

**Honeywell**

**HRDE4X4**  
**Digital Video**  
**Recorder**

**User Guide**

# Revisions

<b>Issue</b>	<b>Date</b>	<b>Revisions</b>
1.00	09/05	New document.

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# FCC Compliance Statement

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**Information to the User:** This equipment has been tested and found to comply with the limits for a Class A digital device. Pursuant to Part 15 of the FCC Rules, these limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**Caution** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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

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# Explanation of Graphical Symbols



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This symbol indicates the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

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## Warnings

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

Power off the DVR when connecting cameras, audio, or sensor cables.

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

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

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## Cautions

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This product has multiple-rated voltages (110V and 220V). See installation instructions before connecting to the power supply.

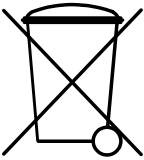
This product uses a Lithium battery. To avoid a risk of explosion, do not replace the battery on the main board by anything other than a Lithium battery. Dispose of used batteries according to the manufacturer's instructions.

This equipment and all communication wirings are intended for indoor use only. To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture.

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## WEEE (Waste Electrical and Electronic Equipment)

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Customers in European Union countries are advised to dispose of this product, at the end of its useful life, as per applicable local laws, regulations and procedures.

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# Introduction

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## Features

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Your HRDE4X4 digital video recorder (referred to as DVR throughout this document) is a stand-alone and/or networked video and audio recording device. It provides recording capabilities for four camera-inputs and is capable of event, pre-event, or timelapse recording. The DVR can function in semi-triplex mode; that is, you can play back video while simultaneously recording in a network configuration. Each of the four channels can record independently or simultaneously. Other features include:

- 4 composite input connectors
- NTSC or PAL configuration
- Records up to 30 NTSC images per second or 25 PAL images per second (IPS). The total frame rate is 120 IPS in quad screen and 30 IPS in full screen mode.
- Video resolution (display and recording):
  - Full screen mode — 720 x 480 NTSC, 720 x 576 PAL
  - Quad mode — 360 x 240 NTSC, 360 x 288 PAL
- Recording modes — manual, schedule, alarm events, time events and motion events.
- MPEG-4 video compression to maximize storage and video streaming on the internet.
- The Remote Access Software (RAS) supports remote live viewing, searching, archiving, and video playback. By installing the DVR remote software on a Microsoft Windows<sup>®</sup> PC you can monitor real-time and recorded video via an optional ethernet network.
- USB archiving function provides storage for still images and AVI clips.
- The Remote Access Software allows playback of video clips archived to a USB stick without first transferring the data to the local PC hard drive.
- Operates on a real-time, embedded RTOS operating system with a user-friendly Graphic User Interface (GUI).
- Built-in pan, tilt, zoom (PTZ) controller

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## Technical Overview

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Your HRDE4X4 DVR incorporates a switcher and multiplexer for selectable multi-mode display, digital motion detection, camera tiling, and event, pre-event, or timelapse recording.

The DVR converts analog NTSC or PAL video to digital images and records them on one hard drive. You can access recorded video from the hard drive or previously archived video from a USB stick. You can watch live video while simultaneously recording.

The Remote Access Software allows the administrator to remotely connect to and monitor multiple networked DVRs. The software logs the operational and alarm status of sites once a day for later analysis. The software lets you search based on time and retrieve video clips from remote sites.

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## Overview of Contents

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This document contains the following chapters and appendixes:

- **Chapter 1, Introduction**, introduces the HRDE4X4 Digital Video Recorder, lists the features, and gives a functional overview of the components.
- **Chapter 2, DVR Unit Installation**, describes how to install the DVR and connect the system components.
- **Chapter 3, DVR Configuration**, provides an overview of the front panel controls and LCD display and provides instructions for configuring the DVR.
- **Chapter 4, Front Panel Operation**, covers live monitoring, recording video and audio, playing recorded video, and searching for video.
- **Chapter 5, RAS Installation**, describes the installation process for the DVR's Remote Access Software.
- **Chapter 6, RAS Operation**, provides an overview for operating the RAS program.
- **Chapter 7, RAS Configuration**, covers configuration of the RAS program.
- **Appendix A, DVR Firmware Upgrade**, explains how to upgrade the firmware on the DVR.
- **Appendix D, Specifications**, lists the HRDE4X4 digital video recorder specifications.

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## Important Safeguards

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1. **Read Instructions**  
All safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions**  
The safety and operating instructions should be retained for future reference.
3. **Cleaning**  
Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.
4. **Attachments**  
Never add any attachments and/or equipment without manufacturer approval as such additions may result in the risk of fire, electric shock, or other personal injury.
5. **Water and/or Moisture**  
Do not use this equipment near water or in contact with water.
6. **Accessories**  
Do not place this equipment on an unstable cart, stand, or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.



Move this equipment and cart combination with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.



7. Power Sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.

8. Power Cords

Operator or installer must remove power, BNC, alarm, and other connections before moving the equipment.

9. Lightning

For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.

10. Overloading

Do not overload wall outlets and extension cords to avoid the risk of fire or electric shock.

11. Objects and Liquids

Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.

12. Servicing

Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

13. Damage Requiring Service

Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or the plug has been damaged
- If liquid is spilled or objects have fallen into the equipment
- If the equipment has been exposed to rain or water
- If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
- If the equipment has been dropped or the cabinet damaged
- When the equipment exhibits a distinct change in performance—this indicates a need for service.

14. Replacement Parts

When replacement parts are required, ensure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

15. Safety Check

Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

16. Field Installation

This installation should be made by a qualified service person and should conform to all local codes.

17. Correct Batteries

**WARNING!** Risk of explosion if battery is replaced by an incorrect type.  
Dispose of used batteries according to the instructions.

18. Operating Temperature

An operating temperature range is specified (see *Appendix F, Specifications*) so that the customer and installer may determine a suitable operating environment for the equipment.

19. Elevated Operating Ambient Temperature

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the specified operating temperature range.

20. Reduced Air Flow

Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

21. Mechanical Loading

Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

22. Circuit Overloading

Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over-current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

23. Reliable Earthing (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (for example, use of power strips).

# 2

## DVR Unit Installation

This chapter covers how to:

- Set the DVR for NTSC or PAL
- Connect the DVR to peripheral equipment

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### Before You Begin

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Please read this document carefully before you install your DVR.  
Keep this guide for future reference.

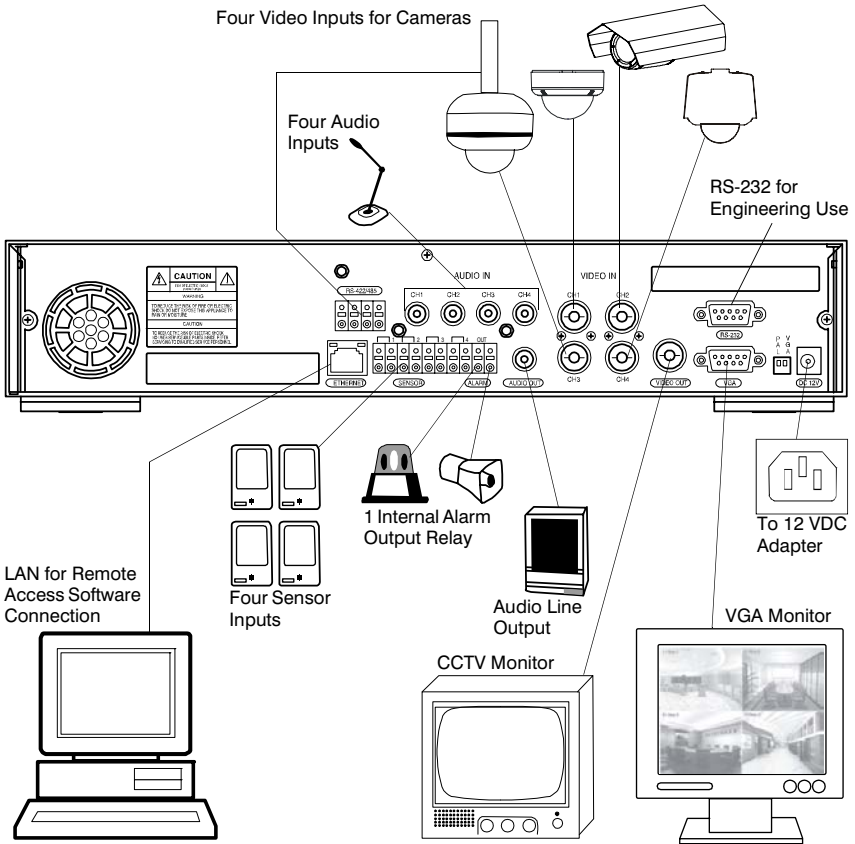
### Unpack Everything

Check that the items received match those listed on the order form and packing slip. The HRDE4X4 packing box should include:

- One fully-assembled HRDE4X4 DVR
- One power cable
- One 12 VDC switching adapter
- One Remote Access Software CD
- This User's Guide

If any parts are missing or damaged, contact the dealer you purchased the DVR from or call Honeywell Customer Service (see the back cover of this document for contact information).

# Typical DVR Installation

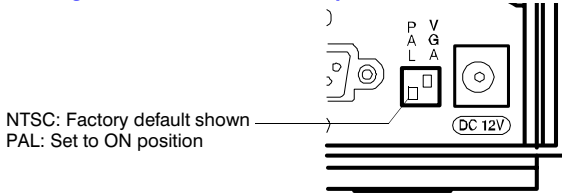


## Setting Unit for NTSC or PAL

Before turning on your DVR, set the switch (see [Figure 2-1](#)) to NTSC or PAL to match your equipment. If your DVR is already powered, unplug the power cord from the wall outlet. Wait a few seconds, set the switch (see [Figure 2-1](#)), and then re-apply power.

**Note** You cannot mix NTSC and PAL equipment. For example, do not connect NTSC cameras when your DVR is set to PAL. Similarly, do not connect a PAL camera and an NTSC monitor.

**Figure 2-1 NTSC/PAL Operation Switch**



## Connecting Peripheral Equipment

Figure 2-2 shows the rear panel connections. Refer to Table 2-1 to connect your network system components.

