

# Digital Video Recorder

Quick Guide

*CR8015ET*

*CR1615ET*



## About This Document

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This document contains instructions for DVR configuration and operation.

## Package Contents

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The package contains the following:

- Digital Video Recorder
- Power Cord
- Quick User Guide (This Document)
- Software CD (User's Manual included)
- Rack-mount Kit
- Assembly Screws for Adding Hard Disk Drives
- SATA Cables
- Infrared Remote Control

## Notice

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Specifications are subject to change without prior notice.

The information contained herein is to be considered for reference only.

The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (*OpenSourceGuide/OpenSourceGuide.pdf*).

## Warning

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



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Symbol	Publication	Description
	IEC60417, No.5032	Alternating current

## Important Safeguards

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### 1. Read Instructions

All the 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 the approval of the manufacturer 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. Placement and 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.

This equipment and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

Do not place this equipment on a closed space. Sufficient amount of ventilation air is necessary to avoid increase of ambient temperature which can cause improper operation or the risk of fire.

### 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.

You may want to install a UPS (Uninterruptible Power Supply) system for safe operation in order to prevent damage caused by an unexpected power stoppage. Any questions concerning UPS, consult your UPS retailer. This equipment should remain readily operable.

### 8. Power Cords

Operator or installer must remove power and TNT connections before handling 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 as this can result in 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:

A. When the power-supply cord or the plug has been damaged.

B. If liquid is spilled, or objects have fallen into the equipment.

C. If the equipment has been exposed to rain or water.

D. 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.

E. If the equipment has been dropped, or the cabinet damaged.

F. When the equipment exhibits a distinct change in performance — this indicates a need for service.

#### 14. Replacement Parts

When replacement parts are required, be sure the service technician has used 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. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions. The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

#### 18. Tmra

A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

## Disposal

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### WEEE (Waste Electrical & Electronic Equipment)

#### Correct Disposal of This Product

(Applicable in the European Union and other European countries with separate collection systems)



This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

## Specifications

### Video

Signal Format	NTSC, PAL or HD-TV (Auto Detect)
Video Input	Composite 8 or 16 inputs: BNC, 1 Vp-p, auto-terminating, 75 Ohms
Monitor Outputs	HDMI: 1 HDMI VGA: 1 SPOT: 1 BNC, 1 Vp-p, 75 Ohms
Video Resolution	HDMI: 3840x2160, 1920x1080, 1440x900, 1280x1024 VGA: 1920x1080, 1440x900, 1280x1024 Composite (SPOT): 720x480 (NTSC), 720x576 (PAL)
Record Speed	480ips @ Full HD (Real-time)
Playback Speed	120ips @ Full HD (Full Duplex)

### Inputs/Outputs

Alarm Input	8 or 16 terminal, programmable as NC or NO, 2.4V (NC) or 0.3V (NO) threshold, 5VDC
Alarm Output	4 relay output, programmable as NC or NO, 2A@125VAC, 1A@30VDC (NO)
Alarm Reset Input	1 TTL, terminal block
Internal Buzzer	78dB at 10cm
Network Connectivity	10/100Mbps, 1Gbps Ethernet (RJ-45)
Audio Input	RCA Input: 4 Line In
Audio Output	RCA Output: 1. Line Out
Text Input	POS Interface, ATM Interface

### Connectors

Video Input	Composite 8 or 16 BNC
Monitor Output	HDMI: 1 HDMI VGA: 1 VGA SPOT (Composite): 1 BNC
Audio In	4 RCA connector
Audio Out	1 RCA connector
Alarm Input/Output	Terminal Blocks
Ethernet Port	RJ-45
eSATA Port	eSATA
RS232 Serial Port	Two-connector terminal block
RS485 Serial Port	Two-connector terminal block
IR Port	1 Remote Control
USB Port	2 (USB 2.0)

### Storage

Primary Storage	SATA hard disk drive (up to 4)
Secondary Storage	eSATA hard disk drive (RAID) USB hard disk drive or flash drive

### General

Dimensions	17" (W) x 3.5" (H) x 16.3" (D) (430mm x 88mm x 415mm)
Unit Weight*	13 lbs. (5.9kg)
Shipping Weight*	19.4 lbs. (8.8kg)
Shipping Dimensions	21.1" (W) x 9.4" (H) x 21.1" (D) (535mm x 238mm x 535mm)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Operating Humidity	0% to 90%
Power	100 to 240 V~, ≤ 2.0A, 50/60Hz
Power Consumption**	76W
Approvals	FCC, CE, UL, CB, PSE

\* When two hard disk drives of 2TB are installed, the value was measured.

\*\* When four hard disk drives of 3TB are installed, the value was measured.

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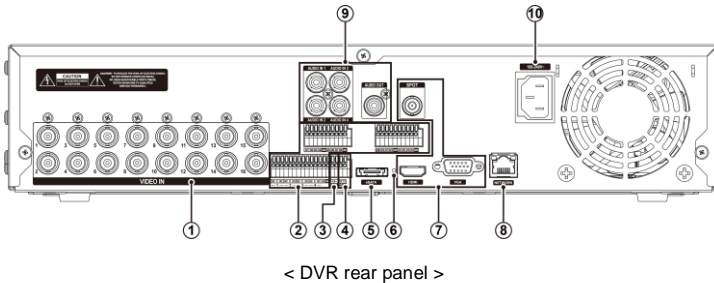


# Installation

No special tools are required to install the DVR. Refer to the installation manuals for the other items that make up part of your system.

