

HRG Performance Series DVR Getting Started Guide

Document 800-13894 – Rev A – 01/2013





This document describes the installation and operation procedures for the following Performance Series Honeywell DVRs:

- HRG4 4-Channel DVR (HRG4X, HRG41X, HRG45X)
- HRG8 8-Channel DVR (HRG8X, HRG81X, HRG82X)
- HRG16 16-Channel DVR (HRG16X, HRG161X, HRG162X, HRG164X)

This document is for system integrators, installers, and end-user operators.

For more detailed information than is contained in this guide, refer to the User Guide, located on the software CD.

Cautions and Warnings

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN		 THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THE UNIT.
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.			THIS SYMBOL INDICATES THAT IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS ACCOMPANY THIS UNIT.

CAUTION Use only the supplied power supply.

Compliance

Manufacturer's Declaration of Conformance

The manufacturer declares that the equipment supplied is compliant with the essential requirements of the EMC directive 2004/108/EC and Low Voltage Directive 2006/95/EC conforming to the requirements of standards EN 55022 for emissions, EN 55024 for immunity, and EN 60950-1 for electrical equipment safety.

Safety Instructions

BEFORE OPERATING OR INSTALLING THE UNIT, READ AND FOLLOW ALL INSTRUCTIONS.

AFTER INSTALLATION, retain the safety and operating instructions for future reference

1. **HEED WARNINGS** - Adhere to all warnings on the unit and in the operating instructions.
2. **INSTALLATION**
 - Install in accordance with the manufacturer's instructions.
 - Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.
 - Do not install the unit in an extremely hot or humid location, or in a place subject to dust or mechanical vibration. The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.
 - Any wall or ceiling mounting of the product should follow the manufacturer's instructions and use a mounting kit approved or recommended by the manufacturer.
3. **POWER SOURCES** - This product 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 supplied to your facility, consult your product dealer or local power company.
4. **HEAT** - Situate away from items that produce heat or are heat sources such as radiators, heat registers, stoves, or other products (including amplifiers).
5. **WATER AND MOISTURE** - Do not use this unit near water or in an unprotected outdoor installation, or any area classified as a wet location.
6. **MOUNTING SYSTEM** - Use only with a mounting system recommended by the manufacturer, or sold with the product.
7. **ATTACHMENTS** - Do not use attachments not recommended by the product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
8. **ACCESSORIES** - Only use accessories specified by the manufacturer.
9. **CLEANING** - Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
10. **SERVICING** - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
11. **REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

Before you Begin Installation

Unpack everything. Ensure that the items received match those listed on the order form and packing slip. In addition to your DVR and this Getting Started Guide, the packing box should include:

- an IR remote control
- a USB mouse
- a power adapter
- a CD/DVD containing the software and the User Guide

Note Other peripheral hardware (owner supplied) will be required for your installation (for example, Honeywell cameras, a VGA monitor, and appropriate cabling). See the User Guide for more information.

Installing the DVR

When installing the DVR:

- Ensure there is ample room for audio and video cables.
- When installing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
- Connect both the alarm and RS-485 cable.
- Allow at least 2 cm of space between devices if rack mounted.
- Ensure the DVR is grounded.
- Ensure that the environmental temperature is within the range of -10 °C to 55 °C.
- Ensure that the environmental humidity is within the range of 10% to 90%.

DVR Front Panels

4-Channel HRG



Position	Control/Indicator	Function
1	IR Receiver	Sensor for IR Remote Controller.
2	USB Port	Connection for a USB mouse or USB flash memory device.
3	Status Indicators	
	POWER	Turns green when the HRG DVR is on.
	STATUS	Illuminates when the compound key switches to numeric/letter input mode.
	Tx/Rx	Flickers green when the network connection is functioning normally.
4	SHIFT	Switches the compound keys functions from inputting the numeric/letter values to the functional controls.
5	Compound Buttons	
	1/MENU	Enter number "1"; Access the main menu.
	2/ABC/F1	Enter number "2" or letters "A", "B", "C"; The F1 button when used in a list field will select all items on the list. In PTZ Control mode, it will turn on/off PTZ light.
	3/DEF/F2	Enter number "3" or letters "D", "E", "F"; The F2 button is used to cycle through tab pages. It will also bring up the Channel and OSD Position settings.
	4/GHI/ESC	Enter number "4" or letters "G", "H", "I"; Exit and back to the previous menu.
	5/JKL/EDIT	Enter number "5" or letters "J", "K", "L"; Delete characters before cursor; Select the check box and ON/OFF switch; Start/stop record clipping in playback.
	6/MNO/PLAY	Enter number "6" or letters "M", "N", "O"; Playback, for direct access to playback interface.
	7/PQRS/REC	Enter number "7" or letters "P", "Q", "R", "S"; Manual record, for direct access to manual record interface; manually enable/disable record.
	8/TUV/PTZ	Enter number "8" or letters "T", "U", "V"; Access to PTZ control interface.
	9/WXYZ/PREV	Enter number "9" or letters "W", "X", "Y", "Z"; Multi-camera display in live view.
	0/A	Enter number "0"; Switch between input methods (upper and lowercase alphabet, symbols and numeric input).

