WELDEX *CORPORATION*

Original Equipment Manufacturer of CCD Cameras, DVR's & LCD Monitors

Digital Video Recorder

WDR Series

WDR

Software User Manual

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(714) 761-2100
www.weldex.com

Canadian Notice

This Class A digital apparatus complies with Canadian ICES-003.

Cet numérique de la classe A est conforme à la norme NMB-003 du Canada.

$$C\,E$$

Declaration of Conformity

This product complies with the requirements of the European Council Electromagnetic Compatibility Directive 2004/108/EEC and the Low Voltage Directive 2006/95/EEC.

This equipment must not be modified for any reason and it must be installed as stated in the Manufacturer's instruction.

If this shipment (or any part thereof) is supplied as second-hand equipment, equipment for sale outside the European Economic Area or as spare parts for either a single unit or system, it is not covered by the Directives.

DISCLAIMER

- While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions.

- Weldex Corporation reserves the right to change the specifications of the hardware and software described herein at any time without prior notice.

- No part of this guide may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without prior written   permission of Weldex Corporation

- Weldex Corporation makes no warranties for damages resulting from corrupted or lost data due to a mistaken operation or malfunction of the Digital Video Recorder, the software, the hard drives, personal computers, peripheral devices, or unapproved / unsupported devices.

FCC NOTICE

Digital Video Recorder, Model WDR-4012, Model WDR-9012, Model WDR-9024, Model WDR-1612, Model WDR-1624.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for Class A digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by on or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experience radio/TV technician for help.

The hard disk provided with the digital video recorder must be used with this equipment in order to comply with Class A limits in subpart B of Part 15 on FCC rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

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Chapter 3: Operation

INTRODUCTION

The WDR series consist of 16-channel, 9-channel, and 4-channel Digital Video Recorders (DVRs). This manual describes how to configure and use the WDR series devices.

For hardware information and related recommendations and precautions refer to the *WDR Quick Installation Guide*.

NOTE

Certain setup and configuration details are different for 4-channel, 9-channel, and 16-channel DVRs. Generally in such cases details for a 16-channel DVR are presented, for example, a screen capture will show-channels 1-8 and 9-16.

CHAPTER SUMMARIES

- *Chapter 1: Introduction*, describes the package contents, supported client software, system architecture, and technical specifications. Manual conventions and technical support information is also provided.
- *Chapter 2: System Setup*, describes system setup options and procedures.
- *Chapter 3: Operation*, this chapter introduces you to operation basics such as system startup and shutdown, logging in, and display modes.

PACKAGE CONTENTS

Thank you for choosing the *Weldex* WDR.

Your package contains the following items:

- WDR DVR
- Installation CD (contains WDR software and user documentation)
- Mouse
- Power cable
- Plug-in connector block (WDR 4-channel models only)
- External connector
- Remote control

- Rack mount brackets (16-channel and 9-channel WDR only)
- Two AAA batteries

When you open the package:

- Carefully inspect the shipping containers as soon as you receive them (with the delivery agent present). Some shipping companies want to have an agent present when a damaged container is opened.
- If a container is damaged, open it immediately, inspect the contents, and have the agent make note on the shipping document.
- Check the purchase order against the packing slips to ensure the order is complete.
- If the contents of a container are damaged in any way, notify the carrier and your Weldex Corporation representative immediately.
- Report any discrepancies to your Weldex Corporation representative.
- Save the packing materials for possible return shipments.

NOTE ON OTHER MANUFACTURER'S DOCUMENTATION

*Weldex Corporation does not duplicate documentation of other equipment manufacturers. When necessary, as in this installation procedure, Weldex Corporation provides documentation that supplements that of other manufacturers. W*hen unpacking your equipment, **keep all original manufacturer documentation for future reference**.

TECHNICAL SUPPORT

Technical assistance is provided to Weldex Corporation authorized dealer representatives from 5 a.m. PST to 5 p.m. PST Monday through Friday. System users can get answers to operator questions by calling the local Weldex Corporation sales/service office.

The authorized dealer representatives can also provide you with information on the maintenance contracts and the on-site field service.

MANUAL CONVENTIONS

The following items are used throughout this manual to indicate special circumstances, exceptions, important points regarding the equipment or personal safety, or to emphasize a particular point.

NOTE
Notes indicate important points or exceptions to the information provided in the main text.

⚠️ CAUTION
Cautions remind you that certain actions, if not performed exactly as stated, can cause damage to equipment, security problems, or cause the system to operate incorrectly due to errors in system setup or programming.

⚡ WARNING
Warnings indicate that the possibility of personal injury exists if an action or actions are not performed exactly as stated.

SPECIFICATIONS

Tables 1-1 and 1-2 list technical specification and required environmental conditions for all WDR models.

Table 1-1: WDR Technical Specifications

Specification	16-channel	9-channel	4-channel
Video Input	16 BNC	9 BNC	4 BNC
Loopthrough	Yes		
Analog Output	1 RCA Composite 1 S-Video 4 BNC Spot Monitor Outputs	1 RCA Composite 1 S-Video 4 BNC Spot Monitor Outputs	1 BNC Composite 1 S-Video 1 Spot Monitor Output
Audio Input	4 RCA		
Audio Output	1 RCA (ADPCM format)		
Video Format	NTSC / PAL standards		
Alarm Input	16 TTL (DC 5V/25mA), NO/NC Programmable	9 TTL (DC 5V/25mA), NO/NC Programmable	4 TTL (DC 5V/25mA), NO/NC Programmable
Alarm Output	4 Relay Output 12 TTL Open-Collector	4 Relay Output 5 TTL Open-Collector	2 Relay Output
Operator Interface	VGA, S-Video, Composite Video		
Internal Storage Archive	250 GB / 500 GB / 1 TB		250 GB / 500 GB

Table 1-1: WDR Technical Specifications

Specification	16-channel	9-channel	4-channel
Recording Rate and Resolution	NTSC (9024, 1624) 240 IPS at 352x240 120 IPS at 704x240 60 IPS at 704x480 NTSC (9012, 1612) 120 IPS at 352x240 60 IPS at 704x240 30 IPS at 704x480		NTSC 120 IPS at 352x240 60 IPS at 704x240 30 IPS at 704x480
	PAL (9024, 1624) 200 IPS at 352x288 100 IPS at 704x288 50 IPS at 704x576 PAL (9012, 1612) 100 IPS at 352x288 50 IPS at 704x288 25 IPS at 704x576		PAL 100 IPS at 352x288 50 IPS at 704x288 25 IPS at 704x576
Live Frame Rate	480 IPS (NTSC), 400 IPS (PAL)	270 IPS (NTSC), 225 IPS (PAL)	120 IPS (NTSC), 100 IPS (PAL)
Live Resolution	720 x 480 (TV-NTSC), 720 x 576 (TV-PAL), 640 x 480 (CRT/LCD)		
Live Display	1, 4, 9, 16, PIP	1, 4, 9, PIP	1, 4, PIP
Playback Display	1, 4, 9, 16, PIP	1, 4, 9, PIP	1, 4, PIP
IPS per Camera	1 to 30 (NTSC), 1 to 25 (PAL)		
Video Compression	MPEG4 ASP (Advanced Simple Profile)		
USB Ports	Four USB 2.0 ports		One USB 1.0 (front panel port) and one USB 2.0 (back panel port)
Ethernet Port	10/100 Mbps Full Duplex Ethernet		
Recording Modes	Continuous, Schedule, Alarm, Motion (no speed boost), Overwrite Supports Recording Schedule per camera.		
Alarm Notification	Automatic e-mail (SMTP authentication is not currently supported), External Alarm, Video Loss, Record Failure, HDD Failure, Shutdown, Log-in.		
Power Failure Recovery	Auto reboot while maintaining previous record setting		
Communication Port	USB, RS-232C (future use), RS-485 terminal block		
User Interface	USB Optical Mouse, Jog-Shuttle, Remote-Controller with ID (ID 00 to 99)		
Video Data Export***	DVD-RW, CD-RW, model dependent.		

Table 1-1: WDR Technical Specifications

Specification	16-channel	9-channel	4-channel
PTZ Control	Pan / Tilt / Zoom / Focus / Iris / Preset / Guard-Tour / Auto-Scan (if feature is available on camera, itself). Supported protocols: Weldex, HSDN, Ernitec, TBT Dome, Pelco P, Pelco D, and SDM 100		
Power Source	AC 100 - 240V, 50/60Hz, Universal		
Operating System	Embedded Linux		
Power Consumption	83W	81W	70W
Weight	19.8 lbs (9 kg)		13.2 lbs (6 kg)
Dimensions (WxHxD)	17x3.5x17.7 in (430x89x450 mm)		15x2.9x16.5 in (381x74x419 mm)
Standard Certifications	Class A: FCC, CE(EMCD/LVD)		
UL Listing	WDR-1612; WDR-1624	WDR-9012; WDR-9024	WDR-4012

* In some cases, such as recording at high/highest quality, or recording video that contains high amount of motion activities, the IPS of recorded video can drop a few IPS below user specified value. The IPS drop is not visible when watching live video; it is only visible during the playback of recorded video.

*** Automatic video data backup is not available.

Table 1-2: WDR Environmental Conditions

Specification	Value (All Models)
Operating temperature	32°F to 104°F (0°C to 40°C)
Operating humidity	20% to 80% relative humidity
Storage temperature	-17°F to 140°F (-20°C to 60°C)
Storage humidity	20% to 90% relative humidity

SYSTEM SETUP

This chapter describes system setup procedures as performed locally.

After the WWW Port has been set up (see page 2-47), users from the ADMIN user group can configure non-system settings via the Internet. For more information on remote setup see the *SAgent Installation and Operation Manual*.

REMOTE IDENTIFICATION

When using remote control, both the remote control unit and the DVR unit must have remote identification set up. The setting on both units must match. The default ID number both on the remote control and on the DVR unit is 0.

❱ **To set up/change remote identification on the remote control:**

1. On the remote control, push the **IDSEL** button for 3 to 5 seconds.
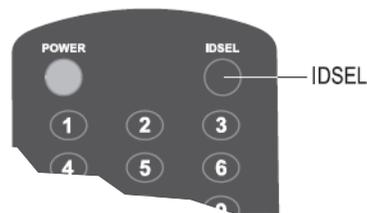
2. Using the numeric buttons, enter the remote identification number. Input range is 00 to 99. For proper functioning the number entered here must match the "Remote Controller ID" number set during system setup (see page 2-7).

❱ **To set up/change remote identification on the DVR:**

1. From the Main menu select **System**>**General**.

2. The General window opens. From the **Remote Controller ID** drop-down list select the remote identification number.

3. Click **Save**.

4. Click **Save**.

VIRTUAL KEYBOARD/CALENDAR

When the configuration steps require you to enter numerical or alphabetical input, you will be using a *virtual keyboard*. In other instances, you will need to use a *calendar* to select date and/or time.

NOTE

Only English characters can be entered using the virtual keyboard.

The same icon ![icon] is used to launch **Virtual Keyboard** and **Calendar**. Function of the icon is specific to context. The kind of application (virtual keyboard or calendar) launched when you click the icon is determined automatically and depends on the kind of input required.

Virtual Keyboard

There are two types of virtual keyboards. When you need to enter letters, numbers, and/or other characters, a full keyboard will be displayed.
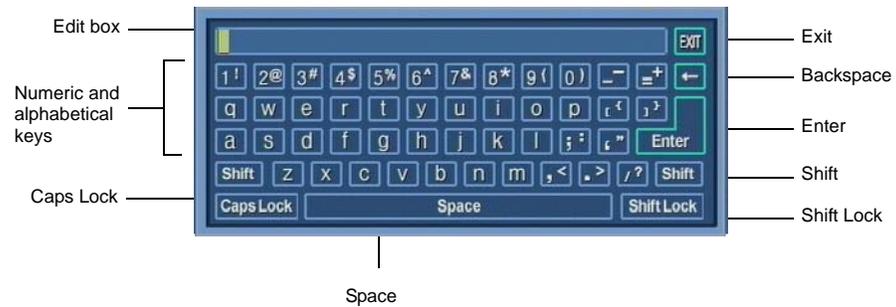
When the allowed input is numbers only, a numeric keyboard will be displayed.
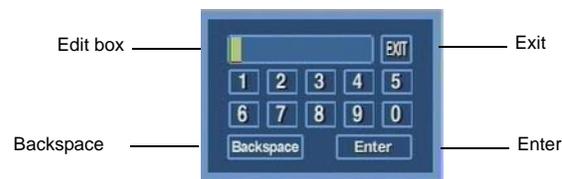
❱ **To use the virtual keyboard:**

1. Move the mouse pointer over a virtual key and click on it. Typed text will appear in the **Edit** box.

2. To confirm the text you typed and exit click on **Enter**.

3. You can also close the keyboard without saving the text by clicking **Exit**.

Calendar

There are two types of calendars. When accessed from most windows, the calendar displays and allows you to specify only the date.

When accessed from the Date/Time window and from the Manual Copy window, in addition to the date the calendar allows you to specify the time.
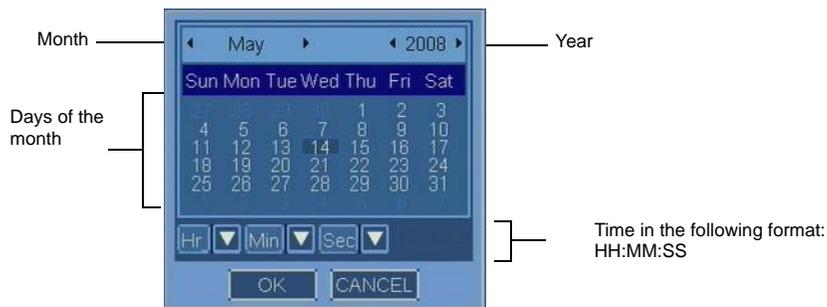
❱ **To use the calendar:**

1. Use the arrows to select month and year.
2. Move the mouse pointer over a day you want to select and click on it.
3. If applicable, use the drop-down lists to set the time.
4. To save the selection click **OK**.
5. You can also close the keyboard without saving by clicking **CANCEL**.

MAIN MENU

The Main menu gives you access to all configuration options. They are grouped under the following categories:

- **System** - Use this menu to view/modify general system configuration, perform user management, and to import/export settings between WDR devices
- **Device** - This menu allows you to configure camera options (including Guard Tour and PTZ) and associated alarms.
- **Record** - Allows you to set up a recording schedule.
- **Network** - Use this menu to set up network connections and event notifications.
- **Copy** - Allows you to copy files.

