# User Manual
# N846 Series



# User Manual
# N846 Series

*Thank you for purchasing this product. Lorex Corporation is committed to providing our customers with a high quality, reliable security solution.*

*This manual refers to the following models:*

N846A62

*For the latest online manual, downloads and product updates, and to learn about our complete line of accessory products, please visit our website at:*

lorex.com



**WARNING**

RISK OF ELECTRIC SHOCK
DO NOT OPEN



**WARNING**: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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.

**WARNING**: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

**CAUTION**: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

# Table of contents


**1 Important Safeguards ..... 1**
- 1.1 General Precautions ..... 1
- 1.2 Installation ..... 1
- 1.3 Service ..... 2
- 1.4 Use ..... 3

**2 Package Contents ..... 4**

**3 Recorder Overview ..... 5**
- 3.1 Front Panel ..... 5
- 3.2 Back Panel ..... 5

**4 Basic System Setup ..... 7**
- 4.1 STEP 1: Connect cameras ..... 7
- 4.2 STEP 2: Connect router ..... 7
- 4.3 STEP 3: Connect mouse ..... 7
- 4.4 STEP 4: Connect monitor ..... 8
- 4.5 STEP 5: Connect power ..... 8
- 4.6 STEP 6: Upgrade Firmware to Latest Version (If Available) ..... 8
- 4.7 Quick Access to System Information ..... 9
- 4.8 Connecting Wired Cameras to the Local Area Network (LAN) (Alternative Camera Setup) ..... 10

**5 Fusion Setup ..... 13**
- 5.1 Part One — Wired Setup ..... 13
- 5.2 Part Two — Installing the **Lorex Home** App ..... 13
- 5.3 Part Three — Connecting your Lorex Fusion Wi-Fi Camera ..... 14
  - 5.3.1 Connecting your Lorex Fusion Wi-Fi Camera to the App ..... 14
  - 5.3.2 Connecting your Lorex Fusion Wi-Fi Camera to your Recorder ..... 15
- 5.4 Adjusting Fusion Settings ..... 16
  - 5.4.1 Turning Off Duplicate Notifications ..... 16
  - 5.4.2 Customize your Lorex Fusion Wi-Fi Camera's Recording Settings ..... 18

**6 Camera Installation ..... 19**
- 6.1 Installation Tips ..... 19
- 6.2 Installing Cameras ..... 19
- 6.3 Connecting Camera Extension Cables ..... 20

**7 Using the Mouse ..... 21**

**8 Setting the Date & Time ..... 22**

**9 Using the On-Screen Display ..... 23**
- 9.1 Navigation Bar ..... 23
- 9.2 Quick Menu ..... 23
- 9.3 Camera Toolbar ..... 24
- 9.4 On-Screen Keyboards ..... 25
- 9.5 Camera Image Settings ..... 25

**10 Recording ..... 28**
- 10.1 Video Recording Types ..... 28
- 10.2 Configuring Recording Quality ..... 28
- 10.3 Setting the Recording Schedule ..... 29
- 10.4 Setting up Scheduled or Manual Recording ..... 30
- 10.5 Configuring HDD (Hard Disk Drive) Overwrite ..... 31

**11 Playback ..... 33**
- 11.1 Playing Back Video from the Hard Disk Drive ..... 33
- 11.2 Playback Controls ..... 33
- 11.3 Area Search ..... 35
- 11.4 Video Clip Backup ..... 36
- 11.5 Playing Back Video from a USB Drive ..... 38

**12 Backup....39**
12.1 Formatting the USB Flash Drive....39
12.2 Backing Up Video....40
12.3 Using Video Clip Backup....40
12.4 Viewing Backed Up Files....41
12.4.1 Viewing Backed Up Files on PC....41
12.4.2 Viewing Backed Up Files on Mac....41
12.4.3 Lorex Player Controls....43
**13 Motion Detection....45**
13.1 Status Icons....45
13.2 Configuring Motion Detection....45
**14 Active Deterrence....48**
14.1 Automatic Deterrence Settings....48
14.1.1 Automatic Warning Light....48
14.1.2 Automatic Voice Prompt....51
14.1.3 Automatic **Smart Security Lighting™**....54
14.2 Manual Deterrence Features....57
14.2.1 Siren....57
14.2.2 **Smart Security Lighting™**....58
14.2.3 Color Night Vision Booster....59
14.2.4 Manually Activate Deterrence Features....61
**15 Smart Motion Detection....63**
15.1 Ensuring Accurate Person, Vehicle & Animal Detection....63
15.2 Configuring Person, Vehicle & Animal Detection....64
15.3 Searching for Person, Vehicle & Animal Detection (Smart Search)....67
15.4 Configuring Active View....67
**16 Face Detection....69**
16.1 Ensuring Face & Mask Detection Accuracy....69
16.2 Enable Face & Mask Detection in Smart Plan....70
16.3 Configuring Face Detection....71
16.4 Configuring Mask Detection....73
16.5 Live Preview of Face & Mask Detection....74
16.6 Searching for Face & Mask Detection (Smart Search)....75
**17 Package & Envelope Detection....77**
17.1 Ensuring Package & Envelope Detection Accuracy....77
17.2 Enable Package & Envelope Detection in Smart Plan....78
17.3 Configuring Package & Envelope Detection....78
17.4 Searching for Package & Envelope Detection (Smart Search)....81
**18 Heat Map....83**
18.1 Enable Heat Map in Smart Plan....83
18.2 Configuring Heat Map....83
18.3 Searching for Heat Map (Smart Search)....84
**19 Safeguard™....86**
19.1 Ensuring Safeguard Detection Accuracy....86
19.2 Configuring **Safeguard™**....86
19.3 Searching for **Safeguard™** events (Smart Search)....89
**20 Sound Detection....91**
20.1 Configuring Sound Detection....91
**21 Managing Passwords and User Accounts....93**
21.1 User Accounts....93
21.1.1 Changing Passwords....93
21.1.2 Adding Users....94
21.1.3 Modifying Users....95
21.1.4 Deleting Users....95

21.2 Account Groups ....95
21.2.1 Adding Groups....95
21.2.2 Modifying Groups....96
21.2.3 Deleting Groups ....96
**22 Using the Main Menu....98**
22.1 Main Menu Overview ....98
22.2 Setting the Monitor Resolution (Display)....98
22.3 Configuring Sequence Mode ....100
22.4 Events Menu ....100
22.4.1 Configuring Smart Plan....101
22.4.2 Configuring Video Loss Settings....102
22.4.3 Configuring Hard Disk Drive Warnings....102
22.4.4 Configuring Network Warnings ....103
22.4.5 Searching Event Logs....104
22.5 Device Menu....104
22.5.1 Viewing Camera Status....105
22.5.2 Camera Firmware Versions ....105
22.5.3 Upgrading Camera Firmware....106
22.5.4 Configuring Video Overlay Settings....107
22.5.5 Configuring Privacy Masking ....107
22.5.6 Creating Custom Channel Names....108
22.5.7 Configuring Snapshot Recording Settings ....109
22.6 System Menu ....109
22.6.1 Configuring General System Settings ....110
22.6.2 Configuring RS–232 ....111
22.6.3 Configuring Holidays ....111
22.6.4 Selecting DHCP or Static IP Address (TCP/IP) ....113
22.6.5 Configuring System Ports (Connection)....113
22.6.6 Configuring Email Alerts....114
22.6.7 Configuring Switch Settings (Advanced) ....116
22.6.8 P2P Setting ....117
22.6.9 Configuring Pre-Recording ....118
22.6.10 Formatting the Hard Disk Drive....118
22.6.11 Configuring Hard Disk Drive Type ....119
22.6.12 Configuring Record Estimate (Recording Calculator) ....120
22.6.13 FTP (Advanced) ....120
22.6.14 Configuring IP Filter....121
22.6.15 Configuring IP Filter — Sync Time-Allowlist ....122
22.6.16 Configuring HTTPS (Advanced)....123
22.6.17 Saving Your System Configuration to a USB Thumb Drive ....123
22.6.18 Restore Default Settings....124
22.6.19 Upgrading Firmware Manually....125
22.6.20 Automatic Firmware Upgrades....125
22.7 Information Menu....125
22.7.1 Version Information....126
22.7.2 Hard Disk Drive Information ....126
22.7.3 BPS....127
22.7.4 System Log....127
22.7.5 Alarm....128
22.7.6 Online Users....129
22.7.7 Network Load....129
22.7.8 Network Test....129
22.8 Sign Out Menu ....130

**23 Connecting Remotely Using the Lorex Home App ..... 131**
**24 Smart Home & Voice Assistance ..... 136**
24.1 Link With Amazon Alexa® ..... 136
24.2 Link With Google Assistant® ..... 141
**25 Pan/Tilt/Zoom (PTZ) Cameras ..... 149**
25.1 Connecting PTZ Cameras to the Recorder ..... 149
25.2 Basic PTZ Controls ..... 150
25.3 Advanced PTZ Controls ..... 150
25.4 Presets ..... 151
25.5 Tours ..... 151
25.6 Patterns ..... 152
25.7 AutoScan ..... 152
**26 Connecting Audio Devices ..... 153**
26.1 Enable Audio Recording ..... 153
26.2 Enable Audio For Amazon Alexa® ..... 154
26.3 Enable Audio for Google Assistant® ..... 155
**27 Replacing the Hard Disk Drive ..... 157**
27.1 Removing the Hard Disk Drive ..... 157
27.2 Installing a New Hard Disk Drive ..... 159
**28 DDNS Setup (Advanced) ..... 163**
28.1 STEP 1: Port Forwarding ..... 163
28.2 STEP 2: Create a Lorex Account ..... 163
28.3 STEP 3: Activate Your Warranty ..... 163
28.4 STEP 4: Sign Up for a DDNS Account ..... 164
28.5 STEP 5: Enable DDNS on the Recorder ..... 165
**29 Troubleshooting ..... 167**
29.1 Top Reasons Your Lorex Camera May Lose Video or Go Black ..... 169
29.1.1 Going over PoE budget will result in video loss ..... 169
29.1.2 When to use a PoE Switch? ..... 170
29.1.3 Not enough power or total loss of it ..... 170
29.1.4 Power surge and interference ..... 170
29.1.5 Not supported display output ..... 171
29.1.6 Twisted, bent or damaged cables ..... 171
29.1.7 Outdated firmware and hardware ..... 171
29.1.8 Issue with compatibility ..... 171
29.1.9 Low internet bandwidth ..... 171
**30 Technical Specifications ..... 172**
30.1 General ..... 172
30.2 Inputs/Outputs ..... 172
30.3 Display ..... 172
30.4 Recording ..... 172
30.5 Playback ..... 172
30.6 Storage ..... 172
30.7 Special Features ..... 172
30.8 Smart Home ..... 173
30.9 Connectivity ..... 173
30.10 Additional Specifications ..... 173
**31 Notices ..... 175**
31.1 FCC/IC ..... 175
31.2 CE ..... 175
31.3 Modification ..... 175
31.4 RoHS ..... 175
31.5 ICES-003 ..... 175

# 1 Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacturing process of your product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to ensure your enjoyment and proper use of the product and accessory equipment. Please read them carefully before operating and using your product.

### 1.1 General Precautions

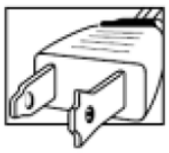
1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. It is highly recommended to connect the product to a surge protector to protect from damage caused by electrical surges. It is also recommended to connect the product to an uninterruptible power supply (UPS), which has an internal battery that will keep the product running in the event of a power outage.

**⚠ CAUTION**

Maintain electrical safety. Power line operated equipment or accessories connected to this product should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

### 1.2 Installation

1. **Read and Follow Instructions:** All the safety and operating instructions should be read before the product is operated. Follow all operating instructions.
2. **Retain Instructions:** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings:** Comply with all warnings on the product and in the operating instructions.
4. **Polarization:** Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other.



A grounding type plug has two blades and a third grounding prong.



The wide blade or the third prong are provided for your safety.