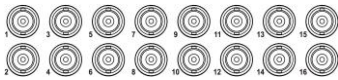
Your DVR can be used with either NTSC or PAL equipment.

**NOTE:** You cannot mix NTSC and PAL equipment. For example you cannot use a PAL camera and an NTSC monitor.



- |                |                        |                        |                |
|----------------|------------------------|------------------------|----------------|
| ① Video Input  | ② Alarm Input/Output   | ③ RS485 Port           | ④ RS232 Port   |
| ⑤ eSATA Port   | ⑥ Factory Reset Switch | ⑦ Video Out            | ⑧ Network Port |
| ⑨ Audio In/Out |                        | ⑩ Power Cord Connector |                |

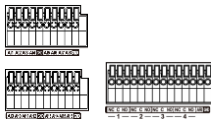
## Video Input



Your DVR can record audio from up to four sources. Connect the audio sources to Audio In 1, Audio In 2, Audio In 3 and Audio In 4 as needed using RCA jacks. Connect Audio Out to your amplifier.

Connect the coaxial cables from the video sources to the BNC Video In connectors.

## Alarm Input/Output



**NOTE:** To make connections on the Alarm Connector Strip, press and hold the button and insert the wire in the hole below the button. After releasing the button, tug gently on the wire to make certain it is connected. To disconnect a wire, press and hold the button above the wire and pull out the wire.

AI 1 to 16 (Alarm-In): You can use external devices to signal the DVR to react to events. Mechanical or electrical switches can be wired to the AI (Alarm-In) and GND (Ground) connectors. The threshold voltage of electrical switches for NC (Normally Closed) is above 2.4V and for NO (Normally Open) is below 0.3V, and should be stable at least 0.5 seconds to be detected. The voltage range of alarm input is from 0V to 5V.

GND (Ground): Connect the ground side of the Alarm input and/or alarm output to the GND connector.

**NOTE:** All the connectors marked GND are common.

NC/NO (Relay Alarm Outputs): The DVR can activate external devices such as buzzers or lights. Connect the device to the C (Common) and NC (Normally Closed) or C (Common) and NO (Normally Open) connectors. NC/NO is a relay output which sinks 2A@125VAC and 1A@30VDC.

ARI (Alarm Reset In): An external signal to the Alarm Reset In can be used to reset both the Alarm Out signal and the DVR's internal buzzer. Mechanical or electrical switches can be wired to the ARI (Alarm Reset In) and GND (Ground) connectors. The threshold voltage is below 0.3V and should be stable at least 0.5 seconds to be detected. Connect the wires to the ARI and GND connectors.

Connector Pin Outs:

AI (1 to 16)	Alarm Inputs 1 to 16
GND	Chassis Ground
NC	Relay Alarm Out (Normally Closed)
C	Relay Common
NO	Relay Alarm Out (Normally Open)
ARI	Alarm Reset In

## RS485 Port



The DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 half-duplex serial communications signals. The RS485 connector can also be used to control PTZ (pan, tilt, zoom) cameras. Connect RX+/TX+ and RX-/TX- of the control system to the + and - (respectively) of the DVR.

## RS232 Port



An RS232 port is provided to connect remote control devices such as a control keyboard. PTZ cameras or text-in devices can also be connected to the RS232 port.

Connector Pin Outs:

Master Unit		Slave Unit	
RX	→ To	→	TXD
TX	→ To	→	RXD
GND	→ To	→	GND

**NOTE:** Refer to the following for pin-out details for the 9-pin connector of the slave unit.



Male



Female

Pin 2	RXD (Receive Data)
Pin 3	TXD (Transmit Data)
Pin 5	GND (Ground)

## eSATA Port



An eSATA port is provided to connect external storage devices for recording or archiving video. Connect the external eSATA hard disk drive (RAID) cable to the eSATA port.

**CAUTION:** Do NOT connect or disconnect eSATA devices while the DVR power is on. The DVR must be powered down to connect or disconnect eSATA devices. Power up eSATA devices so they are ready for operation before powering up the DVR. Power down eSATA devices after powering down the DVR and then disconnect eSATA devices.

## Factory Reset Switch



The DVR has a Factory Reset switch to the left of the HDMI connector on the rear panel. This switch will only be used on the rare occasions that you want to return all the settings to the original factory settings.

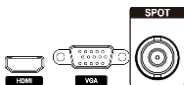
**CAUTION: When using the *Factory Reset*, you will lose any settings you have saved.**

To reset the unit, you will need a straightened paperclip:

1. Turn the DVR off.
2. Turn it on again.
3. While the DVR is initializing, the front panel LEDs will blink. When the front panel LEDs blink, poke the straightened paperclip into the unlabeled hole to the left of the HDMI connector.
4. Hold the switch until the DVR's internal buzzer sounds twice.
5. Release the reset switch. All of the DVR's settings are now at the original settings it had when it left the factory.

## Video Out

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**NOTE: Connect the monitor before the DVR boots so that video can be displayed on the monitor with the resolution you have set during system setup. If you want to use both the HDMI and VGA Monitor connectors, one of the monitors should be connected before the DVR boots, and the other monitor should be connected after the DVR boots.**

An HDMI (High-Definition Multimedia Interface) connector is provided so that you can use an HDMI monitor as your main monitor.