You can access the Main menu in the following ways:

- Click the **Menu** button on the device's front panel.
- When in the Live Mode, click the **Menu** button on the taskbar.
- Right-click on any channel area.
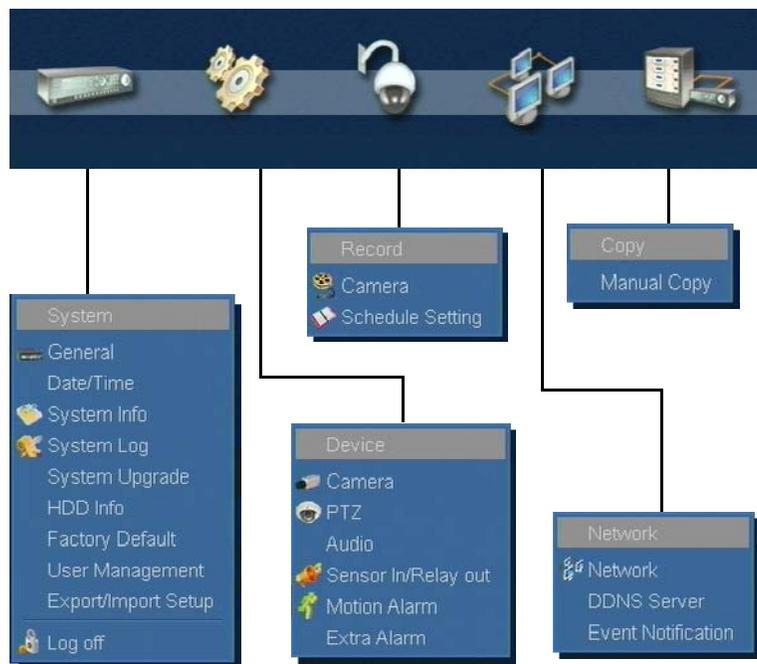
For login information see "System Login" on page 3-3.

SYSTEM MENU

This section describes options available in the Setup menu screens. The System menu has the following structure:

```
                              ┌──────────────┐              ┌──────────────┐
                              │ System Menu  │──────────────│   Log off    │
                              └──────────────┘              └──────────────┘
                                      │
        ┌──────────┬──────────┬───────┼──────────┬──────────────────┐
   ┌─────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
   │ General │ │ Date/Time│ │System Info│ │System Log│ │  System  │
   └─────────┘ └──────────┘ └──────────┘ └──────────┘ │ Upgrade  │
        │           │             │           │        └──────────┘
        │      ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
        │      │ HDD Info │ │ Factory  │ │   User   │ │Export/Import│
        │      └──────────┘ │ Default  │ │Management│ │   Setup    │
        │                   └──────────┘ └──────────┘ └──────────┘
        │                                     │
   ┌──────────┐                          ┌──────────┐
   │   OSD    │                          │ Add/Edit │
   └──────────┘                          │  Group   │
   ┌──────────┐ ┌──────────┐             └──────────┘
   │Date/Time │ │ Calendar │             ┌──────────┐
   └──────────┘ └──────────┘             │ Add User │
   ┌──────────┐ ┌──────────┐             └──────────┘
   │ Spot Out │ │ Spotout  │
   └──────────┘ └──────────┘
```
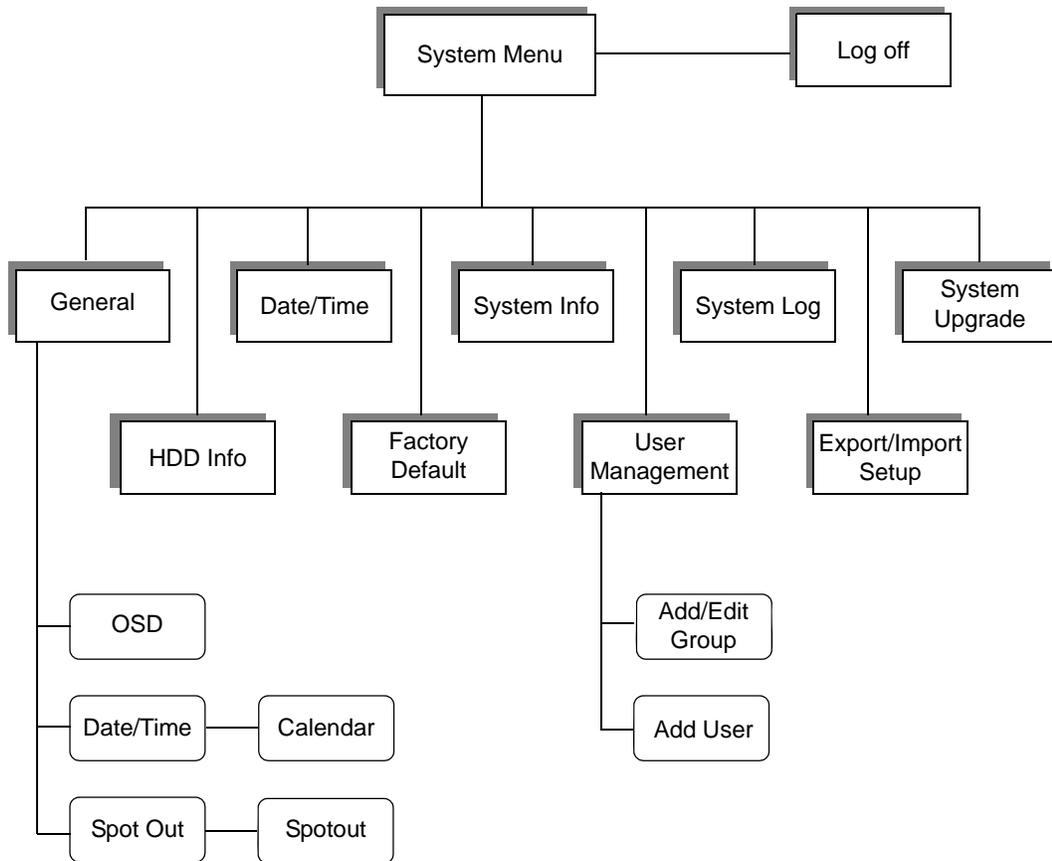
General System Information

〉 To configure general system information:

1. From the Main menu select **System**>**General**.

2. The General window opens. Using the virtual keyboard and drop down-lists specify required information. Refer to "General Menu Field Definitions" for details.

3. Click **Save**.

General Menu Field Definitions

Site ID – This identification number is used in conjunction with DDNS. By default **Site ID** uses the first three sets of the DVR's MAC address.

DVR ID – This identification number is used in conjunction with DDNS. By default the **DVR ID** uses the last three sets of the DVR's MAC address.

Remote Controller ID –This feature is used when you have more than one DVR at the same location. To prevent the remote controller from affecting multiple DVRs you must set up each DVR with a unique Remote Controller ID. Value range is from 0 to 99.

For proper functioning the number entered here must match the number set up in the remote controller device used with this DVR. For instructions on how to change remote identification in the remote control device refer to page 2-1.

The default ID number both on the remote control and on the DVR unit is 0.

Video Output – Select the video output: **TV** for S-Video and/or Composite output or **CRT/LCD Monitor** for VGA output. After you change this setting the DVR will restart.

Language – Select the language to be used (English, Chinese, French, or German). After you change this setting the DVR will restart.

Sequence Dwell Time – Defines how long (in seconds) video from each camera will be displayed on the main viewing screen while this feature is active.

Spot out Dwell Time – Defines for how long (in seconds) video from each camera in sequence will be displayed once the spot out feature is activated.

Spot Out – Click to open the Spot Out window where you can select cameras for spot out.

OSD – Allows you to configure on-screen display options. See page 2-9 for details.

SAVE – Click to save the changes.

CANCEL – Click to cancel the changes.

❌ Close – Click to close the window.

Spot Out

The spot output is a local spot monitor output. The video from a selected camera can be connected to a local monitor for viewing. When you select all or multiple cameras, each camera will be visible for the time configured in the **Spot out Dwell Time** entry (see page 2-8).

You can configure up to 4 spot out sequences for 9-channel and 16-channel DVRs, and 1 spot out for 4-channel DVR.

NOTE

When viewing the spot monitor, menu items are not visible or accessible. Only the video is displayed.

❱ **To configure spot out feature:**

1. In the General window click the **Spot Out** button.

2. The Spot Out window opens. Click the **Set Camera** button for the spot out you want to configure.

3. The Spotout window opens. Select the cameras for the spot out (selected cameras are highlighted in yellow). The **ALL** toggle button allows you to

select or un-select all cameras at once. You can also use the numeric buttons to select or un-select single cameras.

4. Click **OK** in the Spotout window to save the settings.
5. Repeat steps 2-4 for each spot out.
6. Click **OK** in the Spot Out window.

On-Screen Display

This section describes how to configure on-screen display (OSD) settings.

The on-screen display feature allows you to select information that will be visible on the main viewing screen when the Fix to Taskbar feature is disabled (taskbar is not locked on the screen). If the Fix to Taskbar feature is enabled, the following OSD selections will be behind the taskbar and therefore not visible on screen: date, time, recording indicator, and audio. Title is not affected by the taskbar.

❱ To configure on-screen display (OSD):

1. In the General window click the **OSD** button.
2. In the OSD window select the items to be displayed on-screen. The **ALL** button allows you to select all items at once. You can also select individual items:

   - **Date** - Select this check box to display date.
   - **Time** - Select this check box to display time.
   - **Title** - Select this check box to display camera information (default number or custom name, if defined).
   - **Recording -** Select this check box to display recording indicator.
   - **Audio** - Select this check box to display audio indicator.

3. Click **OK**.

Configuring Date and Time

The DVR generates file names based on date and time. If you change the settings to an earlier date and time, the previously recorded information will be overwritten as newer files with the same name get created.

❱ **To configure system date and time:**

1. From the Main menu select **System**>**Date/Time**.

2. The Date/Time window opens. To specify **Date/Time**, first launch the calendar.
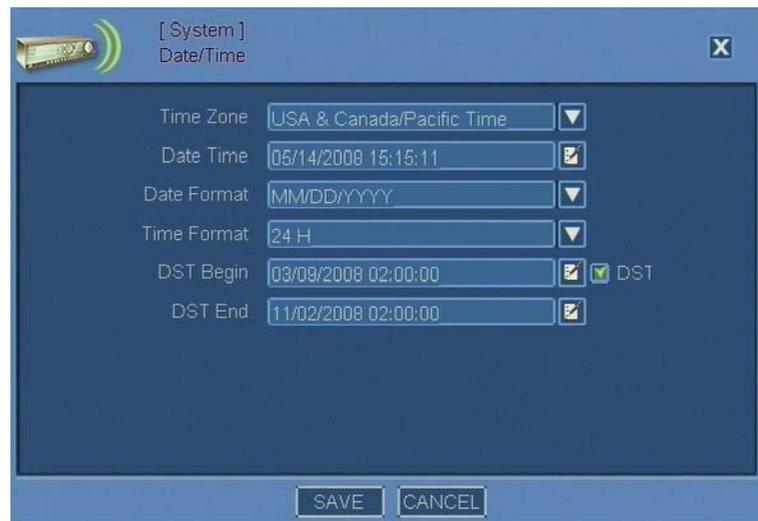
3. When the Calendar window is accessed from the Date/Time window, in addition to the date it also displays the time. Select the date and time and click **OK**.

Time in the following format:
HH:MM:SS, AM/PM (if selected from
Time Format in Date/Time window)

4. In the Date/Time window, make the remaining selections. Refer to "Date/Time Field Definitions" for details.

5. Click **Save**.

Date/Time Field Definitions

Time Zone – Select the time zone.

Date/Time – Displays date and time. This setting can be modified in the Calendar window.

Date Format – Select the format in which the date will be displayed. The following formats are available:

- MM/DD/YYYY (for example 12/24/2007)
- DD/MM/YYYY (for example 24/12/2007)
- YYYY/MM/DD (for example 2007/12/24)

Time Format – Select the format (24-hour or AM/PM) in which the time will be displayed.

DST – Select this check box to activate the automatic Daylight Saving Time option.

DST Begin – Specify the beginning of Daylight Saving Time.

DST End – Specify the end of Daylight Saving Time.

 CAUTION When DST ends, video data will be recorded, but the time stamp will show one hour missing.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

 Close – Click to close the window.

System Information

❱ **To view system information:**

1. From the Main menu select **System**>**System Info**.

2. In the System Info window, view the information displayed. (**Note:** Information in this screen is not editable.) Refer to "System Info Field Definitions" for details.

3. Click **Close**.

System Info Field Definitions

Video Signal – Indicates type of video signal (NTSC or PAL).

Software Version – Indicates software version.

Hardware Version – Indicates hardware version.

Disk Usage – Indicates HDD use and the remaining available space.

IP Address – Indicates current IP address.

MAC Address – Indicates the device's unique MAC.

Login Account – Indicates user ID.

X Close (icon or button)– Click to close the window.

Viewing System Log

❱ **To view system log:**

1. From the Main menu select **System**>**System Log**.

2. The System Log window opens. To retrieve the system for a particular day, launch the calendar to specify the **Date**.
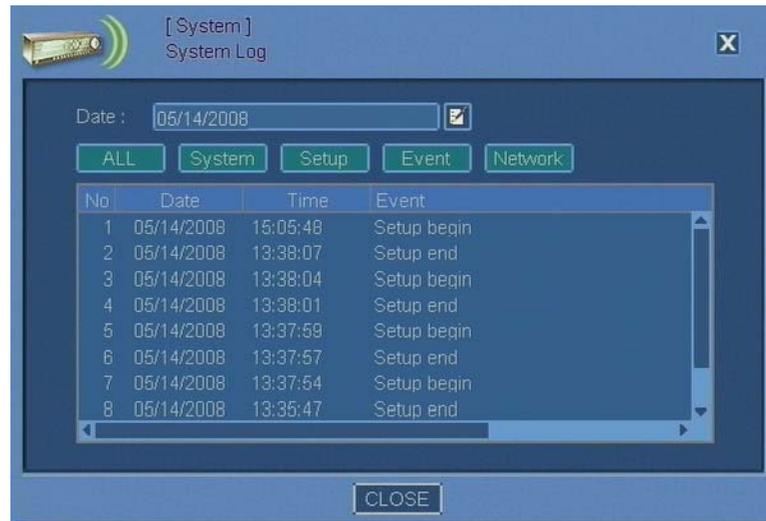
3. In the System Log window, view the information displayed (information in this screen is not editable). Refer to "System Log Field Definitions" for details.

NOTE

If there is a large number of logged items, the display might take few minutes to update. The DVR might not respond while the logs are being retrieved.

System Log Field Definitions

Date – Displays the date for which the system log is retrieved. This value can be modified in the Calendar window.

All – Click to display all activities for selected date.

System – Click to display System menu log with information on:

- ■ System starts
- ■ System shutdowns
- ■ Logins
- ■ Logouts

Setup – Click to display Setup menu log with information on:

- ■ The Setup menu being accessed
- ■ The Setup menu being closed
- ■ System time changes

Event – Click to display event log.

Network – Click to display network-related log.

When connected through the SAgent program to another computer, the network log will display the IP address of that computer.

X Close (icon or button) – Click to close the window.

Upgrading the System

NOTE

It is recommended that you save all custom settings before proceeding. See "Export/Import Setup" on page 2-21 for details.