If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

5. **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 location, consult your video dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

6. **Overloading:** Do not overload wall outlets or extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power-Cord Protection:** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
8. **Surge Protectors:** It is highly recommended that the product be connected to a surge protector. Doing so will protect the product from damage caused by power surges. Surge protectors should bear the UL listing mark or CSA certification mark.
9. **Uninterruptible Power Supplies (UPS):** Because this product is designed for continuous, 24/7 operation, it is recommended that you connect the product to an uninterruptible power supply. An uninterruptible power supply has an internal battery that will keep the product running in the event of a power outage. Uninterruptible power supplies should bear the UL listing mark or CSA certification mark.
10. **Ventilation:** Slots and openings in the case are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the product manufacturer's instructions have been followed.
11. **Attachments:** Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.
12. **Water and Moisture:** Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.
13. **Heat:** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
14. **Accessories:** Do not place this product on an unstable cart, stand, tripod, or table. The product may fall, causing serious damage to the product. Use this product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.



15. **Camera Extension Cables:** Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.
16. **Mounting:** The cameras provided with this system should be mounted only as instructed in this guide or the instructions that came with your cameras, using the provided mounting brackets.
17. **Camera Installation:** Cameras are not intended for submersion in water. Not all cameras can be installed outdoors. Check your camera environmental rating to confirm if they can be installed outdoors. When installing cameras outdoors, installation in a sheltered area is required.

### 1.3 Service

1. **Servicing:** Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

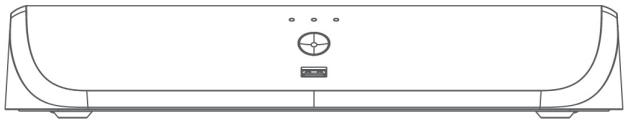
2. **Conditions Requiring Service:** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power supply cord or plug is damaged.
    - If liquid has been spilled or objects have fallen into the product.
    - If the product has been exposed to rain or water.
    - If the product has been dropped or the cabinet has been damaged
    - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
    - When the product exhibits a distinct change in performance. This indicates a need for service.
3. **Replacement Parts:** When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the product manufacturer can prevent fire, electric shock, or other hazards.
4. **Safety Check:** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the product is in safe operating condition.

### 1.4 Use

1. **Cleaning:** Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. **Product and Cart Combination:** When product is installed on a cart, product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
3. **Object and Liquid Entry:** Never push objects of any kind into this product through openings 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 product.
4. **Lightning:** For added protection of this product 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 product due to lightning and power line surges.

# 2 Package Contents

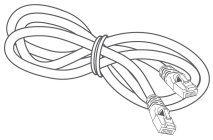
Your security recorder package includes the following components:



4K Fusion Wired NVR



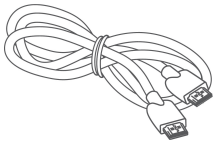
Power Adapter



Ethernet Cable



USB Mouse



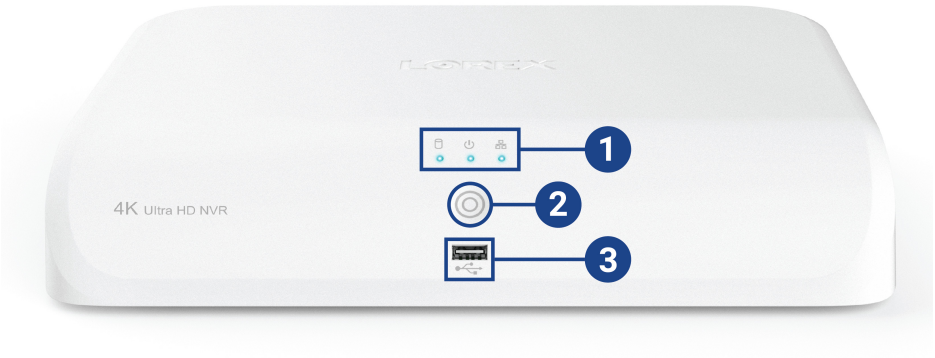
HDMI Cable

**NOTE**

Hard disk drive size, number of channels, and camera configuration may vary by model. Please refer to your package for specific details. Check your package to confirm that you have received the complete system, including all components shown above.

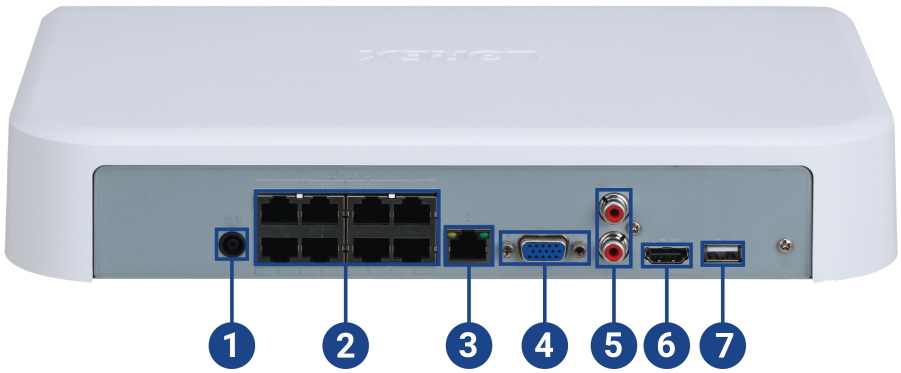
# 3 Recorder Overview

## 3.1 Front Panel




1. **LED Indicators:**
   - **HDD:** Glows to indicate hard disk drive is operating properly. Turns off when there is a hard disk drive error.
   - **POWER:** Glows to indicate the system is on.
   - **NETWORK:** Glows to indicate the recorder is connected to the Internet for remote access and automatic firmware updates. Turns off when there is no Internet access.
2. **Info / Panic Button:**
   - From live view, press once to open the System Information screen.
   - Press and hold for 3 seconds to activate the warning lights and sirens on all connected deterrence cameras.
3. **USB Port:** Connect a USB mouse (included) to control the system, or a USB flash drive (not included) for data backup or manual firmware updates.

## 3.2 Back Panel




1. **DC 12V:** Connect the included power adapter.
2. **PoE Video Inputs:** Connect Lorex IP cameras to the system. For a full list of compatible cameras, visit lorex.com/compatibility.
3. **LAN:** Connect the included RJ45 Ethernet cable from the recorder to your router for remote connectivity and automatic firmware updates.
4. **VGA:** Connect a VGA monitor (not included) to view the system interface.

5. **AUDIO OUT/IN:**
    - Connect an external speaker to the **AUDIO OUT** port to hear system audio
    - Connect an external microphone to the **AUDIO IN** port for single-channel audio recording.
    - For full details on connecting external audio devices, see 26 *Connecting Audio Devices*, page 153.
6. **HDMI:** Connect to an HDMI monitor or TV (not included) using the included HDMI cable to view the system interface.
7. **USB Port:** Connect a USB mouse (included) to control the system, or a USB flash drive (not included) for data backup or manual firmware updates.

# 4 Basic System Setup

## 4.1 STEP 1: Connect cameras

**NOTE**

This step is for verification of the camera image only. It is recommended to connect cameras to a nearby power adapter for this step. The Lorex Setup Wizard that runs at startup will assist you in naming and organizing your cameras, so it is also recommended to leave cameras connected until the wizard asks you to install cameras in their permanent mounting location.

### Option 1: Direct Connection to NVR

Pre-configure your cameras prior to selecting a permanent mounting location by temporarily connecting the cameras and cables to your recorder. Connect the cameras to the recorder using the RJ45 Ethernet extension cables provided with your cameras.



### Option 2: Connect Cameras to Local Network

You can also connect your IP cameras to your local network for flexible installations. For details, see 4.8 *Connecting Wired Cameras to the Local Area Network (LAN) (Alternative Camera Set-up)*, page 10.

**NOTE**

Before selecting a permanent mounting location for your cameras, see 6 *Camera Installation*, page 19 for important notes and installation tips.

## 4.2 STEP 2: Connect router

Connect the recorder to your router using the included Ethernet cable.



**NOTE**

To receive automatic firmware updates and enable remote viewing with mobile apps (including receiving notifications), a high speed Internet connection is required (6Mbps for one 4K channel and at least 20Mbps for the whole system). All other system features can be used without an Internet connection.

## 4.3 STEP 3: Connect mouse

Connect the included mouse to a USB port on the recorder.



### 4.4 STEP 4: Connect monitor

Connect the recorder to a monitor using the included HDMI cable (supports up to 4K resolution).



**OR**

Connect the recorder to a monitor using a VGA cable (not included - supports up to 1080p resolution).

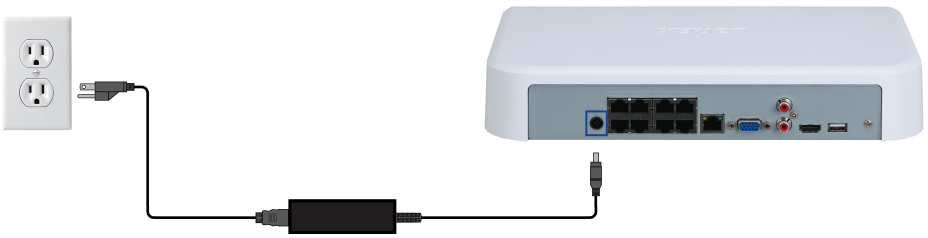


**CAUTION**

If you need to switch monitors, make sure you set the recorder to an output resolution supported by the new monitor before switching. See 22.2 *Setting the Monitor Resolution (Display)*, page 98 for details.

### 4.5 STEP 5: Connect power

Use the included power adapter to connect the recorder to a nearby outlet.



### 4.6 STEP 6: Upgrade Firmware to Latest Version (If Available)

If a firmware upgrade is available, you will be asked to install it once the system starts up. Firmware is software that's embedded in a piece of hardware. When Lorex releases the latest firmware version for the recorder, you'll need to upgrade the existing firmware to the latest release. This is known as a firmware upgrade. It is recommended to upgrade your system firmware, client software, and your mobile app to the latest version to ensure remote connectivity to the system and to support newly added features.

**NOTE**

You must connect your recorder to a router with Internet access in order to get automatic firmware upgrades.

**If a firmware upgrade is available:**

1. After startup, a notification will appear asking you to upgrade the firmware. Click **OK** to upgrade.
2. Enter the system user name (default: **admin**) and your secure password, then click **OK**. Wait for the firmware update to complete. The system will restart once the firmware has been upgraded.

**CAUTION**

**DO NOT POWER OFF THE SYSTEM OR DISCONNECT THE POWER CABLE DURING FIRMWARE INSTALLATION.**

This process might take a few minutes depending on the update and Internet speed.

### 4.7 Quick Access to System Information

Perform one of the following actions to bring up the system information window. This window contains vital system information including the model number, serial number, and device ID.




**NOTE**

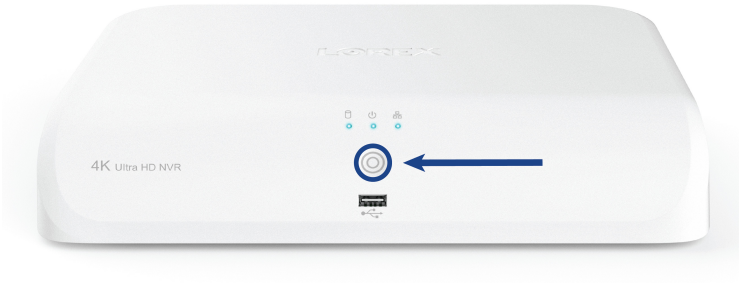
The QR code shown on this screen can be scanned during mobile setup to enter the system's device ID.

**To quickly open a window that displays important system information:**

- From the Live View display, right-click to open the Quick Menu, then click **Info**.
  **OR**
- Press the front panel button on the recorder.

**NOTE**

Do not press and hold the button. The front panel button doubles as a panic button that activates warning lights and sirens for deterrence cameras if held for 3 seconds.




### 4.8 Connecting Wired Cameras to the Local Area Network (LAN) (Alternative Camera Setup)

For flexibility, you may also connect IP cameras to the same Local Area Network (LAN) as the NVR instead of connecting them directly to the NVR. This is accomplished by connecting the cameras to the same router as the NVR.