6 **Control Buttons**

Directional buttons: In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters. In playback mode, the **Up** and **Down** buttons are used to speed up and slow down record play, and the **Left** and **Right** buttons are used to select the recording 30s forwards or backwards. In Live View mode, these buttons can be used to cycle through channels.

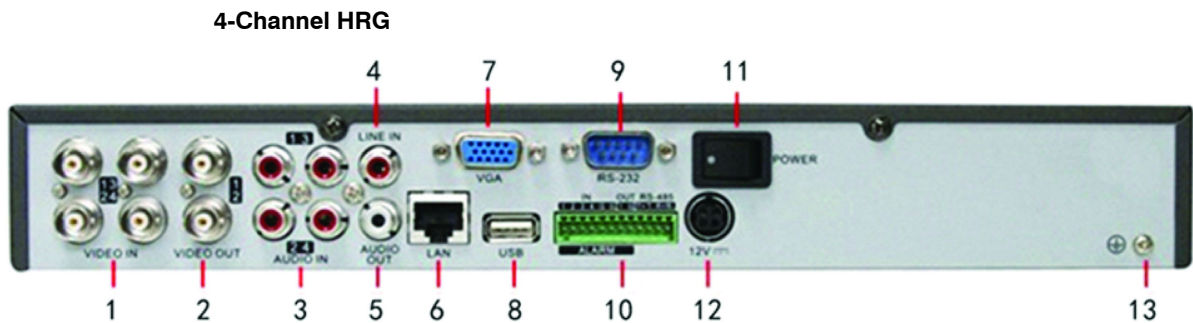
Enter: The **Enter** button is used to confirm selection in the Menu mode; or used to select check box fields and **ON/OFF** switch. In playback mode, it can be used to play or pause the video. In single-frame play mode, pressing the **Enter** button advances the video by a single frame. And in auto sequence live view mode, the buttons can be used to pause / resume auto sequence.

8-Channel/16-Channel HRG



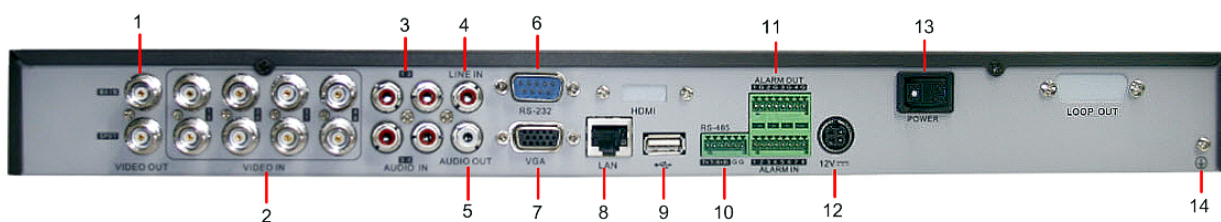
Position	Control/Indicator	Function
1	IR Receiver	Sensor for IR Remote Controller.
2	USB Port	Connection for a USB mouse or USB flash memory device.
3	Status Indicators	
	POWER	Turns green when the HRG DVR is on.
	READY	Turns green when the device is running normally.
	STATUS	Illuminates when the compound key switches to numeric/letter input mode.
	ALARM	Turns red when there is a sensor alarm occurring.
	HDD	Flickers red when the HDD is reading or writing.
	Tx/Rx	Flickers green when the network connection is functioning normally.
4	SHIFT	Switches the compound keys functions from inputting the numeric/letter values to the functional controls.
5	Compound Buttons	
	1/MENU	Enter number "1"; Access the main menu.
	2/ABC/F1	Enter number "2" or letters "A", "B", "C"; The F1 button when used in a list field will select all items on the list. In PTZ Control mode, it will turn on/off PTZ light.
	3/DEF/F2	Enter number "3" or letters "D", "E", "F"; The F2 button is used to cycle through tab pages. It will also bring up the Channel & OSD Position settings.
	4/GHI/ESC	Enter number "4" or letters "G", "H", "I"; Exit and back to the previous menu.
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	6/MNO/PLAY	Enter number "6" or letters "M", "N", "O"; Playback, for direct access to playback interface.
	7/PQRS/REC	Enter number "7" or letters "P", "Q", "R", "S"; Manual record, for direct access to manual record interface; manually enable/disable record.
	8/TUV/PTZ	Enter number "8" or letters "T", "U", "V"; Access to PTZ control interface.
	9/WXYZ/PREV	Enter number "9" or letters "W", "X", "Y", "Z"; Multi-camera display in live view.
	0/A	Enter number "0"; Switch between input methods (upper and lowercase alphabet, symbols and numeric input).
6	Control Buttons	<p>Directional buttons: In menu mode, the direction buttons are used to navigate between different fields and items and select setting parameters. In playback mode, the Up and Down buttons are used to speed up and slow down record play, and the Left and Right buttons are used to select the recording 30s forwards or backwards. In Live View mode, these buttons can be used to cycle through channels.</p> <p>Enter: The Enter button is used to confirm a selection in the Menu mode; or used to select check box fields and the ON/OFF switch. In playback mode, it can be used to play or pause the video. In single-frame play mode, pressing the Enter button advances the video by a single frame. And in auto sequence live view mode, the buttons can be used to pause / resume auto sequence.</p>

