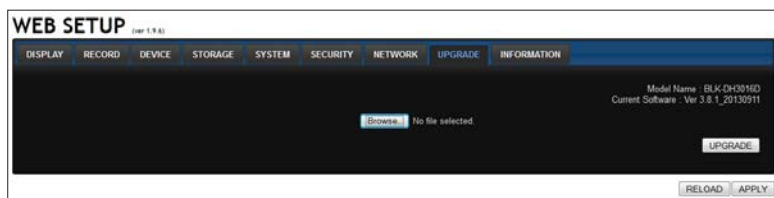
QUALITY LEVEL 5(H)

USE MOBILE OFF

RELOAD APPLY

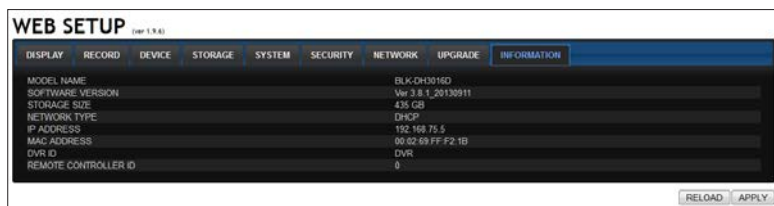
9.3.8 Setup UPGRADE

Use the Upgrade submenu to remotely install new firmware into the DVR.



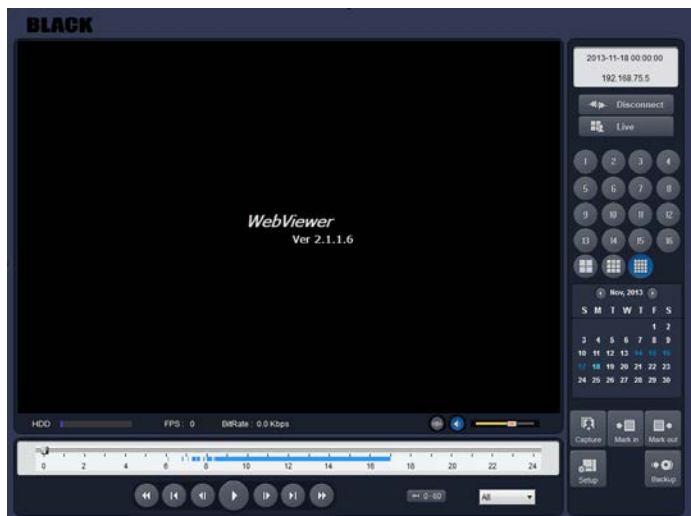
9.3.9 Setup INFORMATION

Use the Information screen to show useful information about the DVR. Information shown here cannot be changed from this display.



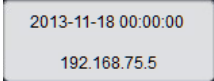
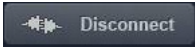
9.4 DVR Search

In **Search** mode, you can watch video recorded by your DVR, backup video clips, and capture still images from recorded video. To switch to Search mode, click the **Search** button on the Live mode display.



WebViewer Search window

Table 25. WebViewer Search window components

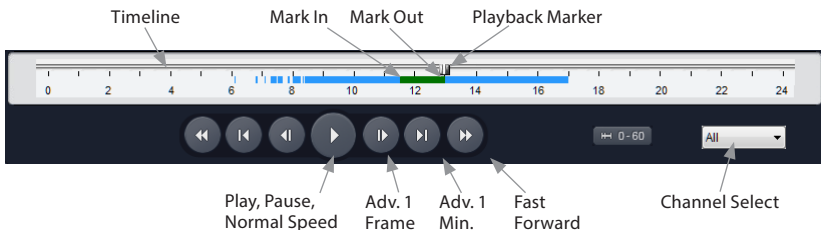
Button	Function	Description
	TIMESTAMP	Timestamp window. When WebViewer is not connected, it shows the PC time. When WebViewer is connected and showing live video, it indicates the DVR timestamp. When WebViewer is in search mode or playing video, it shows the timestamp of the video frame.
	DISCONNECT	Used to initiate a connection to a DVR, or disconnect from a DVR.
	LIVE / SEARCH	Used to switch from the search mode window and the live mode window.
	CHANNEL SELECT	Used to select and display one channel.
	SPLIT SCREEN SELECT	Used to select the screen split: 2x2, 3x3, 4x4

SECTION 9: WEBVIEWER

Button	Function	Description
	MARK IN / MARK OUT	Use these buttons to mark the starting point and ending point of video clips you want to play or backup. The marked clip is colored green.
	CAPTURE/BACKUP	CAPTURE: use to save a snapshot of the current screen BACKUP: use to backup recorded video..
	CALENDAR	On the calendar frame, video was recorded on days colored light blue. Click on the day for which you want to search video. The day selected is marked in dark blue.

9.4.1 Playing recorded video

1. Connect to the DVR (see above).
2. If the WebViewer is in Live mode, click **Search** to open the Search window.
3. In the calendar frame, click the day when the video you want to play was recorded. Sections of the timeline highlighted in blue indicate that live video was recorded on that channel at that time.

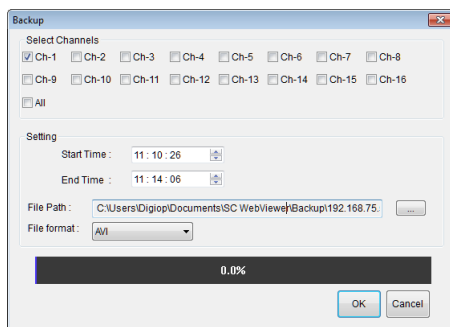


4. On the timeline, drag the playback marker to the time at which you want to play video, then click the **Play** button. The exact time position of the marker is shown in the upper-left corner of the Search window.
5. To stop playing the video, click **Stop**.

9.5 Backup recorded video

Video clips (sections of video tracks) can be backed up and saved for playback on other devices. To backup a video clip, first determine the start time (From), the end time (To), and the channel of the recorded video you want to backup.