A VGA connector is provided so that you can use a standard, multi-sync computer monitor as your main monitor. Use the cable supplied with your monitor to connect it to the DVR.

A SPOT connector is provided so that you can use a spot monitor as needed.

## Network Port

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The DVR can be networked using the 10Mb/100Mb/1Gb Ethernet connector. Connect a Cat5e cable with an RJ-45 jack to the DVR connector. The DVR can be networked with a computer for remote monitoring, searching, configuration and software upgrades.

**CAUTION: The network connector is not designed to be connected directly with cable or wire intended for outdoor use.**

## Audio In/Out

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Your DVR can record audio from up to four sources. Connect the audio sources to Audio In 1, Audio In 2, Audio In 3 and Audio In 4 as needed using RCA jacks. Connect Audio Out to your amplifier.

**NOTE: It is the user's responsibility to determine if local laws and regulations permit recording audio. The DVR does not have amplified audio output, so you will need a speaker with an amplifier. The DVR does not have a pre-amplifier for audio input, so the audio input should be from an amplified source, not directly from a microphone.**

## Power Cord Connector

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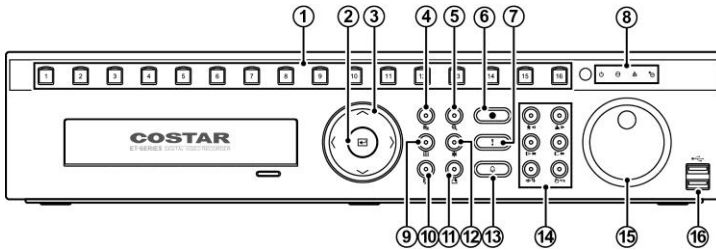


Connect the AC power cord to the DVR and then to a wall outlet.

**WARNING: ROUTE POWER CORDS SO THAT 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 IN TO ONE CIRCUIT.**

## Configuration

### Front Panel Buttons and LEDs



< DVR front panel >

- |                  |                    |                          |                 |
|------------------|--------------------|--------------------------|-----------------|
| ① Camera Buttons | ② Enter Button     | ③ Arrow Buttons          | ④ Menu Button   |
| ⑤ Zoom Button    | ⑥ PTZ Button       | ⑦ Panic Button           | ⑧ LED           |
| ⑨ Display Button | ⑩ Monitor Button   | ⑪ Bookmark Button        | ⑫ Freeze Button |
| ⑬ Alarm Button   | ⑭ Playback Buttons | ⑮ Jog Dial, Shuttle Ring | ⑯ USB Port      |


**NOTE:** The infrared sensor on the DVR is just to the right of the arrow buttons. Make certain that nothing blocks the sensor, or the remote control will not function properly.

When you use wireless communication devices (such as Wi-Fi or Bluetooth) near the DVR, the remote control might not function properly.

You can also use a USB mouse (not supplied) to navigate through the screens and menus much like you would on a computer.

**Camera Buttons** Pressing the individual camera buttons will cause the selected camera to display full screen.

**Enter Button**

- The  (Enter) button selects a highlighted item or completes an entry that you have made during system setup.

**Arrow Buttons** These buttons are used to navigate through menus and GUI. You can also use them to change numbers by highlighting a number in the menu and using the Up and Down arrow buttons to increase or decrease the number's value.

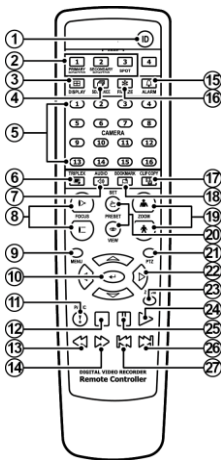
These buttons are also used to control Pan and Tilt when in the PTZ mode. When in the PIP display format, pressing the Up and Down arrow buttons moves the position of the small screen counter-clockwise and clockwise. Pressing the Left and Right buttons moves through screen pages in the Live Monitoring mode and Search mode.