DVR Back Panels

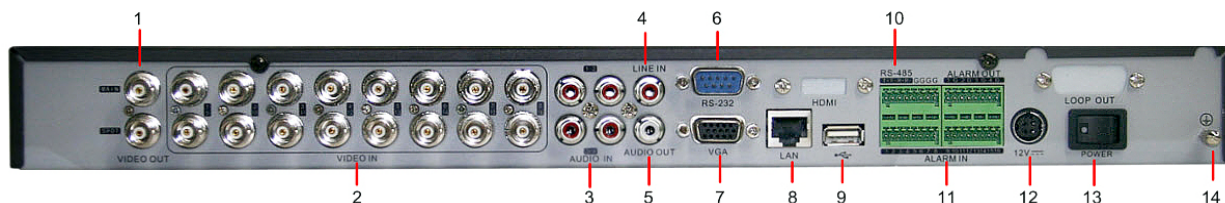


Position	Connection/Switch	Function
1	Video In	BNC connectors for analog video input.
2	Video Out	BNC connectors for video output
3	Audio In	RCA connectors for analog audio input.
4	Line In	RCA connector for audio input.
5	Audio Out	RCA connector for audio output.
6	LAN	Connector for LAN (Local Area Network).
7	VGA	DB15 connector for VGA output. Display local video output and menu.
8	USB	Connector for USB devices.
9	RS-232 Port	DB9 connector for RS232 devices.
10	Alarm In	Connector for alarm input.
	Alarm Out	Connector for alarm output.
	RS-485 Port	Connector for RS-485 devices. T+, T- pins connect to PTZ.
11	Power	Switch for turning On/Off the device.
12	12 V	12 V DC power supply.
13	GND	Ground (needs to be connected when DVR starts up).

8-Channel HRG



16-Channel HRG



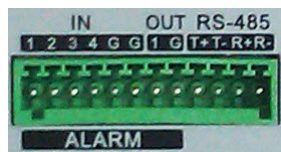
Position	Connection/Switch	Function
1	Main Video Out	BNC connectors for analog video input.
	Local Video Out	BNC connectors for local video out
2	Video In	BNC connectors for analog video input.
3	Audio In	RCA connectors for analog audio input.
4	Line In	RCA connector for audio input.
5	Audio Out	RCA connector for audio output.
6	RS-232 Port	DB9 connector for RS232 devices.
7	VGA	DB15 connector for VGA output. Display local video output and menu.
8	LAN	Connector for LAN (Local Area Network).
9	USB	Connector for USB devices.
10	RS-485 Port	Connector for RS-485 devices. T+, T- pins connect to PTZ.
11	Alarm In	Connector for alarm input.
	Alarm Out	Connector for alarm output.
12	12 V	12 V DC power supply.
13	Power	Switch for turning On/Off the device.
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Connecting the DVR