**Figure 2-2 Rear Panel Connections**

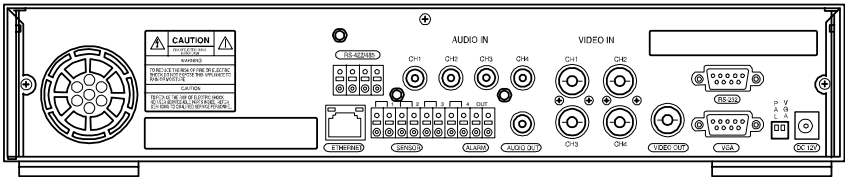
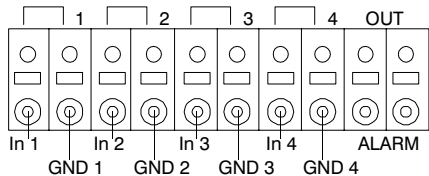


Table 2-1 describes the rear panel connections as shown in Figure 2-2 from left to right.

**Table 2-1 Rear Panel Connections**

Connector	Description
<b>RS-422/485</b>	Remote camera control (see <i>Controlling a PTZ Camera</i> , page 18).
<b>ETHERNET</b>	Network the DVR using 10/100 MB Ethernet connector. Network to a PC for remote monitoring and searching (see <i>Setting Network Parameters</i> , page 19).
<b>AUDIO IN</b>	Connect to an audio source (up to 4). <b>Note</b> It is the user's responsibility to determine if the local laws and regulations permit recording audio.
<b>AUDIO OUT</b>	Connect to an amplifier.
<b>SENSOR IN</b>	Connect to external alarm sensor devices to signal the DVR to react to events. Four sensors can be connected to the equipment sensor 1-4 dedicated to Video channel 1-4 respectively. Simple On/Off switching for either normal open (NO) or normal close (NC) on each sensor (see <i>Recording Mode</i> , page 13 to set sensor recording). <b>Sensor Input Connections</b>



**Table 2-1 Rear Panel Connections (Cont'd)**

<b>Connector</b>	<b>Description</b>
<b>ALARM OUT</b>	Connect to an external alarm device. On/off switching using an internal relay, 0.5A/125V, 1A/30V. The relay is open when not triggered. The relay can be triggered to close by either motion or a sensor input, if enabled in the Recording Setup menu.
<b>VIDEO IN</b>	Connect NTSC or PAL camera coaxial outputs (up to 4) to the BNC Video In connectors. <b>Caution</b> Do not mix NTSC and PAL cameras.
<b>VIDEO OUT</b>	Connect to a monitor.
<b>RS-232</b>	For engineering use only.
<b>VGA</b>	Connect to a VGA monitor. <b>Note</b> When using a VGA monitor, make sure you set the VGA switch to ON and power reset the unit (turn unit off then on).
<b>SWITCHES</b>	
<b>PAL</b>	Set to the ON position when PAL cameras are connected. <b>Note</b> When you change the position of the PAL switch, reboot the DVR to apply the new setting.
<b>VGA</b>	Set to the ON position when a VGA monitor is connected. <b>Note</b> When you change the position of the VGA switch, reboot the DVR to apply the new setting. When VGA is enabled, the video out is disabled.
<b>DC 12V</b>	Apply 12 VDC using the DC switching adapter supplied.

## Connecting the Power Cord

1. Connect the DC power cord of the adapter to the DVR.
  2. Connect the AC power cord to the adapter and then to the wall outlet.
- Your DVR is now ready to operate. See *Chapter 3, DVR Configuration* and *Chapter 4, Front Panel Operation* for more information.

**WARNING!** Route power cords so they are not a tripping hazard. Make certain the power cord will not be pinched or abraded by furniture. Do not install power cords under rugs or carpet.

The power cord has a grounding pin. If your power outlet does not have a grounding pin receptacle, do not modify the plug.

Do not overload the circuit by plugging too many devices into one circuit.

# 3

## DVR Configuration

This chapter covers:

- Front panel LEDs and controls
- Initial DVR setup
- Configuring live and recording modes
- Setting motion zones
- Setting recording schedules
- Setting system parameters
- Configuring remote network control
- Setting storage parameters

**Note** Ensure that your DVR is completely installed and all components are connected before proceeding.

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### Front Panel LEDs and Controls

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*Figure 3-1* shows the front panel and *Table 3-1* and *Table 3-2* describe the operational LEDs and control buttons.











**Figure 3-1 Front Panel**



**Table 3-1 Front Panel LEDs**

LED	Function
<b>POWER</b>	ON indicates power is applied to the unit.
<b>REC</b>	ON indicates the system is recording data.
<b>HDD</b>	ON indicates the system is accessing the hard drive.
<b>EVENT</b>	ON indicates the alarm sensor(s) has/have been triggered or motion is detected.
<b>NETWORK</b>	ON indicates a user is connected to the system through the RAS software.

**Table 3-2 Front Panel Controls**

<b>Control</b>	<b>Function</b>
<b>SEQ</b>	Start auto sequencing (must be in full screen mode). Toggles on and off.
<b>SEARCH</b>	Opens search menu.
<b>REC</b>	Starts/stops manual recording (requires password entry).
<b>ARCH</b>	Starts archiving a video clip or still image to a USB stick.
<b>PTZ</b>	Controls Pan/Tilt/Zoom (PTZ) operation.
<b>SETUP</b>	Opens the <b>Setup</b> menu.
<b>ESC</b>	<ul style="list-style-type: none"> <li>Temporarily stores the changed value</li> <li>Returns to previous menu screen</li> </ul>
	<ul style="list-style-type: none"> <li>Rewinds the video in Playback mode. Press again to toggle the playback speed at 1x, 2x, 4x, 8x and 16x speeds.</li> <li>See the <b>LOG LIST</b>.</li> </ul>
	Jump/step backward. In Playback mode, the playback position moves one minute backward.
	Play or pause a video clip in Playback mode.
	Jump/step forward. In Playback mode, the playback position moves one minute forward.
	<ul style="list-style-type: none"> <li>Plays the video forward in Playback mode. Press again to toggle the speed at 1x, 2x, 4x, 8x and 16x speeds.</li> <li>See the <b>ARCHIVE LIST</b>.</li> </ul>
	<ul style="list-style-type: none"> <li>Moves up in the menu structure in Setup mode</li> <li>Selects camera 1 in Live and Playback modes</li> <li>Used as the number 1 when entering the password</li> </ul>
	<ul style="list-style-type: none"> <li>Moves right in the menu structure in Setup mode</li> <li>Selects camera 2 in Live and Playback modes</li> <li>Used as the number 2 when entering the password</li> </ul>
	<ul style="list-style-type: none"> <li>Moves down in the menu structure in Setup mode</li> <li>Selects camera 3 in Live and Playback modes</li> <li>Used as the number 3 when entering the password</li> </ul>
	<ul style="list-style-type: none"> <li>Moves left in the menu structure in Setup mode</li> <li>Selects camera 4 in Live and Playback modes</li> <li>Used as the number 4 when entering the password</li> </ul>
	<ul style="list-style-type: none"> <li>Selects full screen or quad view in Live and Playback modes</li> <li>Selects desired menu item</li> <li>Stores setup value in the menu</li> </ul>

## USB Port

There is a USB port on the left side of the front panel. You can use this port to archive video onto a USB stick (see *Archiving Video*, page 32) and to upgrade the DVR firmware.



# Initial Setup

Before using your DVR for the first time, you should establish some initial settings (for example, date and time, display language, camera settings, recording mode and scheduling, and your network setup). The following sections describe how to use the Setup menu to quickly set up your DVR.

1. Press **SETUP** on the front panel to enter the Setup menu.
2. At the prompt, enter your password using the appropriate combination of arrow buttons. The default password is **1111**. Press **SEL** to enter the password.
3. After the password is entered you will see the main **Setup** menu screen as shown in *Figure 3-2*. Use the arrow buttons to navigate through the menu items. Press **SEL** to enter the desired sub-menu.

We recommend that you protect your DVR system by assigning a new password immediately. Please follow the procedure in *Setting System Parameters*, page 16.

**Figure 3-2 Setup Menu Screen**



## Menu Structure

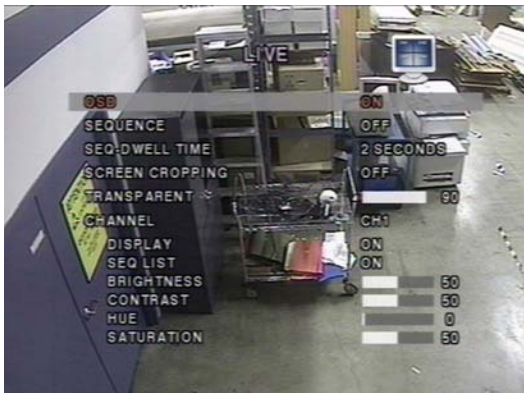
The **Setup** menu structure is as follows:

Setup Menu					
Live	Record	System	Network	Storage	Save Setup
Channel Name	Motion Zone Schedule	DVR ID Description Admin Password Network Password Set Date & Time PTZ Control	Port IP Gateway Subnet Mask DNS Server IP DDNS Server Name Mail Address Mail Server IP		

## Live Mode

To set values for live video display, use the **UP** and **DOWN** controls to navigate through the menu items. Change the value of the menu item using the **LEFT** and **RIGHT** controls.

**Figure 3-3 Live Mode Setup Screen**



Follow [Table 3-3](#) to set the Live Mode parameters.

**Table 3-3 Live Mode Setup Fields**

Field	Description
<b>OSD</b>	Enable/disable on-screen display.
<b>SEQUENCE</b>	Enable/disable sequential display of video in Full Screen mode.
<b>SEQ-DWELL TIME</b>	Set the Dwell time for each channel display in Sequential Display mode (choose from <b>1–60</b> seconds).
<b>SCREEN CROPPING</b>	Enable/disable cropping to make the display fit the screen.
<b>TRANSPARENT</b>	Change the transparency level of the on-screen display.
<b>CHANNEL</b>	Select the channel (camera <b>1–4</b> ) for applying the six following settings. Any changes you make will immediately take effect with the selected channel.  Press <b>SEL</b> to enter a text insertion screen and apply a new name for the channel. Use the <b>LEFT</b> and <b>RIGHT</b> arrow controls to navigate through the channel name and the <b>UP</b> and <b>DOWN</b> arrow controls to change the selected character. Press <b>SEL</b> to confirm the name.
<b>DISPLAY</b>	Enable/disable display of the video channel in Live Display mode.
<b>SEQ LIST</b>	Enable/disable the specified channel to be included in the Sequential Display mode.
<b>BRIGHTNESS</b>	Change the brightness value for the specified channel.
<b>CONTRAST</b>	Change the contrast value for the specified channel.
<b>HUE</b>	Change the hue value for the specified channel.
<b>SATURATION</b>	Change the saturation value for the specified channel.

# Recording Mode

To set values for recording video, use the **UP** and **DOWN** controls to navigate through the menu items. Change the value of the menu item using the **LEFT** and **RIGHT** controls.