Menu Button	Pressing the <b>MENU</b> button enters the Setup screen. You will need to enter the authorized user and password to access Setup. Pressing the button also closes the current menu or setup dialog box. In the Playback mode, pressing the button displays the Search menu. In the Search mode clip-copying can be done instantly by pressing and holding the button for three or more seconds.
Zoom Button	Pressing the <b>ZOOM</b> button zooms the current image on the screen. A PIP with a rectangle temporarily displays showing what area of the screen has been enlarged. You can use the arrow buttons to move the rectangle to another area.
PTZ Button	Pressing the <b>PTZ</b> button enters the PTZ (Pan/Tilt/Zoom) mode which allows you to control properly configured cameras.
Panic Button	Pressing the <b>PANIC</b> button starts panic recording of all camera channels, and displays <b>!</b> on the screen. Pressing the button again will stop panic recording.
LED	<ul style="list-style-type: none"> <li>• <b>Power LED:</b> The Power LED is lit when the unit is On.</li> <li>• <b>Network LED:</b> The Network LED is lit when the unit is connected to a network via Ethernet.</li> <li>• <b>eSATA LED:</b> The eSATA LED is lit when an eSATA device is connected to the DVR.</li> <li>• <b>HDD LED:</b> The HDD LED flickers when the DVR is recording or searching video on the hard disk drive.</li> </ul>
Display Button	Pressing the <b>DISPLAY</b> button toggles between different display formats. The available formats are: PIP, 2x2, 3x2, 3x3, or 4x4.
Monitor Button	Pressing the <b>MONITOR</b> button toggles the monitor selection between Main and Spot.
Bookmark Button	When in the playback mode, pressing the <b>BOOKMARK</b> button adds the current playback point to the bookmark list or moves to the registered bookmark point.
Freeze Button	Pressing the <b>FREEZE</b> button freezes the current live screen.
Alarm Button	The <b>ALARM</b> button has two functions. First, it will reset the DVR's outputs including the internal buzzer during an alarm. Second, it will display the event log when you are in the live monitoring mode unless there is an active alarm.
Playback Buttons	<ul style="list-style-type: none"> <li>• <b>Backward:</b> When in the pause mode, pressing the <b>◀</b> button moves to the previous image. The button is also used to Zoom Out while in the PTZ mode.</li> <li>• <b>Forward:</b> When in the pause mode, pressing the <b>▶</b> button moves to the next image. The button is also used to Zoom In while in the PTZ mode.</li> <li>• <b>Rewind:</b> Pressing the <b>◀◀</b> button plays video backward at high speed. Pressing the button again toggles the playback speed from <b>◀◀</b>, <b>◀◀◀</b> and <b>◀◀◀◀</b>. The button is also used for Near Focus in the PTZ mode.</li> <li>• <b>Play/Pause:</b> Pressing the <b>⏮</b> button plays back video at regular speed. The screen displays <b>  </b> when the DVR is in the Pause mode and the screen displays <b>▶</b> when the DVR is playing back video. The button is also used to save Presets while in the PTZ mode.</li> <li>• <b>Fast Forward:</b> Pressing the <b>▶▶</b> button plays video forward at high speed. Pressing the button again toggles the playback speed from <b>▶▶</b>, <b>▶▶▶</b> and <b>▶▶▶▶</b>. The button is also used for Far Focus in the PTZ mode.</li> <li>• <b>Search/Stop:</b> Pressing the <b>🔍</b> button while in the Live Monitoring mode enters the Search mode. Pressing the <b>🔍</b> button while in the Search mode returns the DVR to the Live Monitoring mode. The button is also used to load a Preset View in the PTZ mode.</li> </ul>

Jog Dial,  
Shuttle Ring

- **Jog Dial:** When in the playback mode, you can play video forward image-by-image by turning the Jog Dial clockwise and backward image-by-image by turning the Jog Dial counterclockwise. When in the PIP mode, you can make the PIP screen smaller by turning the Jog Dial clockwise and larger by turning the Jog Dial counterclockwise. When in the Setup mode, you can change number values by highlighting the item in the menu and turning Jog Dial clockwise or counterclockwise to increase or decrease the number.
- **Shuttle Ring:** The Shuttle Ring only functions in the Playback mode. The Shuttle Ring is spring loaded and returns to the center position when released. Turning the ring clockwise plays video forward. Turning the ring counterclockwise plays video backward. Playback speed varies with the amount the ring is turned. The playback speeds are ◀◀, ◀◀◀, ◀◀◀◀, ▶, ▶▶, ▶▶▶ and ▶▶▶▶. When you release the ring, it snaps back to the center position and the video pauses.

IR Remote Control



- |                         |                          |
|-------------------------|--------------------------|
| ① ID Button             | ⑮ Alarm Button           |
| ② Monitor Buttons       | ⑯ Freeze Button          |
| ③ Display Button        | ⑰ Clip Copy Button       |
| ④ Sequence Button       | ⑱ Bookmark Button        |
| ⑤ Camera Buttons        | ⑲ Zoom In/Out Button     |
| ⑥ Triplex Button        | ⑳ Preset Set/View Button |
| ⑦ Audio Buttons         | ㉑ PTZ Mode Button        |
| ⑧ Focus Near/Far Button | ㉒ Arrow Buttons          |
| ⑨ Menu Button           | ㉓ Zoom Mode Button       |
| ⑩ Enter Button          | ㉔ Play Button            |
| ⑪ Panic Button          | ㉕ Pause Button           |
| ⑫ Stop Button           | ㉖ Next Button            |
| ⑬ RW Button             | ㉗ Previous Button        |
| ⑭ FF Button             |                          |

ID Button

If a DVR System ID is set to 0, the infrared remote control will control that DVR without any additional operations. If the system ID is 1 to 16, you must to press the **ID** button and then press the number button (1 to 16) in order to control that DVR. If the System ID of two or more DVRs is set to 0, those DVRs will react to the infrared remote control at the same time.

Sequence Button

Pressing the **SEQUENCE** button displays live channels sequentially.



Clip Copy Button

Pressing the **CLIP COPY** button allows you to copy video clips.

Turning on the Power



Connecting the power cord to the DVR turns on the unit. The unit takes approximately one minute and 30 seconds to initialize.

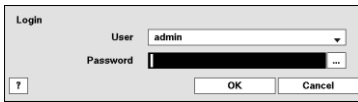
## Shutting down the System



Select the System menu → General → System Shutdown and press the  button. The Shutdown screen displays asking you to confirm whether or not you want to shut the system down. After selecting Shutdown in the screen and pressing the  button, a screen will appear telling you when it is safe to disconnect power.