❭ **To perform firmware upgrade:**

1. From the Main menu select **System**>**System Upgrade**.

2. The System Upgrade window opens. The **Current** field displays the current software version.
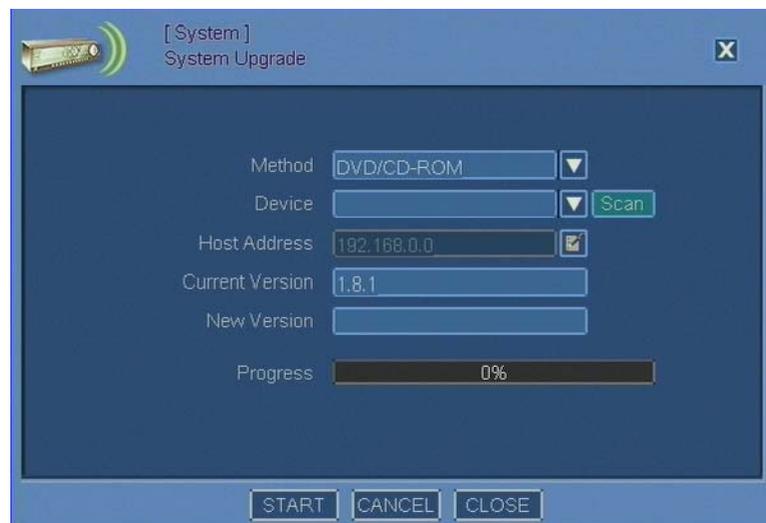
3. From the **Method** drop-down list select one of the following upgrade methods:

   ▪ **DVD/CD-ROM** - Select this method if the firmware upgrade is on a DVD or a CD-ROM.

NOTE

When using the DVD/CD-ROM method, make sure the file is located in the root directory.

- **USB HDD/Stick** - Select this method if the firmware upgrade is on a flash drive or USB-equipped hard drive. Make sure the upgrade software is copied to the root location of the drive you are using.

- **FTP** - Select this method if there is a TFTP server running on a LAN computer with the firmware upgrade file.

4. *If you are using a CD, DVD, or a USB flash drive*: Insert the corresponding media and press **SCAN**.

5. Select a device from the **Device** drop-down list.
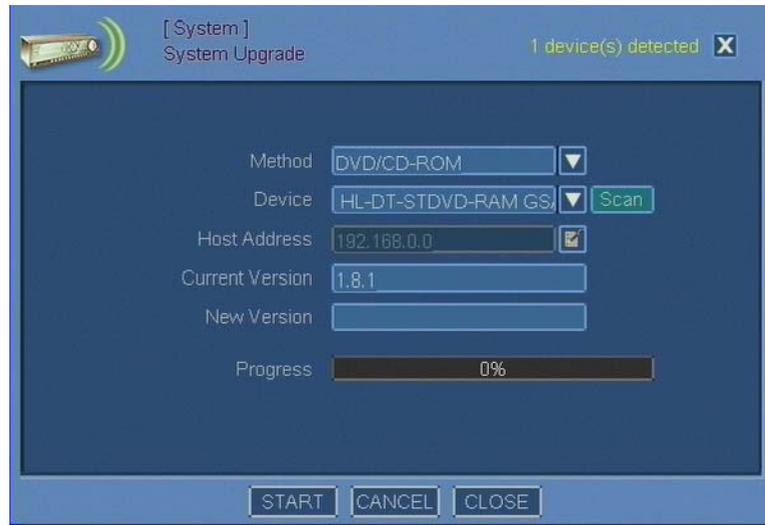
6. *If you are using the FTP method*: In the **Host** field specify the TFTP server's IP address using the virtual keyboard.

7. Click **START**.

8. The **New Version** field will display what firmware upgrade is being installed.

9. When **Progress** bar indicates upgrade completion, click **Close**.

10. The system will reboot automatically.

Configuring HDD Options

The HDD Info window allows you to view hard drive(s) information and set the recording option according to the needs of your system.

⚠ **CAUTION**
By default, when the hard drive is full, the recording with the oldest date will be overwritten by the new recording, and therefore will be lost.

The DVR supports up to 2 hard disk drives.

❱ **To configure HDD options:**

1. From the Main menu select **System**>**HDD Info**.

2. View the information displayed. Refer to "HDD Info Field Definitions" for details.
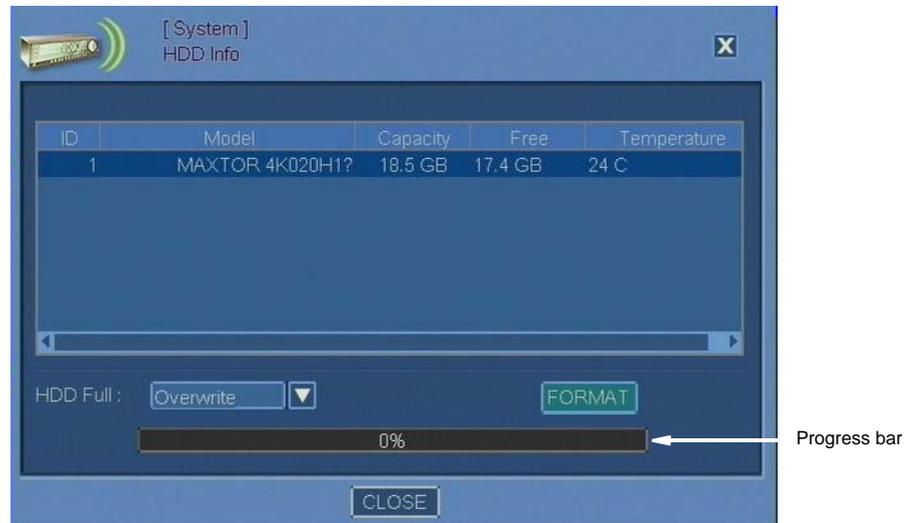
3. In the HDD Info window, from the **HDD Full** drop-down list select the recording option:

   ■ **Stop Recording** - When HDD is full, recording will stop

   ■ **Overwrite** - When HDD is full, the recording with the oldest date will be overwritten by the new recording

4. If you want to format HDD, click the **Format** button.

> ⚠ **CAUTION**   Formatting HDD will erase ALL recorded information.

5. When the process is complete, click the **Close** button.

NOTE

In some cases it may be necessary to first disconnect all cameras and revert the system to factory default settings before formatting the drive. It is recommended that you export custom settings prior to restoring factory default settings.

HDD Info Field Definitions

ID – Displays the HDD identification number.

Model – Displays the HDD hardware model.

Capacity – Displays the HDD size.

Free – Displays the amount of unused space.

Temperature – Displays the HDD temperature.

HDD Full – Select the recording option (**Overwrite** or **Stop Recording**) for situations when HDD is full.

Format – Click to begin HDD formatting.

Progress – Indicates progress of HDD formatting.

X Close (icon or button) – Click to close the window.

Restoring Factory Default Settings

〉 To restore factory default settings:

1. From the Main menu select **System**>**Factory Default**.
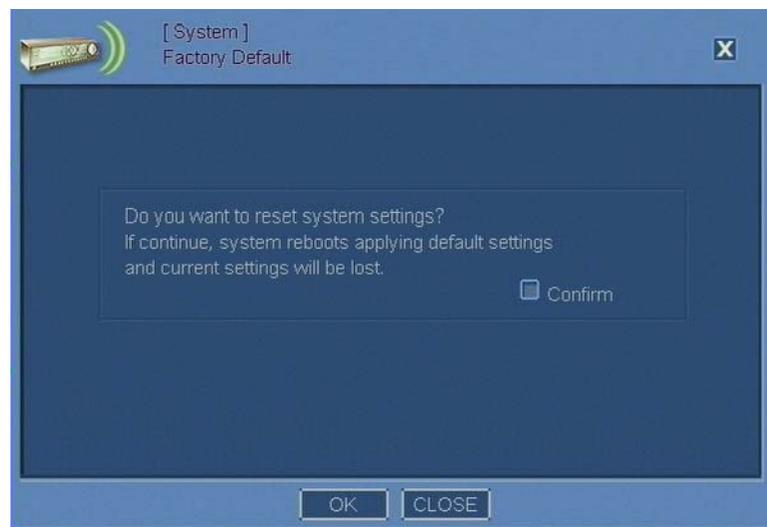
2. Read the information and select the **Confirm** check box.

⚠ CAUTION

Restoring the factory default settings will erase current custom system settings.

3. Click **OK**. The system will reboot and restore factory default settings.

User Management

The User Management window allows you to access configuration windows for individual system users and user groups. It also allows you to delete existing system users and/or user groups.

There is a pre-defined "admin" user account in the system. This account cannot be deleted. In addition to the pre-defined "admin" user account you can define 31 additional user accounts to the total of 32 per system.

There is also a pre-defined "ADMIN" user group in the system. This user group cannot be deleted and its rights cannot be modified. By default, the "admin" user belongs to this group; other users can be added as well. In addition to the pre-defined "ADMIN" user group you can define 15 additional user groups to the total of 16 per system.

❱ **To set up system users:**

1. From the Main menu select **System**>**User Management**.
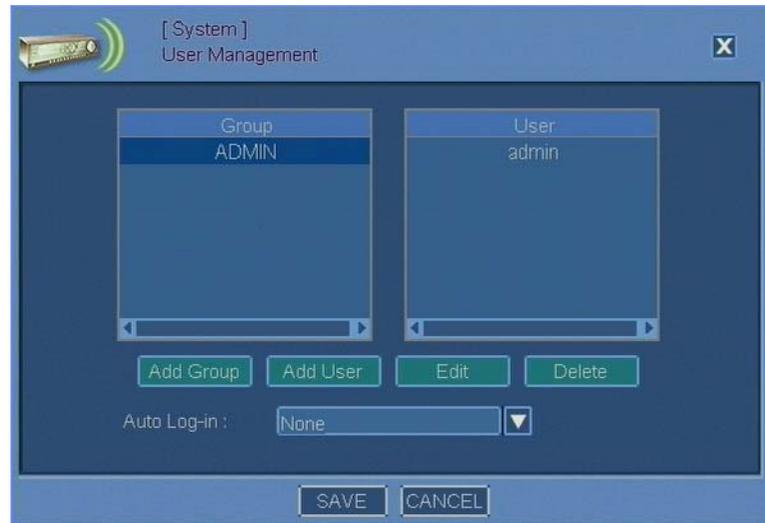
2. The Group list shows all defined user groups. From here you can add a new user group or modify an existing one:

   ■ To define a new user group, click **Add Group**.

   ■ To edit an existing group, select it from the list an **Edit**.

   See "Adding/Editing User Groups" on page 2-19 for details.

3. The User list shows all defined system users. From here you can add a new system user or modify an existing one:

   ■ To define a new system user, click **Add User**.

   ■ To edit an existing system user, select it from the list an **Edit**.

   See "Adding/Editing System Users" on page 2-20 for details.

4. To delete a user group, select it and click **Delete**.

5. To delete a system user, select it and click **Delete**.

6. From the **Auto Log-in** drop down list select **None**, **admin**, or any of the pre-defined users.

   ■ Selecting **None** is the safest option as it *disables* Auto Log-in feature and requires that a person logging on enter their credentials (login and password).

■ Selecting any entry other than **None** *enables* the Auto Log-in feature. The system will bypass the Login screen and the user can proceed without entering credentials.

> ⚠ CAUTION
>
> If **admin** is selected for auto log-in and power is cycled to the unit, the person present when the system comes back up will be automatically logged on as the administrator and have complete access to the system (administrator's rights).

7. Click **Save**.

Adding/Editing User Groups

❱ **To add/edit system user:**

1. From the Main menu select **System**>**User Management**.

2. In the User Management window click **Add Group** to define a new user group.

   If you want to modify an existing user group, select it and click **Edit**.

3. If you are defining a new user group, use the virtual keyboard to specify the name. See "Virtual Keyboard/Calendar" on page 2-2 for details.

4. Make the remaining selections as required. Refer to "Add Group Field Definitions" for details.

5. Click **OK**.

Add Group Field Definitions

NOTE

*The **Copy** function is accessible from the Live Mode taskbar as well as from Main Menu. Privilege to use this function from the taskbar is independent of the privilege to use it from the menu. To prevent a user from copying recording files to an outside media, both **Copy** check boxes must be un-selected.*

Group – Displays the name of the user group. Use the virtual keyboard to edit this field.

Search – If selected, members of this user group are allowed to use the **Search** button on the Live Mode taskbar.

PTZ – If selected, members of this user group are allowed to use the **PTZ** button on the Live Mode taskbar.

Copy – If selected, members of this user group are allowed to use the **Copy** button on the Live Mode taskbar.

System – If selected, members of this user group can use the System menu.

NOTE

It is not recommended that only the administrator is given rights to use the System menu.

Record – If selected, members of this user group can use the Record menu.

Device – If selected, members of this user group can use the Device menu.

Network – If selected, members of this user group can use the Network menu.

Copy – If selected, members of this user group can use the Copy menu.

Camera – Select the cameras available to the user group members. When not selected, viewing images from that camera will be disabled. However, the user will be able to access cameras in the Playback Mode if this user has **Search** privileges.

OK – Click to confirm the changes.

Cancel – Click to cancel the changes.

❌ Close – Click to close the window.

Adding/Editing System Users

❱ **To add/edit system user:**

1. From the Main menu select **System**>**User Management**.

2. In the User Management window click **Add User** to define a new system user.

   If you want to modify an existing system user, select it and click **Edit**.

3. When defining a new system user, specify the name using the virtual keyboard (see "Virtual Keyboard/Calendar" on page 2-2) in the Add/Edit User window.

4. To assign the user to a user group, select the entry from the **Group** drop-down menu. The menu lists all previously defined user groups.

NOTE!

Although not required by the system, it is recommended that all users protect their accounts with passwords.

---

5. Using the virtual keyboard specify and confirm the password. The password should be between 1 and 9 characters in length.

6. In the Add/Edit user window, click **OK**.

Export/Import Setup

You can *export* the DVR settings (IP Address, camera recording settings, etc) to a USB flash drive. This information can later be *imported* from the media to either the same or different WDR machine of the same model number.

This feature is useful when you want to:

- Use the same settings on multiple DVRs
- Save the DVR settings before restoring factory defaults
- Restore the DVR settings after firmware upgrade

❭ **To export settings:**

1. From the Main menu select **System**>**Export/Import Setup**. The Export/Import Setup window opens.

---

2. Insert the USB flash drive and press the **Scan** button next to the **Export To** drop-down list.

3. When the DVR finishes scanning, select a device from the **Export To** drop-down list.
4. Click the **EXPORT** button.
5. When the **Progress** bar indicates completion of the export process, click **Close**.

❱ **To import settings:**

1. From the Main menu select **System**>**Export/Import Setup**. The Export/Import Setup window opens.
2. Insert the USB flash drive and press the **Scan** button next to the **Import From** drop-down list.