1. Playback the recorded video you want to backup.
2. While watching the video, determine the exact starting timestamp of the video clip you want to backup. Stop the playback, then click the **Mark In** button.
3. Playback the video or drag the playback marker to find the ending timestamp of the video clip you want to backup. Stop the playback, then click the **Mark Out** button. The timeline will be green for the section of the video that is marked.
4. Click **Backup** to open the backup menu. In the Backup window, edit the **From** (starting timestamp), **To** (ending timestamp), and **File** (save to location) fields as needed.



Select the **Channel** of the video from the drop down list, then click **OK** to begin the backup operation. A progress bar will appear showing the status of the backup. Allow the backup operation to complete before continuing.

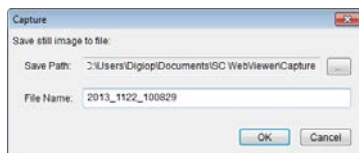
5. To play the backed-up video file, open the file in an .AVI file compatible video player.

9.5.1 Capture

A snapshot of the screen image can taken in live mode, during pause, in playback mode, or when video playback is stopped. To take a snapshot:

1. When connected to your DVR, click **Capture**. The parameter screen will open. The timestamp of the image is encoded in the default file name.

SECTION 9: WEBVIEWER



2. Click **OK**. A snapshot of the screen image will be saved in .BMP format.

SECTION 10

Blackhawk for Mac™

BlackHawk for MAC™, the network-based administrative interface to the DVR, is used with an Apple® Mac™ OS X™ computer to monitor and control the DVR across a network. It can be used to view live video, configure the DVR SETUP menus, and search for and watch recorded video. BlackHawk for Mac™ can display up to 16 video channels (live or recorded video) simultaneously.

System requirements

To install and use the BlackHawk for MAC application, your Mac™ computer must have at least:

- **Operating system:** OS X 10.6 and above
- **CPU:** Intel® Core™2 Duo processors
- **RAM:** 2GB
- **VGA:** NVIDIA® or AMD ATI™ graphics interface

You can acquire BlackHawk for Mac through the Apple® App store.

10.1 Getting started

To connect to your DVR, the DVR must be configured and connected to a network. The URL (internet address) to use with BlackHawk for MAC to connect to the DVR depends what network(s) your Apple® Mac™ computer and DVR are connected to. You can determine the network settings of your computer and DVR using the following procedures.

10.1.1 Finding the DVR network settings

To use BlackHawk, the DVR must first be configured and connected to a network. The URL (internet address) of the DVR depends on the path used to connect to it. If your computer is networked on the same local network as the DVR you are accessing, the URL is the IP address shown in the DVR **System Information** window. In the example shown below, the URL is the IP ADDRESS: 192.168.75.79.

MODEL NAME	BLK-DH3016D
SOFTWARE VERSION	Ver 3.8.1_20130911
STORAGE SIZE	435 GB
NETWORK TYPE	STATIC
IP ADDRESS	192.168.75.79
MAC ADDRESS	00:02:69:FF:F2:1B
DDNS STATUS	Not Ready
DVR ID	DVR
REMOTE CONTROLLER ID	0

OK

If you are accessing your DVR across the internet, your DVR may be addressed through a port forwarded by a router or a device that connects the network with the DVR to the Internet, or through a connection to a DDNS web service such as obsddns.com (preferred). To use this service for accessing your DVR across the internet, refer to obsddns.com for more information.

10.1.2 Finding your Apple® Mac™ network settings

To find the network settings of your Apple® Mac™ computer:

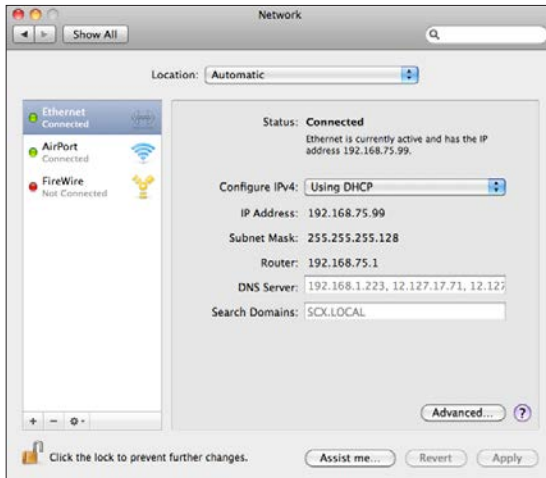
3. Click the “gear-like” **System Preferences** icon in the desktop dock.



4. In the System Preferences window, click the **Network** icon.



5. Find the current network settings for your computer on the Network window. This window shows your network connection(s), your IP address(es), etc. The settings in the window for your computer will be different from the ones shown below.



10.1.3 Connecting to your DVR

Considering the network settings of your DVR and those of your computer, determine the best way to connect. For instance:

- **If your computer and DVR are on the same LAN** (connected to the same router), you can address your DVR in BlackHawk for MAC with the local IP address of your DVR. See the DVR NETWORK menu window above.
- **If you are accessing your DVR across the internet**, your DVR is normally addressed through a port forwarded by the router your DVR is connected to. You can use a connection to a DDNS web service such as ddnscenter.com (preferred). To use this service for accessing your DVR across the internet, refer to ddnscenter.com for more information.
- **Other:** Depending on the network configuration of your computer and DVR, there may be other ways to addressing your DVR across the network. For more information, consult with the support organization provided by your vendor.

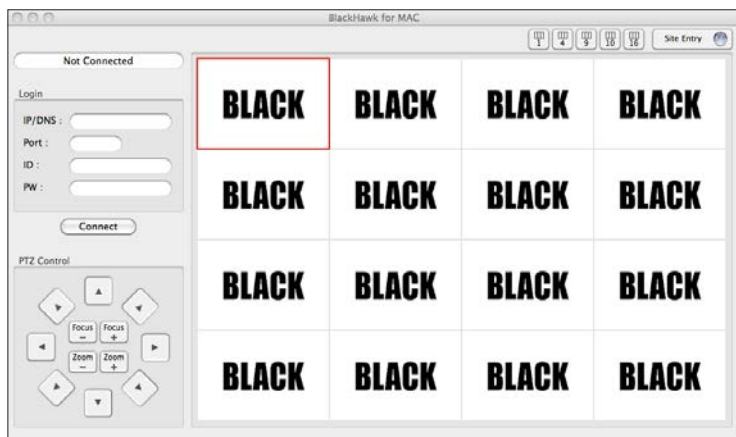
10.2 Installing and starting BlackHawk for MAC

The BlackHawk for MAC application is contained on the software disk provided with your system. To use the program:

1. Insert the software disk into the optical drive on your Macintosh computer.
2. Install the BlackHawk for MAC application using standard OS X installation procedures. When the installation is complete, the following icon will appear on the desktop.