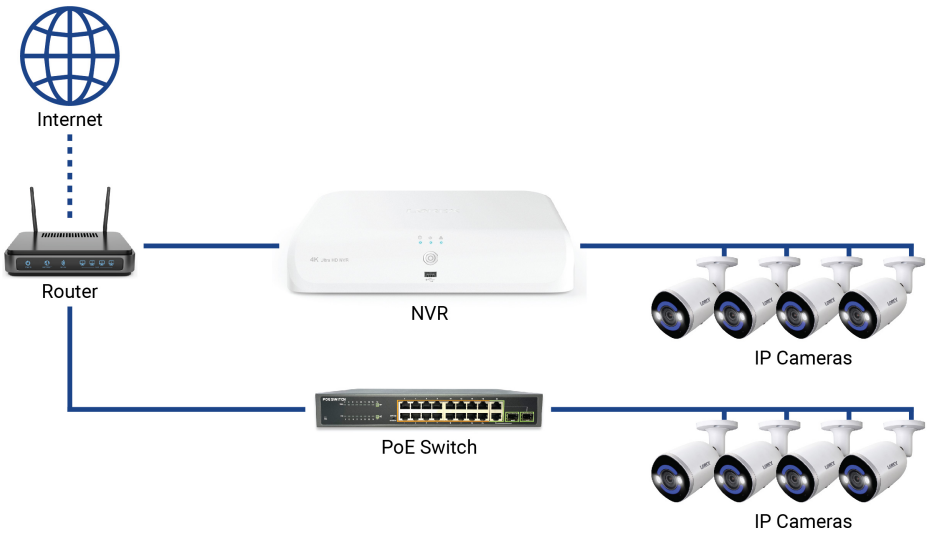
For these alternative setup methods, an external PoE switch (sold separately) or power adapter (sold separately) must be used to provide power to each IP camera. Afterwards, you must navigate to the camera's setup page and manually add the cameras to the system.

Follow the steps below to connect the cameras to the NVR over the LAN.

**NOTE**

Compatible with Lorex HD IP cameras. For a list of compatible cameras, please visit lorex.com/compatibility.

**Step 1 of 2 — Alternative option A: Connecting cameras to your local network using a PoE switch:**

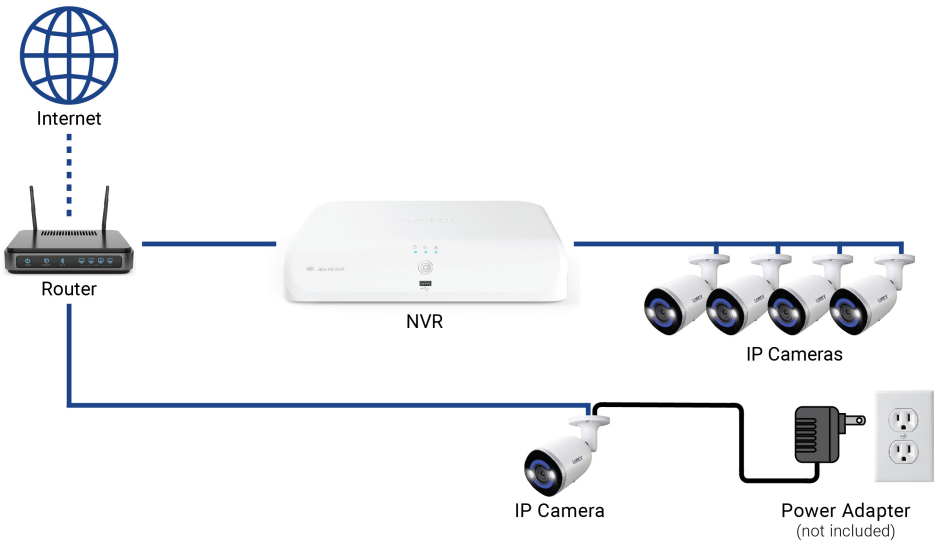


1. Connect an Ethernet cable from the LAN port on an external PoE switch (sold separately on lorex.com) to your router using a CAT5e or higher Ethernet cable. Connect the power cable to the PoE switch and to a power outlet or surge protector.

| NOTE |
| --- |
| Terminology may vary depending on the model of PoE switch you have. |

2. Connect the IP cameras to the PoE switch using the Ethernet extension cables. The PoE switch will provide power and video transmission the same way as your NVR.

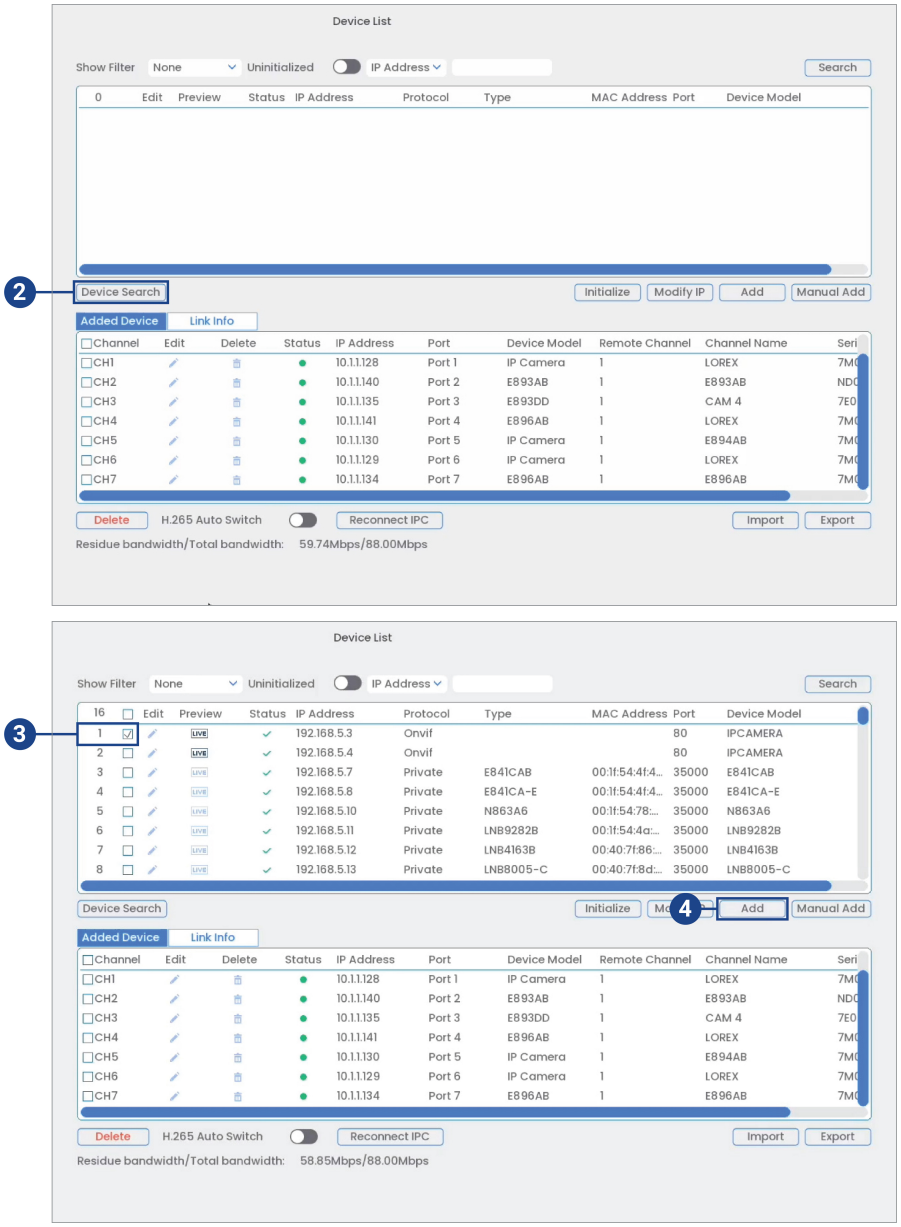
**Step 1 of 2 — Alternative option B: Connecting cameras to your local network using power adapters:**




1. Connect each camera to a compatible power adapter (check your camera documentation at lorex.com for compatible power adapters for your cameras).
2. Connect the camera to your router using a CAT5e or higher Ethernet cable.

**Step 2 of 2: Add wired cameras to your NVR:**

1. Right-click and select **Camera Registration**.



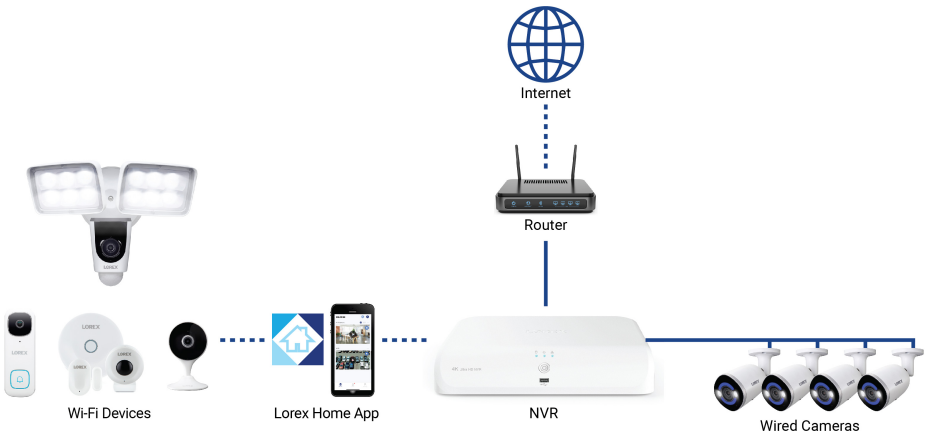

2. Click **Device Search**. The system searches the network for compatible cameras.

> **NOTE**
>
> It may take a few minutes after you power up IP cameras for them to appear in your search.

3. Check the camera(s) you would like to add.
4. Click **Add**. The **Status** indicator turns green to show the camera is successfully connected.

> **NOTE**
>
> You can also add a camera to a specific channel by hovering the mouse over an empty channel in split-screen view and clicking  . Double-click the camera you would like to add, then right-click to exit.

# 5 Fusion Setup




Our Lorex Fusion recorders incorporate the newest (fusion) technology to connect both wired and Wi-Fi cameras, doorbells, floodlights, and motion sensors to one system. All Fusion compatible Wi-Fi cameras and devices connect to one recorder for continuous 24/7 recording and private local storage. Access everything from the **Lorex Home** app for easy control of all devices.

## 5.1 Part One — Wired Setup

For Fusion setup, your recorder must be powered on and connected to a monitor. Refer to 4 *Basic System Setup*, page 7 for instructions on setting up your wired system.

| NOTE |
| --- |
| Network setup is required for your system — use the included Ethernet cable to connect your recorder to your router. |

## 5.2 Part Two — Installing the Lorex Home App

Download the **Lorex Home** app to register an account and add your Fusion devices.

**To enable remote viewing for the mobile app, you will need to:**

- Have high speed Internet.
- Have an upload speed of 6Mbps for one 4K channel and at least 20Mbps for the whole system.

- Access your recorder's **Device ID** QR code. From the Live View display, right-click for the Quick Menu, then click **Info**.




**To connect your Fusion recorder to the app:**

1. Download the **Lorex Home** app from the App Store® or Google Play™ store.

2. Create a **Lorex Home** app account (for detailed instructions, refer to 23 *Connecting Remotely Using the* **Lorex Home** *App*, page 131).
3. In-app, tap the + icon to add your recorder.
4. Follow the in-app steps to complete the setup.

## 5.3 Part Three — Connecting your Lorex Fusion Wi-Fi Camera

Connect your Lorex Fusion Wi-Fi camera to the app and then from your recorder scan your network to add it.

### *5.3.1 Connecting your Lorex Fusion Wi-Fi Camera to the App*

Follow the **Lorex Home** app steps to add your Lorex Fusion Wi-Fi camera. Refer to your camera's documentation at help.lorextechnology.com for detailed setup instructions. Search your camera's model number to access the product support page.

**To connect your Lorex Fusion Wi-Fi camera to the app:**

1. Open the **Lorex Home** app.
2. In-app, tap the + icon to add your Wi-Fi camera.
3. Power on your Wi-Fi camera and scan the camera's **Device ID** QR code.
4. Follow the in-app steps to complete the setup.