3. When the DVR finishes scanning, select a device from the **Import From** drop-down list.

4. Click the **IMPORT** button.

5. When the **Progress** bar indicates completion of the import process, click **Close**.

DEVICE MENU

This section describes options available in the Device menu screens. The Device menu has the following structure:

```
                          ┌──────────────┐
                          │ Device Menu  │
                          └──────┬───────┘
                                 │
   ┌──────────┬─────────┬────────┼──────────┬─────────────┬─────────────┐
┌──────┐  ┌──────┐  ┌──────┐  ┌──────────┐  ┌────────────┐  ┌───────────┐
│Camera│  │ PTZ  │  │Audio │  │ Sensor In│  │Motion Alarm│  │Extra Alarm│
└──────┘  └──┬───┘  └──────┘  │ /Relay Out│ └────────────┘  └───────────┘
             │                └─────┬──────┘
      ┌ ─ ─ ─┴─ ─ ─┐               │
      │  Presets*  │          ┌─────┴──────┐
      └ ─ ─ ─ ─ ─ ─┘          │   Notify   │
             │                └────────────┘
      ┌────────────┐
      │ Guard Tour │
      └────────────┘
             │
      ┌────────────┐
      │ Guard Tour │
      │  Setting   │
      └────────────┘
             │
      ┌────────────┐
      │   AUX**    │
      └────────────┘
```
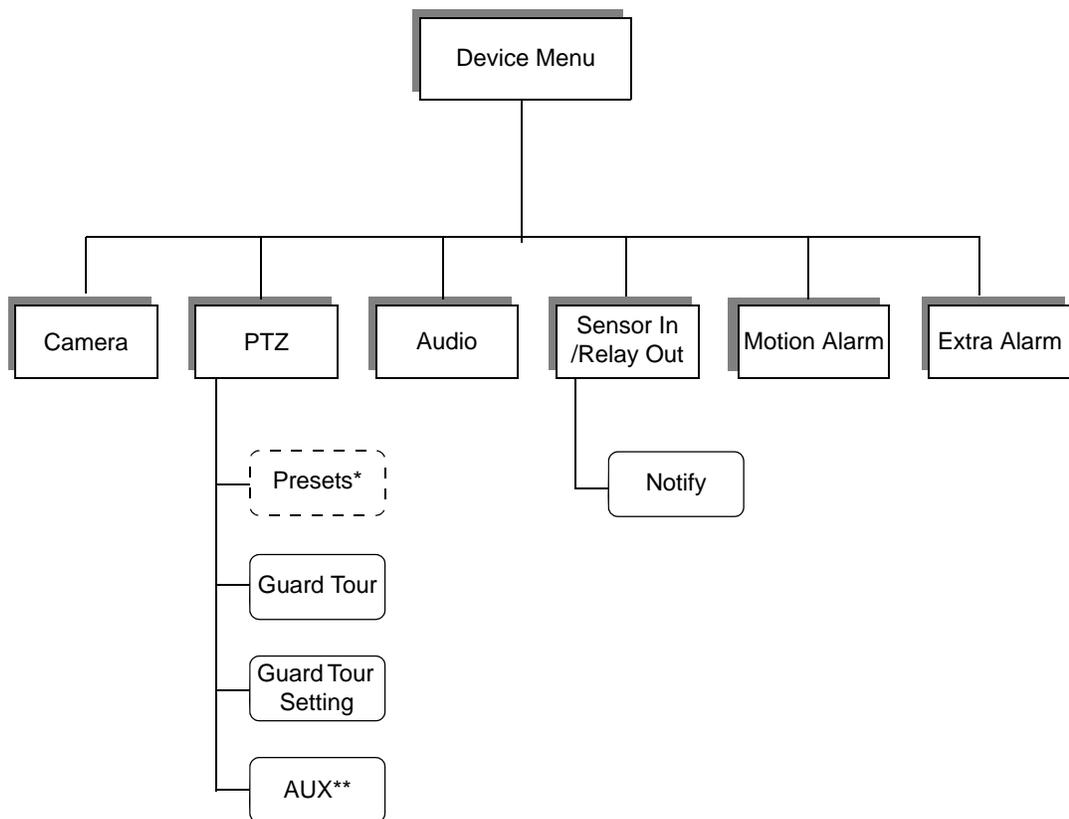
* Not a separate screen. Presets are defined from the PTZ screen.

** Currently not supported

Configuring Cameras

❱ **To configure a camera:**

1. From the Main menu select **Device**>**Camera**.

2. Select the camera to be configured. The **All** button allows you to select all cameras at once, while the individual numeric buttons correspond to individual cameras.
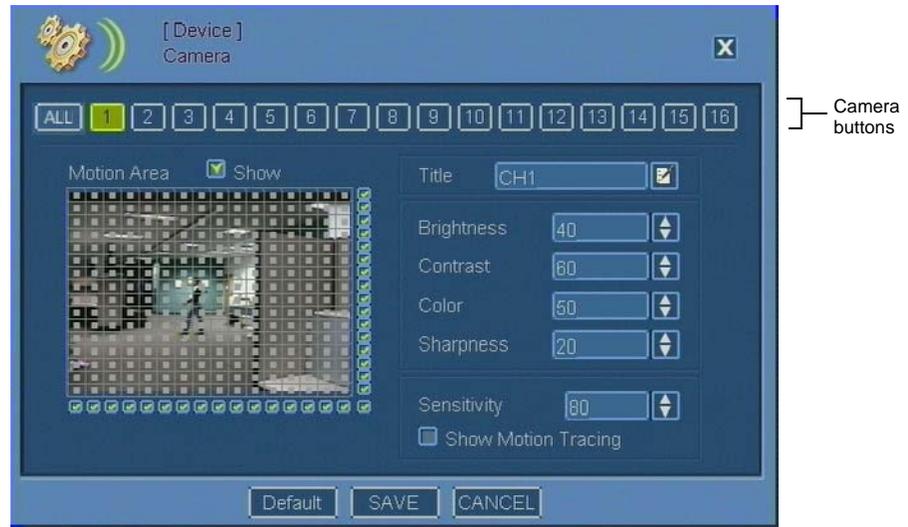
Camera buttons

3. In the **Title** field specify camera name.

4. Make the remaining selections as required. Refer to "Camera Field Definitions" for details.

5. Click **Save**.

Camera Field Definitions

Camera – Select one or more camera(s). The **All** button allows you to select all cameras at once.

Motion Area – Select the area sensitive to motion triggers. See. "To define motion tracing area:" on page 2-25 for details.

Show – Select this check box for the defined motion area to be displayed.

Title – Enter the name for the camera.

Brightness – Use the arrows to adjust brightness. Value range: 0-100.

Contrast – Use the arrows to adjust contrast. Value range: 0-100.

Color – Use the arrows to adjust color saturation. Value range: 0-100.

Sharpness – Use the arrows to adjust sharpness. Value range: 0-100.

Sensitivity – Use the arrows to adjust sensitivity level of motion detection. Value range: 0-100. Default value: 80.

Show Motion Tracing – Select to enable motion tracing. When enabled, the areas that are affected by the motion will be highlighted in yellow on the screen. Motion tracing is also available in live mode.

NOTE

Light changes and camera sensitivity may cause "false triggering" of motion tracing even if the picture appears unchanged.

Default – Reset all camera settings to default values.

⚠️ CAUTION

This function will restore **all settings** of **all cameras** to their default values. Any custom configuration settings will be lost.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

❎ Close – Click to close the window.

❭ **To define motion tracing area:**

1. In the Camera window, select the **Show** check box to view area defined for motion tracing. By default the entire area is selected and active (motion-sensitive).

2. To precisely define the motion-sensitive area use either the check boxes outlining the matrix (to select an entire row), or the individual matrix points. Un-selected areas will have the "dot" mark removed. You may also define an area by clicking and holding a mouse and dragging it diagonally (a rectangular area will be selected).

Click to select or un-select entire corresponding row

Click to select or un-select entire corresponding column

Click to select or un-select entire matrix
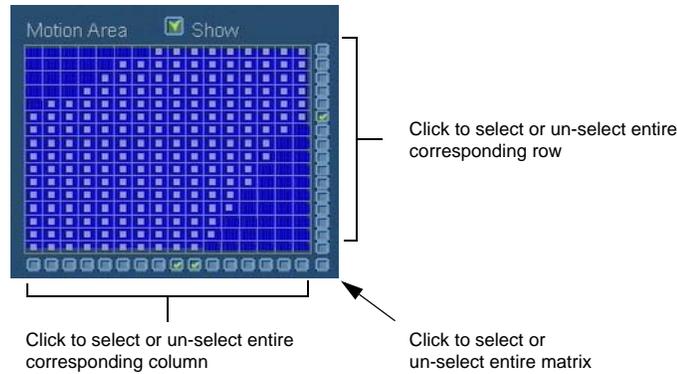
With the motion tracing enabled, motion is indicated by yellow highlights like in the following example.

Motion tracing highlights

Configuring PTZ Cameras, Presets, and Guard Tours

Different PTZ (Pan, Tilt, and Zoom) cameras use different protocols to communicate with the DVR through the RS-485 interface, such as Pelco-D and Pelco-P. For proper functioning you need to define what protocol a camera will be using.

For each PTZ camera you can define up to 8 presets and 1 guard tour.

Presets are used to quickly move camera to a desired position by simply clicking on the preset number on the PTZ Mode taskbar.

Guard tours are based on the 8 presets defined by the user. Guard tour moves the camera from preset to preset automatically.

NOTE
The AUX function is not currently supported.

❱ **To configure PTZ cameras:**

1. From the Main menu select **Device**>**PTZ**.

2. From the **Camera** list select the camera to edit. Image from the camera will be displayed in the screen area.

3. From the **Protocol** drop-down list select the communication protocol to be used. Refer to the PTZ manufacturer to find out the supported protocol.

4. In the **Address** field use the virtual keyboard to specify camera ID.

5. Click the **Set** button to set camera protocol and address.

6. To test camera functioning use the following buttons:

   ▪ Arrow buttons - Pan and tilt functions.

   ▪ **Z**+ and **Z-** buttons - Zoom in and out.

   ▪ **F**+ and **F-** buttons - Focus in and out.

7. Set the speed of camera movements. The **Speed** number represent the percentage of the PTZ camera's maximum speed. For example, if a PTZ camera maximum speed is 100 degrees per second, and if you choose speed 20 from the DVR, the speed will be 20% of the 100 degrees per second.

8. Click the **Tour** button to activate a predefined tour embedded in the camera (if available). Refer to the camera manufacturer's documentation for more details.

9. Click the **AutoScan** button to activate a predefined autoscan embedded in the camera (if available). Refer to the camera manufacturer's documentation for more details.

10. Click **Save** or continue with the next procedure to configure presets.

〉 **To configure presets for a selected camera:**

1. In the **Preset** field, use the virtual keyboard to define preset name.

2. Assign a number to the preset by selecting a numeric button.

Preset numbers

3. Use the navigational buttons for the PTZ functions to adjust the camera settings.

4. Click the **Set** button for the preset.

5. Repeat steps 1 - 4 for all presets you want to define for this camera.

6. To verify preset function select a preset by highlighting a corresponding numeric button and click **Move**.

7. Click **Save** or continue with the next procedure to configure a guard tour.

〉 **To configure guard tour for a selected camera:**

1. In the PTZ window click the **Set** button for Guard Tour.

2. In the Guard Tour window select the camera and click the **Add** button.
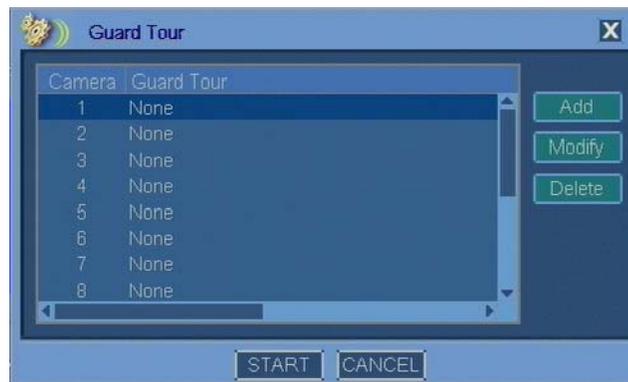
3. The Guard Tour Setting window opens. Select a preset and from the **Tour Point** list and time (in seconds) from the **Tour Sec** list.

4. Click the right arrow button [→] to add the selection to the **Guard Tour** list.

    The left arrow button [←] allows you to remove unwanted items from the list after highlighting them.

5. Repeat steps 3 and 4 until the Guard Tour is defined.

    The Guard Tour elements are displayed in the following format: PX(Y), where X is the number of the preset and Y is time in seconds. For example, P1(3) symbolizes preset 1 with dwell time of 3 seconds.

6. Click **OK** to save the Guard Tour.

7. In the Guard Tour window click the **Start** button to begin the Guard Tour.

    You can also use this window to add, modify, or delete guard tours for other cameras.
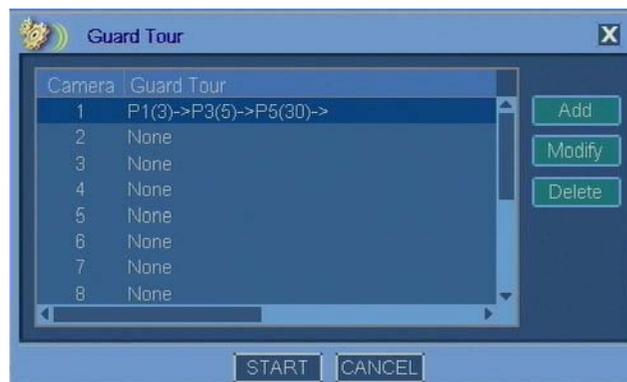
8. In the PTZ window click **Move** to verify guard tour operation.

9. In the PTZ window click **Save**.

Configuring Audio

You can enable/disable audio for up to 4 cameras. See page 2-38 for information on how to assign an audio channel to a particular camera.

❱ **To configure audio:**

1. From the Main menu select **Device**>**Audio**.

2. For each 1-4 audio select an **ON** or **OFF** mode from the drop down list.
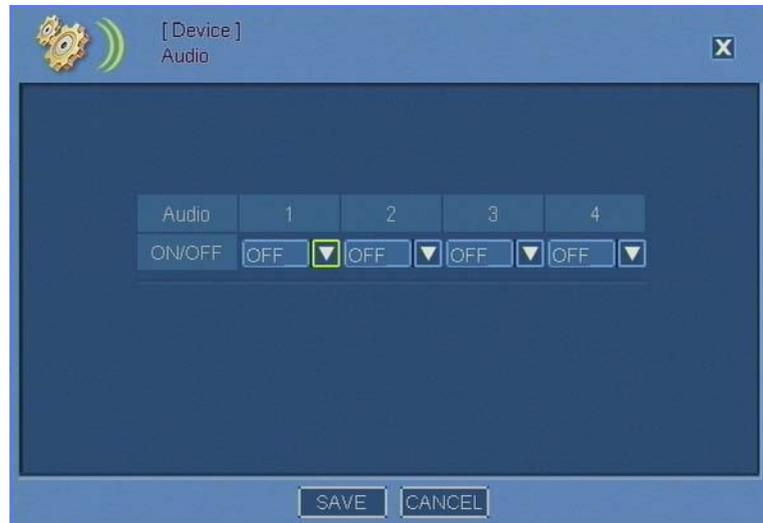
3. Click **Save**.

After turning on Audio, you should also associate individual audio channels with a camera. See page 2-38 for details.

Configuring Sensor Alarms

Alarms work independently from recording. This means that sensor alarm, when configured, will be triggered by detected motion whether or not recording is currently enabled according to recording schedule.

NOTE

When sensor alarm is triggered during motion alarm, the sensor alarm will override the motion alarm. However, if motion alarm is triggered during sensor alarm, the motion alarm (although registered in the log) **will not** *override the sensor alarm and the notification options (Buzzer, Icon and Tooltip, and Camera Pop-up)* **will not** *be activated.*

❱ **To configure sensor alarms:**

1. From the Main menu select **Device**>**Sensor In/Relay Out**.

2. For each of the 1-16 sensors, make selections as required. Refer to "Sensor In/Relay Out Field Definitions" for details.