Connecting to Alarm Inputs/Outputs

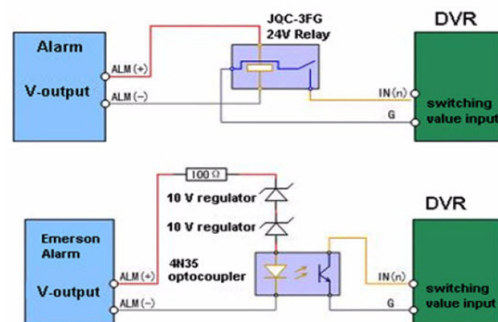
Connect the alarm inputs and outputs as shown below:

4-Channel HRG model shown



Connecting to an Non Open/Closed Relay

The alarm input requires an open/closed dry contact relay. If the input is not an open/closed dry contact relay, connect as shown below:



Connecting Alarm Output Relays

The alarm output relay must be used with external DC loads only within a limit of 12 V DC/1 A.

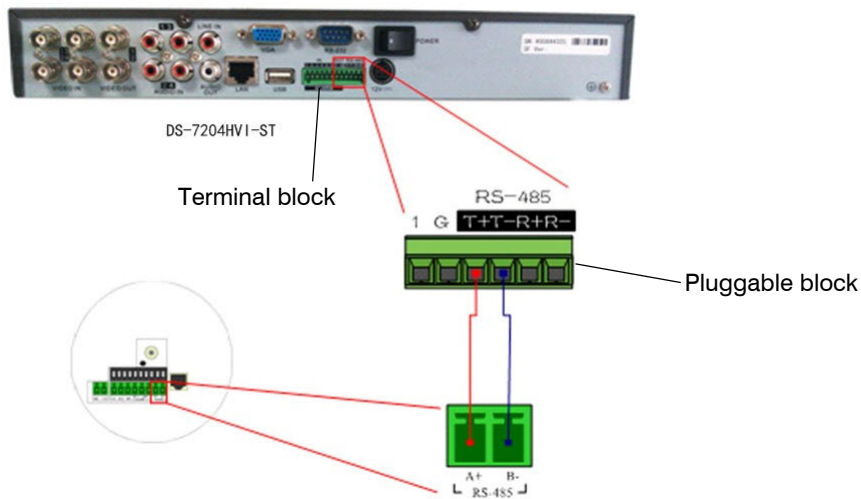
Note The DVR Alarm-out relay does not support connection to an AC load. An external relay is needed to isolate the AC loads from the DVR.

Connecting Alarm Devices to the DVR

1. Disconnect the pluggable block from the ALARM IN /ALARM OUT terminal block.
2. Loosen the stop screws from the pluggable block, insert the signal cables into the slots and then retighten the stop screws. Ensure that the signal cables are securely fastened.
3. Reconnect the pluggable block to the terminal block.

Connecting RS-485 Devices to the DVR

1. Disconnect the pluggable block from the RS-485 terminal block.



2. Loosen the stop screws from the pluggable block, insert the signal cables into the slots, and then retighten the stop screws. Ensure signal cables are securely fastened.
3. Reconnect the pluggable block to the terminal block.

Note Connect the pan/tilt receiver unit to the T+ and T- terminals on the DVR.

HDD Storage Calculation Chart

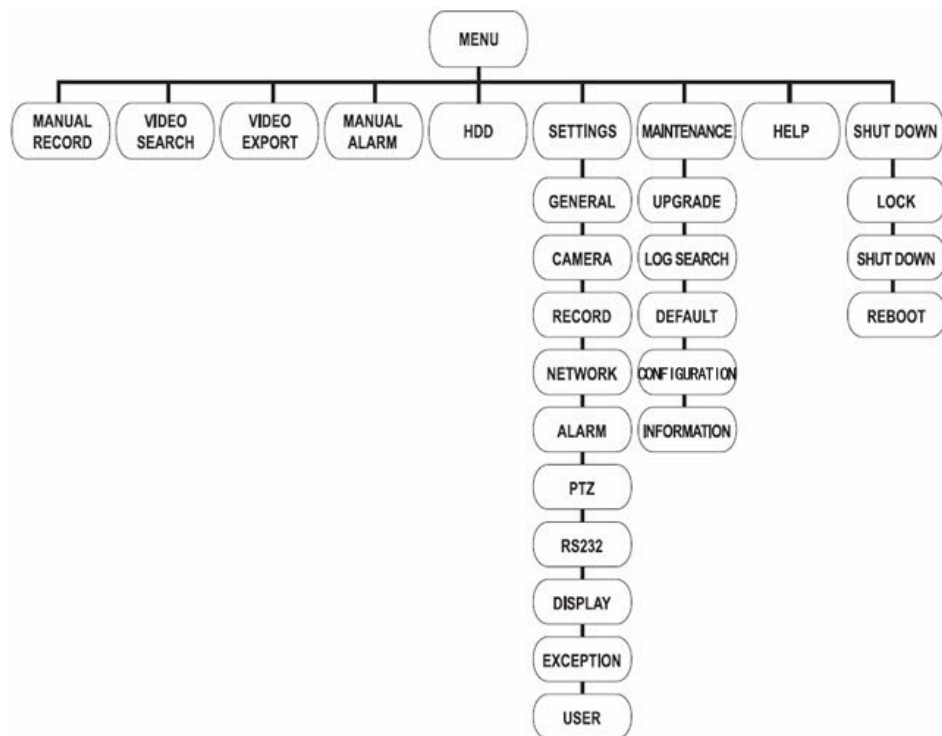
The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