**NOTE**

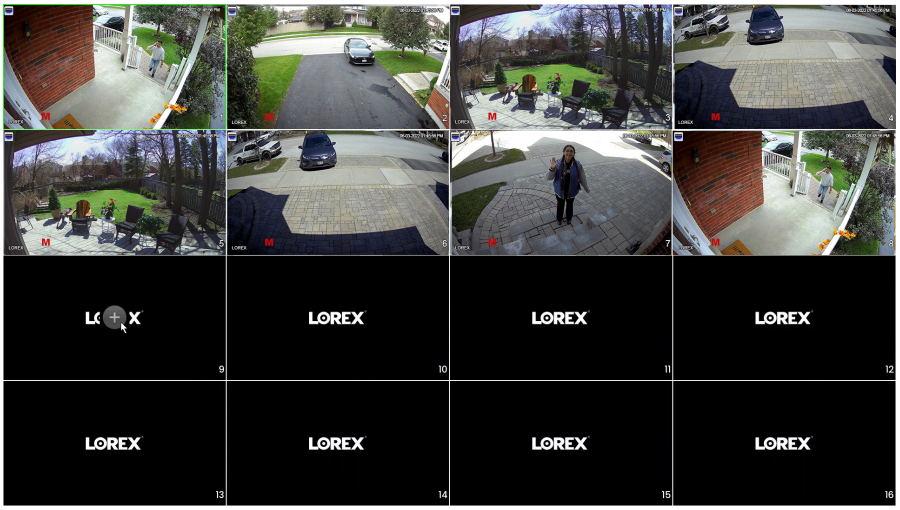
Ensure your Lorex Fusion Wi-Fi camera and Fusion recorder are connected to the same **Lorex Home** app account and network.

### *5.3.2 Connecting your Lorex Fusion Wi-Fi Camera to your Recorder*

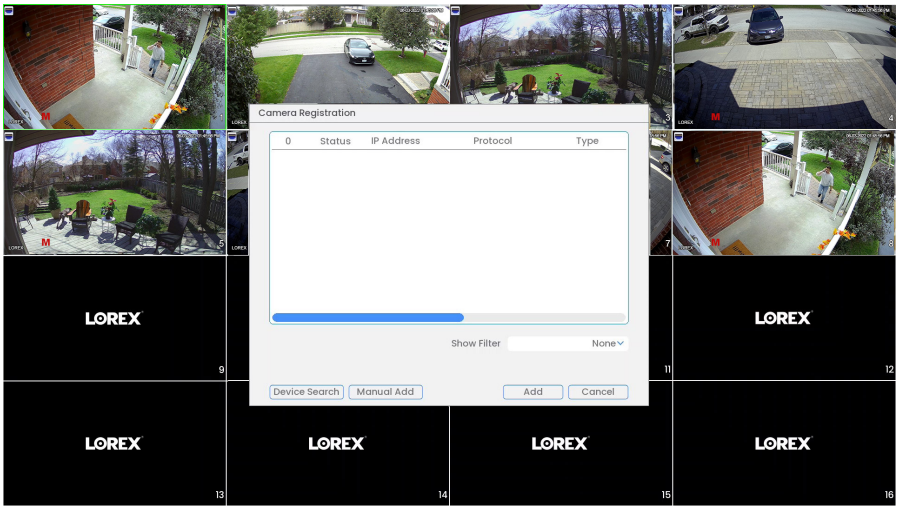
Add compatible Lorex Fusion Wi-Fi cameras and accessories onto Fusion Wi-Fi channels on the recorder. To learn the exact number of Fusion Wi-Fi channels for this system, see 30 *Technical Specifications*, page 172.

**To connect your Fusion Wi-Fi camera to the recorder:**

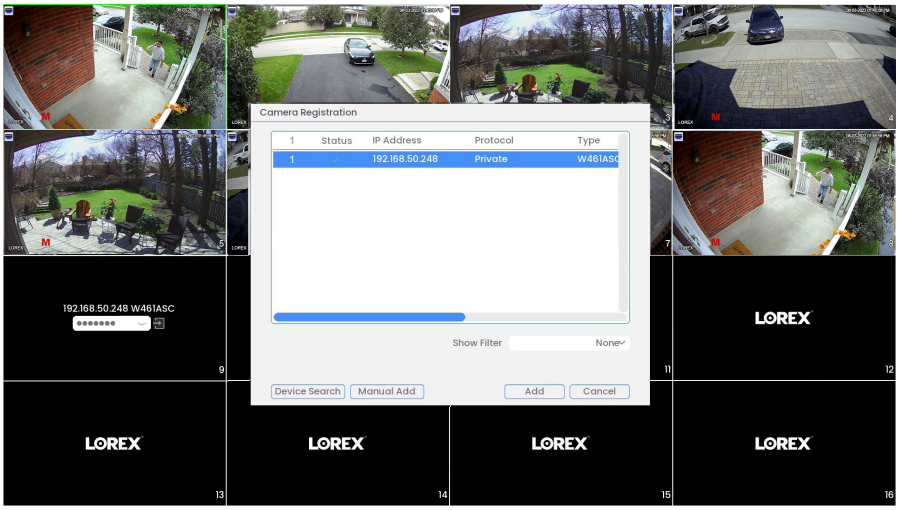
1. From the Live View display, click the pair icon in the center of the Wi-Fi channel's screen.



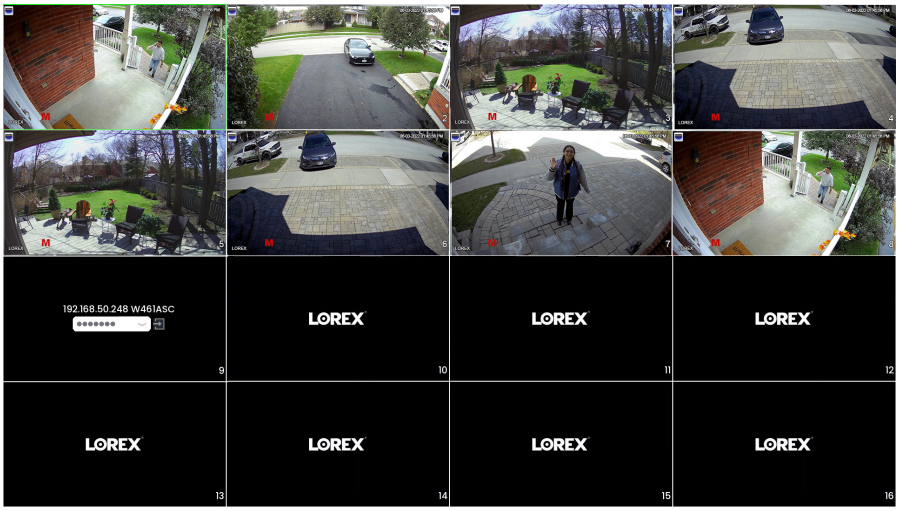
2. Click **Device Search**.



3. Double-click on your Lorex Fusion Wi-Fi camera to add it.




4. Right-click to exit the screen, then enter your Lorex Fusion Wi-Fi camera's password created in-app.




**NOTE**

It may take a few minutes for your Lorex Fusion Wi-Fi camera's video feed to appear.

## 5.4 Adjusting Fusion Settings

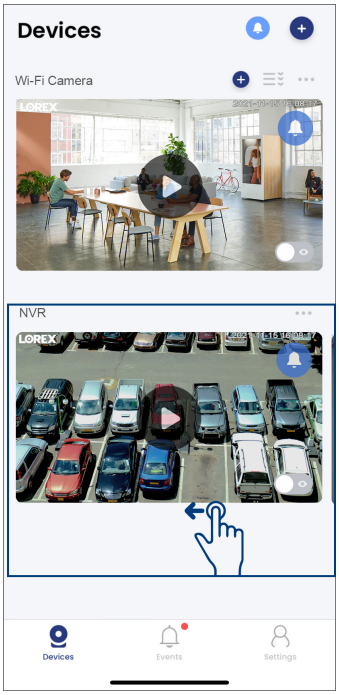
Ensure you turn off duplicate notifications in the app and adjust preferences for your recording schedule on the recorder.

### *5.4.1 Turning Off Duplicate Notifications*

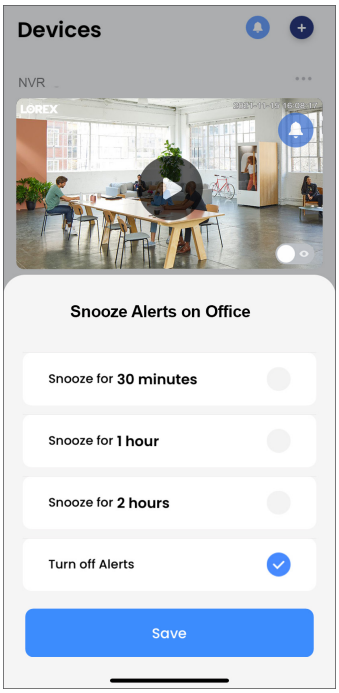
After Fusion setup, your Lorex Fusion Wi-Fi camera is connected to the **Lorex Home** app twice. To avoid duplicate notifications, turn off alerts for your Lorex Fusion Wi-Fi camera that's connected under your Fusion recorder.

**To turn off duplicate notifications:**

1. Open the **Lorex Home** app.




2. Under your Fusion recorder, swipe left to find your Lorex Fusion Wi-Fi camera.




3. Tap on your Lorex Fusion Wi-Fi camera's notification icon .
4. Tap on **Turn off Alerts**, and then **Save**.

### *5.4.2 Customize your Lorex Fusion Wi-Fi Camera's Recording Settings*

After Fusion setup, your Lorex Fusion Wi-Fi camera's recording settings will automatically adjust to **Continuous**, recording 24/7 directly to your recorder's hard disk drive. To adjust your Lorex Fusion Wi-Fi camera's recording settings, see 10 *Recording*, page 28.

# 6 Camera Installation

The following chapter provides general setup instruction and installation tips for security cameras.

**NOTE**

This section covers connection of cameras to the recorder and general installation tips only. Please refer to the documentation that came with your camera or search for your camera model number at lorex.com for specific installation instructions.

## 6.1 Installation Tips

General camera installation tips that apply to all camera models. Please review before selecting a permanent mounting location for your cameras.

- Pre-configure the cameras before permanent installation. Plan where you will route the wiring for the camera and where you will aim the camera.
- Point the camera where there is the least amount of obstructions (e.g., tree branches).
- Mount the camera where the lens is away from direct and intense sunlight.
- Plan your cable wiring so that it does not interfere with power lines or telephone lines.
- Secure cabling so that it is not exposed or easily cut.
- Mount the camera in an area that is visible, but out of reach.
- Avoid pointing the camera at a glass window to see outside. This may result in a bright white ring in the night vision image, as the light from the night vision LEDs may reflect off the glass.
- Adjust the camera angle so that it covers an area with high traffic.
- In "high-risk" locations, have multiple cameras point in the same area. This provides camera redundancy if a vandal attempts to damage one of your cameras.
- For outdoor rated cameras, installation in a sheltered location is recommended to ensure the camera lens remains clear of rainwater and other precipitation.

## 6.2 Installing Cameras

1. Mount the cameras to the desired mounting surface according to the instructions that came with the cameras (visit lorex.com for the most up-to-date documentation). Choose a firm mounting surface that can support the full weight of the camera.

   **NOTE**

   If you wish to mount cameras to drywall, it is recommended to use the included drywall anchors.

2. Adjust the camera stand to ensure that the camera has a satisfactory view of the area you would like to monitor. Stand configuration depends on the mounting surface you have chosen (see below for suggested stand configurations).

| | |
|---|---|
|  |  |
| Wall Mount | Ceiling Mount |

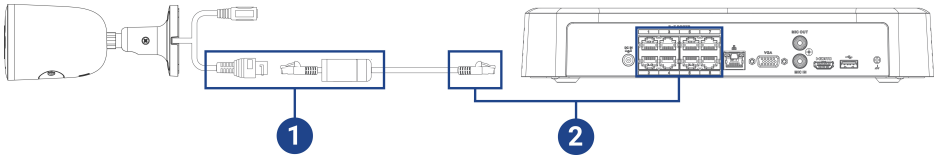
**NOTE**

Counter / table top mounting is not recommended if you are planning to utilize smart motion detection. Please refer to a smart detection feature chapter for the recommended camera angling to ensure accurate detection for that feature.

### 6.3 Connecting Camera Extension Cables

It is recommended to connect your cameras directly to the NVR. This is because the NVR features Power over Ethernet (PoE) ports that are used to transmit video and audio, as well as provide power to the camera without the need for a power adapter.