3. Click the **Sensor Name** button.

4. In the Sensor Name window use the virtual keyboard to specify custom sensor names. Click **1-8** to display sensors 1 through 8 and **9-16** to display sensors 9 through 16.

5. In the Sensor Name window click **Close**.

6. In the Sensor In/Relay Out Field window click **Save**.

Sensor In/Relay Out Field Definitions

Sensor – List of sensors (1 through 8 and 9 through 16).

ON/OFF – Turn the sensor input alarms on or off.

Camera – Select the camera to associate with the sensor (input).

OUT – Select the alarm output to associate with the input sensor alarm. The outputs are predefined via hardware, therefore the OUT number corresponds to the physical alarm output port on the back panel of the DVR.

Table 2-1: Output Relays and Corresponding Physical Ports

OUT 1-16	Corresponding Physical Alarm Output Port		
	4-Channel DVR	**9-Channel DVR**	**16-Channel DVR**
OUT 1-4	RO1 and RO2	RO1-RO4	RO1-RO4
OUT 5-9	N/A	AO5-AO9	AO5-AO9
OUT 10-16	N/A	N/A	AO10-AO16

IPS – Displays the Images Per Second recording rate as set in the camera's recording options.

Preset – Select the preset to be activated upon alarm. This feature requires a PTZ camera and defined presets.

When selected, a PTZ camera will be moved to a specific preset position when associated alarm sensor is triggered. For example, you can program the DVR to point to Preset 1 (e.g. Preset1 = Main Door) when alarm sensor 1 is triggered, and so forth.

Dwell – Defines dwell time in seconds (1, 2, 3, 4, or 5) from the beginning of the alarm. Dwell time applies to notifications and relay/alarm output durations. See "Alarm Notifications" on page 2-36 for details.

NOTE
Even if the alarm event continues, the DVR will generate only 1 event and relay/alarm output at the beginning of the alarm.

Pre-Alarm – This feature is currently not supported.

Type – Set sensor input alarm to N/O (Normally Open) or N/C (Normally Closed).

1-8 – Click to display sensors 1 through 8.

9-16 – Click to display sensors 9 through 16.

Notify – Click to configure notifications. The sensors are independent of each other and can be set up separately. See "Alarm Notifications" on page 2-36 for details.

Sensor Name – Click to assign names to sensors.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

X **Close** – Click to close the window.

Configuring Motion Alarms

Alarms work independently from recording. This means that motion alarm, when configured, will be triggered by detected motion whether or not recording is currently enabled according to recording schedule.

NOTE

When motion alarm and sensor alarm occur at the same time, the latter will override the first. For example, if motion alarm is triggered first and sensor alarm is triggered 0.01 second later, sensor alarm settings will override motion alarm settings.

❱ **To configure motion alarms:**

1. From the Main menu select **Device**>**Motion Alarm**.
2. For each camera, make selections as required. Refer to "Motion Alarm Field Definitions" for details.

Motion Alarm Field Definitions

Camera – Lists of cameras (1 through 8 and 9 through 16).

ON/OFF – Turn the motion alarms on or off.

OUT – Select the output to associate with the motion alarm. The outputs are predefined via hardware, therefore the OUT number corresponds to the physical alarm output port on the back of the DVR. See Table 2-1 for details.

IPS – Displays the Images Per Second recording rate as set in the camera's recording options.

Dwell – Specify dwell time in seconds from the beginning of the alarm. Dwell time applies to notifications and the relay/alarm outputs duration. See "Alarm Notifications" on page 2-36 for details.

If motion duration exceeds the dwell time, alarm will be generated at the beginning of motion and last for specified dwell time. See the illustration below for example scenario.
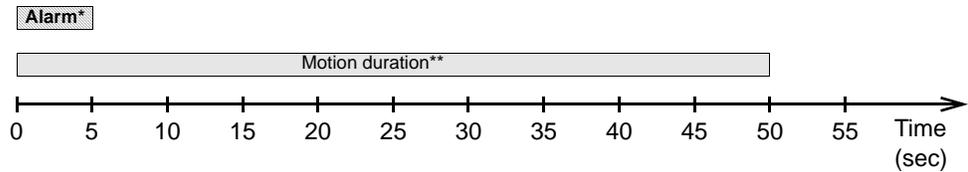
*Dwell time for motion alarm set to 5 seconds
** Motion duration 50 seconds

Pre-Alarm – This feature is currently not supported.

1-8 – Click to display cameras 1 through 8.

9-16 – Click to display cameras 9 through 16.

Notify – Click to configure notifications. See "Alarm Notifications" on page 2-36 for details.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

☒ Close – Click to close the window.

Configuring Other Alarms

Alarms work independently from recording. This means that an alarm, when configured, will be triggered by defined condition whether or not recording is currently enabled according to recording schedule.

The following alarms can be set (besides the motion alarms):

- S.M.A.R.T.*
- Video loss**
- Recording failure (DVR system failure)
- HDD Full

* Self-Monitoring, Analysis, and Reporting Technology, a monitoring system for computer hard drives to detect and report on various indicators of reliability in the hope of anticipating failures. If the S.M.A.R.T. alarm occurs, contact Technical Support.

** Due to cut camera cables, camera failure, etc.

❱ **To configure alarms:**

1. From the Main menu select **Device**>**Extra Alarm**.
2. Make selections for each alarm type you want to configure. Refer to "Extra Alarm Field Definitions" for details.

3. Click **Save**.

Extra Alarm Field Definitions

Alarm – The alarm type:

- S.M.A.R.T - Alarm triggered by a hardware-based indicator that indicates hard drive failure risk.
- Video Loss - Alarm triggered for video loss.
- Recording Failure - Alarm triggered for recording failure.
- HDD Full – Alarm triggered based on HDD usage.

ON/OFF – Turn the feature on or off.

Disk Usage (HDD Full alarm only) – Select the critical amount of space that, when used, will trigger the alarm. This feature is useful in combination with **Stop Recording** selected in "Configuring HDD Options" on page 2-15. If you are using the **Overwrite** option instead, the alarm will be triggered only once when the disk usage reaches the defined percentage for the first time.

Relay Out – Select the output to associate with the alarm. The outputs are predefined in hardware, therefore the Relay OUT number corresponds to the physical alarm output port on the back of the DVR.

Dwell – Specify dwell time in seconds from the beginning of the alarm. Dwell time applies to notifications. See "Alarm Notifications" on page 2-36 for details.

Notify – Click to configure notifications. See "Alarm Notifications" on page 2-36 for details.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

X Close – Click to close the window.

Alarm Notifications

Alarm notifications are generated when a specific event occurs. They can be set up for the following alarms:

- Sensor In/Relay Out
- Motion
- S.M.A.R.T.
- Video loss
- Recording failure
- HDD Full

〉 To set up notifications:

1. In the window used to define alarms, click the **Notify** button.

Note: Camera Pop-up is available only for Sensor In/Relay Out and Motion alarms.

2. The following notification options are available:
   - **Buzzer -** When an alarm is triggered, the DVR generates an alarm sound for a pre-defined dwell time.
   - **Icon and Tooltip** (Motion Alarm or Sensor only) **-** When an alarm is triggered, the DVR generates an icon on the Main taskbar. The type of event will also be displayed (but not the specific camera or sensor involved).
   - **Camera Pop-up** (Sensor In/Relay Out alarms only) - When an alarm is triggered, the DVR will automatically switch to multiple channel view. The camera channel name will be displayed in red.

   Select the appropriate check boxes. Selecting **All** enables all sensor notifications.

3. Click **OK** to save your changes.

RECORD MENU

This section describes options available in the Record menu screens. The Record menu has the following structure:
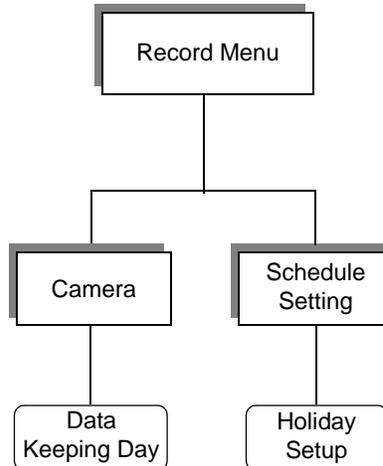
Configuring Camera Recording and Audio Options

❱ **To configure camera settings:**

1. From the Main menu select **Record**>**Camera**.

2. From the **Recording Resolution** drop-down menu select the desired resolution value.
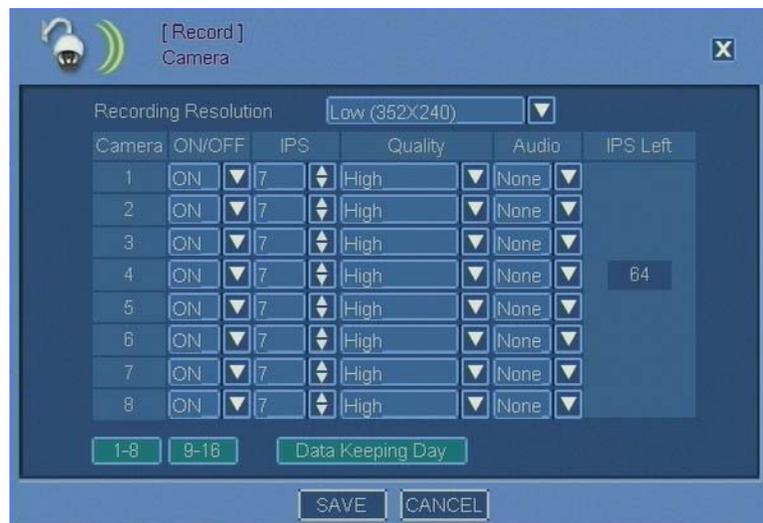
3. Make selections for camera you want to configure to record. Refer to "Camera Field Definitions" for details.

Camera Field Definitions

Recording Resolution – Select recording resolution.

Camera – Lists cameras 1 through 8 or 9 through 16.

ON/OFF – Turn the recording on or off for the camera.

IPS – Sets the Images Per Second recording rate for recording.The minimum value is 1. However, if the camera is turned OFF, the IPS from this camera can be used by other cameras.

Quality – Set the quality of the recording. Select from the following:

- **Lowest**, QS (Quantization Scale) = 10
- **Low**, QS = 8
- **Standard**, QS = 5
- **High**, QS = 4
- **Highest**, QS = 3

Audio – Select the audio input (None, 1, 2, 3, or 4) to be associated with a camera. When selected, the sound will be on during playback. The sound will *not* be on during live mode.

In order to hear the audio, select the channel and the single camera view. In addition to associating audio input with the camera, the audio function must be enabled for that channel (see page 2-30), and the speakers must be connected to the Audio output.

1-8 – Click to display cameras 1 through 8.

9-16 – Click to display cameras 9 through 16.

Data Keeping Day – Click to set up the longest amount of time that video can possibly be saved before being erased from HDD. Some configurations may fill the storage drive before the specified time. See the following procedure for details.

IPS Left – It indicates the remaining frames that can be distributed among different cameras within the same camera group. When you increase value in the **IPS** column, **IPS Left** decreases, and vice versa.

For a 9-channel DVR there are two codecs to process video. The 240 FPS is split to 120 FPS for cameras 1- 4 and 120 FPS for cameras 5 - 9. Therefore cameras 1- 4 can be configured to an average of 30 FPS per each camera, while cameras 5 - 9 can only be configured to an average of 24 FPS per each camera. Unused IPS on one codec cannot be shared with the other codec.

NOTE

Maximum number of FPS is for any camera is 30 for systems using NTSC and 25 for systems using PAL.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

☒ Close – Click to close the window.

❱ **To set up Data Keeping Day:**

1. In the Camera window click **Data Keeping Day**.
2. To enable the feature, select the **Use** check box.

3. By default, all cameras are set to keep data for 6 days.Maximum number of days is 30 for each camera.

   Use the arrow buttons to change the value for specific cameras or select the **All Same Days** button and change the value for all cameras at once.

   To set the same number of days for all cameras, select the **All Same Day(s)** check box and indicate the number of days.

   You can also use the arrow buttons change the value for specific cameras. To enable the buttons, the **All Same Day(s)** check box must be un-selected.

4. Click **Close** to save the changes.

Configuring Recording Schedule

NOTE

Recording works independently from alarms. This means that alarm, when configured, will be triggered by defined conditions whether or not recording is currently enabled according to recording schedule.

❱ **To set up holidays:**

1. From the Main menu select **Record**>**Schedule Setting**.
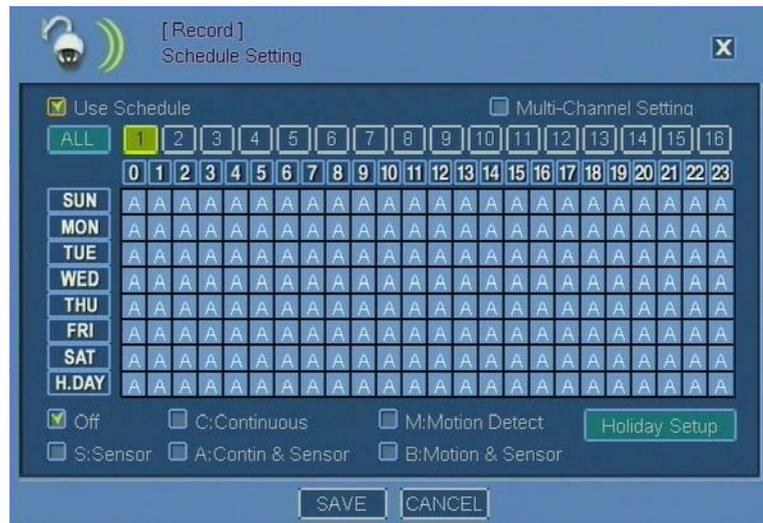
2. In the Schedule Setting window click **Holiday Setup**.

3. The Holiday Setup window opens. Use the arrows to select **Mon** (Month) and **Day** of the holiday and click **Add**.

   You can also remove a defined holiday by selecting from the list it and clicking **Del**.
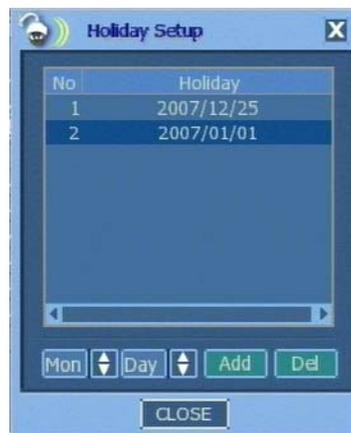
4. Click **Close** in the Holiday Setup window.

NOTE

*Clicking **Close** in the Holiday Setup window saves the changes.*

---

5. Click **Save** in the Schedule Setting window or proceed with configuring the recording schedule (starting with step 2 below).