Bit Rate	Storage Used	Bit Rate	Storage Used
96K	42M	512K	225M
128K	56M	640K	281M
160K	70M	768K	337M
192K	84M	896K	393M
224K	98M	1024K	450M
256K	112M	1280K	562M
320K	140M	1536K	675M
384K	168M	1792K	787M
448K	196M	2048K	900M

Note The supplied values for storage space used is just for reference. Storage space used is estimated by formulas and may have some deviation from actual value. Download the storage estimator found on the HRG Series DVR product web page. Go to Products on the Honeywell Video Systems web site (www.honeywellvideo.com).

DVR Operation

Menu Structure



Starting Up and Shutting Down the DVR

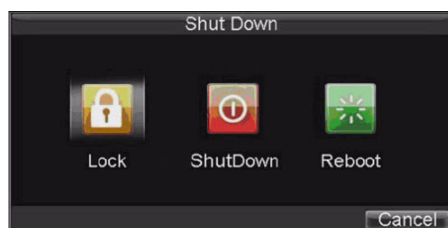
Proper startup and shutdown procedures are crucial to maintaining the life of your DVR.

Starting Up the DVR

1. Ensure the power supply is plugged into an electrical outlet. It is **HIGHLY** recommended that you use an Uninterruptible Power Supply (UPS) in conjunction with the unit.
2. Press the **POWER** switch on the rear panel. After the power has been started up, the POWER indicator on the DVR will light green.

Shutting Down the DVR

1. Enter the Shutdown menu by clicking on **Menu** ► **ShutDown**.



2. Click **ShutDown**.
3. Click **Yes** in the pop-up window to confirm that you want to shut down the DVR.

Setting Up the DVR with the Setup Wizard

Note Please ensure that the DVR has been installed with HDD before access to the Setup Wizard. By default, the Setup Wizard will start once the DVR has loaded. The Setup Wizard will guide you through some important settings of your DVR. Select **Next** if the DVR has been installed with HDD, or click **Cancel** to access Live View window if no HDD is installed.

By default, the Setup Wizard will start after the DVR has loaded. The Setup Wizard will walk you through some of the more important settings of your DVR. If you do not wish to use the Setup Wizard at this time, click the **Cancel** button. You can also choose to use the Setup Wizard at a later time by leaving the **Start Wizard when DVR starts?** check box checked.



Using the Setup Wizard for Initial Setup

1. Click **Next** on the Wizard window. This will take you to the **User Permission** window.
2. Navigate to the **Admin Password** input field. Enter the admin password into the **Admin Password** input field. By default, the password is **12345**.
3. Check the **New Admin Password** check box to change the admin password. Enter the new password and confirm the password in the given fields.



4. Click **Next**. The HDD Management window opens.



5. Click **Enter** to start HDD management.
6. If a new HDD was recently installed, select the HDD from the list to initialize it. Initializing the HDD will format and remove all data from it.