**Figure 3-4 Recording Mode Setup Screen**



Follow [Table 3-4](#) to set the Recording Mode parameters.

**Table 3-4 Recording Mode Setup Fields**

Field	Description
<b>RESOLUTION</b>	Set the resolution to either <b>FULL</b> Screen or <b>QUAD</b> View.
<b>CHANNEL</b>	Select the channel (camera <b>1–4</b> ) to apply the following settings on. Changes you make will immediately take effect with the selected channel.
<b>FRAME RATE</b>	Set the frame rate for the specified channel (choose from <b>OFF</b> or <b>1–30</b> fps). The sum of the frame rate values from each channel cannot exceed the maximum frame rates for a specific recording resolution. The total Maximum frame rate for NTSC video are 120 Fps (frames per second) for Quad and 30 Fps for Full.
<b>QUALITY</b>	Select the recording quality for the specified channel. Options are: <b>NORMAL</b> <b>HIGH</b> <b>SUPER</b>
<b>RECORDING</b>	Assign the recording mode for each channel. Options are: <b>CONTINUOUS</b> <b>BY MOTION</b> <b>BY SENSOR</b> (record based on sensor inputs) <b>BY SCHEDULE</b> <b>DISABLE</b>
<b>MOTION ZONE</b>	Select motion sensing zones. Options are: <b>FULL ZONE</b> <b>PARTIAL ZONE</b> <b>Note</b> If Partial Zone is selected (press <b>SEL</b> ), the screen will change as shown in <a href="#">Figure 3-5</a> .

**Table 3-4 Recording Mode Setup Fields (Cont'd)**

<b>Field</b>	<b>Description</b>
<b>MOTION SENSITIVITY</b>	Set the motion sensitivity for the specified channel, from: <b>1 to 9</b>
<b>SENSOR TYPE</b>	Set the type of sensor for the specified channel. Options are: <b>None</b> <b>N/O</b> normal open (ground connected to the input starts recording) <b>N/C</b> normal closed (ground connected to the input stops recording)
<b>PRE RECORD</b>	Enable/disable pre-event recording. Pre-event recording time is five seconds and only intra-frames are recorded for pre-event recording.
<b>POST EVENT RECORD</b>	Set post event recording time duration for the specified channel (choose from <b>2–30</b> seconds).
<b>ALARM</b>	Enable/disable alarm output for the specified channel. The alarm output relay can be closed by either a motion event or a sensor input, if enabled.
<b>ALARM DURATION</b>	Set the alarm time duration for the specified channel (choose from <b>1–60</b> seconds).
<b>AUDIO</b>	Enable/disable audio recording for the specified channel.
<b>SCHEDULE</b>	Set the recording schedule. This menu item takes you to the <b>Schedule Setup</b> screen (see <i>Figure 3-6</i> ).

## Motion Zones

When you select **Partial Zone** in the **Motion Zone** menu, you can set up motion sensing zones (see *Figure 3-5*).

To move around each rectangular zone, use the arrow controls. Press **SEL** on each rectangular zone you want to include as part of the motion sensing zone. As you select each zone, the color changes. Press **ESC** to return to the **Record Menu**.

**Figure 3-5 Motion Zone Setup Screen**







**Note** Only selected zones will trigger motion recording.

# Recording Schedules

To set up a recording schedule, select **SCHEDULE** in the **RECORD** menu. Use the arrow buttons to navigate through the items and set the recording schedule (see [Table 3-5](#)).

**Table 3-5 Button Functions in Schedule Recording Mode**

Control	Function
◀◀ REW	Set continuous recording mode.
●●◀ F/REV	Disable recording setting.
▶/   PLAY/PAUSE	Enable motion detection triggered recording.
FF ▶▶	Enable sensor triggered recording.
	Move up.
	Move right.
	Move down.
	Move left.
ESC	Exit from Scheduling mode.

**Figure 3-6 Recording Schedule Setup Screen**



You can schedule recording in one hour increments from **0** to **24** (0:00 to 24:00). You can select individual blocks of time, blocks of time for all channels, entire channels, or the entire schedule. Motion recording and sensor recording and continuous recording can be used exclusively for the schedule, or mixed as needed. See [Table 3-6](#) for four ways to set the schedule.

**Table 3-6 Schedule Recording Setup Fields**

Field	Description
<b>ALL</b>	Selected recording mode is applied to the entire time zone and all channels (cameras 1 to 4).
<b>CH1 to CH4</b>	Selected recording mode is applied to the entire time zone for the specified channel.
<b>Vertical Bar</b>	Selected recording mode is applied to the entire channel for the selected time zone. Each vertical bar corresponds to one hour.
<b>- Individual Block of Time</b>	Selected recording mode is applied to the selected 1-hour increment for the selected channel.

## Setting System Parameters

Use the **System Setup** screen to input system parameters.

Use the **UP** and **DOWN** arrow controls to navigate through the menu items and use the **LEFT** and **RIGHT** arrow controls to change the value of the menu items.

**Figure 3-7 System Setup Screen**



Follow [Table 3-7](#) to set global System parameters.

**Table 3-7 System Setup Fields**

Field	Description
<b>DVR ID</b>	Set the name of the DVR (see <a href="#">Figure 3-8</a> ). Press <b>SEL</b> , use the <b>LEFT</b> and <b>RIGHT</b> arrow controls to navigate through the position for each alphanumeric character. Use the <b>UP</b> and <b>DOWN</b> arrow controls to change the selected character. Press <b>SEL</b> to confirm the name.
<b>DESCRIPTION</b>	Press <b>SEL</b> to view system information (System version, storage capacity, IP address and MAC address. See <a href="#">Figure 3-9</a> ).
<b>LOAD SETUP DEFAULT</b>	Select <b>ON</b> to reset the system to the factory default settings.

**Table 3-7 System Setup Fields (Cont'd)**

<b>Field</b>	<b>Description</b>						
<b>ADMIN PASSWORD</b>	<p>Set the administrator password. After selecting this menu item you will be prompted for your current password and then the new password. Follow the prompts to change and confirm the new password. The default password is <b>1111</b>.</p> <p>Use the arrow controls to change the password:            UP = 1            RIGHT = 2            DOWN = 3            LEFT = 4</p>						
<b>NETWORK PASSWORD</b>	<p>Set the remote access password. You will need to enter this password when connecting to this DVR through the RAS program (see <a href="#">page 38</a>). After selecting this menu item you will be prompted for your current password (the default password is <b>1111</b>) and then the new password. Follow the prompts to change and confirm the new password.</p> <p>Use the arrow controls to change the password as described in <b>ADMIN PASSWORD</b> above.</p>						
<b>DATE FORMAT</b>	<p>Set the desired date and time display format. Options are:</p> <table> <tr> <td>YYYY/MM/DD</td> <td>YYYY-MM-DD</td> </tr> <tr> <td>MM/DD/YYYY</td> <td>MM-DD-YYYY</td> </tr> <tr> <td>DD/MM/YYYY</td> <td>DD-MM-YYYY</td> </tr> </table>	YYYY/MM/DD	YYYY-MM-DD	MM/DD/YYYY	MM-DD-YYYY	DD/MM/YYYY	DD-MM-YYYY
YYYY/MM/DD	YYYY-MM-DD						
MM/DD/YYYY	MM-DD-YYYY						
DD/MM/YYYY	DD-MM-YYYY						
<b>SET DATE &amp; TIME</b>	<p>Set the present date and time for the DVR (see <a href="#">Figure 3-10</a>). Press <b>SEL</b>, then use the <b>LEFT</b> and <b>RIGHT</b> arrow controls to navigate through the position of each alphanumeric character in the date and time. Use the <b>UP</b> and <b>DOWN</b> arrow controls to change the selected character. Press <b>SEL</b> to confirm the new date and time.</p>						
<b>PTZ CONTROL</b>	<p>Set the PTZ camera speed, number, type, and ID (see <a href="#">Controlling a PTZ Camera</a>, page 18).</p>						
<b>LANGUAGE</b>	<p>Set the desired language.</p>						

**Figure 3-8 DVR ID Setup Screen**





**Figure 3-9 DVR Description Display Screen**



**Figure 3-10 Date and Time Setup Screen**



## Controlling a PTZ Camera

To control the PTZ functions of the camera, connect the controller to the RS485 port on the rear panel (see *Figure 2-2*).

**Note** For speed dome cameras that support RS485, connect them directly to the RS485 port.  
If the camera is controlled with RS232C, use an RS485 to RS232C signal converter.

On the **PTZ Control Setup** screen (see *Figure 3-11*) you can select or set the protocol type of the camera that is the same as the one installed on the site. If the camera has a specific camera ID, select the camera ID using the **LEFT** and **RIGHT** arrow controls. The following options are available on the **PTZ CONTROL** screen:

- **CAMERA SPEED** (19200, 14400, 9600, 4800, 2400)
- **CAMERA NUMBER** (channel number that the PTZ is connected to)
- **CAMERA TYPE** (protocol type)
- **CAMERA ID** (0–63)



**Figure 3-11 PTZ Control Setup Screen**



## Setting Network Parameters

Set up your network parameters (for remote connection through the Remote Access Software) on the **Network Setup** screen. See [Chapter 5](#), [Chapter 6](#), and [Chapter 7](#) for more information about RAS.

**Figure 3-12 Network Setup Screen**



Follow [Table 3-8](#) to set your system network parameters.

**Table 3-8 Network Setup Fields**

Field	Description
<b>PORT</b>	Press <b>SEL</b> to enter the RTSP port number.
<b>REMOTE ACCESS</b>	Enable/disable remote access (through RAS).
<b>BANDWIDTH SAVING</b>	Enable/disable key frame transmission only. This feature is useful when your network bandwidth is not enough for live video streaming.

**Table 3-8 Network Setup Fields (Cont'd)**

<b>Field</b>	<b>Description</b>
<b>NETWORK TYPE</b>	Set the type of network connection. Options are: <b>LAN</b> <b>DHCP</b> <b>ADSL</b> <b>Note</b> Other parts of the <b>Network Setup</b> screen change depending on what network type you select (see <i>Network Types</i> , page 20).
<b>DDNS</b>	Enable/disable the DDNS server.
<b>DDNS SERVER NAME</b>	Enter or edit the DDNS server name. <b>Note</b> This option only appears if DDNS is enabled.
<b>SEND E-MAIL</b>	Enable/disable sending daily e-mail reports on the status of your DVR. Once enabled the <b>MAIL ADDRESS</b> and <b>MAIL SERVER IP</b> settings become available. Enter the appropriate email address and server information to enable sending daily e-mail reports.