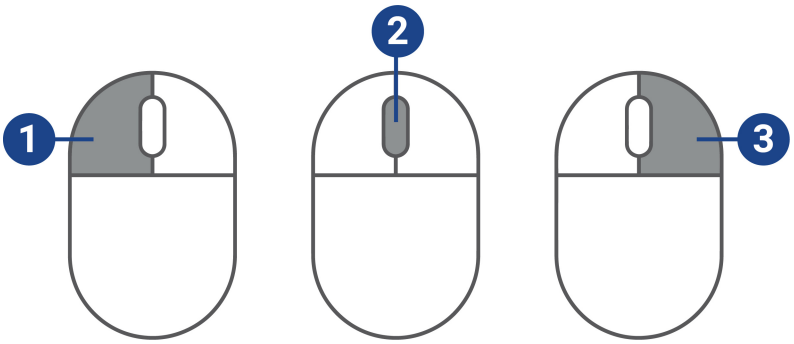
You can also connect cameras to a network switch or router (see 4.8 *Connecting Wired Cameras to the Local Area Network (LAN) (Alternative Camera Setup)*, page 10 for details). If your switch does not support PoE, or you are connecting cameras to a router, you will require a power adapter for each camera (sold separately). Refer to your camera's documentation at lorex.com for the correct power adapter to use.




1. Connect the camera to the included Ethernet extension cable.
2. Connect the other end of the Ethernet extension cable to one of the PoE ports on the rear panel of the NVR.

# 7 Using the Mouse

The mouse is the primary control device for the system. Connect the included mouse to the USB port on the front or rear panel.




1. **Left-button:**
   - In live view, while in a split-screen display mode, click an individual channel to view it in full-screen. Click again to return to the split-screen display mode.
   - While navigating menus, click to open a menu option.
2. **Scroll wheel:** In live view, use the scroll wheel to zoom in/out.
3. **Right-button:**
   - During live view, right-click anywhere on the screen to open the Quick Menu.
   - Within system menus, right-click to exit menus.

# 8 Setting the Date & Time

**CAUTION**

It is highly recommended to set the date and time when first setting up your system.

**Inaccurate time stamps may render your footage unusable for court evidence.**

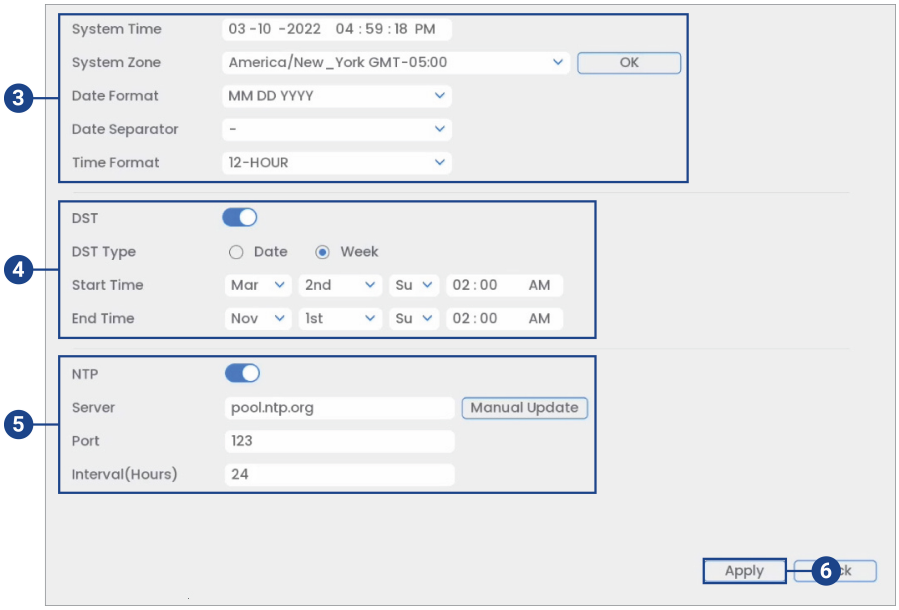
**NOTE**

This chapter covers setting system date and time only. See the references below for full instructions on the other submenus shown below:

- **General:** See 22.6.1 *Configuring General System Settings*, page 110.
- **Holiday:** See 22.6.3 *Configuring Holidays*, page 111.

**To set the date and time:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Settings**. Click the **General** tab from the side panel, then the **Date & Time** tab from the top panel.




3. Under **System Time**, enter the current time and select your time zone. Then, click **OK**.
4. Check the **DST** check box to enable auto Daylight Savings Time updates.

**NOTE**

- You can adjust the **Start Time** and **End Time** for Daylight Savings Time if the default settings do not match your region.

5. (Optional) Check the **NTP** check box to sync your system with an Internet time server. Click **Manual Update** to instantly update the time.

**NOTE**

- Your system must have a constant connection to the Internet to use NTP.
- (Advanced) You can enter a custom NTP server under **Server** and **Port**, and you can select how often the system will sync the time using **Interval**(hours).

6. Click **Apply** to save changes.

# 9 Using the On-Screen Display

Use the system's on–screen display to navigate menus and configure options and settings.

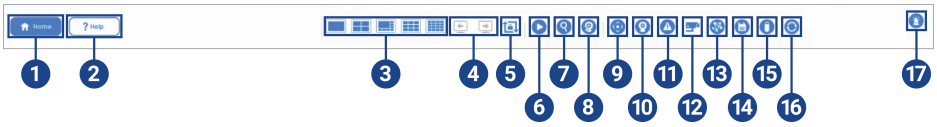
> **NOTE**
>
> To access the on-screen display, you must connect the included mouse and a monitor (not included) to the recorder. See 4 *Basic System Setup*, page 7 for full instructions.

## 9.1 Navigation Bar

The **Navigation Bar** along the bottom of the recorder's Live View display allows you to access the Main Menu and control basic functions of the recorder.

**To show the Navigation Bar:**

- Hover the mouse pointer near the bottom of the Live View screen.



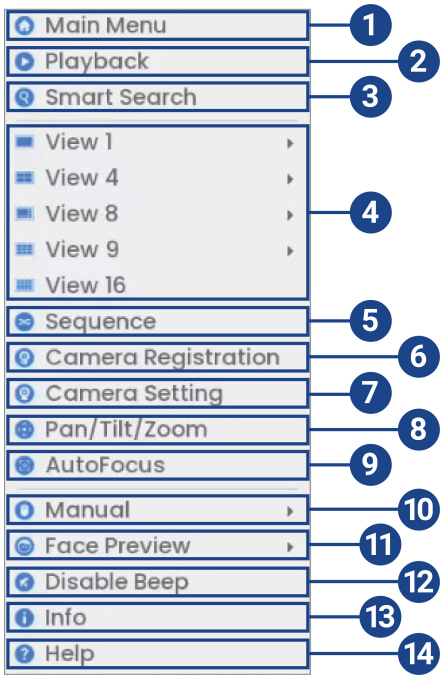

1. **Main Menu:** See 22 *Using the Main Menu*, page 98 for full instructions on using the Main Menu.
2. **Help Menu**: Offers additional information and support on using the system.
3. **Viewing Modes:** Select how many channels are shown on screen during live viewing.
4. **Previous / Next Channel(s):** Display previous / next channel(s) in single or quad channel viewing mode.
5. **Sequence Mode:** Start or stop Sequence Mode. In Sequence Mode, the system display will automatically cycle through connected channels every few seconds.
6. **Playback:** Opens the Playback Menu. This allows you to search for video recordings saved on the recorder's hard disk drive. For details on using the Playback menu, see 11 *Playback*, page 33.
7. **Smart Search:** Filter through recorded video when searching.
8. **Camera Registration**: Search the network for wired cameras and Wi-Fi devices to add to the recorder.
9. **Pan/Tilt/Zoom:** Control and configure settings for Pan-Tilt-Zoom (PTZ) cameras. For full instructions on connecting and using PTZ cameras, see 25 *Pan/Tilt/Zoom (PTZ) Cameras*, page 149.
10. **Camera Setting:** Click to open camera image settings. For full details, see 9.5 *Camera Image Settings*, page 25.
11. **Alarm Status:** View alarms in progress. See 22.7.5 *Alarm* for details.
12. **Channel Info:** Click to access status information about connected cameras.
13. **Network:** View and configure network options, including setting a dynamic or static IP address. For full instructions on configuring network options, see 22.6.4 *Selecting DHCP or Static IP Address (TCP/IP)*, page 113.
14. **Hard Drive Manager:** Configure hard disk drive read/write options (see 22.6.11 *Configuring Hard Disk Drive Type*, page 119 for details) or format drives (see 22.6.10 *Formatting the Hard Disk Drive*, page 118 for details).
15. **USB Manager:** Click to access options for connected USB thumb drives (not included). You can backup video, logs, or system configurations and install firmware upgrades.
16. **System Upgrade:** Check for firmware upgrades. The system must be connected to the Internet to check for or receive updates.
17. **Warning Light & Siren — Deterrence Cameras Only:** Click to activate warning lights and sirens for all connected deterrence cameras. Click again to deactivate.

## 9.2 Quick Menu

The **Quick Menu** gives you quick access to functions which can also be accessed using the Navigation Bar.

**To open the Quick Menu:**

- Right-click anywhere on the Live View screen.




1. **Main Menu:** Select for full access to the Main Menu. For details on using the Main Menu, see 22 *Using the Main Menu*, page 98.
2. **Playback:** Opens the Playback Menu. This allows you to search for video recordings saved on the recorder's hard disk drive. For details on using the Playback menu, see 11 *Playback*, page 33.
3. **Smart Search:** Filter through recorded video when searching.
4. **Viewing Modes:** Select how many channels are shown on screen during live viewing.
5. **Sequence:** Start or stop Sequence Mode. In Sequence Mode, the system display will automatically cycle through connected channels every few seconds.
6. **Camera Registration:** Check the camera's that you want added to the NVR.
7. **Camera Setting:** Configure image settings for cameras. For full details, see 9.5 *Camera Image Settings*, page 25.
8. **Pan/Tilt/Zoom:** Control and configure settings for Pan-Tilt-Zoom (PTZ) cameras. For full instructions on connecting and using PTZ cameras, see 25 *Pan/Tilt/Zoom (PTZ) Cameras*, page 149.
9. **AutoFocus:** Access zoom/focus controls for auto-focus cameras (not included).
10. **Manual:** Select manual recording and snapshot options. For details, see 10.4 *Setting up Scheduled or Manual Recording*, page 30.
11. **Face Preview: Enable** or **Disable** face events to show on the right side of the screen (compatible with face detection cameras only).
12. **Disable Beep:** Temporarily disable the current audible warning.
13. **Info:** Displays system information, such as model number, device ID, IP address, etc.
14. **Help Menu**: Offers additional information and support on using the system.

**NOTE**

Audible warnings can be given for a wide range of events, such as hard disk drive issues, network connectivity, motion detection events and more. Disabling the current audible alarm using the Quick Menu will silence the recorder only for a short time, then audible warnings will continue.

### 9.3 Camera Toolbar

The **Camera Toolbar** lets you perform quick functions for a specific channel on the recorder.

**To use the Camera Toolbar:**

- Hover the mouse near the top of a channel with a connected camera.




1. **Instant Playback:** Plays back recent video from the selected channel. By default, instant playback is set to play the last 5 minutes of recorded video. See 22.6.1 *Configuring General System Settings*, page 110 to set a custom playback length.
2. **Digital Zoom:** Click to enable digital zoom. Click-and-drag over the camera image to zoom in on the selected area. Right-click to return to the full camera image. You can then repeat to zoom in on a different area, or click the icon again to disable zoom.
3. **Real-time Backup:** Click to start recording the current channel manually. Click again to stop recording and save the video file to a USB flash drive (not included).
4. **Snapshot:** Save a snapshot of the current camera image to a USB flash drive (not included).
5. **Two-way Audio:** *(Two—way audio cameras only)* Click to enable two-way talk on compatible cameras. To be able to listen-in to sounds occurring around your camera an external speaker (not included) must be plugged into the recorder.
6. **Warning Light:** *(Deterrence cameras only)* Click to manually turn on the camera's warning light for 10 seconds.
7. **Siren:** *(Deterrence cameras only)* Click to manually turn on the camera's siren for 10 seconds.
8. **Smart Security Lighting**: *(Deterrence cameras only)* Click to manually turn on the camera's smart security lighting. Click again to manually turn it off.