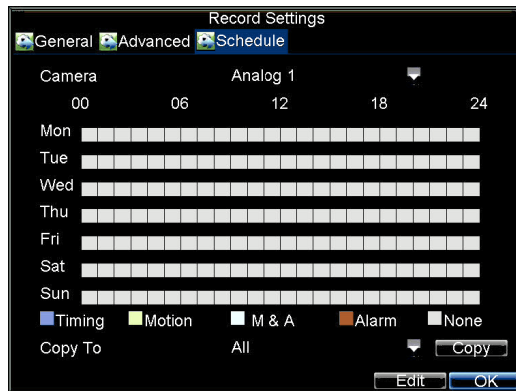


7. Click **OK** after the HDD has been initialized. You will return to the **Setup Wizard**.

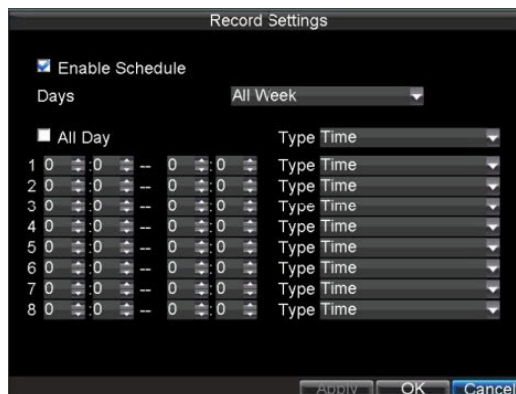
- Click **Next**. The **Record Settings** window opens.



- Click **Enter** to enter the Record Settings window.
- Select the **Schedule** tab.

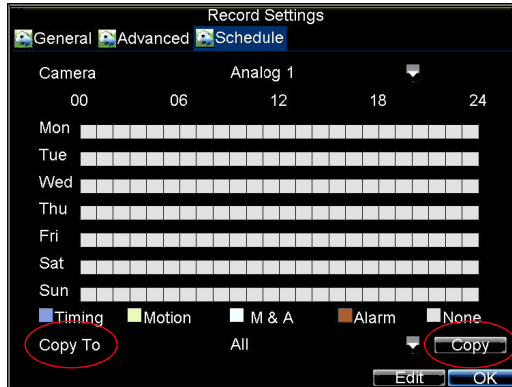


- Click **Edit**. A new recording schedule opens.



- Check both the **Enable Schedule** and **All Day** boxes. This enables the recording schedule and allows it to record continuously all day.
- Click **OK** to return to the **Schedule** tab.

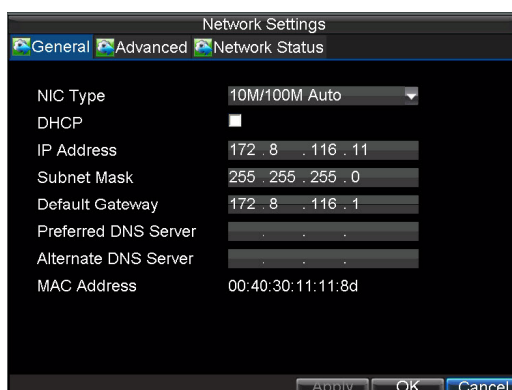
Note To copy the schedule to a different channel, select the channel or all under **Copy To**, then click **Copy**.



14. Click **Next**. The Network Settings window opens.



15. Click **Enter** to configure the network settings. The **Network Settings** window opens.



16. Enter the **IP Address**, **Subnet Mask**, and **Default Gateway**.

17. Click **OK** to return to the Setup Wizard.

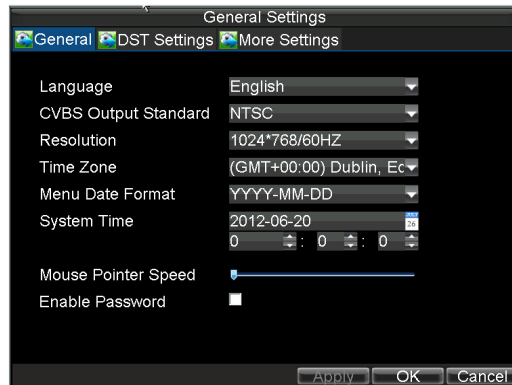
18. Click **Done** if you are satisfied with all of the settings you have entered. This finishes the setup procedure and closes the Setup Wizard.

This completes this initial setup process. Continue to [Setting the Date and Time](#).

Setting the Date and Time

It is extremely important to setup the system date and time to accurately time stamp recordings and events.

1. Click **Menu** > **Settings** > **General** to enter the **General Settings** menu.





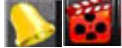


2. Enter the correct date and time in the **System Time** field.
3. Click **Apply** to save the changes.

Live View

Live View Icons

Some icons are provided on screen in Live View mode to indicate different camera status.