## Ports

When you connect one or more DVRs to a network through an IP sharing device, each device must have a unique RTSP port number for remote access to each unit from outside the LAN (Local Area Network). Also, the IP sharing device must be configured for port forwarding so that each port, when accessed on the IP sharing device, will forward to the appropriate DVR.

**Note** This port number is listed next to the **PORT** menu option in the **Network Setup** screen. If you plan to access the DVR units only from within the same LAN, the RTSP port does not have to be changed.

## Network Types

There are three network types available. Each type requires different settings.

### LAN

To use the LAN option when connecting the DVR to a network, the following information is required. See your network administrator if you do not have this information.

**IP** The fixed IP address of the DVR unit

**Gateway** The IP address of the Gateway

**Subnet Mask** The Subnet Mask for the LAN

**DNS Server IP** The IP address for the DNS server

## DHCP

Select **DHCP** to use the DHCP option when connecting the DVR to a network. An IP address is automatically assigned by the DHCP server, which automatically assigns IP addresses and other parameters to new devices. The assigned IP address and MAC address are displayed when **DHCP** is selected.

If the network connection does not allow additional IP addresses, then an IP sharing device will be needed. In this case, forwarding may be needed to allow for a network connection. For more information on port forwarding, see the documentation for your IP sharing device, or contact your network administrator.

## ADSL

To use the ADSL option when connecting the DVR to a network, the following information is required. See your network administrator if you do not have this information.

**ID** The user ID for the ADSL connection

**Password** The password for the ADSL connection

Your ADSL connection must have an RJ45 output to connect to the DVR.

When sharing the connection with other devices, an IP sharing device should be used. In this case, select **LAN** as the **NETWORK TYPE**. You must also configure the IP sharing device for port forwarding to allow for a network connection.

For more information on port forwarding, see the documentation for your IP sharing device, or contact your network administrator.

## Storage Setup

To assign how your DVR reacts when the hard drive is full, set the storage parameters in the **Storage Setup** screen.

**Figure 3-13 Storage Setup Screen**



*Table 3-9* describes the Storage field options.

**Table 3-9 Storage Setup Fields**

<b>Field</b>	<b>Description</b>
<b>OVERWRITE</b>	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data once the hard drive is full. When disabled, recording will stop once the hard drive is full.
<b>FORMAT</b>	Format the hard drive. Use the <b>LEFT</b> and <b>RIGHT</b> arrow buttons to select <b>ON</b> , then press <b>SEL</b> . You then have the option to <b>CANCEL</b> or <b>CONFIRM</b> . <b>Caution</b> All recorded data will be lost. We recommend that you archive any data that you may need in the future before you format the hard drive.

## Saving Setup

To preserve the setup values that you have selected, open the **SAVE SETUP** screen, and then select **CONFIRM** and press **SEL**.

**Figure 3-14 Save Setup Screen**



This completes your DVR setup. Proceed to [Chapter 4, Front Panel Operation](#) for information on live viewing, searching for video, and archiving.

# 4

## Front Panel Operation

This chapter covers:

- Live viewing
- Searching
- Playing back
- Live networked remote monitoring
- Archiving video to a USB stick

**Note** This chapter assumes you have already correctly installed and configured your DVR. If you have not, see *Chapter 2* for Installation and *Chapter 3* for Configuration.

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### Live Viewing Window










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In the Live window, video inputs from the cameras are displayed as they are configured in the **Live Setup** screen (see *Live Mode* on page 11). *Figure 4-1* shows the layout of the live viewing window. Various on-screen display (OSD) symbols, which indicate the status of the DVR, are described in *Table 4-1*.



**Figure 4-1** Live Viewing Window



**Table 4-1 Status Indicator Icons in the Live Viewing Window**

Key	Description
	Continuous recording in progress.
	Manual recording in progress (overrides other modes).
	Sensor alarm recording in progress.
	Motion alarm recording in progress.
	Alarm indicator. When there is an alarm (sensor or motion alarm) in the video channel, this icon will be highlighted bright red.
	Indicates that alarm output is activated.
	Indicates that a RAS user is connected to the DVR.
	Indicates that the sequencing mode is enabled.
	Indicates storage is set to overwrite the oldest recorded data.

**Table 4-2 Button Functions in Live Viewing Window**

Button	Description
<b>SETUP</b>	Launch the <b>SETUP</b> menu.
<b>SEQ</b>	Enable/disable the automatic sequential display of channels in full screen or automatic sequencing of the highlighted channel in quad display mode. Audio is heard from the highlighted channel in quad display mode when audio is enabled.
<b>SEARCH</b>	Launch the <b>SEARCH</b> window (see <i>Figure 4-2</i> ).
	Select the channel to be displayed in full screen mode.
	Switch between full and quad screen display modes.
<b>ESC</b>	No action taken.
<b>RECORD</b>	Perform continuous or manual recording for all channels.

## Search Window

Press **SEARCH** in live mode to enter the Search window. The screen will appear as in *Figure 4-2*.

**Figure 4-2 Search Menu**



## Event Search

The **EVENT SEARCH** window (see *Figure 4-3*) is used to find stored video. Three categories of search filters can be applied: **DATE**, **CHANNEL** and **TYPE**. Press **SEL** to select a value and move down to the next category and use the **UP** arrow button to move up to the categories you have previously entered. The **ESC** button will return the user to the previous screen.

Searching for an event:

1. Select the date of the video to begin searching. Use the **LEFT**, **RIGHT**, **UP** and **DOWN** buttons to navigate through the days.
2. Once you have selected the date, press **SEL** to move to the **CHANNEL** selector.
3. Use the **LEFT** and **RIGHT** buttons to change the channel selection from **ALL** to any of the four available channels.
4. Once you have selected the channel, press **SEL** to move to the **TYPE** selector.
5. Use the **LEFT** and **RIGHT** buttons to change the type of recording to **ALL**, **MOTION**, **SENSOR**, **MANUAL**, or **CONTINUOUS**.
6. Once you have selected the type of recording to search for, press **SEL** to produce a list of instances that fit your search criteria.

**Figure 4-3 Event Search Screen**



**Figure 4-4 Event Search List Screen**



7. Use the **UP** and **DOWN** buttons to scroll through the on-screen listings.
8. Use the **LEFT** and **RIGHT** buttons to display a list of events that happened previous to or after the current selection.
9. Once the desired event has been selected, press **SEL** to start playing back the selected video.
10. Press **ARCH** to launch the archiving function in playback mode (see *Archiving Video* on page 32 for more information).

## Time-Line Search

The **TIME-LINE SEARCH** window (see *Figure 4-5*) is used to find the stored video by using the time line bar.

**Figure 4-5 Time-line Search Date Select Screen**



1. Select the date of the video to begin searching by using the **LEFT**, **RIGHT**, **UP**, and **DOWN** buttons to navigate through the days.
2. Once you have selected the date, press **SEL** to move to the time line search window (see *Figure 4-6*).
3. Use the **LEFT** or **RIGHT** buttons to select a time zone on the 24 hours time table. Once you have selected the time zone, press the **DOWN** or **SEL** buttons to move to the 60 minutes time table.



**Figure 4-6 Time-line Search Screen**



4. Select All or a specific channel to search by using the **UP** and **DOWN** arrow buttons. Notice that the highlighted icon on the lower left side of the screen changes when **UP** or **DOWN** is pressed.
5. Once you select the channel, use the **LEFT** and **RIGHT** arrow buttons to move the time line select **Bar** (yellow) to the point on the 60 minute time table that you wish to start playing the video clip (time zones with recorded video are indicated by a red underline).
6. Press **SEL** to playback the recorded video.
7. Press **ARCH** to launch the archiving function in playback mode (see *Archiving Video* on page 32 for more information).

## Go To Search

You can search for video data from a specific instance by setting the date and time in the **GO TO** search window (see *Figure 4-7*). Use the **LEFT** or **RIGHT** arrow buttons to move through the date and time values in this menu. Use the **UP** and **DOWN** arrows buttons to change the date and time values. Press **SEL** when the appropriate date and time is entered to playback the recorded video.

**Figure 4-7 Go To Search Screen**



## Go First Search

You can access the oldest recorded data on the DVR hard drive by selecting **GO FIRST** on the **SEARCH** window.

## Go Last Search

You can access the latest recorded data on the DVR hard drive by selecting **GO LAST** on the **SEARCH** window.

## Log List Search

You can access the **LOG LIST** search screen (see *Figure 4-8*) by selecting **LOG LIST** on the **SEARCH** window. Select a date and press **SEL** to open the **LOG LIST** from that date (see *Figure 4-9*).

**Figure 4-8** Log List Search Screen



**Figure 4-9** Log List Screen



## Archive Search

The **ARCHIVE SEARCH** window (see *Figure 4-10*) is used to find previously stored video or images.

**Figure 4-10** Archive Search Screen



1. Select the date to begin searching by using the **LEFT**, **RIGHT**, **UP**, and **DOWN** buttons to navigate through the days.
2. Once you have selected the date, press **SEL** to open the list of stored data (see *Figure 4-11*).

**Figure 4-11** Archive List Screen



3. Use the **UP** and **DOWN** buttons to scroll through the on-screen listings.
4. Use the **LEFT** and **RIGHT** buttons to display a list of stored events that happened previous to or after the current selection.
5. Once the desired event has been selected, press **SEL** to view the still image or the first frame of the selected video.
6. Press **ARCH** to launch the archiving function in playback mode (see *Archiving Video* on page 32 for more information).




# Play Mode

During playback of a recorded event, the mode changes from **SEARCH** to **PLAY**. While in **PLAY** mode, you may return to the previous **SEARCH** screen by pressing **ESC**. Playback starts in quad mode with channel 1 highlighted by default. If audio is enabled, it will only play from the highlighted channel.



**Figure 4-12 Play Mode Screen**



**Table 4-3 Button Functions in Play Mode**

Button	Description
<b>ESC</b>	Return to the previous menu screen, search list, or exit the menu.
<b>◀◀ REW</b>	Press to rewind the footage at 1x, 2x, 4x, 8x, and 16x speeds. Reverse playback speed is shown as ◀ (normal), 2◀◀ (2 times normal), 4◀◀ (4 times normal), 8◀◀ (8 times normal), and 16◀◀ (16 times normal) at the bottom right of the screen.
<b>◻◻◀ F/REV</b>	Jump/Step backward. The playback position moves one minute backward.
<b>▶/   PLAY/PAUSE</b>	Press to play or pause recorded video.
<b>F/ADJ ▶◻◻</b>	Jump/Step forward. The playback position moves one minute forward.
<b>FF ▶▶</b>	Press to fast forward the footage at 1x, 2x, 4x, 8x, and 16x speeds. Playback speed is indicated as ▶ (normal), 2▶▶ (2 times normal), 4▶▶ (4 times normal), 8▶▶ (8 times normal), and 16▶▶ (16 times normal) at the bottom right of the screen.
	View channel 1 in full screen.
	View channel 2 in full screen.
	View channel 3 in full screen.