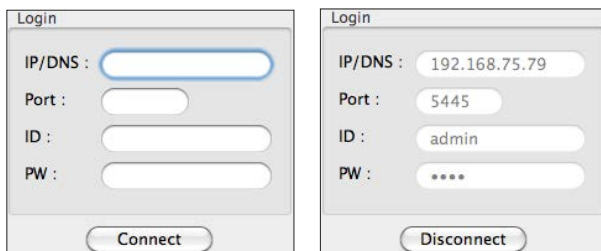


- Double-click the **BlackHawk for MAC** icon to start the application.



10.2.1 Connecting to your DVR

In the Login frame, enter the **IP/DNS** address of your DVR, the port number (usually 5445 by default), and your user **ID** and password (**PW**).



After entering the appropriate information in the Login frame, click the **Connect** button. BlackHawk for MAC will connect to your DVR and open the “live” window.

10.3 Live window

A typical Live window with a 4-channel display is shown below. Components of the window are described in the table below.

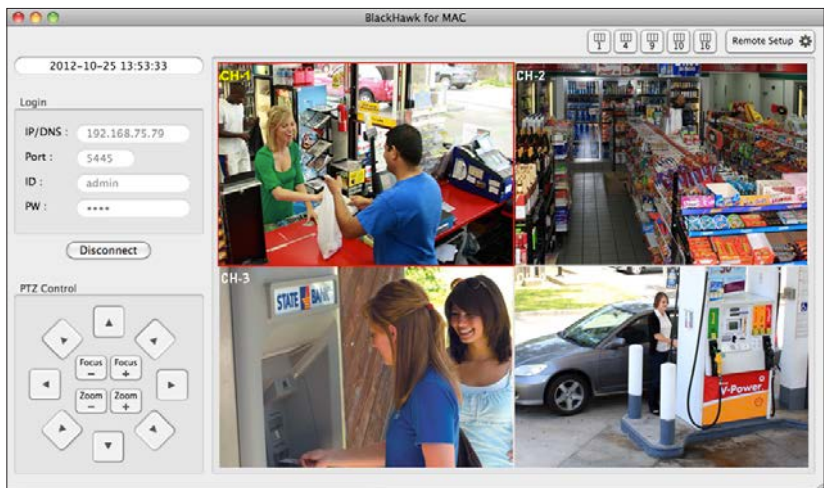
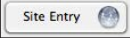
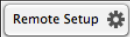


Table 26. Live window controls

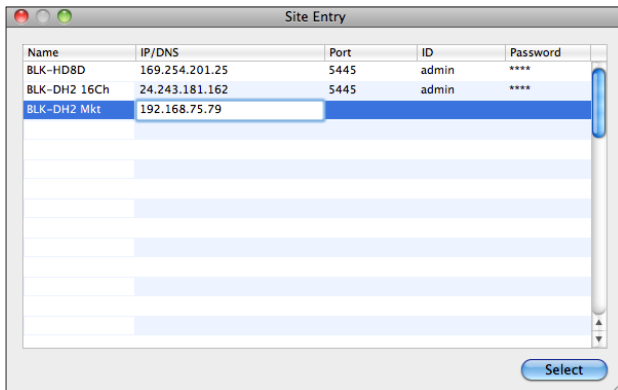
Button	Description
Time Display Not Connected	After connecting to the DVR, the date and time is displayed as following. 2012-10-25 13:58:37
Login frame Login IP/DNS : Port : ID : PW : Connect	Enter the required information in each field, then click Connect to access DVR. Login IP/DNS : 192.168.75.79 Port : 5445 ID : admin PW : **** Disconnect
PTZ CONTROL PTZ Control	Control the PTZ function of PTZ enabled cameras. Functions issued by the controls are passed to the camera of the channel selected in the "live" display.
CHANNEL SPLIT	Click one of these buttons to select the number of channels displayed in the window (1 channel, 4 channel, 9 channels, etc.).

SECTION 10: BLACKHAWK FOR MAC

Button	Description
SITE ENTRY 	Click the icon and the window to register the number of site will be displayed. When the network connection is done, SITE ENTRY button is converted to REMOTE SETUP Button.
REMOTE SETUP 	Remote Setup Button. This button is converted from SITE ENTRY button when the network connection is done.
Window Control 	Red – Close the window Yellow – Minimize the window Green – Toggles between normal size and full screen width

10.3.1 Using Site Entry registration

The Site Entry feature allows you to preset login settings for different DVRs, then access those settings to connect easily and quickly. Click the **Site Entry** button to preset a login for your DVR.



To create a login entry, click a field on a line in the window, then enter the appropriate information for your DVR.

Click the line for the DVR you want to connect to, then click **Select**. The fields on the Login frame of the main window will be populated with the settings on the line you selected.

NOTE

*If multiple users access the DVR through your Macintosh, and you want to restrict access to an administrator login, leave the password field blank on the Site Entry line and enter your password in the Login frame of the main window before clicking **Connect**.*

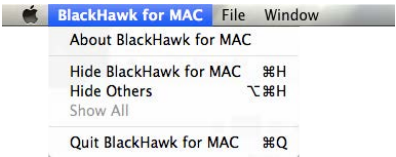
10.4 Closing the application

There are two ways to close the BlackHawk for MAC application:

1. Click the red ball in the upper left corner of the application window.

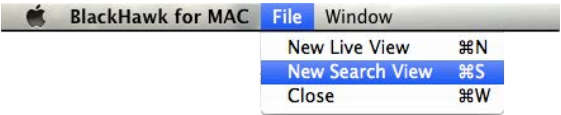


2. Open the drop-down list under the app name on the menu bar, then select **Quit BlackHawk for MAC**.



10.5 Search and Playback Video

To access the search and playback features of BlackHawk for MAC, open a "Live" window, then in the menu bar, open the **File** drop-down list and select **New Search View**.