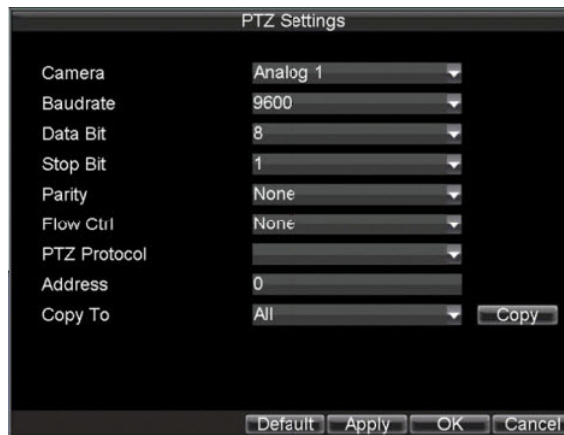
Icon	What it indicates
	Main output
	Auxiliary output
	Event Alarm Indicates video loss, video tampering, motion detection or relay alarm.
	Record Indicates the current channel is recording. The recording may have been started manually, from a schedule, and/or triggered from motion or alarm.
	Event Alarm and Record

Controlling PTZ Cameras

Settings for a PTZ camera must be configured before it is used. Before proceeding, verify that the PTZ and RS-485 of the DVR are connected properly.

Configuring PTZ Settings

1. Click **Menu** > **Settings** > **PTZ** to enter the **PTZ Settings** menu.

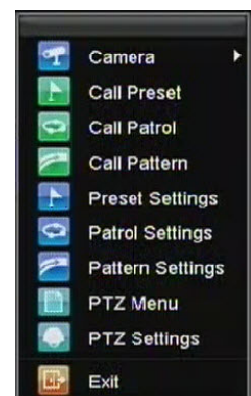


2. Select, next to the Camera label, the channel where the PTZ camera is installed.
3. Configure the settings for baud rate, data bit, stop bit, parity, flow control, PTZ protocol and address.
4. Click **OK** to save the changes and exit the PTZ Settings window.

Controlling PTZ Cameras with the PTZ Control Panel

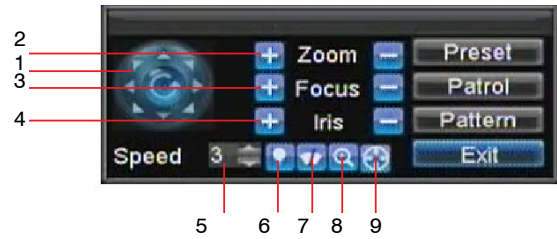
The PTZ control panel in the live view window provides a series of PTZ control buttons, as shown in the following figure:

Control	Action
Call Preset	Call a PTZ preset.
Call Patrol	Call a PTZ patrol.
Call Pattern	Call a PTZ pattern.
Preset Settings	Enter the PTZ preset configuration menu.
Patrol Settings	Enter the PTZ patrol configuration menu.
Pattern Settings	Enter the PTZ pattern configuration menu.
PTZ Menu	Enter the PTZ menu.
PTZ Settings	Enter the PTZ Settings menu.



Controlling PTZ Cameras with the Live View Menu

#	Control	Action
1	Directional Pad/Auto-scan Buttons	Controls the movements and directions of the PTZ. The center button is also used to start auto-scan of PTZ.
2	Zoom	Used to zoom in and out with the PTZ.
3	Focus	Used to adjust the focus of the PTZ.
4	Iris	Used to open or close the iris of the PTZ.
5	Speed	Adjusts the movement speed of the PTZ.
6	Light	Turns the PTZ light (if applicable) on and off.
7	Wiper	Turns the PTZ wiper (if applicable) on and off.
8	Zoom In	Instantly zooms PTZ in.
9	Center	Centers PTZ. Camera: Select a PTZ camera.

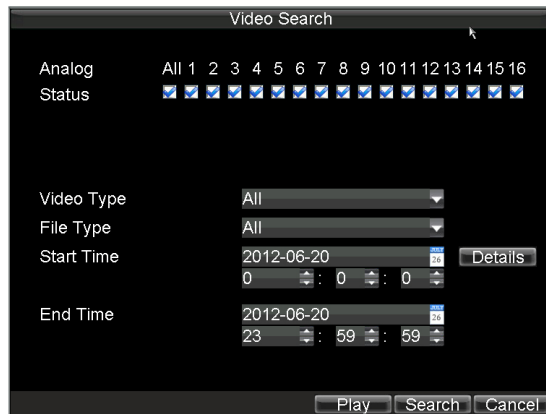


Playback

Playback of Recorded Video

To play back files from a general search:

1. Click **Menu > Video Search** to enter the **Video Search** menu.
2. Select the **General** tab, then set the search parameters by selecting cameras to search, a video/file type, and the start and end times.