**Table 4-3 Button Functions in Play Mode (Cont'd)**

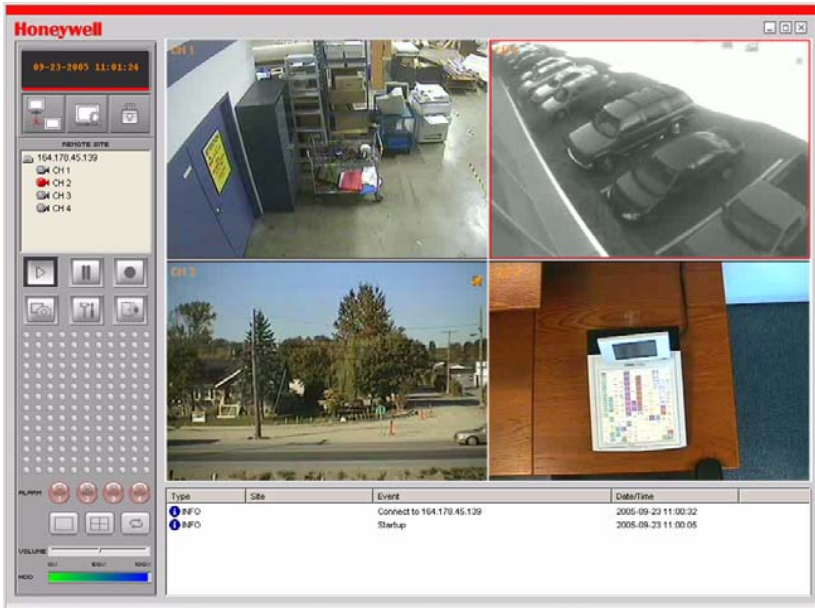
Button	Description
	View channel 4 in full screen.
	Switch the live view between quad and full screen mode displaying the highlighted channel.
<b>ARCH</b>	Press to launch the archiving function.

## Network Mode

The DVR provides a live remote monitoring feature. Remote monitoring requires installation of a Remote Access Software program on your PC (see *Chapter 5, RAS Installation*). A LAN connection using the RJ45 connector on the DVR rear panel is mandatory for remote connection. For detailed features on operation of the RAS program, please refer to *Chapter 6* and *Chapter 7*.

For local operation purposes, the frame rate is limited to 1 frame/sec when there is no recording operating on the DVR. When recording is in progress, the video frame rate for live monitoring will follow the recording frame rate.

**Figure 4-13 Main GUI Screen of RAS Program**



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## Archiving Video

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To archive a still image or video clip to a USB stick, the user must first archive a still image or video clip to the hard drive.

### Archiving Images or Video onto the Hard Drive

Still images can be captured and archived onto the hard drive in live mode or while playing back recorded video. In live mode, press **ARCH** to capture and store the still image. When you press **ARCH**, *Figure 4-14* will display.

**Figure 4-14** Archive Mode Screen



The still image will be archived onto the hard drive and can be transferred to a USB stick afterwards.

In playback mode, press **ARCH** to launch the archiving function. The DVR will ask whether to store a **Still Image** or **Video** clip (see *Figure 4-14*). If the user selects **STILL**, it will store the captured still image on the HDD. If the user selects **VIDEO**, the DVR will keep a record of the archiving operation without actually writing to the hard drive. When a USB stick is plugged in and archiving to the USB is requested, the DVR will convert the corresponding portion of video into an AVI file and store it onto the USB stick. Make sure to transfer the data to the USB stick before the actual video content is erased from the hard drive, otherwise the clip will be lost, even if archived to the hard drive.

### Transferring Still Images or Video onto USB

To begin transferring stored images or video to a USB stick, connect the DVR to a USB stick through the USB port on the front panel (see *Figure 3-1*). Press **Search** then select **Archive**, this will bring up the **ARCHIVE** screen (see *Figure 4-15*), which will allow you to select a date to search for stored images or video.



**Figure 4-15** Archive Menu Screen



Press **SEL** to retrieve a list of archived images or video (see *Figure 4-16*).

**Figure 4-16** List of Archived Files



Select one of the files in the archived list using the **UP** and **DOWN** arrow buttons, and then press **ARCH** to transfer the file to the USB stick. If there is enough space for archiving, the DVR will start transferring the file. In the case of video, the DVR will convert the video and audio into an AVI format while transferring the video file into the USB stick. This will allow the video to be played back using programs such as the Windows Media Player™. See *Appendix B, Playing AVI Archive Clips* if your archived clips are not playing back on your local PC for procedures to install updated video codecs to assist with this.

**Note** When archiving video from a Quad view to the USB stick, only the video from the one highlighted camera will be moved to the USB stick.





# RAS Installation


## Minimum PC Requirements

Before installing the Remote Access Software program, check your PC specifications. The DVR remote software may not perform correctly if the PC does not meet these minimum requirements:

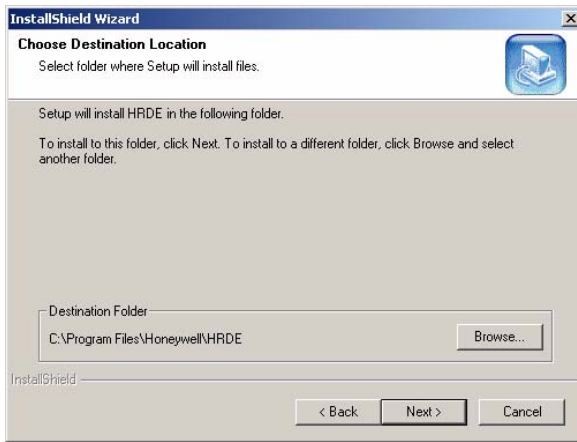
**Table 5-1 Recommended and Minimum PC Requirements**

PC Specification	Minimum Requirement	Recommended
CPU	Intel Pentium III 500 Mhz	Intel Pentium IV 2 Ghz
Memory	128 MB	256 MB
VGA	16 MB	64 MB
Resolution	1024 x 768	1024 x 768
Disk Space	10 MB	10 MB
Operating System	Windows 2000 Professional SP4	Windows 2000 Professional SP4, XP Professional SP2
Network	10/100Base T	10/100Base T
Direct X	Direct X 8.1	Direct X 8.1 or higher

## Installing the RAS Program

1. Insert the Remote Viewer software CD provided with the HRDE4X4 DVR into the CD-ROM drive of your PC.
2. Double-click the RAS setup file or icon (  ) to start the installation process.
3. The RAS splash screen appears while the installation wizard loads.
4. Click **Next** to use the default destination location (see *Figure 5-1*), or click **Browse...** to manually select a different destination location.

**Figure 5-1 Choose Destination Location**



5. Click **Next** to use the default program folder (see *Figure 5-2*), or manually select a folder from the list of **Existing Folders**.

**Figure 5-2 Choose Program Folder**



6. Wait a few minutes while the setup completes.
7. Double-click the **RAS** icon (see *Figure 5-3*) that should now be on your desktop to launch the program.

**Figure 5-3 RAS Icon**



# 6

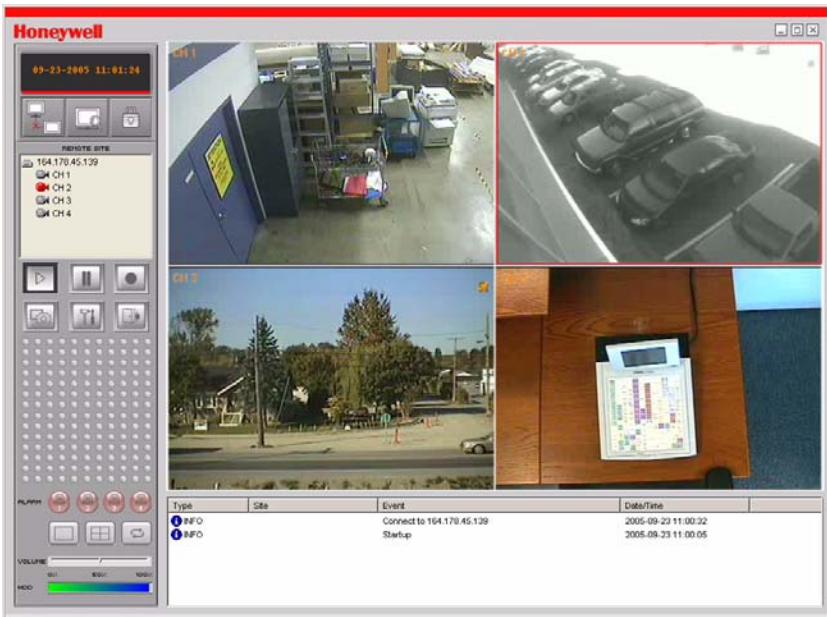
## RAS Operation

When the installation is complete, double-click the RAS icon (see *Figure 5-3*) on your desktop to launch the program.