### 9.4 On-Screen Keyboards

The **Full Keyboard** is used to input alphanumeric characters, such as in user name or password fields. The **Number Keyboard** is used to input numeric characters only, such as in the time or date fields.

**To use the Full Keyboard:**

- Using the mouse, click on a field where alphanumeric characters are entered, such as the user name and password fields.
- The Full Keyboard opens:




- Click **Shift** to switch between uppercase and lowercase characters.
- Right-click to close the Full Keyboard.

**To use the Number Keyboard:**

- Using the mouse, click on a field where numeric characters are entered, such as the date or time fields.
- The Number Keyboard opens:



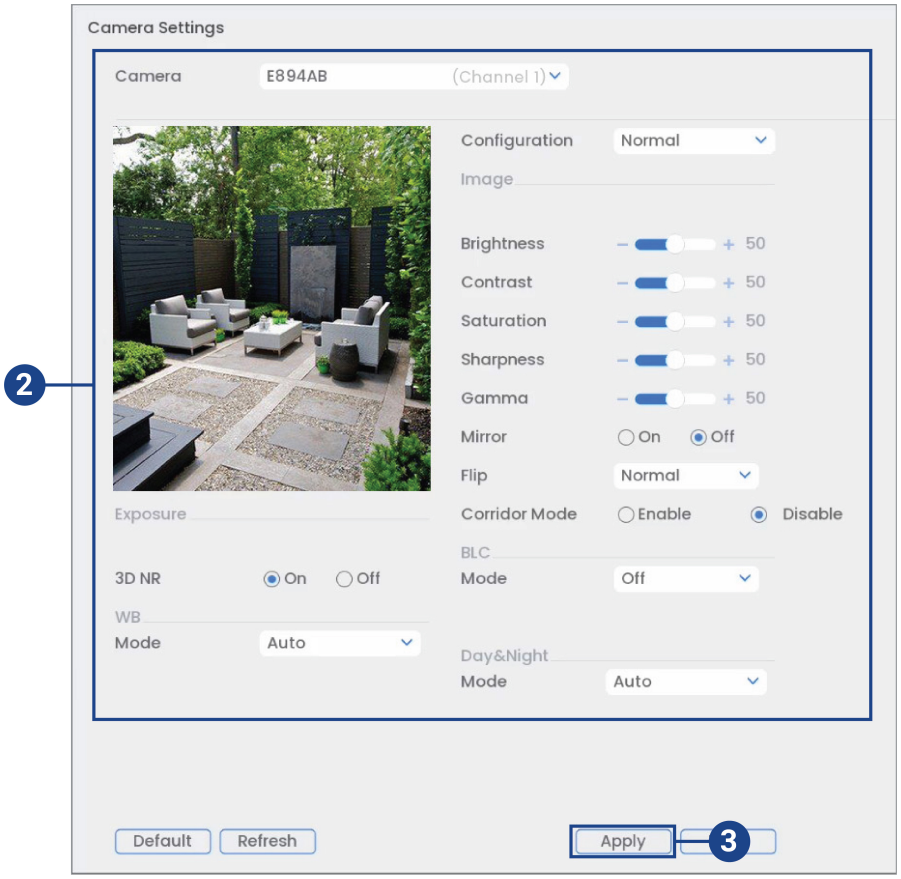

- Right-click to close the Number Keyboard.

### 9.5 Camera Image Settings

Use the Camera Setting menu to adjust image settings for your cameras.

**To adjust image settings:**

1. Right-click on the channel you would like to configure and select **Camera Setting**.



2. Configure the following settings as needed:

> **NOTE**
>
> The settings listed below are only shown if they are supported on the selected camera. Some camera models do not support all settings.

- **Configuration:** Select from image setting presets.
- **Brightness:** Adjust the image brightness.
- **Contrast:** Adjust the image contrast.
- **Saturation:** Adjust the vibrancy of colors in the image.
- **Sharpness:** Adjust the sharpness of the image.
- **Gamma:** Adjust the light-to-dark balance of the image.
- **Mirror:** Select **On** to flip the image horizontally.
- **Flip:** Select **180°** to flip the image vertically, or select **0°** for the default orientation. You can also select **90°** or **270°**.
- **Corridor Mode:** Not supported.
- **BLC Mode:** Select one of the following backlight compensation modes:
  - **BLC (Back Light Compensation):** Adjusts the lighting levels in the picture so you can see objects in the foreground if there is a strong light source behind them.
  - **WDR / HDR (Wide / High Dynamic Range):** *(Compatible camera required)* The camera compensates for changes in brightness across the image to enhance the picture quality of both light and dark areas.
  - **HLC (High Light Compensation):** The camera dims the brightest areas of the image to make them clearer.
  - **Off:** Disable this function.
- **Day&Night Mode:** This setting sets the camera's day/night mode. Select **Auto** for the camera to automatically determine whether to use color or black and white mode. Select **Black&White** for the camera to use black and white mode at all times. Select **Color** for the camera to use color mode at all times.

> **NOTE**
>
> It is recommended for most installations to select **Auto** mode. Using **Color** mode will keep the camera in color even as light levels drop, which will impact image quality on cameras without low-light image sensors.

- **3D NR:** Select **On** to turn on the camera's noise reduction feature. Noise reduction will ensure a cleaner image, especially at night, and may reduce the amount of disk space required to store video.
- **WB Mode:** This mode allows you to adjust white balance levels for the camera. Choose from the list of preset modes, or select **Auto** to have the system automatically set the optimal white balance mode.

3. Click **Apply** to save changes.

> **NOTE**
>
> You must save changes to apply settings changes. It is recommended to adjust one setting at a time so you can see the results of each change. Click **Default** to reset the camera to default image settings.

# 10 Recording

By default, the system is set to immediately record video from connected cameras continuously, 24 hours a day. You can customize the recording settings according to your needs.

## 10.1 Video Recording Types

The system supports the following recording types:

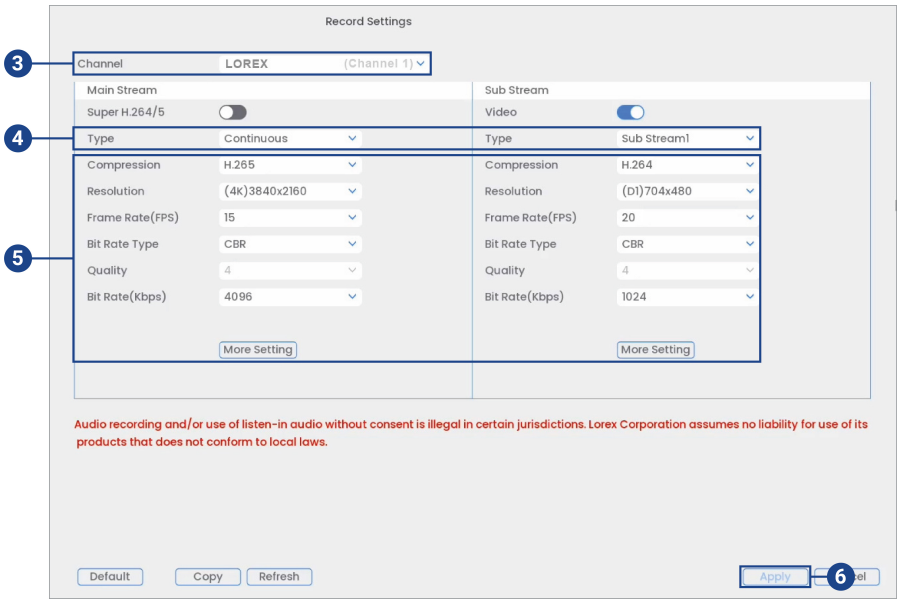
- **Continuous recording:** Normal, continuous recording. A C icon is shown in the bottom left-hand corner of the camera image when continuous recording is in progress.
- **Motion recording:** Motion-triggered video recording. An M icon is shown in the bottom left-hand corner of the camera image when a motion event is being recorded.
- **Smart motion recording:** Smart motion video recording of a person, vehicle or animal. An S icon is shown in the bottom left-hand corner of the camera image when a motion event of a person, vehicle or animal is being recorded. For more details on configuring smart motion detection of people, vehicles, or animals see 15 *Smart Motion Detection*, page 63.

## 10.2 Configuring Recording Quality

The system uses two video recording streams: a **Main Stream** and a **Sub Stream**. The Main Stream records high quality video to your system's hard disk drive. The Sub Stream records lower resolution video for efficient streaming to devices over the Internet. You can customize the video quality settings for these streams according to your needs.

**To configure recording quality:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Record Settings**. Click the **Record Settings** tab from the side panel.




3. Under **Channel**, select the camera you would like to configure.
4. Under **Type**, select the recording type you want to configure the recording quality settings for.

5. Configure the following settings. Except where noted, options for Main Stream and Sub Stream are the same:
   - **Compression:** Select the video compression type that will be used. For H.265 compatible cameras, it is recommended to select **H.265**, as it will use the least amount of disk space.
   - **Super H.264/5: (Main Stream only)** Enable to reduce system requirements for unimportant recordings to maximize hard disk drive storage. If you enable, select the **Quality** from **1** (lowest) to **6** (highest).
   - **Resolution:** Select the resolution that you want to use to record the selected channel. Higher resolutions create a more detailed image, but take up more hard disk drive space to record and require more bandwidth to stream to connected computers or mobile devices.

     **NOTE**

     Available resolutions for the Main Stream and Sub Stream depend on the model of camera that is connected to the system.

   - **Frame Rate (FPS):** Select the frame rate in Frames Per Second (FPS) that each stream will record at. A higher frame rate provides a smoother picture, but requires more storage and bandwidth.
   - **Bit Rate Type:** Select **CBR** (Constant Bit Rate) or **VBR** (Variable Bit Rate) to determine the bit rate type. If you select VBR, select the **Quality** from **1** (lowest) to **6** (highest).
   - **Bit Rate (Kbps):** Select the bit rate for each recording stream. A higher bit rate results in a better image, but increases the amount of hard disk drive space or bandwidth required.
   - **More Settings:** Click on **More Settings** under Main Stream or Sub Stream to enable Audio Encode. Audio Encode is disabled by default.

     **NOTE**

     Recording settings include options for audio recording. For full details, see 26 *Connecting Audio Devices*, page 153.

6. Click **Apply** to save changes.
7. **(OPTIONAL)** Click **Copy** to apply the settings for the current channel to one or more other channels.

### 10.3 Setting the Recording Schedule

You can set a custom recording schedule according to your needs. For example, you can set the system to record continuously during business hours and record on motion detection only outside of business hours.

A custom recording schedule helps reduce the amount of hard disk drive space required, increasing the time your system can retain recordings.

**To configure the recording schedule:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **System**, then **Storage**. Click the **Schedule** tab from the side panel, then the **Record** tab from the top panel.




3. Under **Channel**, select the channel you would like to configure or select **All**.
4. Check the recording type you would like to configure, or check **All**:
   - **Continuous**: The video will record automatically according to the time on the schedule.
   - **MD** (Motion Detection): The video will record when motion is detected.
   - **Alarm**: Not supported.
   - **Smart Detection**: The video will record when smart motion is detected.
5. Configure the schedule as needed:
   - Click-and-drag on each day to customize the recording schedule. The schedule is set up as a grid, with each block representing two hours.
   - Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
   - To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
   - To disable all recording of the selected type on the selected day, click .
6. Click **Apply** to save changes.