❱ **To configure recording schedule:**

1. From the Main menu select **Record**>**Schedule Setting**.

2. In the Schedule Setting window, select the camera for which to set the recording schedule.

   To configure identical schedule for more than one camera, first select the **Multi Channel Setting** check box. Then choose the cameras. You have the following options:

   ■ Choose the cameras one by one, or

   ■ Click the **All** button to select all cameras

NOTE

After setting identical schedule for multiple cameras, you can make modifications to a particular camera by selecting only that camera and making changes to its recording schedule.

Camera buttons

Hour buttons
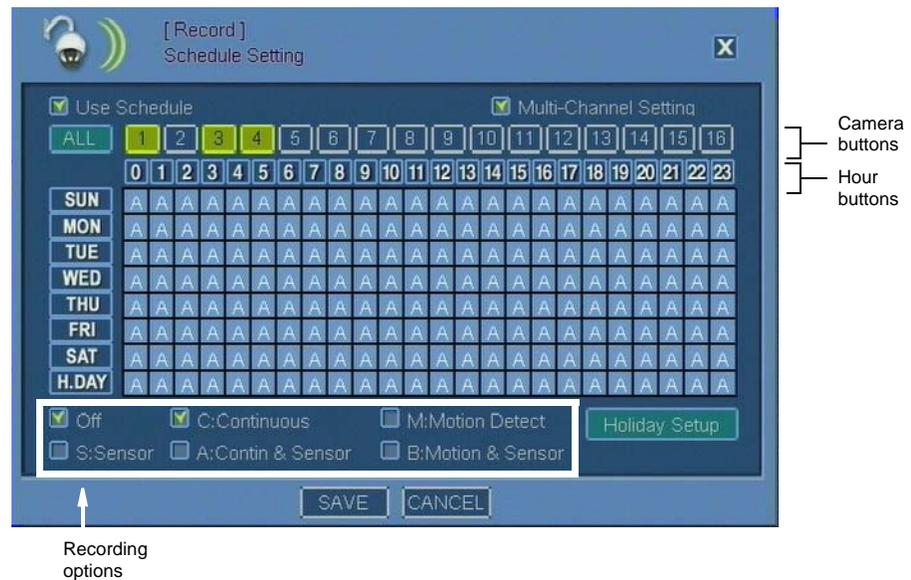
Recording options

3. Choose a recording option by selecting corresponding check box. Refer to "Schedule Setting Field Definitions" for detailed description.

4. Apply the selected recording option to the matrix. See "Tips on Using the Recording Matrix"for details.
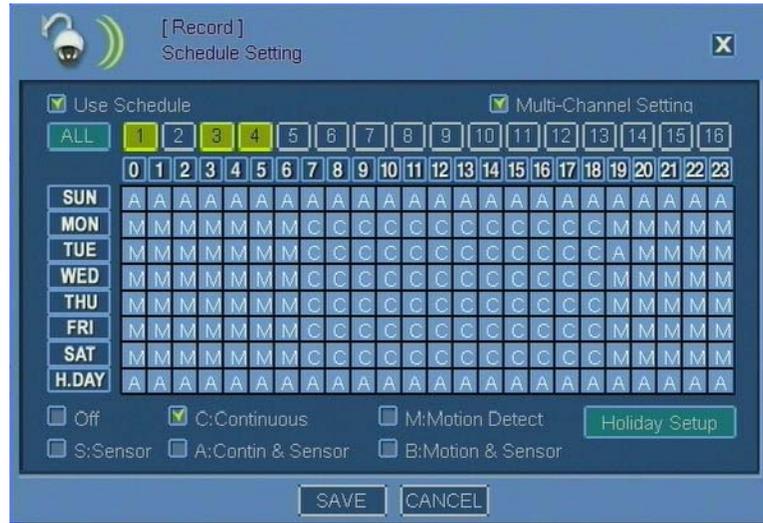
5. Repeat steps 2-4 until recording schedule is set for all cameras.
6. Click **Save**.

Schedule Setting Field Definitions

Use Schedule – Select this check box to enable schedule use. For continuous recording leave the check box un-selected. This function is enabled by default.

Multi- Channel Setting – When selected, you can choose multiple cameras at the same time. This feature is useful when applying the same settings to multiple cameras.

Camera – Select one or more camera(s). The **All** button allows you to select all cameras at once, provided the **Multi-Channel Setting** is enabled.

0 through 23 – Indicates the time to record: 0 through 23 hour(s).

When you click a button indicating an hour, you will apply currently selected recording option (**Off**, **C:Continuous**, etc.) to an entire column. See "Tips on Using the Recording Matrix" on page 2-43 for more details.

SUN through MON and H-DAY - Indicates the days (Sunday through Monday and Holiday, as defined in Holiday Setup).

When you click a button indicating a day, you will apply currently selected recording option (**Off**, **C:Continuous**, etc.) to an entire row. See "Tips on Using the Recording Matrix" on page 2-43 for more details.

Recording Options

Off – Select to disable recording for the specified hour(s)

C:Continuous – Select to record continuously.

M:Motion Detection – Select to set motion detection recording.

NOTE

Consider camera placement when using motion detection. This feature works best when the motion (e.g. a person walking) occurs across the camera's field of view and is less sensitive when the motion is directly toward or away from the camera's lens.

S:Sensor – Select to set sensor recording.

A:Continuous & Sensor – Select for continuous and sensor recording.

B:Motion & Sensor – Select for motion and sensor recording.

Other

Holiday Setup – Click to set up the holiday schedule. See page 2-41 for details.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

X Close – Click to close the window.

Tips on Using the Recording Matrix

The recording matrix consists of multiple cells. Each cell corresponds to one hour of a specific day of the week (or a pre-defined holiday).

When you configure recording schedule, you decide what type of recording is supposed to occur each specific hour. While each hour *can* be configured separately, there are also ways to configure several hours at once. Various ways of using the matrix are described below.

❱ **To set recording type for a specific hour:**

1. Select the type of recording, for example, **M:Motion Detect**.

2. Click on the cell in the matrix, for example, column **3**, row **TUE**, corresponding to Tuesday 3 AM.

An "M" will appear in the grid and the type of recording for that hour will change to "Motion Detect." (See "Recording Options" on page 2-43 for types of recording and corresponding letters.)
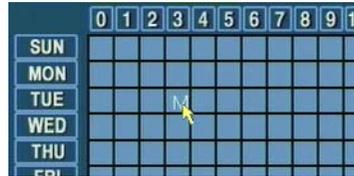
❱ **To set recording type for a specific day (all hours):**

1. Select the type of recording, for example, **M:Motion Detect**.
2. Click on the button describing the day, for example **WED**.

   The type of recording for Tuesday will change to "Motion Detect."
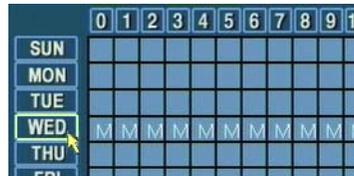
❱ **To set recording type for a specific hour (all days):**

1. Select the type of recording, for example, **M:Motion Detect**.
2. Click on the button describing the hour, for example 8.

   The type of recording for 8 AM will change to "Motion Detect."
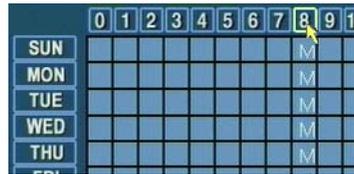
❱ **To set recording type for a day and hour range:**

1. Select the type of recording, for example, **M:Motion Detect**.
2. Click and hold the mouse button. Drag the cursor over the matrix area to select day/hour range.
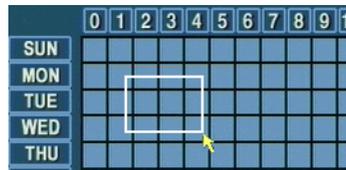
3. Release the mouse button. The type of recording for the selected range will change to "Motion Detect."

NETWORK MENU

This section describes options available in the Network menu screens. The Network menu has the following structure:
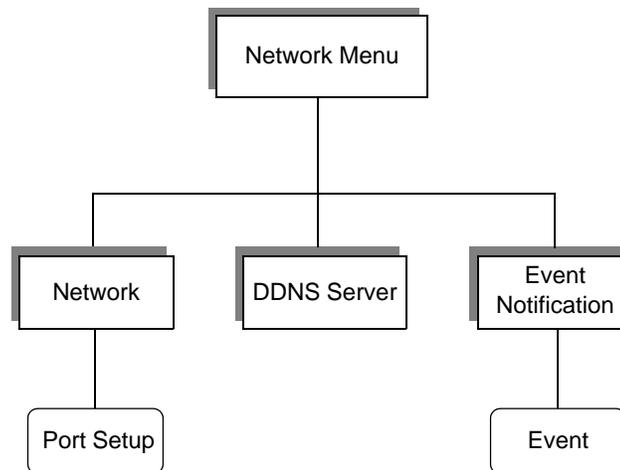
Configuring Network Settings

The DVR can output 16 channels at any given time through the network. These 16 channels can be accessed from multiple network computers. For example, if 2 computers are connected to the DVR, and one of them has access to 14 channels, the other one can only have access to 2 channels.

It is recommended not to exceed 2 connections per network.

❭ **To configure the network settings:**

1. From the Main menu select **Network**>**Network**.

2. The Network window opens. Filling out several fields will require you to use the virtual keyboard.
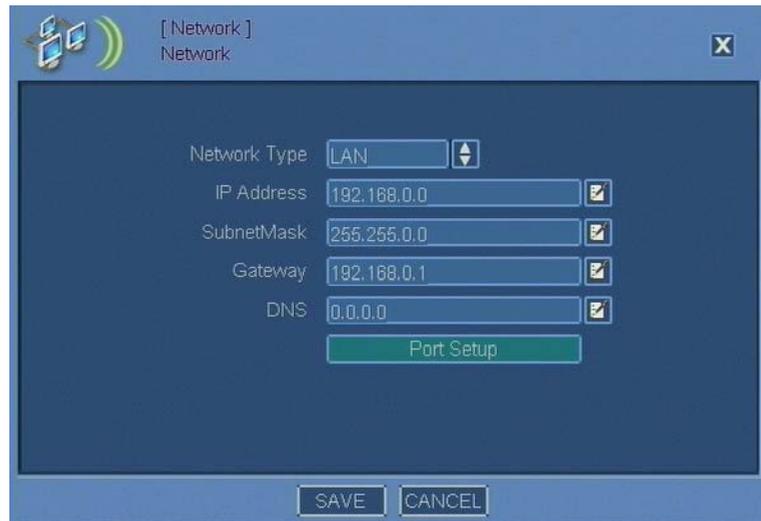
3. Make selections for each alarm type you want to configure. Refer to "Network Field Definitions" for details.

Network Field Definitions

Network Type – Select the network type (LAN or DHCP). When DHCP is selected, the DVR will automatically get an IP address from a DHCP server.

IP Address – Specify the IP address for LAN network.

Subnet Mask – Specify the subnet mask for LAN network.

Gateway – Specify the gateway for LAN network.

DNS – Specify the DNS (Domain Name Server) address.

Virtual Keyboard – Click this icon to open the virtual keyboard.

Port Setup – Click to define communication port numbers. See the following procedure for details.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

X **Close** – Click to/IP close the window.

❭ **To set up TCP and UDP ports:**

1. In the Network window click **Port Setup**.

2. Enter the port information (depending on what option you are using):

   ■ **TCP Port** - Specify *first* of 6 consecutive TCP/IP ports to be used to connect to the DVR.

   ■ **UDP Port** - Displays the *first* of 6 consecutive UDP ports to be used to connect to the DVR via UDP. The same ports are used for TCP/IP and UDP.

NOTE

*The DVR will automatically use the next 5 ports starting from the ports defined in the **TCP Port** and **UDP Port** sections.*

   ■ **WWW Port** - Specify the port used to connect to the DVR using the Internet Explorer. Typically port number 80 is used.

   ■ **Event Port** - Specify the port used to send event notifications to SAgent. Default value: 7056.

NOTE

*Clicking the **Default** button will erase current settings and restore the factory default values.*

---

3. Click **Close**.

Configuring DDNS

The DDNS (Dynamic Domain Name Service) allows the DVR to establish network communications with remote devices, such as SAgent, using a dynamic IP address.

NOTE

DDNS is not functional.

This section describes how to configure WDR for DDNS. For instructions on creating and configuring DDNS server itself, or configuring remote devices for DDNS, refer to the user documentation provided with those products.

〉 **To configure WDR for DDNS:**

1. From the Main menu select **Network**>**DDNS Server**.
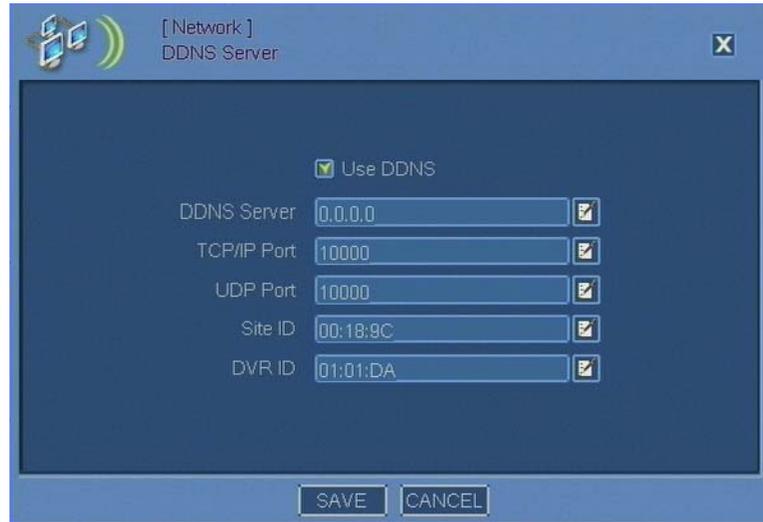
2. Select the **Use DDNS** check box.
3. Fill out remaining information. Refer to "DDNS Server Field Definitions" for details.
4. Click **Save**.

DDNS Server Field Definitions

Use DDNS – Select this check box to enable DDNS on the DVR.

DDNS Server – Specify the IP address of the DDNS Server.

TCP/IP Port – Specify the TCP/IP port to be used for communications with the DDNS Server. The default value is 10000.

UDP Port – Specify the UDP port to be used for communications with the DDNS Server. The default value is 10000.

NOTE

The TCP/IP and UDP port number values must match those used at the DDNS Server and at the SAgent.

Site ID – Enter the name to identify the site where the WDR is used. The default value is the first half of the DVR's MAC address.

DVR ID –   Enter the name to identify this WDR. The default value is the second half of the DVR's MAC address. You can change this value to be more user-friendly.

Save – Click to save the changes.

Cancel – Click to cancel the changes.

 Close – Click to close the window.

Setting Up Event Notification

Event notification forwards event information from the DVR to an event server running SAgent through the network.

Event notification feature can also be used to send event information via email. The port number used for email notifications is 25.