- Click **Play** to start playback of all the files that met the specified search criteria.
– OR –

Click **Search** to bring up a list of search results. From this list of search results, you can select a file to play back, and then click **Play** to enter synchronous playback cameras selection.



Recorded video will automatically play back in the Playback interface (above).

Playback in Live View

You can also instantly playback from a channel while watching a Live View. The playback will be of recordings from the past 5 minutes. You can use the USB mouse or the DVR front panel controls or the remote control for playback.

Using a Mouse for Playback

- Right-click the mouse on the desired channel, then select the **Playback** button.

Recordings from the selected channel will start playing back in the Playback interface. An Attention message will appear if there are no recordings found from the previous 5 minutes. You may also press the **Play** button to view the day's recording for the selected channel.

You can also select additional channels for playback from the channel list on the right hand side of the Playback interface.

Using the Front Panel/Remote Controls

- Press the **Play** button. The Playback interface opens.
- Use the front panel or the remote to enter the channel for which you would like to view recordings.

For the remote control, press **SHIFT**. The **STATUS** light turns green. Then press the number buttons to select a channel.

Playback of recorded video begins.

Playing Video from the System Log

1. Click **Menu** > **Maintenance** > **Log Search** to enter the **Log Search** menu.

2. Select **Information** from the **Major Type** drop-down menu.
3. Select **Start Record** or **End Record** from the **Minor Type** drop-down menu.
4. Select a **Start** and **End** time.
5. Click **Search**.
A list of search results is displayed.
6. Select a video log for playback, then click **Play**.
The recording begins to play in the Playback interface.

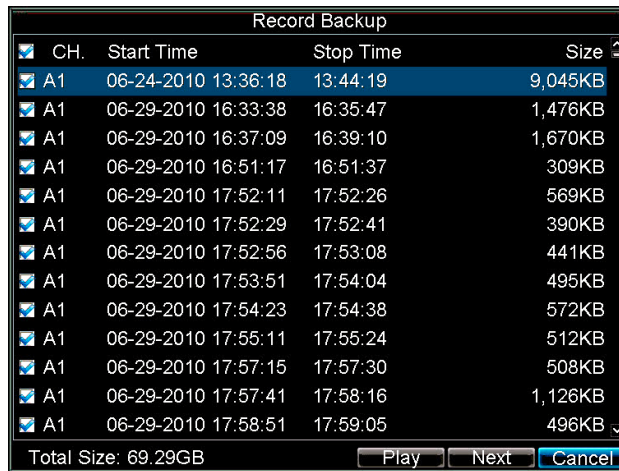
Backing Up

Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or a DVD writer.

1. Click **Menu** > **Video Export** to enter the **Record Backup** menu.

2. Select the desired search parameters to find files for export.

- Click **Export**. The **Record Backup** menu opens.



- Select the files to export. You can also click the **Play** button to verify that these files are indeed the ones you would like to export.
The size of the currently selected file is displayed in the lower-left corner of the window.
- Click **Next** to enter the **Export** menu.

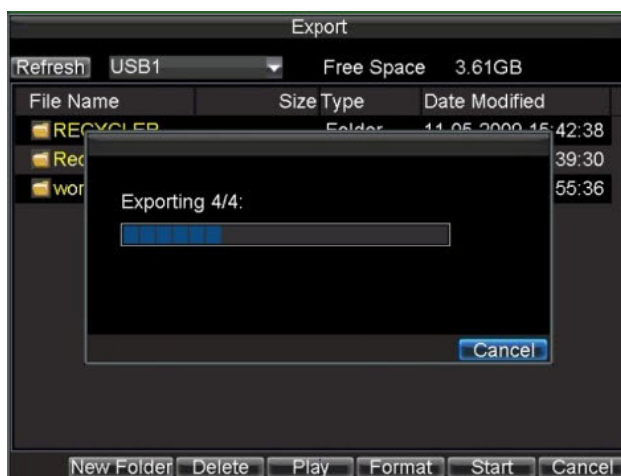


- Select a storage device for exporting from the drop-down list (USB Flash Drive, USB HDD, or DVD Writer).

If the backup device is not recognized:

- Click **Refresh**.
- Reconnect the device.
- Check with the vendor for compatibility.

7. Click **Start** to begin the backup process.



Confirming that the Export was Successful

When the backup process is complete, you can select the files from your device and click the **Play** button to verify that they have been exported successfully.

Note The Video Player software is automatically copied onto the device to which the recorded files were exported.

Honeywell Systems (Head Office)

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