The **Search** window will open.

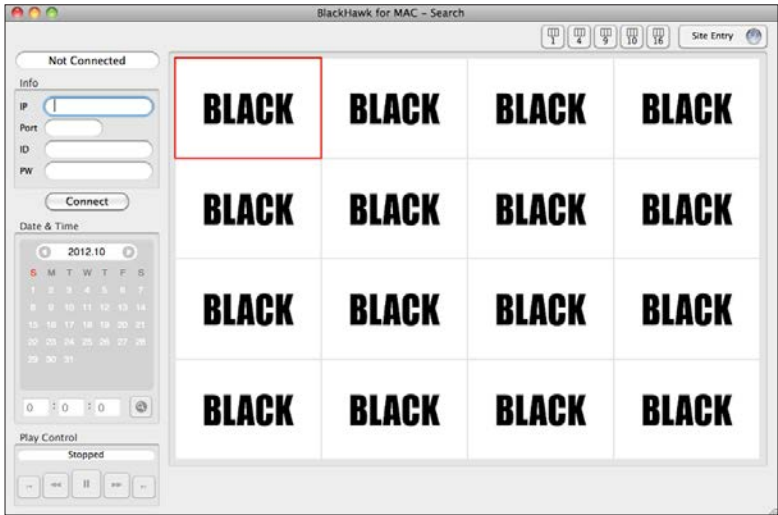
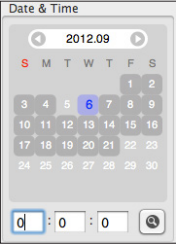
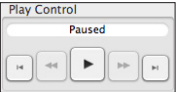
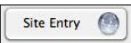
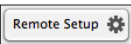


Table 27. Search window controls and indicators

Button	Description
Time Display Not Connected	After connecting to the DVR, the date and time is displayed as following. 2012-10-25 13:58:37
Info frame Info IP Port ID PW Connect	Enter the required information in each field, then click Connect to access DVR. Info IP192.168.75.79 Port5445 IDadmin PW**** Disconnect

Button	Description
Date & Time 	The Date & Time frame indicates: • Year and month (at the top). In the example to the left, the year is 2012, then month is the 9th month (September) • The days when recordings were made (highlighted in gray), and the date selected (date is colored blue). • The hour, minute, and second to search for. You can select a specific time, or click the search icon (magnifier) to begin playing recorded video on the date selected.
Play Controls 	The Play Controls icon buttons are used to play and/or position the video clip selected through the Date & Time frame. The icons are similar to those used in most computer desktop media players.
CHANNEL SPLIT 	Click one of these buttons to select the number of channels displayed in the window (1 channel, 4 channel, 9 channels, etc.)..
SITE ENTRY 	Click the icon and the window to register the number of site will be displayed. When the network connection is done, SITE ENTRY button is converted to REMOTE SETUP Button.
REMOTE SETUP 	Remote Setup Button. This button is converted from SITE ENTRY button when the network connection is done.
Window Control 	Red – Close the window Yellow – Minimize the window Green – Toggles between normal size and full screen width

SECTION 10: BLACKHAWK FOR MAC

Following is a 1-channel view captured from recorded video.



10.6 Search for and playback video

To search for and playback a video clip:

1. Connect to your DVR (see the procedures above). The **Info** frame will reflect the DVR connect status.
2. Select the camera (channel) you want to play recorded video from.
3. Select the calendar date when the recording was made. In the **Date & Time** frame, the days when recordings were made are highlighted in gray, and the date selected is colored blue.
4. Enter the hour, minute, and second of the recording in the fields below the calendar, if known. If the time is not entered, playback will begin with the first recording of the day of the camera selected.
5. Click the magnifier icon to begin playback.

NOTE *BlackHawk for MAC cannot be used to backup video clips or create screen captures.*

SECTION 11

BLACKHAWK Mobile Phone Apps

The BLK-DH30 series DVRs are supported by two smartphone applications (apps), BLACKHAWK for iPhone®, and BlackHawk for Android™.

11.1 BLACKHAWK for iPhone

BLACKHAWK for iPhone lets you remotely monitor and control your video security system over a Wi-Fi or 3G connection directly from your iPhone, iPad, or iPod Touch. Have peace of mind by keeping an eye on your home or business anytime from anywhere in the world. Its features include:

- View up to 16 cameras at one location
- Monitor multiple locations from one app
- View in portrait or landscape mode
- Digital zoom on full screen
- Max. 16 channels can be selected to display split screen
- Single or split screen display.
- PTZ support.
- Playback support

11.1.1 Installing BLACKHAWK

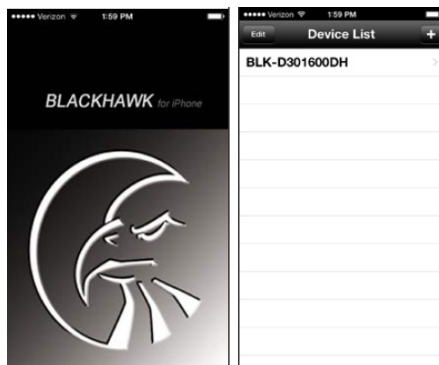
1. Open the Apple® iTunes® store.
2. Find and download the app BLACKHAWK by Supercircuits.
3. Install the BLACKHAWK app. The BLACKHAWK icon will be display on the phone.



11.1.2 Live viewing

1. Open the installed BLACKHAWK app, then select the **Live Preview**.
2. Click the menu button of the phone to add a remote device.