❱ **To configure event notification:**

1. From the Main menu select **Network**>**Event Notification**.

2. The Event Notification window opens. Filling out several fields will require you to use the virtual keyboard.
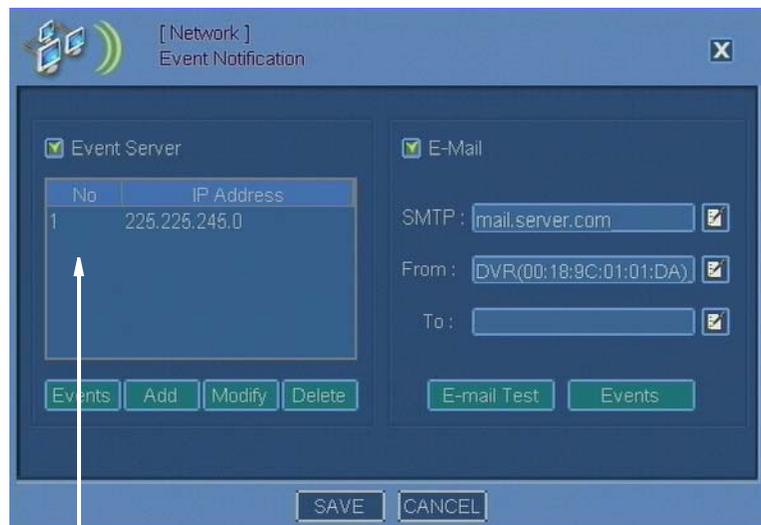
Address list

3. Make selections for each alarm type you want to configure. Refer to "Event Notification Field Definitions" for details.

Event Notification Field Definitions

Event Server

Event Server – Select this check box to use event server.

NO and **IP Address** – Numbered list of IP addresses.

Events – Click to set up alarm notifications. The notifications will be sent to the server's IP address. See "To configure network events:" on page 2-50 for details.

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NOTE

The server must be running the SAgent software.

Add – Click to enter the IP address of the event server the IP address of the computer running SAgent).

Modify – Click to modify the IP address.

Delete – Click to delete defined server from the list.

E-Mail

E-Mail – Select this check box to enable DVR email event notifications.

SMTP – Enter SMTP information.

NOTE

E-mails without SMTP authentication are blocked by most e-mail servers.

From – Specify the source of the email (the name of this DVR).

To – Specify the email address of the email recipient.

E-mail Test – Click to test current e-mail function.

Events – Click to set up alarm notifications. The notifications will be sent to the server via email. See "To configure network events:" on page 2-50 for details.

Other

Save – Click to save the changes.

Cancel – Click to cancel the changes.

☒ Close – Click to close the window.

❱ **To configure network events:**

1. From the Main menu select **Network**>**Event Notification**.
2. Click on the **Events** button.
3. Select the check boxes for the features you want to enable:
    - **All** - Click to select all available notifications
    - **Log-in/out** - Logging in and logging out notification.
    - **Setup** - Beginning and end of user setup notification.
    - **System Start** - System start notification.
    - **Shutdown** - DVR shutdown notification.
    - **Sensor** - Sensor alarm notification.
    - **Motion Alarm** - Motion alarm notification.

- **Video Loss** - Video loss notification.
- **S.M.A.R.T** - Notification of alarm triggered by a S.M.A.R.T. system, a hardware-based indicator that indicates hard drive failure risk.
- **Recording Failure** - Recording failure notification.
- **HDD Full** - Notify when HDD reached pre-defined critical amount of space used.

4. Click **Close**.

COPY MENU

This section describes the Copy menu screens. The Copy menu has the following structure:
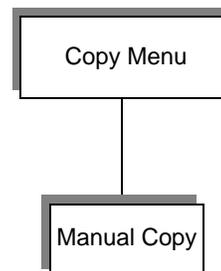
Copying Files

The following physical media are supported:

- CD-R and CD-RW
- DVD+RW
- USB flash drive formatted to FAT32
- USB external hard drive formatted to FAT32

Recommended file size is up to 2.5 GB.

NOTE

*You cannot copy data from the current hour. (The DVR structures data in 1
hour increments, and it cannot copy data that is currently being created.)*

❱ **To copy files:**

1. From the Main menu select **Copy**>**Manual Copy**.

2. The Manual Copy window opens.

Camera
buttons

3. Insert the physical media and click **Scan**.

4. When the DVR finishes scanning, select a **Device** from the drop-down list.

5. Select the File Format. Refer to "Manual Copy Field Definitions" for details.

6. In the **From** field, define the beginning of the recording period from which
    you want to copy files. To do so, first launch the calendar.

Time in the following format:
HH:MM:SS, AM/PM
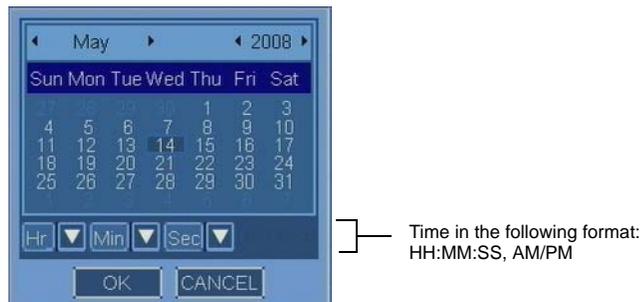
7. When the Calendar window is accessed from the Manual Copy window, in
    addition to the date it also displays the time. Select the date and time and click
    OK.

8. In the **To** field, define the end of the recording period to be copied. To do so,
    launch the calendar again, select the date and time and click **OK**.

---

9. Fill out the remaining information. Refer to "Manual Copy Field Definitions" for details

10. Click the **START** button.

11. When the **Progress** bar indicates completion of the copy process, click **Close**.

Manual Copy Field Definitions

Device – Select the physical device to which the data will be copied.

Scan – Click to scan for devices.

File Format – Select the type of format used. Currently only a proprietary WSF file format is supported.

From – Specify "from" date and time for the recording period to be copied.

To – Specify "to" date and time for the recording period to be copied.

Camera – Select one or more camera(s). The **All** button allows you to select all cameras at once.

Estimated File Size – Indicates approximate file size.

Add Viewer – Selecting this option will add a viewer software, called Single Player, to the copied files. Using the viewer the video can be played back on a PC without the WDR software loaded on it.

Progress – Progress indicator.

Start – Click to begin copying.

Cancel – Cancels the copying process.

Close – Click to close the screen.

OPERATION

This chapter introduces you to operation basics such as system startup and shutdown, logging in, and display modes.

SYSTEM STARTUP AND SHUTDOWN

All peripheral devices should be connected before proceeding with system startup.

System Startup

After connecting all peripheral devices, connect power cord to DVR for system startup. The power will be turned on automatically within 5 seconds of power cord being connected.

However, if the power button was previously turned off by the user, power will not be turned on automatically. In that case, press the power button again to restore power.

System Shutdown

For proper shutdown, turn off the power by pressing the power button located on the front panel of the device. Do not turn off the power by pulling the power plug.

NOTE

When you shut down the system, you will be required to enter administrator's password using the virtual keyboard.

⚠ CAUTION

If the power plug is pulled off while the system is operating, the currently recording file may not be closed properly. In addition, even though the Journaling File System is not damaged, index information required for quick file search may be not saved. The Auto Recovery System will attempt to recover files during the next booting; this process might take between a few seconds to a few minutes.

Abnormal Shutdown

WDR has been designed to operate for long periods without malfunction or abnormal shutdown. In case of power failure, the system will automatically reboot when power is restored.

> ⚠ **CAUTION**
>
> If **admin** is selected for auto log-in and power is cycled to the unit, the person present when the system comes back up will be automatically logged on as the administrator and have complete access to the system (administrator's rights). For auto log-in details see page 2-18.

However, when major parts (such as hard disk) malfunction due to external electric shock, physical damage, or other reasons, operation of the system can become locked up. In such situations, the internal watchdog circuit is activated in order to reset the system for rebooting within 2 minutes. The system will then recover normally.

In some cases, major parts (such as hard disk) are damaged to the extend that it is impossible to recover normally. This will cause continuous rebooting by watchdog or deadlock without reset. Countermeasures for abnormal discontinuation are as follows.

1. If the power cannot be turned off by pressing the power button, turn it off by pulling the power cord.
2. Wait for 10 seconds and reconnect the power. Ensure the system is functioning properly.
3. Consult your local Weldex Corporation representative if system is not functioning properly after reconnecting power.

Automatic File Testing and Recovery

When all files in the hard disk have been closed properly during normal shutdown, it will take only a few seconds to examine the files after rebooting.

However, when recovery is required it will take a few minutes or more for Auto-Scan and Auto-Recovery to complete necessary operations.

NOTE

Generally, when all files in the hard disk have been closed properly during normal shutdown, it will take only a few seconds to examine the files after rebooting. However, if file recovery is required, the process will take additional time (a few minutes or more).

SYSTEM LOGIN

The default login settings are:

- Login name "admin"
- Password "0000"

❱ **To log in:**

1. From the **User** drop-down list select your login name.
2. Using the virtual keyboard enter the password.

Virtual Keyboard
(see page 2-2 for instructions)

3. Click the **Login** button.

❱ **To log off:**

1. From the Main menu select **System**>**Log off**.

WDR MODES

The WDR operates in one of the following modes: Live, Playback, or PTZ.

NOTE

Recording can also continue during Playback mode.

To switch between modes, press a corresponding button (**ESC** - for Live Mode, **Search**, or **PTZ**) on the WDR hardware.

Each mode has a taskbar that allows you to access corresponding features. The taskbar can be displayed on screen continuously or it can be set up auto-hide when not in use. See "Channel Indicator" for details.

Color-coded
channel indicator

Screen display   **FIx to Taskbar**
                                                  toggle button

Channel Indicator

The channel indicator displays the number or name (if defined) of the camera which captured the image. By default the channel indicator is "on" (visible); for instructions on turning it on/off see "On-Screen Display" on page 2-9

Channel indicator is color-coded as follows:

- White - Indicates no recording is taking place
- Yellow - Indicates continuous recording
- Green - Indicates motion-triggered recording
- Red - Indicates that a sensor event has occurred.

Fix to Taskbar

The Fix to Taskbar feature allows you to display the task bar on screen continuously. It is enabled by default.

When the Fix to Taskbar feature is enabled, the **Fix to Taskbar** button is highlighted and the task bar is locked on the screen.

When the Fix to Taskbar feature is disabled, the **Fix to Taskbar** button is not highlighted. The taskbar will auto-hide when you move the mouse away from

the taskbar and reappear when you move the mouse over it in the lower
portion of the screen.

To toggle this feature on/off, click on the **Fix to Taskbar** button.

LIVE MODE

The Live Mode taskbar gives you access to basic DVR functions and to the Main menu.

To access the Live Mode taskbar, press the "ESC" button on the WDR device. Also, the
"PTZ" button on the device toggles the display between the PTZ and Live Modes.

When you exit the Search Mode or Playback Mode, you return to the Live Mode as well.
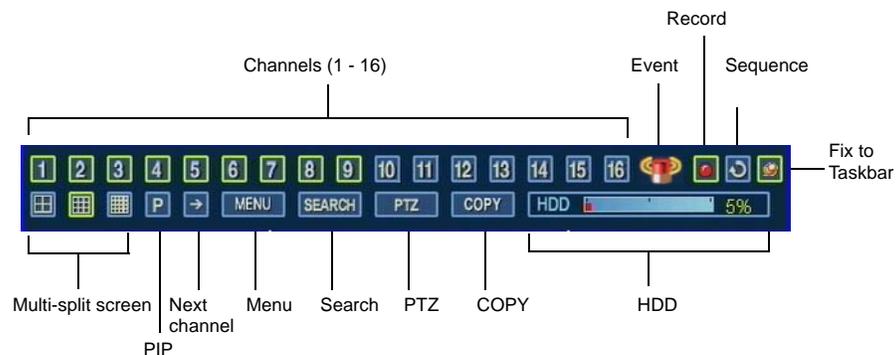
Channels (1 - 16) – Select the channel from which to display the live image.

Event – When an event occurs, this icon appears and remains for a pre-defined *dwell time*.
The type of event will also be displayed (but not the specific camera or sensor involved).
This feature requires **Icon and Tooltip** to be enabled for a particular alarm type; see "Alarm
Notifications" on page 2-36.

Record – Click to stop/start recording. You will be required to enter administrator's
password. By default, recording is turned on.

When the DVR is in the recording mode, the **Record** button is highlighted.

When the DVR is not in the recording mode, the **Record** button is not highlighted.

Sequence – Activates the sequence feature in which video from the subsequent cameras is
being shown.

NOTE
*In order to activate the Sequence mode, change the display to single
camera view first.*

Multi-split screen – Allows you to change screen display to 1, 4, 9, or 16-channels (depending on the WDR model).

PIP – Enables the PIP (Picture in Picture) display. When you click this button again, it changes the channel for the inner picture in the PIP mode.

Next channel – Click to display live image from the next chanel. When used in PIP mode, click to change the channel for the background picture.

MENU – Click to go to access the Main menu.

SEARCH – Click to open the Search pop-up menu. See page 3-11 for details.

PTZ – Click to access the PTZ Mode taskbar.

COPY – Click to access the Manual Copy window.

HDD – Indicates the amount of HDD used.

Picture in Picture (PIP)

The PIP feature allows you to view two channels at once.

CH1

Background picture (here: from camera number 1)

CH5

Inner picture (here: from camera number 5)
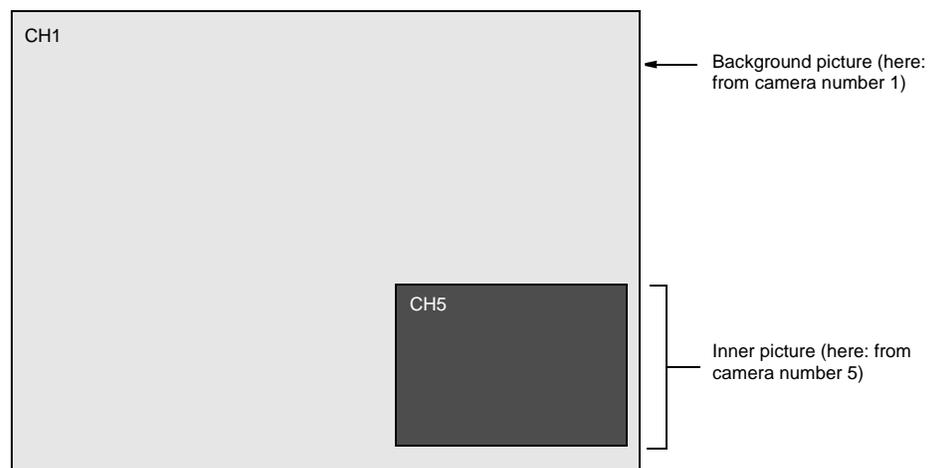
The Live Mode taskbar allows you to control the camera selection:

- To enable PIP display mode, click the **PIP** button
- To change the channel for the background picture, click the **Next channel** button
- To change the channel for the inner picture, click the **PIP** button
- To exit from the PIP display mode, click on any **Channel** button

Click any channel to exit PIP display mode

Click to change the channel for the
background picture.