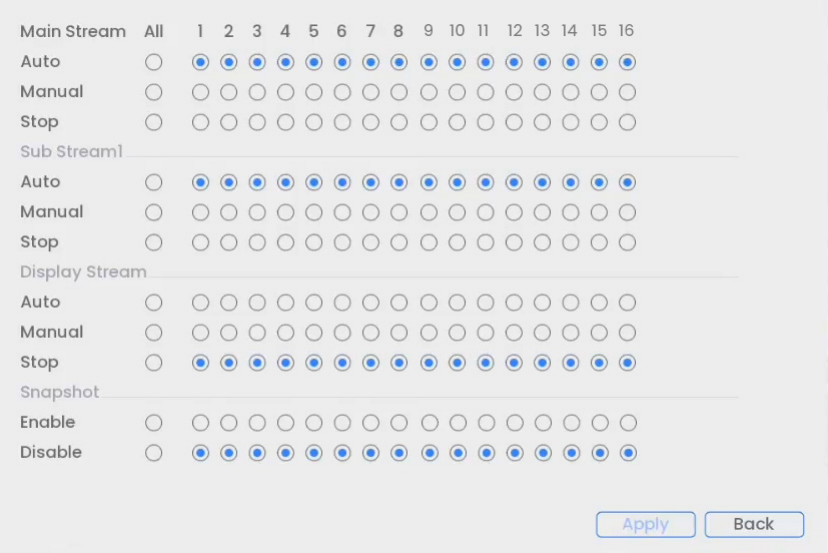
### 10.4 Setting up Scheduled or Manual Recording

You can set the system to record based on a schedule or you can manually turn recording on and off. By default, the system is set to always record on a schedule.

To configure the recording schedule, see 10.3 *Setting the Recording Schedule*, page 29.

**To set options for manual recording:**

1. From the Live View display, right-click to open the Quick Menu. Click **Manual**, then **Record**.




2. Under **Main Stream**, select how the system will record the Main Stream for each channel:
   - **Auto:** Main Stream recording will follow the recording schedule.
   - **Manual:** The system will record the Main Stream continuously as long as this option is checked.
   - **Stop:** The system will not record the Main Stream for this channel. This option is not recommended.
3. Under **Sub Stream**, select how the system will record the Sub Stream for each channel.
   - **Auto:** Sub Stream recording will follow the recording schedule.
   - **Manual:** The system will record the Sub Stream continuously as long as this option is checked.
   - **Stop:** The system will not record the Sub Stream for this channel. This option is not recommended.
4. Under **Display Stream**, select how the system will record the Sub Stream for each channel.
   - **Auto:** Display Stream recording will follow the recording schedule.
   - **Manual:** The system will record the Display Stream continuously as long as this option is checked.
   - **Stop:** The system will not record the Display Stream for this channel. This option is not recommended.
5. Under **Snapshot**, select **Enable** to enable snapshot recording on each channel. Or, select **Disable** to disable snapshot recording.

> **NOTE**
>
> To set more preferences for snapshots recording, see 22.5.7 *Configuring Snapshot Recording Settings*, page 109.

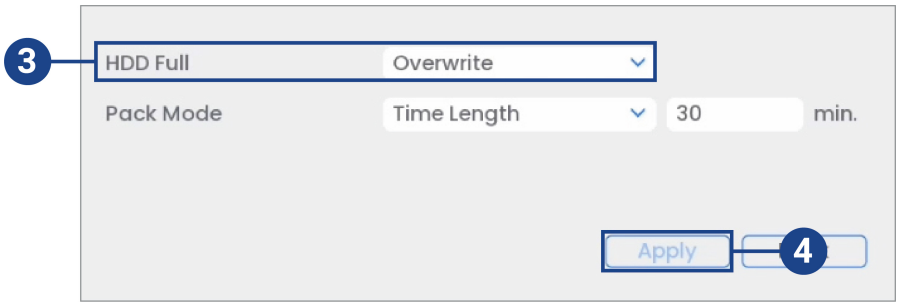
6. Click **Apply** to save changes.

### 10.5 Configuring HDD (Hard Disk Drive) Overwrite

When the hard disk drive is full, the system will overwrite the oldest recordings by default. This is recommended, as it makes sure that your system will continue to record without any input from you. You can also set the system to stop recording once the hard disk drive is full.

**To configure hard disk drive overwrite:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Storage**. Click the **Basic** tab from the side panel.




3. Ensure **HDD Full** is set to **Overwrite** to overwrite the oldest recordings when the hard disk drive is full.

> **NOTE**
>
> Select **Stop Record** for the system to stop recording when the hard disk drive is full.

4. Click **Apply** to save changes.

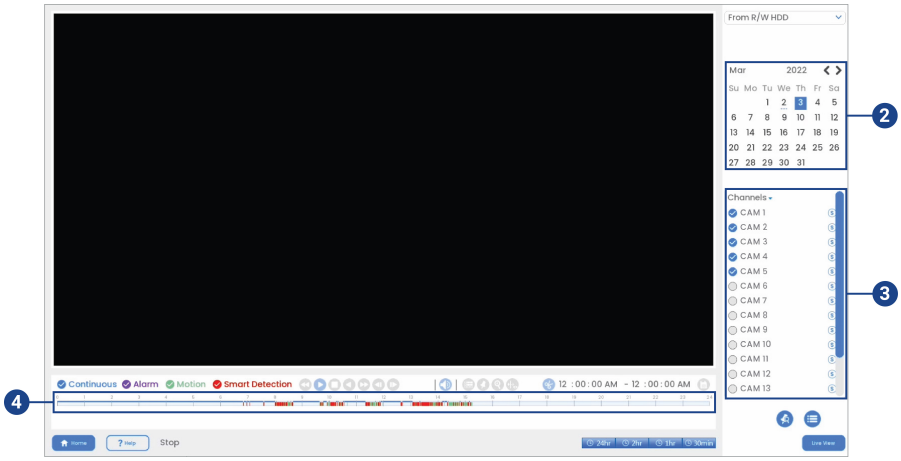
# 11 Playback

Search through and playback recorded video files on the system.

## 11.1 Playing Back Video from the Hard Disk Drive

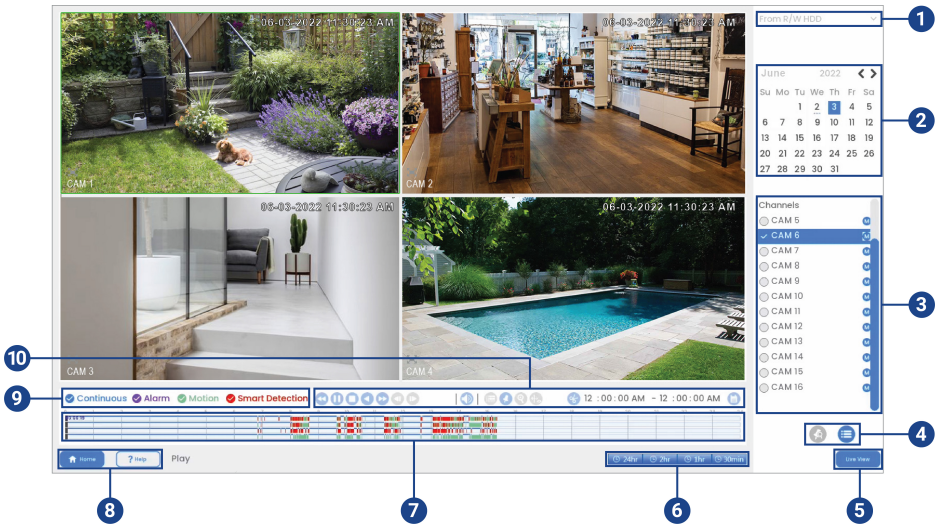
**To play back recorded video:**

1. From the Live View display, right-click to open the Quick Menu, then click **Playback**.




2. Use the calendar on the right to select the day to playback.
3. Check the channels you want to play back. Click the icons to the right of each channel name to choose the video quality (M for Main Stream, S for Sub Stream).
4. Click inside the video bar to select the playback time. The system will begin playing back video from the selected time.

## 11.2 Playback Controls




1. **Select Playback Device:** Choose between searching the recorder's hard disk drive or a USB flash drive (not included).
2. **Calendar:** Select the date to playback.

3. **Channel Selection:** Select channels and video quality for playback. You can check up to 4 channels for playback in mainstream (M) and up to 8 channels for playback in substream (S).
4. **Viewing Modes:**
   - **Bookmark List:** Shows all bookmarked recordings for a single channel on the selected date (requires bookmarked recordings — see below for details).
   - **File List:** Shows all available recordings for the selected date and channel(s) in list format.
5. **Live View**: Click to return to the live view display of connected cameras.
6. **Playback Bar Time Scale:** Select the length of the time period shown on the playback bar.
7. **Playback Bar:** Click inside the bar to select a playback time.
8. **Main Menu & Help Menu**: Click to go to either the Main Menu or the Help Menu.
9. **Recording Type Filters:** Click to show/hide recording types.

**NOTE**

Up to 4 channels will playback in sync. If the **Continuous** option is enabled, all selected channels will playback video at the same time. The sync option makes it easy to compare recordings from different cameras.

10. **Playback Controls:**

- **Slow Playback:** Click repeatedly to slow the video down by half speed up to 16× slower than normal. Click again to return to regular speed.
- / **Play / Pause**
- **Stop**
- **Play Backwards**
- **Fast Playback:** Click repeatedly to double the speed of the video up to 16× faster than normal. Click again to return to regular speed.
- **Previous Frame:** Go to the previous frame when video is paused.
- **Next Frame:** Go to the next frame when video is paused.
- **Volume / Mute:** Click on the volume bar to set the volume for audio in playback. Click the icon to mute/unmute.

  **NOTE**

  - You must be viewing an audio camera in single channel to hear audio. You must also be using an HDMI monitor with built-in speakers, or connect an external speaker to the recorder in order to hear audio.
  - Audio recording and / or use of listen-in audio without consent is illegal in certain jurisdictions. Lorex Corporation assumes no liability for use of its products that does not conform with local laws.

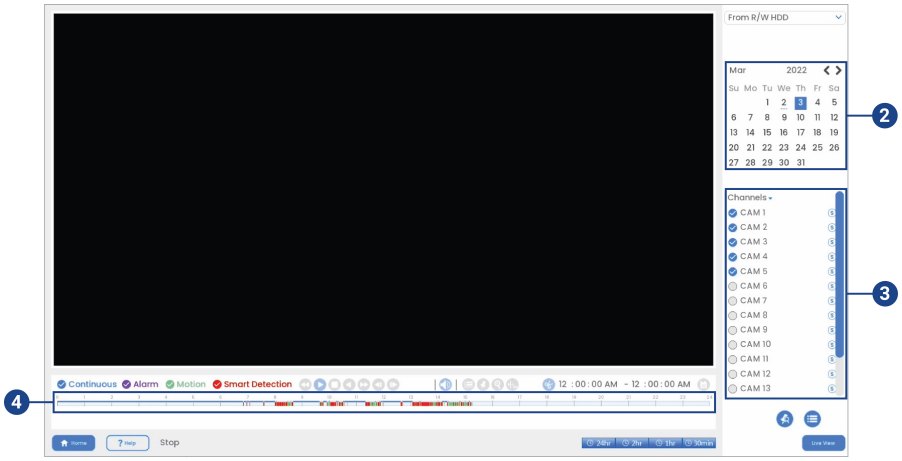
- **Area Search:** Click to select an area of the camera image and play back all recordings with motion in the selected area. For full details, see 11.3 *Area Search*, page 35.
- **Add Bookmark:** Bookmark recordings for easy retrieval.
- **Digital Zoom:** Click to enable digital zoom. Click-and-drag over the camera image to zoom in on the selected area. Right-click to return to the full camera image. You can then repeat to zoom in on a different area, or click the icon again to disable zoom.
- **Show/Hide Smart Search Rules:** Click to show/hide active areas for smart detection of people and vehicles during playback.
- **Video Clip:** Back up a custom video clip to a USB flash drive (not included). For full instructions, see 11.4 *Video Clip Backup*, page 36.