SECTION 11: BLACKHAWK MOBILE PHONE APPS



3. Enter the Site Information for your DVR in the fields shown, select **Live** mode, then click **Connect**.



4. The app will display the selected channel(s). Double tap the channel to switch from a 1-channel display to a 4-channel split display, and vice versa.



11.1.3 PTZ Control

To use the PTZ functions of a PTZ camera, tap the menu button to display the PTZ control buttons. You can point the camera in 8 different directions using the buttons on the left, and control zoom and focus with the buttons on the right.



11.1.4 Playback

1. Select the registered device, then select up to 4 channels to search and playback.
2. Select **Playback** mode, then click **Connect**. A search window will open.



3. Select the date, hour, minute, and AM or PM, then click **Connect & Play**.



4. The app will display the selected channel(s). Double tap the channel on the screen switch between a 1-channel display and a 4-channel split display, and vice versa.

SECTION 11: BLACKHAWK MOBILE PHONE APPS



5. Tap the menu button. The **Playback** menu icons will appear.



11.2 BlackHawk for Android™

BlackHawk for Android™ supports up to 16 cameras and easily switches between portrait and landscape mode. You can monitor multiple locations from one app. This app is supported by Android™ v2.2 and above. It may not work on some of the old type devices.

Features:

- View up to 16 cameras at one location.
- Monitor multiple locations from one app.
- View in portrait or landscape mode.
- Max. 4 channels can be selected to display split screen (Android™ only)
- Single or split screen display.
- PTZ support.

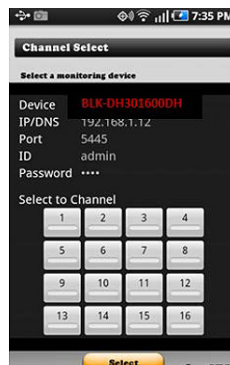
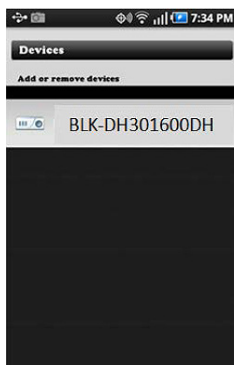
11.2.1 Installing BlackHawk

1. Open the Google Play™ store (<https://play.google.com/store>).
2. Find and download BlackHawk by Observint Technologies.
3. Install the BlackHawk app. The BlackHawk icon will be display on the phone.

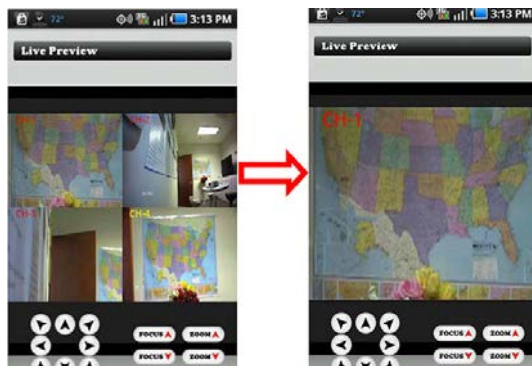


11.2.2 Live

1. Open the BlackHawk app, then select the **Live** Preview.
2. Click the menu button of the phone to add a remote device.
3. Enter the essential remote device information for your DVR, then register the information.
4. Select your device, then select up to 4 channels to monitor. Press **SELECT**.

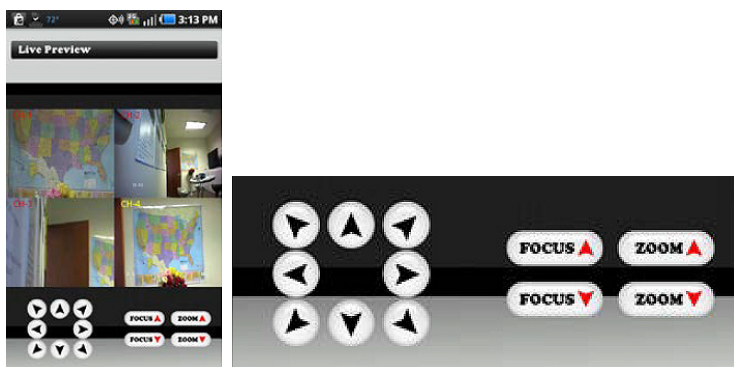


5. The app will display the selected channel(s). You can double tap the screen to switch between a 1-channel display and a 4-channel split display, and vice versa.



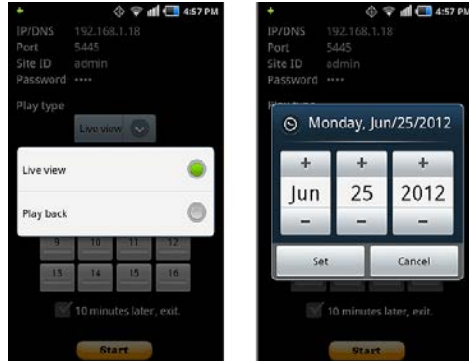
11.2.3 PTZ Control

To use the PTZ functions of a PTZ camera, tap the channel screen. The name of the selected channel will become yellow. Use the PTZ control buttons to point the camera in 8 different directions and control the zoom and focus.

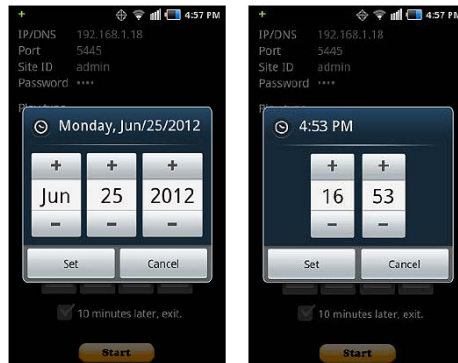


11.2.4 Playback

1. Select the registered device (your DVR), select **PLAYBACK** mode, then click **START**. Then the search window will open.



2. Select the date, hour, minute, then click **SET**.



Then playback screen and menu icons will display.



11.2.5 Screen Shot and Viewer

To capture live and playback screen, click capture button:



To search and view the captured image, click **SCREEN SHOT VIEWER**.