## Initial Unit Setup

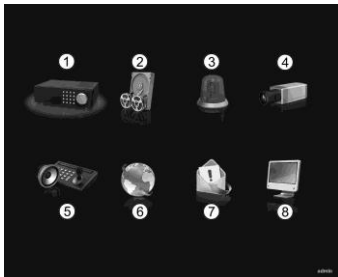
Before using your DVR for the first time, you will want to establish the initial settings. This includes items such as time and date, display language, camera, remote control, record mode, network and password. Your DVR can be set up using various screens and dialog boxes.

Press the  button or move the mouse pointer on the right edge of the screen and then select  (Login) in the Live Monitoring menu to enter the setup screens. The Login screen appears.



Select a User and enter the password by pressing the appropriate combination of Camera number buttons and then the  button. There is no default password when logging in the admin user for the first time. If you do not know the password, click the  button for guidance.

Press the  button or move the mouse pointer on the right edge of the screen and then select  (Setup) in the Live Monitoring menu.




- ① System
- ② Record
- ③ Event
- ④ Camera
- ⑤ Device
- ⑥ Network
- ⑦ Notification
- ⑧ Display

<b>System Setup</b>	<b>Record Setup</b>	<b>Event Setup</b>	<b>Camera Setup</b>
General	General	Motion	General
Date/Time	Schedule	Alarm-In	PTZ
User	Pre-Event	Video Loss	
Storage		Video Blind	
System Event		Text-In	
<b>Device Setup</b>	<b>Network Setup</b>	<b>Notification Setup</b>	<b>Display Setup</b>
Audio	General	Callback	OSD
Alarm-Out	LAN	Mail	Main Monitor
Remote Control	FEN	SNS	Spot Monitor
	RTSP	FTP	
	WebGuard	Schedule	
	VNC		
	NetFS		

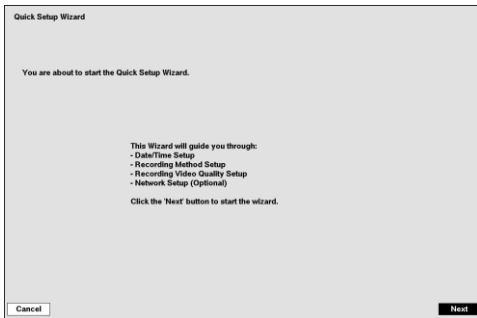
**NOTE:** For detailed descriptions of the system setup, refer to the User's Manual on the software CD.

## Setup Wizard

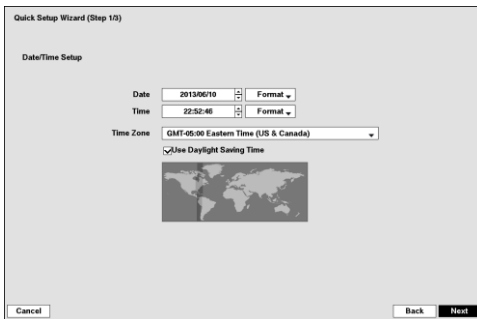
Select the **System** menu → **General** → **Wizard** and press the  button. The Wizard setup screen appears. The Wizard setup guides you through configuring the system for basic operation.



Select either **Quick wizard** or **Network wizard** and select the **Next** button to start the selected setup wizard.



If you selected the **Quick wizard**, selecting the **Next** button starts the **Quick Setup Wizard**.



### Date/Time Setup

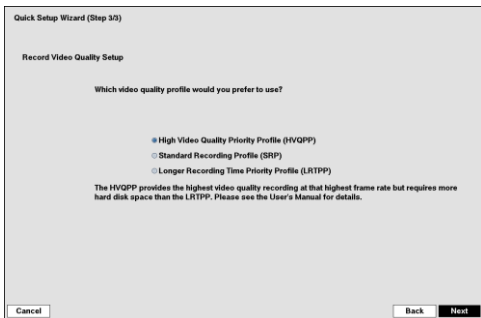
- **Date:** Set the system date and select the date format.
- **Time:** Set the system time and select the time format.
- **Time Zone:** Select your time zone. The Time Zone can be selected on the map.
- **Use Daylight Saving Time:** Selecting the box sets the system to use daylight saving time.





## Record Method Setup

- Select the desired recording mode from:
  - Motion Event Record (Recommended)
  - Continuous & Motion Event Record
  - Continuous Record



## Record Video Quality Setup

- Select the desired video quality profile from:
  - Higher Video Quality Priority Profile
  - Standard Recording Profile
  - Longer Recording Time Priority Profile



Select the Finish button to finish the Quick Setup Wizard and select the Go to Network Setup button to start the Network Setup.

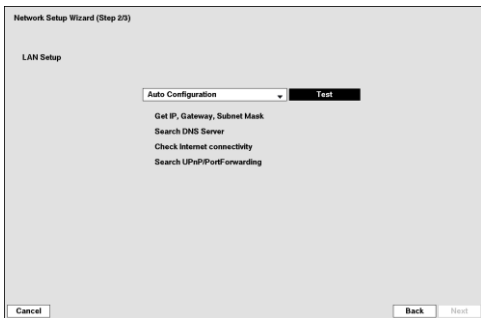


If you selected the Go to Network Setup, select the Next button to start the Network Setup Wizard.