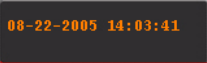

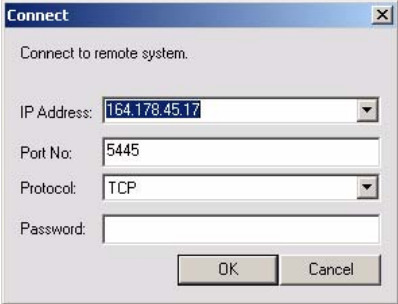




### Live Viewing

#### Live Viewing Interface








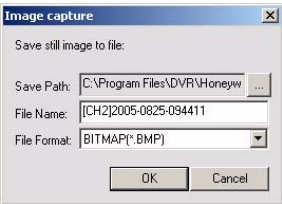






Figure 6-1 RAS Live Viewing Interface (Connected)







**Table 6-1 Live Viewing Interface Controls**

Interface Control	Description
	<p>Displays the current date and time when viewing live video.</p>
	<p>Click to <b>Connect</b> to the DVR.</p>  <p>If you click <b>Connect</b>, this <b>Connect</b> pop up window appears. Enter the <b>IP Address</b> and the <b>Port</b> number. Then select the <b>Protocol</b> type and enter the network <b>Password</b>. Click <b>OK</b> to initiate the connection.</p> <p><b>Caution Port No:</b> It should be the same as the DVR's port number (the default port number is <b>5445</b> on both DVR and RAS).</p> <p><b>Caution Password:</b> It should be the same as the DVR's network password (the default password is <b>1111</b>), set in the <b>System</b> menu on your DVR.</p> <p>Remote access should be set to ON in the <b>Network Setup</b> menu on the DVR.</p>
	<p>Click to <b>Disconnect</b> from the DVR.</p> <p><b>Note</b> This button only appears when you are remotely connected to a DVR.</p>
	<p>Click to open the <b>Search</b> user interface. See <i>Search and Playback Viewing</i>, page 40, for information on searching for recorded video.</p> <p><b>Note</b> When this button is clicked it changes to the <b>Live Video</b> button.</p>
	<p>Click to open the <b>Live Video</b> user interface.</p> <p><b>Note</b> When this button is clicked it changes to the <b>Search</b> button.</p>
	<p>Click to <b>Lock</b> all the operations on the DVR.</p> <p><b>Note</b> When this button is clicked it changes to the <b>Unlock</b> button.</p>


**Table 6-1 Live Viewing Interface Controls (Cont'd)**

Interface Control	Description
	<p>Click to <b>Unlock</b> all the operations on the DVR.</p> <p><b>Note</b> When this button is clicked it changes to the <b>Lock</b> button.</p>
	<p>When you click the <b>Lock</b> or <b>Unlock</b> button, the password entry window appears. When you <b>Lock</b> the operations on the DVR, you need to set and enter the <b>Password</b>. When you <b>Unlock</b> the operations on the DVR, you need to enter the <b>Password</b> previously set while locking.</p>
	<p>This <b>Remote Site</b> information panel shows the DVR site RAS is currently connected to, and the corresponding channel information.</p>
	<p>Click to <b>Play</b> live video clips.</p>
	<p>Click to <b>Pause</b> live video clips.</p>
	<p>Enable or disable the recording of live video to the local disk that has been selected in the <b>Setup</b> menu.</p>
	<p>Click to <b>Capture</b> or save a still image.</p>
	<p>When you click the <b>Capture</b> button, this window appears, offering you image capturing options. The still image can be captured in either <b>jpeg</b> or <b>bmp</b> file format. The image will be saved in the folder selected on the <b>General Setup</b> screen (see <i>General Setup</i> on page 45) unless you specify otherwise. You can also change the default <b>File Name</b> for the still image.</p>
	<p>Click to <b>Setup</b> the configuration of the RAS program.</p>
	<p>Click to <b>Exit</b> from the operations of the RAS program.</p>
	<p>These Alarm indicators illuminate when an alarm is active on the corresponding channel.</p>
	<p>Click to view the highlighted channel in <b>Full Screen</b> view.</p>
	<p>Click to view all the channels in a <b>Quad Screen</b> view.</p>
	<p>Click to start or stop the <b>Sequential</b> display of each channel in full screen mode.</p>

**Table 6-1 Live Viewing Interface Controls (Cont'd)**

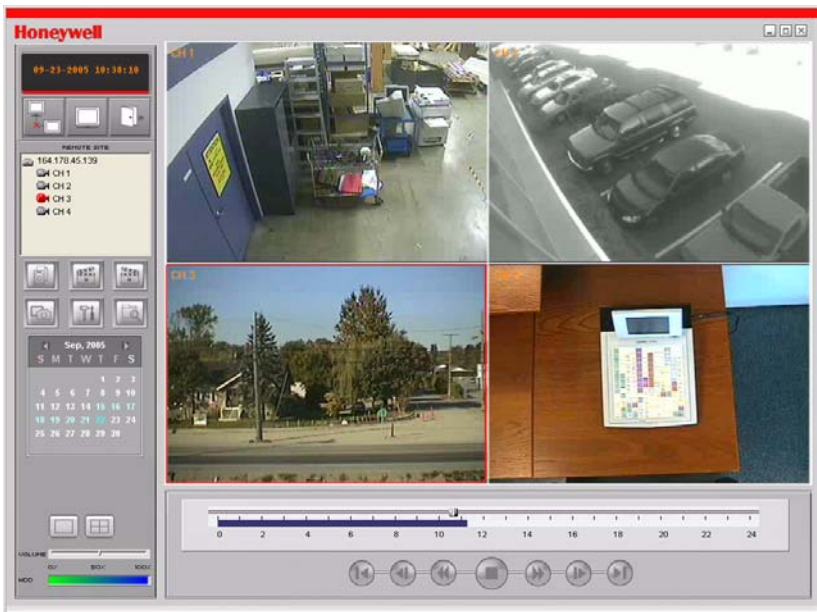
Interface Control	Description
	Adjust audio <b>Volume</b> using this slide bar.
	This green bar indicates the remaining hard drive storage capacity.
	This log lists client activity information.
	Click these buttons to <b>Minimize</b> , <b>Maximize</b> or <b>Close</b> the RAS window.

## Search and Playback Viewing

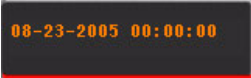





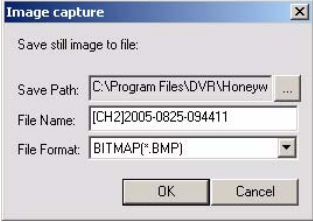



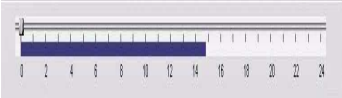
You can access the Search window by clicking **Search** (  ) on the upper left section of the main user interface.

### Search and Playback Interface











**Figure 6-2 Search and Playback Interface**



**Table 6-2 Search and Playback Interface Controls**

Interface Control	Description
	Displays the recording time of the selected data by adjusting the slide bar at the bottom of the main user interface.
	Click to open the <b>Live Video</b> user interface. <b>Note</b> When this button is clicked it changes to the <b>Search</b> button.
	Click to <b>Exit</b> from the operations of the RAS program.
	Click to <b>Backup</b> the recorded video in AVI format to your hard drive. The video clip will be saved in the folder selected on the <b>General Setup</b> screen.
	Click to enable <b>Remote Playback</b> of clips from the DVR or <b>Local Playback</b> of clips from the PC.
	Click to <b>Capture</b> or save a still image.
	When you click the <b>Capture</b> button, this window appears, offering you image capturing options. The still image can be captured in either <b>jpeg</b> or <b>bmp</b> file format. The image will be saved in the folder selected on the <b>General Setup</b> screen (see <i>General Setup</i> on page 45) unless you specify otherwise. You can also change the default <b>File Name</b> for the still image.
	Click this button ( <b>Mark In</b> ) to set the start time for backing up recorded video in AVI format to the local PC.
	Click this button ( <b>Mark Out</b> ) to set the end time for backing up recorded video in AVI format to the local PC.
	The <b>Calendar</b> shows dates with recorded video in bold blue and the currently selected date in black.
	The timeline shows recorded data in dark blue on the bar. You can adjust the time line scale and move it to the time you wish to start playing back. Click <b>Play</b> to display the recorded video.

**Table 6-2 Search and Playback Interface Controls (Cont'd)**

Interface Control	Description
	Click to <b>Play</b> the recorded video clip.
	Click to <b>Stop</b> or pause the displayed video clip.
	Click to <b>Fast Forward</b> through the video clip being played back.
	Click to <b>Rewind</b> through the video clip being played back.
	Click to <b>Reverse One Frame</b> in the video clip being played back.
	Click to <b>Advance One Frame</b> in the video clip being played back.
	Click to jump back one minute in the video clip.
	Click to jump forward one minute in the video clip.
	Click to view the highlighted channel in <b>Full Screen</b> view.
	Click to view all the channels in a <b>Quad Screen</b> view.

## Back Up a Video Clip

You can backup the recorded video clips in AVI format on the Search User Interface.



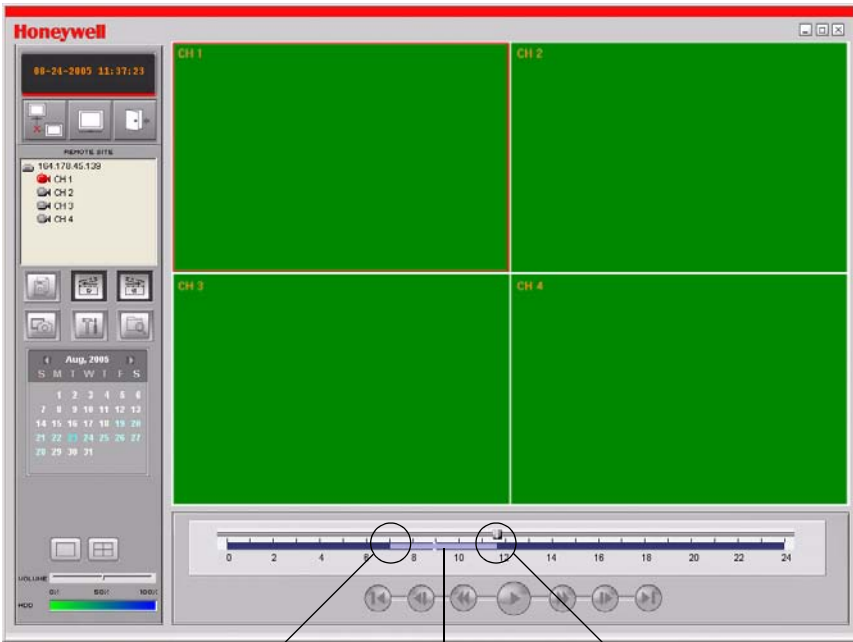
1. First you need to set the starting point on the blue timeline by using the slide bar and clicking the **Mark In** button () to set the starting point of the video clip to be backed up.
2. Then set the ending point on the blue timeline by using the slide bar and clicking the **Mark Out** button () to set the ending point of the video clip to be backed up.



Figure 6-3 Main User Interface with Back Up Times Marked



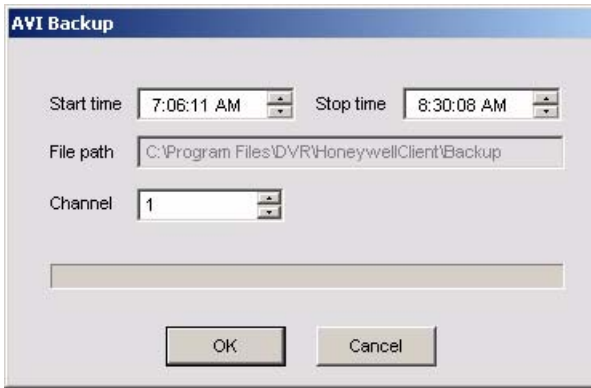
Move the slide bar to the start of the clip to back up and click **Mark In**.