SECTION 12

Specifications

Table 28. Specifications

ITEM			BLK-DH3004D	BLK-DH3008D	BLK-DH3016D
Video	Input	Channel, Input Level	4 channel, composite	8 channel, composite	16 channel, composite
		Signal Format	NTSC		
		Input level	Composite, 1.0 Vp-p @ 75Ω		
		Video Loss Check	Yes		
	Output	VGA	1 VGA,		
		HDMI	1 HDMI, resolutions up to 1080p		
		BNC	1		
		Spot	1		
Audio	Input / Output		4 channel line input / 1 channel line output		
	Audio CODEC		G.711 (ADPCM)		
Alarm	Sensor Input (NC/NO selectable)		4 channel (NC/NO selectable)		
	Alarm Output		1 alarm out by sensor, motion and video loss		
Recording	Compression		H.264		
	Multi-Operation		QUADPLEX (Playback/Record/Network/Backup)		
	Resolution / Frame Rate	960H	120 / 120 fps	240 / 200 fps	240 / 200 fps
		D1	120 / 120 fps	240 / 200 fps	240 / 200 fps
		CIF	120 / 120 fps	240 / 200 fps	480 / 200 fps
	Recording Quality Grade		ECONOMY, STANDARD, HIGH, SUPERIOR, ULTRA		
	Recording Mode		Continuous / Schedule / Motion/ Sensor/ Manual		
	Pre Recording		Max. 20 minutest		
	Post Recording		Max. 60 seconds		
Playback	Multi-Decoding		1, 4	1, 4, 8	1, 4, 8, 16
	Format		BMP, AVI, Proprietary format		
	Huge backup		Yes, max. 24 hours		
Storage	HDD	Interface Type	Serial ATA I		
		Capacity of 1 HDD	2TB (maximum)		
		Internal HDD No.	2 (1 with DVD-RW)		
	USB Port		2 (front 1, rear 1)		

SECTION 12: SPECIFICATIONS

ITEM		BLK-DH3004D	BLK-DH3008D	BLK-DH3016D
User I/F	Input Method	Front panel buttons, remote control, mouse, keyboard controller		
Network	Dynamic DNS	Yes (free DDNS)		
	Network Interface	10/100BASE-T Ethernet (RJ-45)		
	Network Streaming	CIF 120 fps	CIF 240 fps	CIF 480 fps
Network Access	3G Mobile Viewer (1:1)	iOS, Android™		
	Web Viewer (1:1)	Windows (IE, Chrome™, Firefox®, Safari)		
	PC Client	Single / Multi Client and CMS (64 channels)		
	MAC Client	MAC Client		
	Remote setup and upgrade	Yes		
Features	DLS (Day Light Saving)	Yes		
	Internal Beep	Yes		
	Multi-Language	Yes		
	Digital zoom	Yes		
	NTP (Network Time Protocol)	Yes		
	S.M.A.R.T.	Yes		
	e-mail notifications	Yes		
Power Source		12 Vdc, 3 A	12 Vdc, 5 A	
Operating Temperature		41 °F ~ 104 °F (5 °C ~ 40 °C), Storage: 14 °F ~ 122 °F (-10 °C ~ +50 °C)		
Allowable Operating Humidity		0 ~ 90 % RH		
Weight / Gross weight		9 lb (4.1 kg) without HDDs		
Dimension (w x h x d)		14.9" x 13.3" x 2.8" (380 mm x 340 mm x 72 mm)		

APPENDIX A

DVR Compatible Hard Disk Drives

Table 29. Compatible HDDs

Manufacturer	Model	Capacity	RPM	BUFFER
Seagate®	ST2000VM003	2TB	5900 RPM	64MB
	ST2000VM002	2TB	5900 RPM	64MB
	ST2000DL003 (barracuda green)	2TB	5900 RPM	64MB
	ST32000641AS (Barracuda XT)	2TB	7200 RPM	64MB
	ST2000DM001	2TB	7200 RPM	64MB
	ST1000VX000	1TB	7200 RPM	64MB
	ST1000VM002 [fw: sc12]	1TB	5900 RPM	64MB
	ST1000DM003	1TB	7200 RPM	64MB
	ST31000524AS (barracuda 7200.12)	1TB	7200 RPM	32MB
	ST31000322CS (pipeline)	1TB	5900 RPM	8MB
	ST31000526SV (Surveillance)	1TB	7200 RPM	32MB
	ST31000524AS (Barracuda)	1TB	7200 RPM	32MB
	ST31000340SV (Surveillance)	1TB	7200 RPM	32MB
	ST31000528AS (Barracuda)	1TB	7200 RPM	32MB
	ST3500312C8	500GB	5900 RPM	8MB
	ST500DM002 (barracuda)	500GB	7200 RPM	16MB
	ST3500312CS (pipeline)	500GB	5900 RPM	8MB
	ST3500411SV (Surveillance)	500GB	7200 RPM	16MB
	ST3500413AS (Barracuda)	500GB	7200 RPM	16MB
	ST3500830SCE	500GB	7200 RPM	8MB
	ST3500418AS (Barracuda)	500GB	7200 RPM	16MB
	ST3500410AS (Barracuda)	500GB	7200 RPM	16MB
	ST250DM000 (Barracuda)	250GB	7200 RPM	16MB
	ST3250312CS (pipeline)	250GB	5900 RPM	8MB
	ST3250410AS (Barracuda)	250GB	7200 RPM	16MB
	ST3250310SV (Surveillance)	250GB	7200 RPM	8MB
	ST3250318AS (Barracuda)	250GB	7200 RPM	8MB
	ST3160815AS (Barracuda)	160GB	7200 RPM	8MB