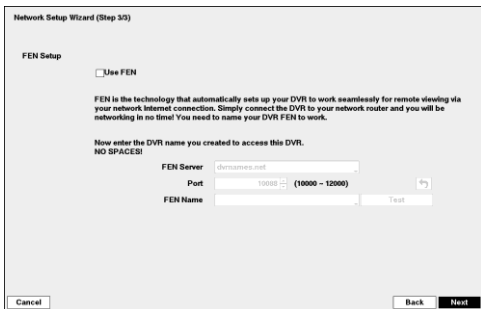
## Internet Connection

Select whether or not your DVR is connected to the Internet.



## LAN Setup

Select between Auto Configuration and Manual Configuration for network configuration, and then select the Test button to test the network configuration you selected.



## FEN Setup

- **Use FEN:** Highlight and press the  button to toggle between On and Off. FEN is the technology that automatically sets up your DVR to work seamlessly for remote viewing via your network internet connection. For FEN to work, naming your DVR will be required.
- **FEN Name:** Enter the DVR name to be registered on the FEN server. The FEN Name you entered should be checked by selecting Test, otherwise the FEN changes will not be saved.

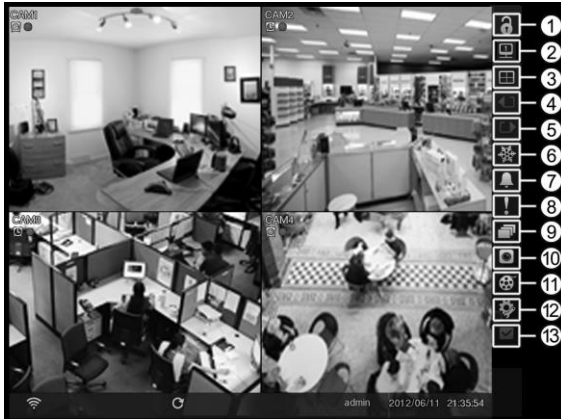


Select the Finish button to finish the Setup Wizard.





















# Operation






## Live Monitoring

While in the live monitoring mode, pressing the **MENU** button displays the following Live Monitoring menu on the right edge of the screen. Pressing the **MENU** button again hides the menu. You can navigate through menus and items by pressing the arrow buttons.



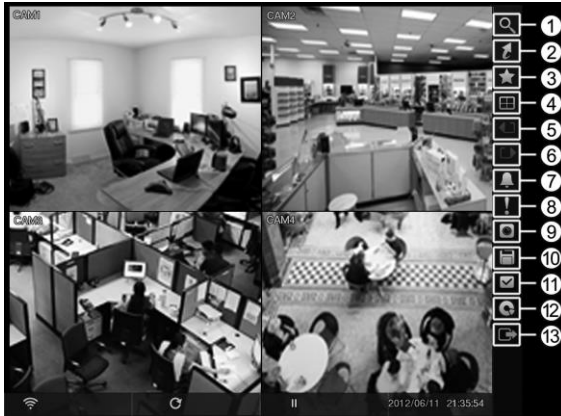
- ① Login/Logout
- ② Monitor
- ③ Display
- ④ Previous Group
- ⑤ Next Group
- ⑥ Freeze
- ⑦ Alarm
- ⑧ Panic
- ⑨ Sequence
- ⑩ Camera Menu
- ⑪ Search
- ⑫ Setup
- ⑬ Status

<b>Login/Logout</b>	Selecting  accesses the Login screen, and you will be asked to select a User and enter the password to log into the system. Selecting  displays the Logout screen asking you to confirm whether or not you want to log out the current user.
<b>Monitor</b>	Selecting  (Monitor) in the Live Monitoring menu will allow you to select the monitor from Main and Spot. It is the same as pressing the <b>MONITOR</b> button. You can select the screen format and sequence monitoring of the selected monitor.
<b>Display</b>	Selecting  displays the Display Menu. <ul style="list-style-type: none"> <li>• Full Screen: Selecting  and choosing the camera number button displays the selected camera full screen.</li> <li>• PIP, 2x2, 1+5, 1+7, 3x3, 4x4: Selecting , , , , , or  displays the cameras in the selected multiview screen mode.</li> <li>• Camera/Status OSD: Selecting Camera OSD or Status OSD toggles Camera OSD or Status OSD On and Off.</li> </ul>
<b>Previous/Next Group</b>	Selecting  or  moves to the previous or next page.
<b>Freeze</b>	Selecting  will freeze the current image on the screen until you select  again.
<b>Alarm</b>	Selecting  resets the DVR's outputs including the internal buzzer during an alarm.
<b>Panic</b>	Selecting  starts panic recording of all cameras, and selecting  again stops panic recording.
<b>Sequence</b>	Selecting  causes the cameras to display sequentially, and selecting  again exits the Sequence mode.
























<b>Camera Menu</b>	<p>Selecting  displays the Camera Menu.</p> <ul style="list-style-type: none"> <li>• <b>PTZ:</b> Selecting PTZ and choosing the camera number allows you to control the selected camera as long as it has Pan, Tilt and Zoom capabilities.</li> <li>• <b>Zoom:</b> Selecting Zoom and choosing the camera number zooms the current image of the selected camera on the screen.</li> <li>• <b>Audio:</b> Selecting Audio toggles audio output On and Off.</li> <li>• <b>Color Control:</b> Selecting Color Control and choosing the camera number allows you to control brightness, contrast, hue and saturation for each camera for the selected camera.</li> <li>• <b>Spot Monitor:</b> Selecting Spot Monitor allows you to select the camera you want to display on a Spot monitor.</li> <li>• <b>Edit Group:</b> Selecting Edit Group enters to the Active Cameo mode.</li> <li>• <b>Triplex:</b> Selecting  (Search) → Triplex enters the Triplex mode. It enables <b>monitoring, recording and playing back at the same time.</b></li> </ul>
<b>Search</b>	<p>Selecting  displays the Search Menu.</p> <ul style="list-style-type: none"> <li>• <b>All Channels:</b> Selecting All Channels exits the live monitoring mode and enters the search mode.</li> <li>• <b>Triplex:</b> Selecting Triplex enters the Triplex mode.</li> </ul>
<b>Setup</b>	Selecting  enters the Main Setup screen.
<b>Status</b>	Selecting  will allow you to check the status of the DVR's system, inputs and storage.