The off-color bar indicates the portion of recorded video that will be backed up.

Move the slide bar to the end of the clip to back up and click **Mark Out**.

3. Click **Backup** (). *Figure 6-4* appears as below.

**Figure 6-4 AVI Backup Window**



4. You can adjust the **Start** and **Stop** times for the video clip in the AVI Backup window.
5. Select a **Channel** to back up.
6. Click **OK** to start the backup process.

The clip will be automatically saved to file specified in *General Setup*, page 45. Navigate to the folder, find the AVI file you have archived and open it. This will allow the video to be played back using programs such as the Windows Media Player.

See *Appendix B, Playing AVI Archive Clips* if your archived clips are not playing back on your local PC.

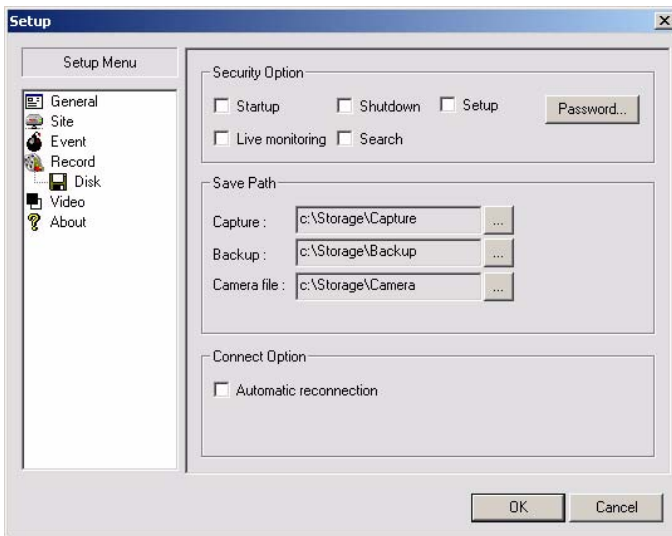
# RAS Configuration

Click **Setup** (  ) to open the **Setup** menu for the RAS program.

## General Setup

Click **Setup** to open *Figure 7-1*. Set the options as follows:

**Figure 7-1** General Setup Screen



1. In the **Security Option** section, click the checkboxes to place a checkmark in those boxes. The options that you select will now require a password when a user accesses that function.
2. Select a **Save Path** for saving **Capture**, **Backup**, or **Camera files** to the hard drive. Click ... for the corresponding file type to manually select a destination folder.
3. Click **Password...** to open the **Change Password** screen (see *Figure 7-2*).

**Figure 7-2 Change Password Screen**



4. Enter the appropriate passwords in the **Old**, **New** and **Confirm** text boxes.
5. Click **OK** to save the new password.

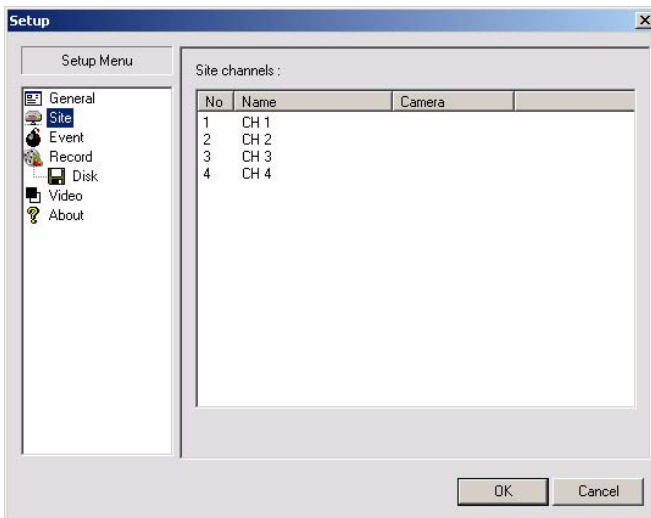
---

## Site Setup

---

Click **Site** on the left-hand panel of the **Setup** menu. The **Site** menu (see *Figure 7-3*) shows the DVR channel information and allows you to change the channel titles. Click a channel **Name** twice to enter a new name.

**Figure 7-3 Site Menu**



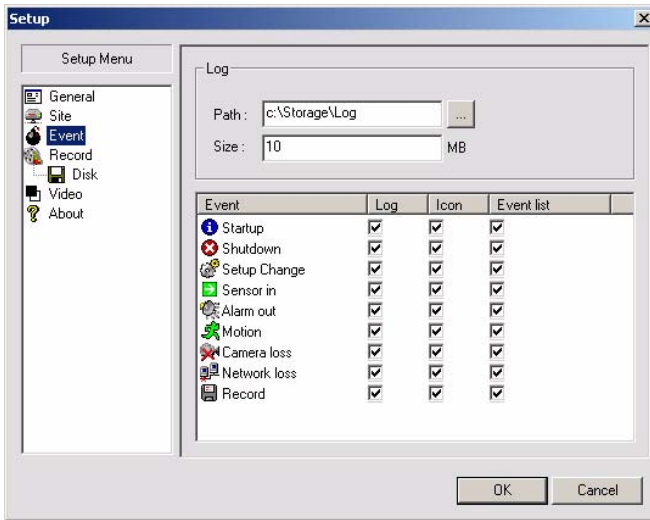
---

## Event Setup

---

Click **Event** on the left-hand panel of the **Setup** menu. In the **Event** menu (see *Figure 7-4*) you can set the event items that will be included in the event list and log, the amount of local disk space you want to allow, and the save path for the event log.

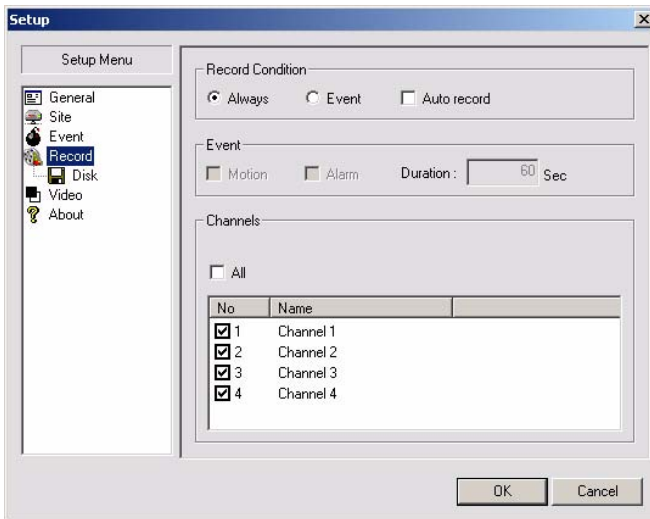
Figure 7-4 Event Menu



## Record Menu

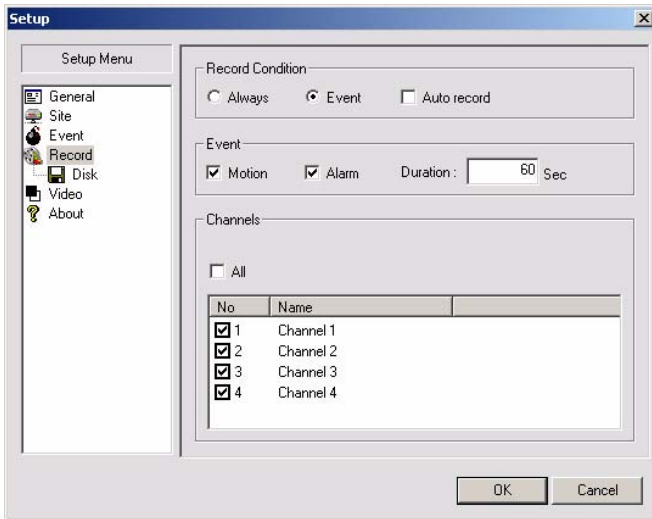
Click **Record** on the left-hand panel of the **Setup** menu. In the **Record** menu (see [Figure 7-5](#)) you can set the recording conditions for **Always**, **Event**, or **Auto** recording. You can also select to record individual channels or **All** the channels.

Figure 7-5 Record Menu (Always)



When you set the recording condition to **Event** (see *Figure 7-6*), you can set the events to record for **Motion**, **Alarm** or both with a specified duration. You can also select to record individual channels or **All** the channels.

**Figure 7-6 Record Menu (Event)**



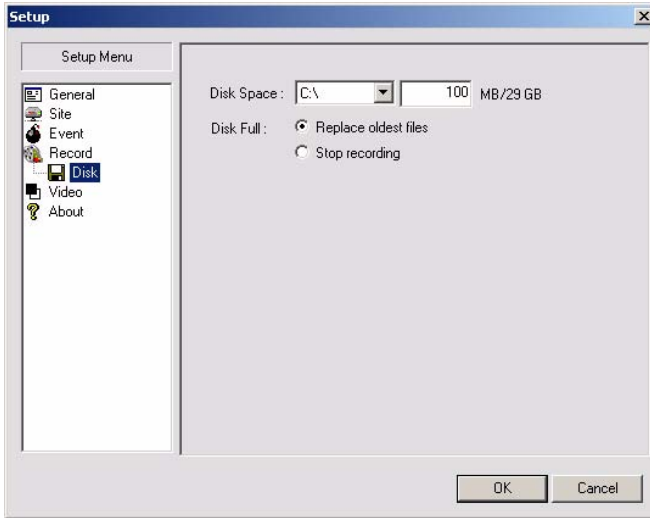
---

## Disk Menu

---

Click **Disk** on the left-hand panel of the **Setup** menu. In the **Disk** menu (see *Figure 7-7*) you can select the local disk to use and the amount of **Disk Space** you want to allow the program to use for recording. You can also select the option to overwrite data or to stop recording when the maximum amount of disk space is full.

**Figure 7-7**      **Disk Menu**



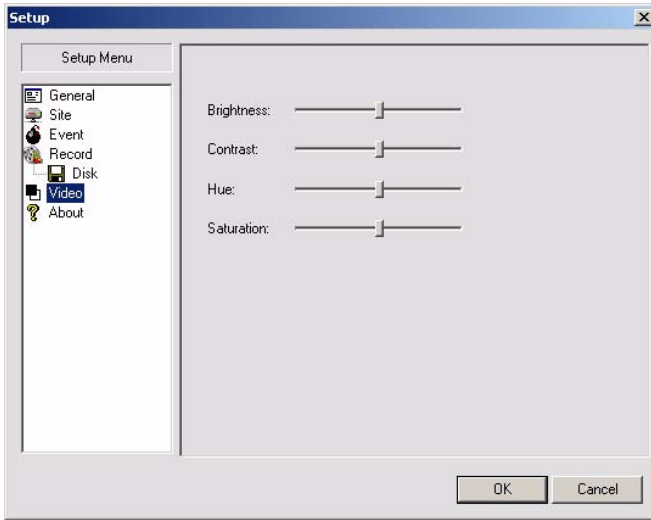
---

## Video Menu

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Click **Video** on the left-hand panel of the **Setup** menu. In the **Video** menu (see *Figure 7-8*) you can adjust the **Brightness**, **Contrast**, **Hue**, and **Saturation** of the live video or video being played back in the main user interface.