--

Manufacturer	Model	Capacity	RPM	BUFFER
HITACHI®	HDS723020BLA642	2TB	7200 RPM	64MB
	HDS722020ALA330	2TB	7200 RPM	32MB
	HDS721010DLE630	1TB	7200 RPM	32MB
	HDS721010KLA330	1TB	7200 RPM	32MB
	HDT721010SLA360	1TB	7200 RPM	16MB
	HDS721010CLA332	1TB	7200 RPM	32MB
	HDS721050DLE630	500GB	7200 RPM	32MB
	HDS721050CLA362	500GB	7200 RPM	16MB
	HDP725050GLA360	500GB	7200 RPM	16MB
	HDS721032CLA362	320GB	7200 RPM	64MB
	HDS721025CLA382	250GB	7200 RPM	8MB
	HDT721025SLA380	250GB	7200 RPM	8MB
	HDP725025GLA380	250GB	7200 RPM	8MB
Western Digital®	WD20EURS-63SPKY0	2TB	5400 RPM	64MB
	WD5000AAKX-00ERMA0	500GB	7200 RPM	16MB
	WD5000AVCS-632DY1	500GB	5400 RPM	32MB
	WD10EZEX-00RKKAO	1TB	7200 RPM	64MB
	WD20EARS	2TB	5900 RPM	64MB
	WD20EARX(00PASB0)	2TB	5900 RPM	65MB
	WD20EADS	2TB	5400 RPM	32MB
	WD20EURS	2TB		64MB
	WD10EURX(63FH1Y0)	1TB	5400 RPM	64MB
	WD10EZRX(00A8LB0)	1TB	5400 RPM	64MB
	WD10EARS(00Y5B1 Caviar Green)	1TB	5400 RPM	64MB
	WD10EVDS(63U8B1)	1TB	7200 RPM	32MB
	WD10EALX(229BA1)	1TB	7200 RPM	32MB
	WD10EALX(009BA0)	1TB	7200 RPM	32MB
	WD10EVVS	1TB	5400 RPM	8MB
	WD10EACS	1TB		16MB
	WD10EUCX	1TB		16MB
	WD10EURS(630AB1)	1TB	5900 RPM	64MB
	WD5000AAKX(221CA1 Caviar Blue)	500GB	7200 RPM	16MB
	WD5000AAKX(001CA0)	500GB	7200 RPM	16MB

APPENDIX A: DVR COMPATIBLE HARD DISK DRIVES

Manufacturer	Model	Capacity	RPM	BUFFER
Western Digital® (cont.)	WD5000AVCS	500GB		16 MB
	WD5000AACS	500GB	5400 RPM	16 MB
	WD2500AVVS(63L2B0)	250GB		
	WD2500AAKX	250GB	7200 RPM	16 MB
	WD2500AVVS	250GB		8 MB
	WD2500AAKS	250GB	7200 RPM	16 MB
Toshiba®	HDS723020BLE640	2TB	7200 RPM	64 MB

If you are installing multiple HDDs in your DVR, the HDDs you install must be the same model. If the models are different, the DVR might not recognize an HDD, or could malfunction.

APPENDIX B

Estimated Storage Capacity

The storage capacity of your system depends on several variables, HDD capacity, camera resolution, channel frame rate, and recording configurations (schedules and triggers). The following tables are provided as examples with which the storage capacity of your system can be estimated through interpolation or extrapolation.

Recording Condition: 4 channels * D1 * 30 fps * Continuous

HDD Capacity	Level 5 (H)	Level 4	Level 3	Level 2	Level 1 (L)
	day(s)	day(s)	day(s)	day(s)	day(s)
250GB	2	3	5	7	11
500GB	5	7	11	15	22
1TB	11	15	22	30	45
2TB	22	30	45	60	90

APPENDIX C

Device Log

The following table is provided as an aid to setting up and logging the analog devices on your system.

Analog Camera Device Summary

Channel	Camera Model	Audio (Y/N)	Location
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

APPENDIX D

DDNS setup with obsddnscenter.com

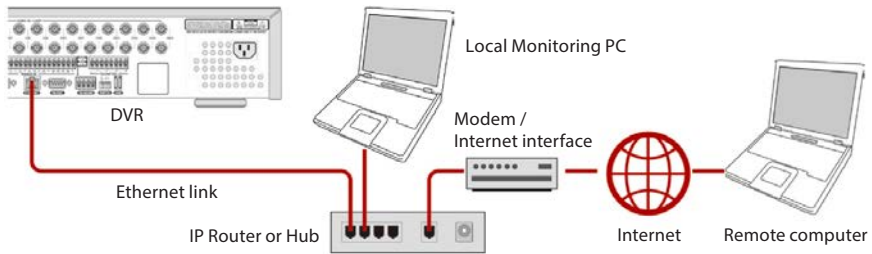
Observint Technologies recommends that to setup your DVR for access with a **remote computer through the internet**, use the obsddns.com DDNS (Dynamic Domain Name Server). Using DDNS, you can usually always connect to your DVR using the same URL, even if the IP address of the devices your DVR interfaces with, or the IP address of the DVR, change. The URL for your DVR formed through the DDNS service can be used in the http addressing through a web browser, or as the **Site Address** with Remote Client of Multi Client.

NOTE

The following general instructions for DDNS setup apply to most networks. For additional assistance, please contact your technical support staff.

To use DDNS with the obsddnscenter, do the following:

1. Configure your DVR with a path to the internet. See the following generalized diagram.



2. At the DVR, open the **SETUP NETWORK** menu. Set the DDNS option to **ON** to enable DDNS.

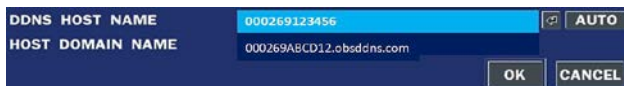


Enable DDNS -
set to ON

3. On the DDNS SERVER1 line, then click the  (submenu) button. Then the DDNS menu will display.



- **Automatic Host name registration:** Click the **AUTO** button. Then the MAC Address of DVR will be registered automatically as a host name on DDNS.



- **Manual Host name registration:** Click the  (submenu) button (to the left of **AUTO**). The virtual keyboard window will display.