## Searching Video

While in the search mode, pressing the **MENU** button displays the following Search menu on the right edge of the screen. Pressing the **MENU** button again hides the menu. You can navigate through menus and items by pressing the arrow buttons.



- ① Search
- ② Go To
- ③ Bookmark
- ④ Display
- ⑤ Previous Group
- ⑥ Next Group
- ⑦ Alarm
- ⑧ Panic
- ⑨ Camera Menu
- ⑩ Export
- ⑪ Status
- ⑫ Data Source
- ⑬ Exit

<b>Search</b>	<p>Selecting  displays the Search menu.</p> <ul style="list-style-type: none"> <li>• <b>Event Log Search:</b> Selecting <b>Event Log Search</b> selects video from the event log.</li> <li>• <b>Record Table Search:</b> Selecting <b>Record Table Search</b> selects using a recording table.</li> <li>• <b>Motion Search:</b> Selecting <b>Motion Search</b> selects motion events.</li> <li>• <b>Text-In Search:</b> Selecting <b>Text-In Search</b> selects text input strings.</li> </ul>
<b>Go To</b>	<p>Selecting  displays the Go to menu.</p> <ul style="list-style-type: none"> <li>• <b>Go to the First:</b> Selecting <b>Go to the First</b> displays the first recorded image.</li> <li>• <b>Go to the Last:</b> Selecting <b>Go to the Last</b> displays the last recorded image.</li> <li>• <b>Go to the Date/Time:</b> Selecting <b>Go to the Date/Time</b> allows you to set the date and time you want to search for video.</li> </ul>
<b>Bookmark</b>	<p>Selecting  adds the current playback point to the bookmark list.</p>
<b>Display</b>	<p>Selecting  displays the Display Menu.</p> <ul style="list-style-type: none"> <li>• <b>Full Screen:</b> Selecting  and choosing the camera number button displays the selected camera full screen.</li> <li>• <b>2x2, 1+5, 1+7, 3x3, 4x4:</b> Selecting  (Display) → , , , ,  or  (2x2, 1+5, 1+7, 3x3 or 4x4) displays the cameras in the selected multiview screen mode.</li> <li>• <b>Camera/Status OSD:</b> Selecting <b>Camera OSD</b> or <b>Status OSD</b> toggles Camera OSD or Status OSD On and Off.</li> </ul>
<b>Previous/Next Group</b>	<p>Selecting  or  moves to the previous or next page.</p>
<b>Alarm</b>	<p>Selecting  resets the DVR's outputs including the internal buzzer during an alarm.</p>
<b>Panic</b>	<p>Selecting  starts panic recording of all cameras, and selecting  again stops panic recording.</p>
<b>Camera Menu</b>	<p>Selecting  displays the Camera Menu.</p> <ul style="list-style-type: none"> <li>• <b>Zoom:</b> Selecting <b>Zoom</b> and choosing the camera number zooms the current playback image of the selected camera on the screen.</li> <li>• <b>Audio:</b> Selecting <b>Audio</b> toggles audio playback On and Off.</li> <li>• <b>Show/Hide Text-In:</b> Selecting <b>Show Text-In</b> or <b>Hide Text-In</b> shows or hides the text-in data on the screen if the video was recorded with text-in data.</li> <li>• <b>Edit Group:</b> Selecting <b>Edit Group</b> enters to the Active Cameo mode.</li> </ul>
<b>Export</b>	<p>Selecting  displays the Export menu.</p> <ul style="list-style-type: none"> <li>• <b>A-B Clip-Copy:</b> Selecting <b>A-B Clip-Copy</b> will set the starting point of the video to be clip copied, and the  icon displays at the bottom-left corner of the screen. Selecting <b>A-B Clip-Copy</b> again will set the ending point of the video to be clip copied and displays the <b>Clip-Copy</b> screen.</li> <li>• <b>Clip-Copy:</b> Select <b>Clip-Copy</b>, and the <b>Clip-Copy</b> screen appears to allow clip copy setup.</li> <li>• <b>Print:</b> Selecting <b>Print</b> allows you to print a selected image.</li> </ul>
<b>Status</b>	<p>Selecting  will allow you to check the status of the DVR's system, inputs and storage.</p>
<b>Data Source</b>	<p>Selecting  allows you to select the data source to be searched.</p>
<b>Exit</b>	<p>Selecting  exits the search mode and enters the live monitoring mode.</p>

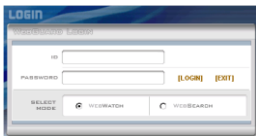
# Remote Program

## WebGuard

WebGuard allows you to access a remote DVR, monitor live video images and search recorded video using Internet Explorer web browser anytime from virtually anywhere.