**Figure 7-8 Video Menu**



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## About Menu

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Click **About** on the left-hand panel of the **Setup** menu. The **About** menu provides information on the RAS program.



# A

## DVR Firmware Upgrade

This appendix covers upgrading the firmware on your DVR unit. Check the Honeywell Video Systems website for firmware upgrades at <http://www.honeywellvideo.com>.

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### 1. Copy Firmware Upgrade to USB Stick

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In order to carry out the upgrade, the upgrade firmware must first be downloaded and copied onto the USB stick. Create a new folder in the USB stick and copy the upgrade firmware **app.bin** into the folder. The folder name should be **upgrade**.

After the upgrade firmware is copied into the USB stick, follow **2. Start Engineering Mode** and **3. Upgrading Using USB Stick** to complete the upgrade.

---

### 2. Start Engineering Mode

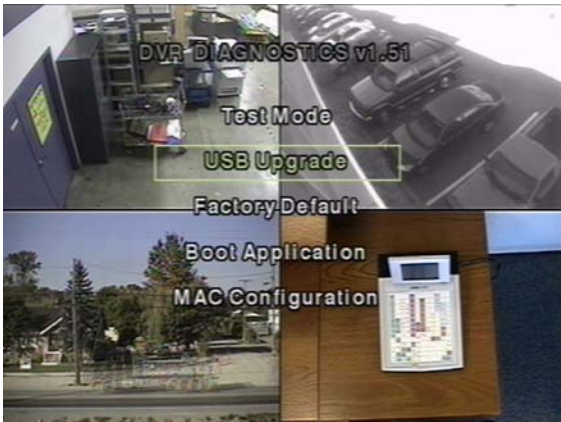
---

The DVR firmware is designed to be upgraded through firmware updates. Firmware upgrades can be initiated in engineering mode (see *Figure A-1*). To start engineering mode:

1. Press **SETUP** and enter the **Setup** menu.
2. Go to the **SYSTEM** menu and select the **ADMIN PASSWORD** menu item.
3. Enter the password as **12341234**, and press **SEL**.

**Note** The space provided to enter the **Admin** password is only designed for four characters. Entering the last four characters will not appear on the screen, but they do serve to open the Engineering mode.

**Figure A-1     Engineering Mode**



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### **3. Upgrading Using USB Stick**

---

1. Connect the USB stick with the upgrade file saved on it to the USB port on the front panel (see *Figure 3-1*).
2. Select **USB Upgrade** and press **SEL**. The **UPGRADE** will start automatically.
3. After the upgrade is complete, press **SEL** to return to the **DVR Diagnostics** screen.
4. Select **Boot Application** and press **SEL** to reboot the DVR with the updated firmware.

# B

## Playing AVI Archive Clips

If you are having trouble playing archived AVI clips from either a USB stick or saved to your PC through the RAS program, try installing the following codecs onto your PC.

1. Insert the Honeywell RAS CD provided with the HRDE4X4 DVR into the CD drive on the PC you want to playback clips with.
2. Open the **Codecs** folder.
3. Double-click the file **ffdshow-xxx.exe** to run the codec installation program (where xxx is the file date).
4. Follow the installation wizard prompts to install the **FFDShow** program with the default settings.

**Note** Alternatively, a DivX codec from <http://www.divx.com/divx> could be used to play back video clips.



# C

## Optional Items

Check with your sales representative for the price and availability of the following item:

- Remote Control

### Remote Control Operation



<b>RECORD</b>	Press to start or stop manual recording.
<b>PTZ</b>	Press to control PTZ operation.
<b>SEARCH</b>	Press to go to the search menu.
<b>SEQUENCE</b>	Press to start auto sequencing of screen in full screen mode.
<b>SELECT</b>	Press to select desired menu item or to store a setup value in the menu.
<b>SETUP</b>	Press to launch the setup menu.
<b>ESC</b>	Press to return to the previous menu screen.
<b>F/REW</b>	Press to jump/step 60 seconds backward in playback mode.
<b>PLAY/PAUSE</b>	Press to play or pause a video in playback mode.
<b>F/ADV</b>	Press to jump/step 60 seconds forward in playback mode.
<b>REW</b>	Press to rewind the footage at 1x, 2x, 4x, 8x, and 16x speeds in playback mode.
<b>ARCH</b>	Press to start operation involving archiving.
<b>FF</b>	Press to fast forward the footage at 1x, 2x, 4x, 8x, and 16x speeds in playback mode.



# D

## Specifications

**Table D-1    Technical Specifications**

<b>Video</b>	
Signal Format:	NTSC or PAL
Video Input:	Composite: 4-channel, 1.0 V P-P, 75 $\Omega$ , BNC
Monitor Outputs:	Composite: 1-channel, 1.0 V P-P, 75 $\Omega$ , BNC VGA: 1-channel
Video Resolution:	NTSC: Quad 360 x 240, Full screen 720 x 480 PAL: Quad 360 x 288, Full screen 720 x 576
Compression Algorithm:	MPEG-4
Playback/Record Speed (frames per second):	NTSC: Quad 120 IPS, Full screen 30 IPS/4-ch PAL: Quad 100 IPS, Full screen 25 IPS/4-ch
Still Image Capture:	NTSC: Quad 360 x 240, Full screen 720 x 480 PAL: Quad 360 x 288, Full screen 720 x 576
<b>Inputs, Outputs</b>	
Alarm Input:	4 Sensor In (N/O, N/C selectable)
Alarm Output:	1 internal relay, 0.5 A / 125 V, 1 A / 30 V
Network Connectivity:	ADSL, LAN / Dynamic IP Support 1 10/100-base T Ethernet
Audio Input:	4 Line In (RCA)
Audio Output:	1 Line Out (RCA)
<b>Connectors</b>	
Video Input:	Composite: 4-channel BNC
Monitor Output:	Composite: 1-channel BNC VGA: 1-channel
Audio In:	RCA
Audio Out:	RCA

**Table D-1    Technical Specifications (Cont'd)**

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Ethernet Port:	RJ-45, 10/100 Base
RS232C Serial Port:	9-pin D type (Engineering use only)
Archive:	USB Port

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**Storage**

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Primary Storage:	Max 1 hard disk
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**General**

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Dimensions (W x H x D):	13.78 in. x 2.83 in. x 10.24 in. (350 mm x 72 mm x 260 mm)
Unit Weight:	7.05 lb. (3.0 kg)
Operating Temperature:	32°F to 104°F (0°C to 40°C)
Storage Temperature:	14°F to 122°F (-10°C to 50°C)
Operating Humidity:	0 to 90% (non-condensing)
Power:	100 to 240 VAC, 50/60 Hz, 1.5 A, External Adapter
Input Voltage:	12 VDC, 5 A
Power Consumption:	Normal 18W (12 V, 1.5 A)

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**Note**    Specifications are subject to change without notice.

---





## **Honeywell Video Systems (Head Office)**

2700 Blankenbaker Pkwy, Suite 150

Louisville, KY 40299, USA

[www.honeywellvideo.com](http://www.honeywellvideo.com)

☎ +1.800.796.2288

### **Honeywell Security Australia Pty Ltd.**

Unit 5, Riverside Centre, 24-28 River Road West  
Parramatta, NSW 2150, Australia

[www.ademco.com.au](http://www.ademco.com.au)

☎ +61.2.8837.9300

### **Honeywell Video Systems UK Ltd.**

Aston Fields Road, Whitehouse Ind Est  
Runcorn, Cheshire, WA7 3DL, UK

[www.security.honeywell.com](http://www.security.honeywell.com)

☎ +44.1928.754.000

### **Honeywell Security Asia Pacific**

Flat A, 16/F, CDW Building, 388 Castle Peak Road  
Tsuen Wan, N.T., Hong Kong

[www.security.honeywell.com/hk](http://www.security.honeywell.com/hk)

☎ +852.2405.2323

### **Honeywell Security South Africa**

Unit 6 Galaxy Park, Galaxy Avenue, Inlbro Business Park  
P.O. Box 59904, Kengray, 2100, South Africa

[www.honeywell.co.za](http://www.honeywell.co.za)

☎ +27.11.574.2500

### **Honeywell Security France**

Parc Gutenberg, 13, Voie La Cardon  
91120, Palaiseau, France

[www.ademco.fr](http://www.ademco.fr)

☎ +33.1.6932.1090

### **Honeywell Security Germany**

Großenbaumer Weg 8  
40472 Düsseldorf, Germany

[www.honeywell-security.de](http://www.honeywell-security.de)

☎ +49.211.415.090

### **Honeywell Security Italia SpA**

Via della Resistenza 53/59, 20090 Buccinasco  
Milan, Italy

[www.ademco.it](http://www.ademco.it)

☎ +39.02.457.1791

### **Honeywell Security Poland**

Chmielewskiego 22a, 70-028  
Szczecin, Polska

[www.ultrak.pl](http://www.ultrak.pl)

☎ +48.91.485.40.60

### **Honeywell Security España**

Calle Vivero, 5, 28040  
Madrid, Spain

[www.security.honeywell.com/es](http://www.security.honeywell.com/es)

☎ +34.91.102.5900

### **Honeywell Security Czech Republic**

Havránkova 33, Brno  
Dolní Heršpice, 619 00, Czech Republic

[www.olympo.cz](http://www.olympo.cz)

☎ +420.543.558.111

### **Honeywell Security Nederland**

Amperestraat 41  
1446 TR Purmerend, Netherlands

[www.SecurityHouse.nl](http://www.SecurityHouse.nl)

☎ +31.299.419.000

### **Honeywell Security Slovakia Republic**

Vajnorská 142, 83104 Bratislava  
Slovakia

[www.olympo.sk](http://www.olympo.sk)

☎ +421.2.444.54.660

# **Honeywell**

**Video Systems**

[www.honeywellvideo.com](http://www.honeywellvideo.com)

+1.800.796.CCTV (North America only)

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