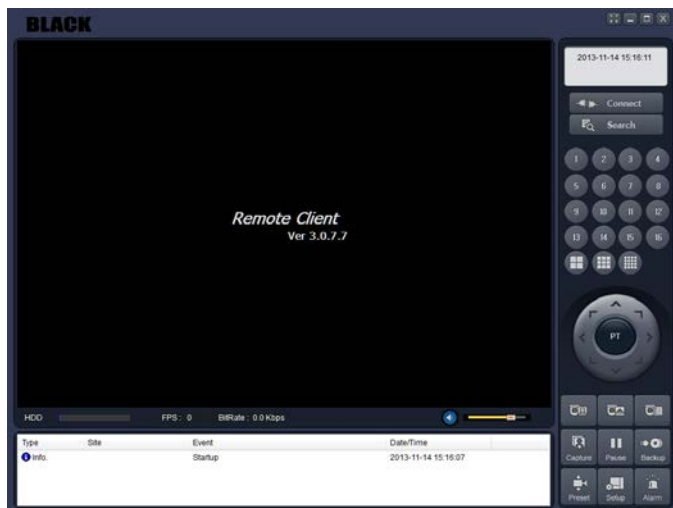
In the **DDNS HOST NAME** field, enter the name you want to assign to the DVR, then click **OK**.



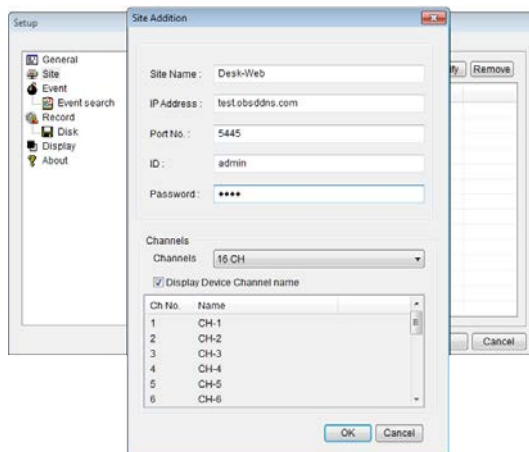
4. In the Registration window (above) click **OK** to register your DVR. Check the status of the DDNS registration on the popup window.



5. Install, then open the **Remote Client** software. See “7.2 Installing the Remote Client” on page 56 for more information.



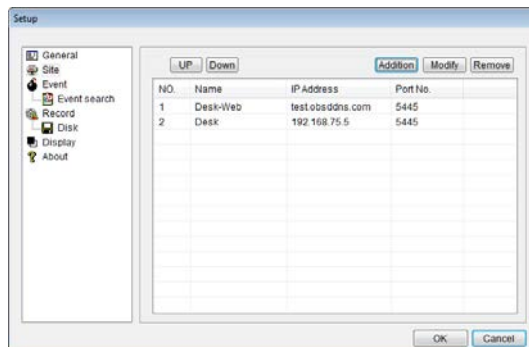
6. To create a permanent link to your DVR, click the **SETUP** in the lower-right corner to open the **SETUP** menus, click **Site**, then click **Addition**.



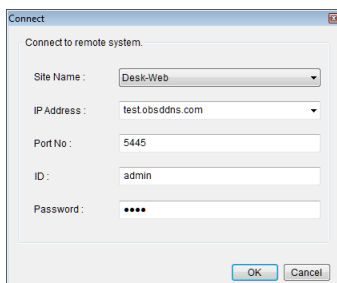
7. Enter the **Site Name**, **Site Address** (URL address), **Port No.**, **ID** and **Password** on the Site Addition window.
 - **Site Name:** Input a name that properly describes a site.
 - **IP Address:** Input DDNS URL for the DVR. In the example above, it is *test.obsdns.com*.

- **Enter the Port No. (port number) of DVR.** The default port number is **5445**.
- **ID:** Enter your user ID for DVR. The default ID is **admin**.
- **Password:** Input network password of DVR. Default Password is **1111**.

8. Click **OK** to save your settings, then click **OK** to closed the **SETUP** menus..



9. In the REMOTE CLIENT window, click the **Connect** button. In the Connect window, open the drop-down list and select the DDNS Site Name you setup.



10. Click **OK** to connect to your DVR using DDNS.

APPENDIX E

DVR Setup Menu Components

The following lists show the components in each SETUP menu tab (submenu).

DISPLAY

- OSD
- OSD CONTRAST
- SEQUENCE
- SEQUENCE DWELL TIME
- CHANNEL
 - NAME
 - COVERT
 - BRIGHTNESS
 - CONTRAST
 - HUE
 - SATURATION
- VIDEO OUTPUT

RECORD

- CHANNEL
 - RESOLUTION
 - FRAME RATE
 - QUALITY
 - RECORDING
 - SENSOR RECORDING
 - PRE RECORD
 - POST EVENT RECORD
 - AUDIO
 - SCHEDULE

DEVICE

- ALARM OUT
- CONTROLLER & PTZ
- SPOT OUT
- CHANNEL
 - MOTION ON
 - MOTION SENSITIVITY
- KEY TONE
- REMOTE CONTROLLER ID
- SENSOR
 - TYPE

STORAGE

- OVERWRITE
- DISK FORMAT
- DISK INFO
 - RECORDING LIMIT DAYS
- S.M.A.R.T

SYSTEM

- DVR-ID
- DESCRIPTION
- LANGUAGE
- DATE FORMAT
- SET DATE & TIME
- CLIENT ACCESS
- NTP
- SEND EMAIL

SECURITY

- USER AUTHENTICATION (ADMIN, NETWORK, USER1, USER2, USER3)
- USER PASSOWRD
- PLAYBACK AUTHORITY

NETWORK

- PORT
- NETWORK AUDIO PORT
- WEB PORT
- NETWORK TYPE (DHCP, LAN)
 - IP
 - SUBNET MASK
 - GATEWAY
 - DNS (PRIMARY)
 - DNS (SECONDARY)
- DDNS
- NETWORK STREAM

CONFIG

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

QUICK SETUP

- USE QUICK SETUP
- INPUT DESIRED DAYS
- CUSTOMER SETTINGS
 - RESOLUTION
 - FRAME RATE
 - QUALITY
 - RECORDING
 - DAYS TO RECORD