Start Internet Explorer on your local PC. You can run the WebGuard program by entering the following information in the address field.

- “http://IP address:port number” (The DVR IP address and the WebGuard port number (default: 12088) set in the Network setup screen (WebGuard tab))
- Or, “http://FEN server address/FEN name” (The FEN server address and the FEN name registered on the FEN server)
- Or, “http://www.dvronline.net” (Entering the DVR IP address or the FEN name will be required when logging in)



Select between the WEBWATCH (Web monitoring) and WEBSEARCH (Web search) modes. Entering ID and PASSWORD and clicking the [LOGIN] button logs in using the selected mode.

You will need to enter the DVR IP address in the DVR ADDRESS field when running the WebGuard program by entering http://www.dvronline.net. Selecting the Use DVRNS option allows you to enter the FEN name registered on the FEN server instead of the IP address. You must enter the FEN server address and port number in the SETUP setting when selecting the Use DVRNS option.



Web Monitoring



Web Search

**NOTE:** For detailed instructions on operating the WebGuard program, refer to the User's Manual on the software CD.

## StarNET

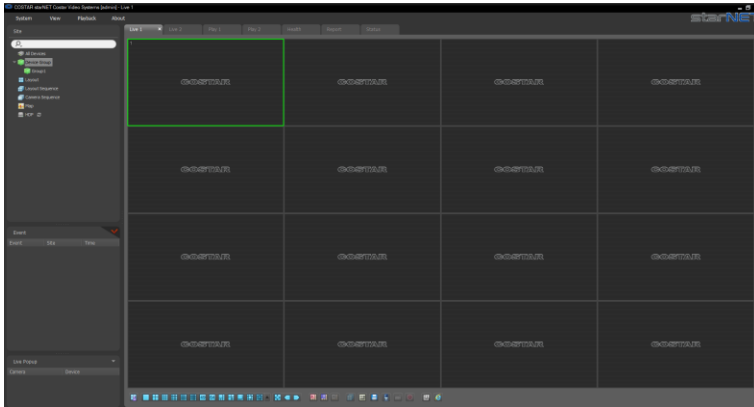
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StarNET program, which is designed to be used with remote digital video recorder, is an integrated software program that controls system management, video monitoring, video recording and image playback of multiple remote sites.

**CAUTION: If an older version of StarNET software is installed on your computer, a screen appears asking you to upgrade the software. In this case, you are required to upgrade the software according to the instructions in the screen.**

Insert the installation CD and install the StarNET software following the instructions.

After installing the StarNET software, run the StarNET program as follows: Go to the Start menu on the PC → Click StarNET → Enter login information.



**NOTE: For detailed instructions on operating the StarNET program, refer to the User's Manual on the software CD.**


## StarNET Mobile

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StarNET Mobile allows you to access remote sites and monitor live video using mobile devices anytime from virtually anywhere.

**CAUTION: This program uses large amounts of data and you are responsible for all data charges. Please contact your service provider's customer service to confirm or add an unlimited data plan.**

### Android-based mobile devices

1. Open the Play Store (Google Play)  on your Android device.
2. In Play Store (Google Play), enter StarNET Mobile in the search field.
3. Install StarNET Mobile and open it.

**NOTE:** To uninstall StarNET Mobile, go to **Settings** → **Applications** → **Manage applications**. Select **StarNET Mobile** and press **Uninstall**.

4. Press the Menu button on your mobile device. The following start-up screen will appear.



- **New site:** Registers device.
- **Delete site:** Deletes device. Only displayed when a registered device exists.

5. Register the device by pressing **New Site** and entering the device information.



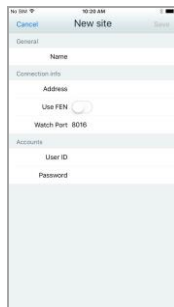
- **General:** Enter a name of the device to be used in StarNET Mobile.
- **Connection Info:** Configure FEN, remote address, and remote port settings.
  - NOTE:** Deselect the checkbox if FEN is not enabled on the device. If using a separate FEN server, tap (**Settings**) to configure FEN server settings. For more details, contact your FEN server administrator.
  - NOTE:** If FEN feature is not enabled on the device, deselect **Use FEN** checkbox and enter the device's IP address under **Address**. Default value is recommended for the **Port** setting.
- **Accounts:** Enter the User ID and Password used to login to the device.

### iOS-based mobile devices

1. Open App Store on your device.
2. In App Store, enter **StarNET Mobile I** in the search field.
3. Install **StarNET Mobile I** and open it.

**NOTE:** To remove the **StarNET Mobile I** program, press and hold the program icon for 2 seconds and then press the button.

4. Press the (**New Registration**) button on the title bar at the top. The following menu will appear.



- **General:** Enter a name of the device to be used in StarNET Mobile I.
- **Connection Info:** Configure FEN, remote address, and remote port settings.
  - NOTE:** Deselect the checkbox if FEN is not enabled on the device. If using a separate FEN server, tap (**Settings**) to configure FEN server settings. For more details, contact your FEN server administrator.
  - NOTE:** If FEN feature is not enabled on the device, deselect **Use FEN** checkbox and enter the device's IP address under **Address**. Default value is recommended for the **Port** setting.
- **Accounts:** Enter the User ID and Password used to login to the device.



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