Click to enable PIP display mode
and to change the channel for the
inner picture.
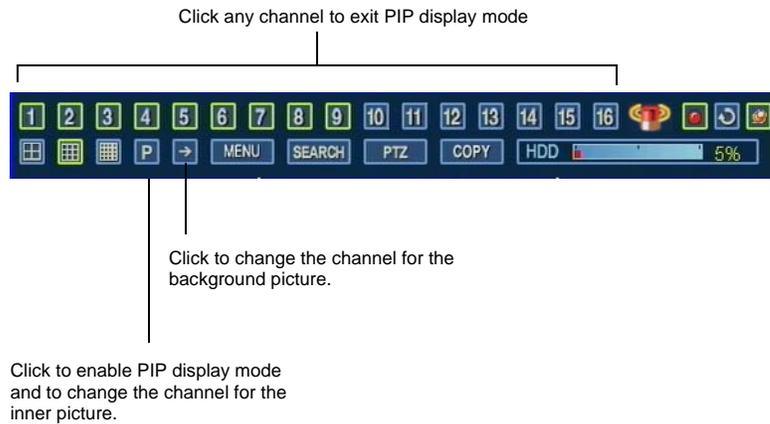
PLAYBACK MODE

The Playback Mode allows you to view previously recorded video. When the DVR reaches
the end of the recorded video, it will go to still mode.

During the playback, the data may be also played back in reverse, paused, or speed searched.

The Playback Mode is accessible from the Calendar Search window. See "Calendar Search"
on page 3-11 for details.

❱ To access the Playback Mode

- Press the "Search" button on the WDR device, or
- From the Live Mode, go to **Search**>**Calendar Search**. The Calendar Search
  window opens. Select the playback time and click **Play**.

Camera   Intelligent search bar   Next day

Previous
day   Fix to
                                                       Taskbar

Multi-split   Search   Playback buttons   Exit
screen

Next channel
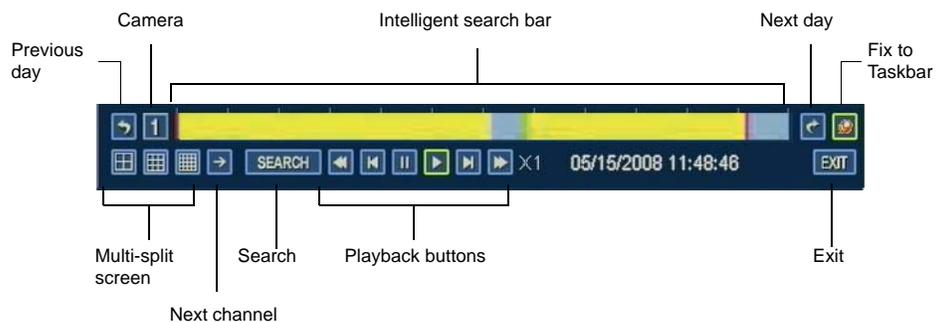
Previous day – Click to go to the recording from the previous day.

Camera – Click to select a camera from a pop-up list.

Intelligent search bar – The intelligent search bar allows you to view recording pattern for a selected day and quickly access recording from any hour.

- Markers on top of the bar indicate 2-hour intervals

- Yellow highlighting indicates recorded video

- Gray area indicates no recording

- **Playback indicator** marks the current playback time

You can move the **Playback indicator** and change the current playback time by clicking on other areas of the yellow bar.
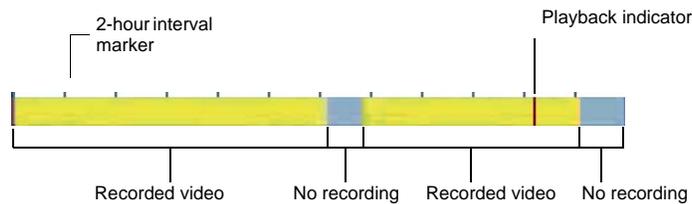
Playback indicator –The red mark indicates the current playback time. You can change the current play time by clicking on other areas of the yellow bar.

Next day – Click to go to the recording from the following day.

Fix to Taskbar – Toggles the Fix to Taskbar feature on and off.

Multi-split screen – Allows you to change screen display to 1, 4, 9, or 16-channels (depending on the WDR model).

Next channel – Go to next screen.

Search – Click to open the Search pop-up menu. See page 3-11 for details.

Playback buttons – Playback buttons:

Fast rewind - Click to increase the rewind speed 2, 4, 8, 16, or 32 times.

Frame-by-frame rewind - Click to rewind the recording one frame at a time.

Pause - Click to pause the recording.

Play - Click to play the recording.

Frame-by-frame forward - Click to forward the recording one frame at a time.

Fast forward - Click to increase the forward speed 2, 4, 8, 16, or 32 times.

Exit – Click to return to live mode with Live Mode taskbar.

PTZ MODE

This mode gives you access to the PTZ functions of a camera.

To access the PTZ Mode Taskbar:

- Press the "PTZ" button on the WDR device (the "PTZ" button toggles the display between PTZ and Live Modes), or

- Click **PTZ** on the Live Mode taskbar

Then, select the PTZ camera by clicking on the screen area. The screen of the selected camera will be outlined in green.
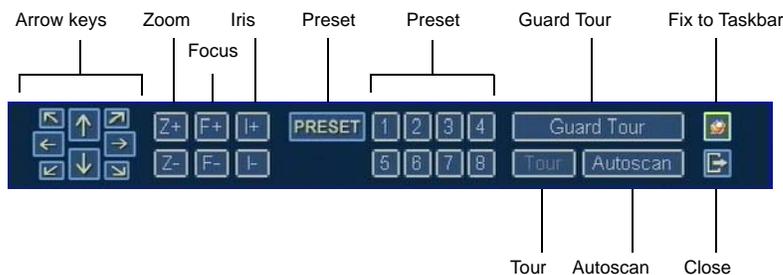
Arrow keys – Use the keys to position the camera.

Zoom – Use the **Z+** button to zoom in and the **Z-** button to zoom out.

Focus – Use the **F+** button to focus near and the **F-** button to focus far.

Iris – Use the **I+** and **I-** buttons to adjust the iris.

Preset – Press the number to activate previously defined preset. (Refer to "Configuring PTZ Cameras, Presets, and Guard Tours" on page 2-26 for information on how to configure presets)

Guard Tour – Press this button to activate previously defined guard tour for a selected camera. (Refer to "Configuring PTZ Cameras, Presets, and Guard Tours" on page 2-26 for information on how to configure guard tours).

Tour – Click to activate a predefined tour embedded in the camera. Refer to the camera manufacturer's documentation to see if this option is available.

Autoscan – Click to activate a predefined autoscan embedded in the camera. Refer to the camera manufacturer's documentation to see if this option is available.

Fix to Taskbar – Toggles the Fix to Taskbar feature on and off.

Close – Click to close the window.

POP-UP MENUS

For your convenience, the Quick Access pop-up menu is provided. This menu gives you access to several display features, such as Sequence, Freeze, Zoom, and PTZ as well as to other menus.

To access the Quick Access pop-up menu from either the Live or Playback Mode, right-click on the on the screen area.
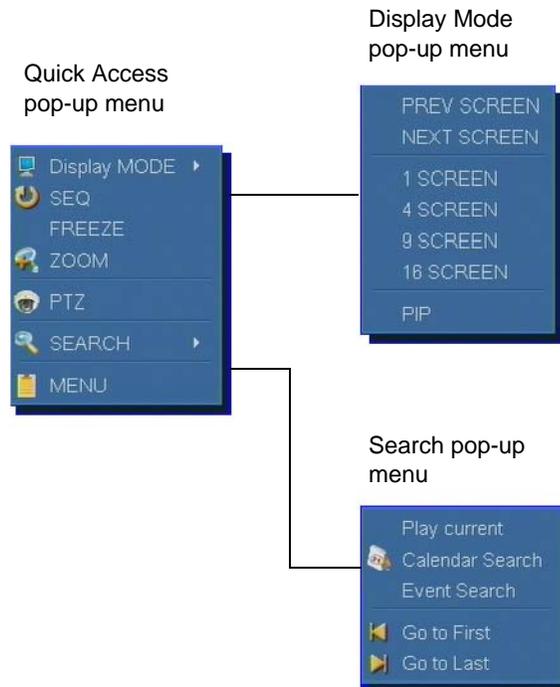
Quick Access Pop-Up Menu

You can access the Quick Access pop-up menu from either the Live or Playback Mode by right-clicking on the on the screen area.

Display MODE – Click to open the Display Mode pop-up menu.

SEQ – Activates the sequence feature in which video from the subsequent cameras is being shown. See page 2-8 for defining the Sequence Dwell Time.

FREEZE – Click to freeze the image.

ZOOM – Click to zoom the image.

PTZ – Click to access the PTZ Mode taskbar.

SEARCH – Click to open the Search pop-up menu.

MENU – Click to go to the Menu screen.

Display Mode Pop-Up Menu

The Display Mode pop-up menu is available from the Quick Access pop-up menu.

PREV SCREEN – Displays previous screen in sequence

NEXT SCREEN – Displays next screen in sequence

1 SCREEN – One screen displayed at a time

4 SCREEN – Four screens displayed at a time

9 SCREEN – Nine screens displayed at a time

16 SCREEN – Sixteen screens displayed at a time. Available only for the 16-channel DVR.

PIP – Picture-in-Picture display.

Search Pop-Up Menu

The Search pop-up menu is available from the Quick Access pop-up menu.

It can also be accessed by clicking the **Search** button on the Live Mode taskbar or the Playback Mode taskbar.

Play Current – Brings up the last frame of the video and the Playback Mode taskbar. This feature is used to verify recording.

Calendar Search – Opens the Calendar Search screen.

Event Search – Opens the Event Search screen.

Go to First – Launches the oldest recording.

Go to Last – Launches the recording from the beginning of current hour (if available).

SEARCH MENUS

You can search recorded material using the calendar, list of events, or a specific time criterion. This section describes in detail all the search options available.

Calendar Search

Use the Calendar Search screen to look for a specific event by date.

To access the Calendar Screen, from the Live Mode or the Playback Mode taskbar go to **Search**>**Calendar Search**.

You can also right-click on the screen when in Live Mode or the Playback Mode and select **Search**>**Calendar Search**.
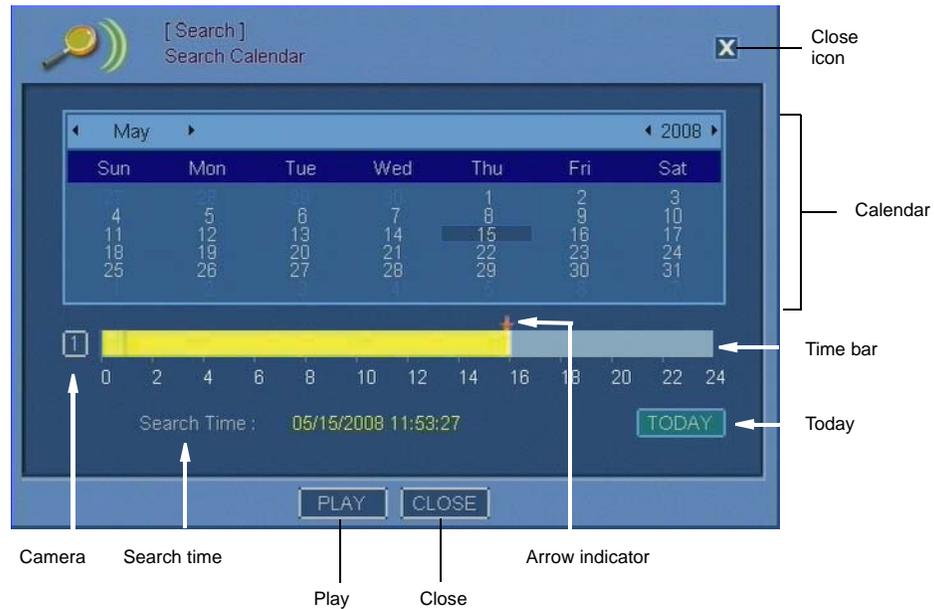
Calendar – Use the calendar to set search criteria (day, month and, year).

Camera – Click to display a list of cameras and select a camera.

Time bar – Yellow highlight in time bar indicates the time when recording was on.

Arrow indicator – Determines the exact playback time. To change the indicator's position on the time bar, move the mouse cursor over the time bar and click on the time you want to select.

Search time – Indicates search date and time.

Today – Press this button to display current date and time.

Play – Click to play the recording from the selected date/time.

Close (icon and button) – Click to close the window.

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Event Search

Use the Event Search screen to view a chronological list of events. You can customize the list based on trigger type (sensor, motion alarm, and video loss) as well as view selected event and its details.

To access the Calendar Screen, from the Live Mode or the Playback Mode taskbar go to **Search**>**Event Search**.

You can also right-click on the screen when in Live Mode or the Playback Mode and select **Search**>**Event Search**.

Date   Calendar

Close icon

Type of event: All, Sensor, Motion, or Video Loss

Event list

Play   Close
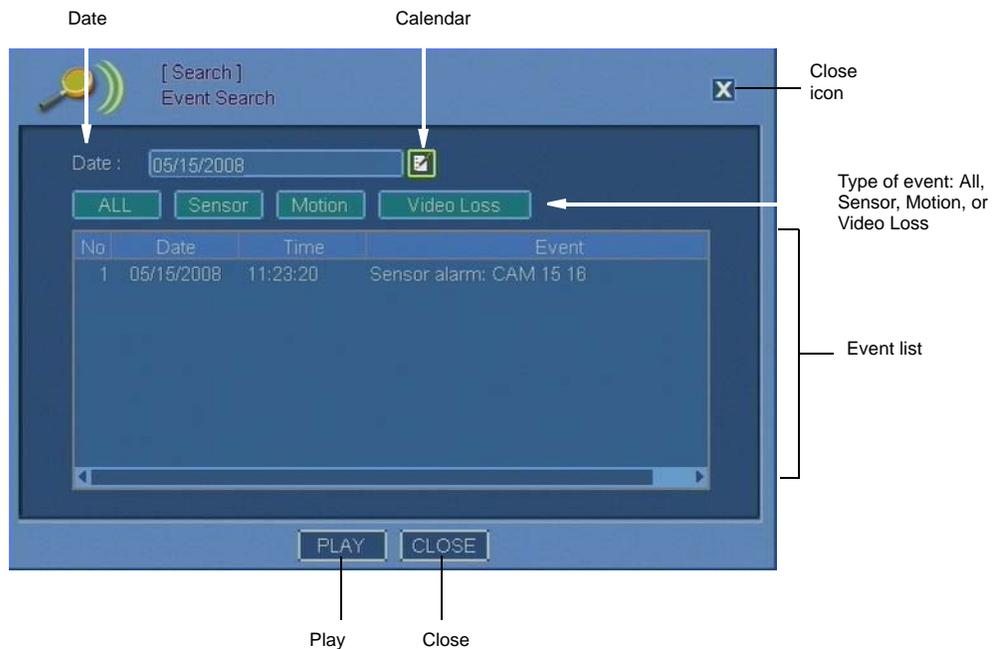
Event List – Detailed list of events displaying the event number, date and time of occurrence, event type, and recording camera(s).

Date – Displays selected date of the recording to be searched for.

Calendar – Click this icon to open the Calendar window. See "Virtual Keyboard/Calendar" on page 2-2 for details.

All – Click to show all recorded events.

Sensor – Click to display captured sensor events.

Motion – Click to display captured motion alarm events.

Video Loss – Click to display video loss events for the specified date.

Play – Click to play the selected event recording.

Close (icon and button) – Click to close the window.