### 11.3 Area Search

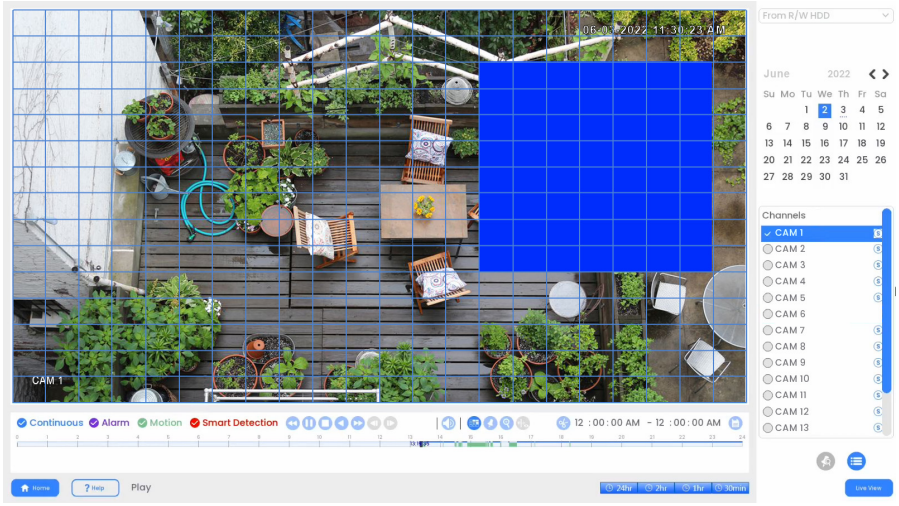
Play back all recordings from a single channel with motion in a specific area of the camera image.

**To perform an area search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Playback**.




2. Use the calendar on the right to select the day to playback.
3. Check a single channel you want to play back. Click the icon to the right of the channel name to choose the video quality (M for Main Stream, S for Sub Stream).
4. Click inside the video bar to select the playback time. The system will begin playing back video from the selected time.
5. Click to configure an area for the search.
6. Click or click-and-drag to add / remove squares from the grid. Solid blue areas mark the part of the image that will be searched for motion events.




7. Click to begin area search.

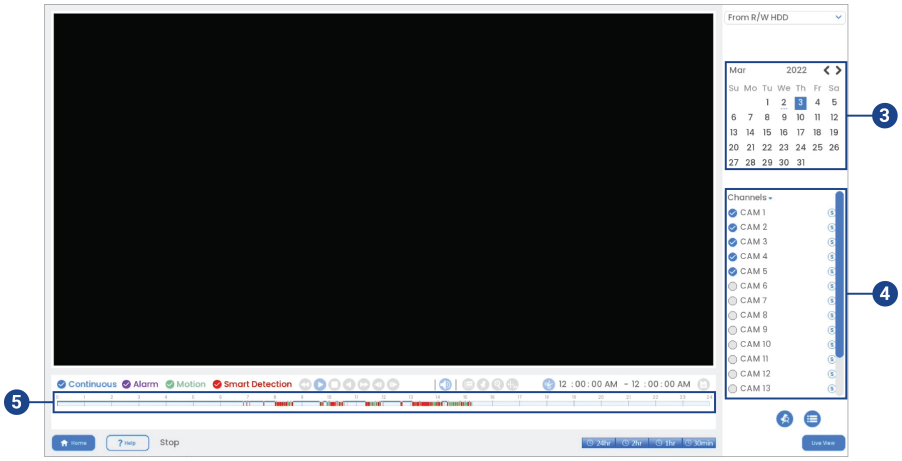
## 11.4 Video Clip Backup

Video clip backup allows you to select a duration of video during playback mode and save it to a USB device (not included).

**To use video clip backup:**

1. Connect the USB thumb drive (not included) to a free USB port on the recorder.

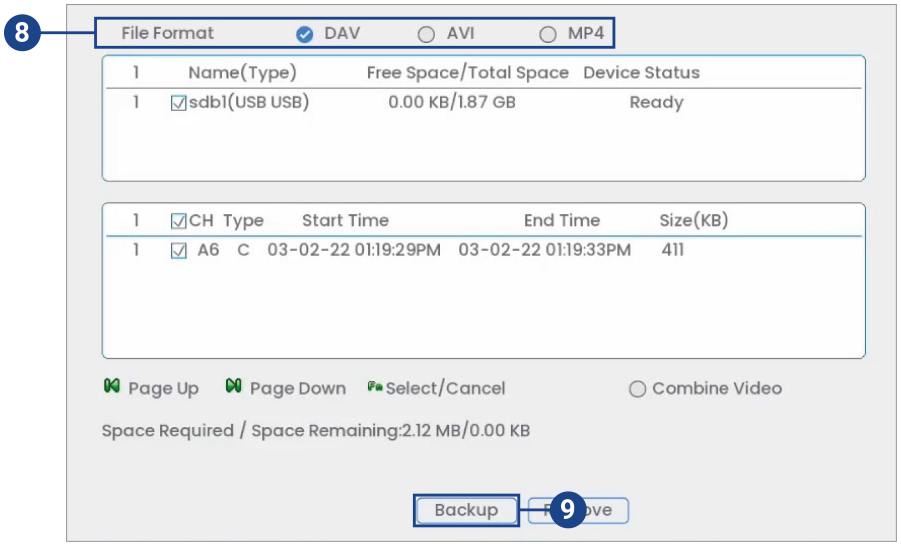
2. From the Live View display, right-click to open the Quick Menu, then click **Playback**.




3. Use the calendar on the right to select the day to playback.
4. Check the channels you want to play back. Click the icons to the right of each channel name to choose the video quality (M for Main Stream, S for Sub Stream).
5. Click inside the video bar to select the playback time. The system will begin playing back video from the selected time.




6. Click to mark the beginning of the video clip, then click again to mark the end of the video clip.
7. Click to open the backup menu.




8. Select a filetype for your backup file.
9. Click **Backup**.

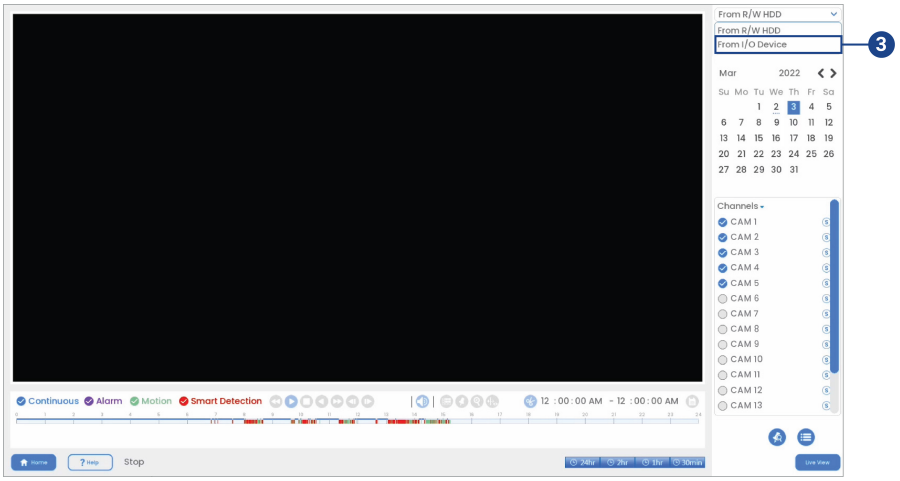
## 11.5 Playing Back Video from a USB Drive

If you have video files saved to a USB flash drive (not included), you can play them back using the system.

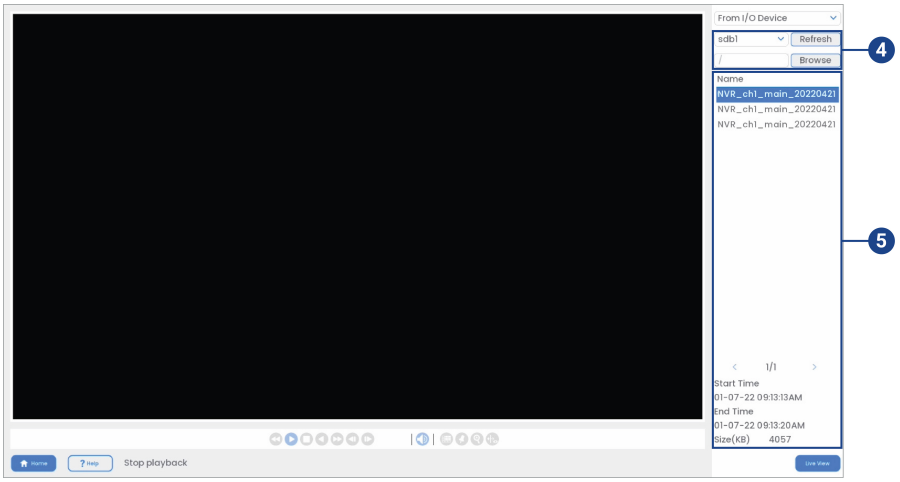
For full instructions on backing up video to a USB flash drive, see 12 *Backup*, page 39.

**To play back video from a USB flash drive:**

1. Connect the USB thumb drive (not included) with video files on it into a free USB port on the recorder.
2. From the Live View display, right-click to open the Quick Menu, then click **Playback**.




3. Click the dropdown and select **From IO Device**.




4. Click **Browse** to locate the video file on your USB flash drive.
5. Double-click the video file you want to open from the file list to start playback.

# 12 Backup

Backup video files to external USB flash drive (not included).

## 12.1 Formatting the USB Flash Drive

It is recommended to format your USB thumb drive (not included) before using it with the system.

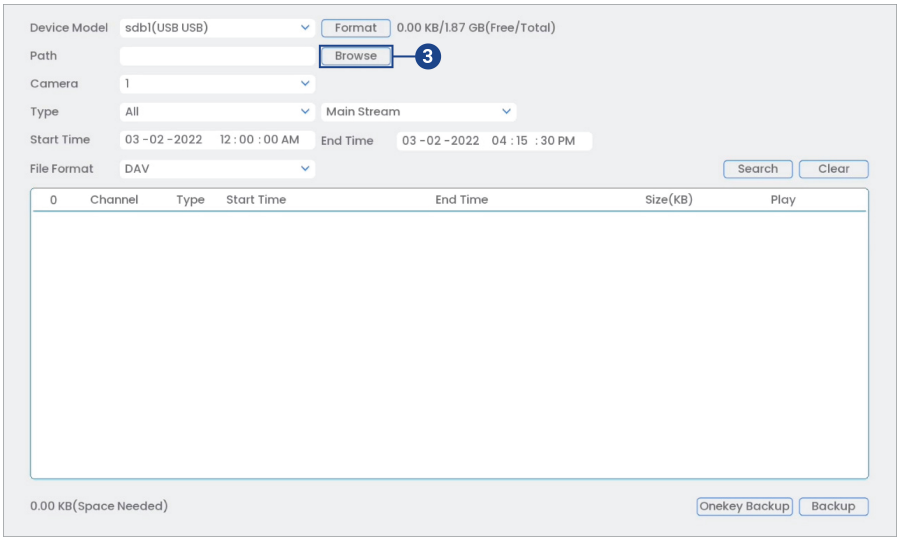
| ⚠ CAUTION |
| --- |
| Formatting the USB device will permanently erase all data. **This step cannot be undone.** |

**Prerequisite:**

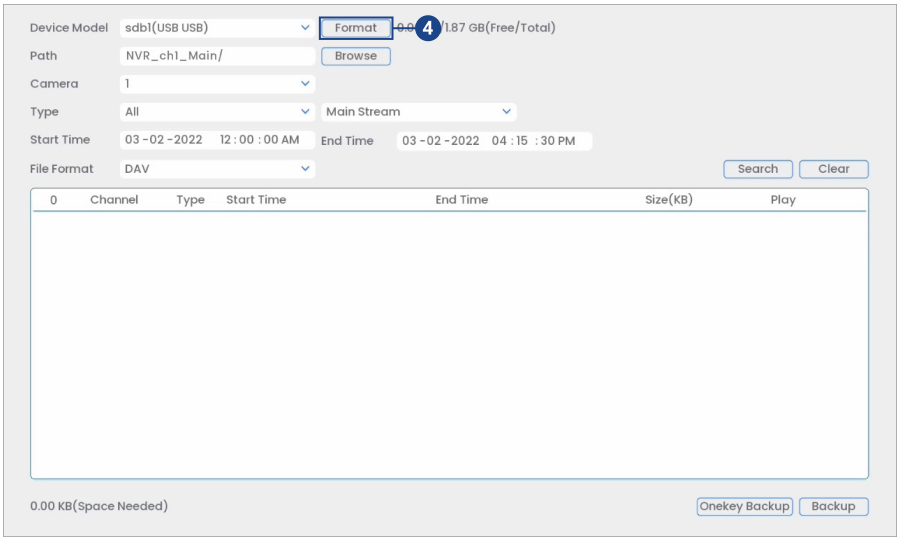
- Connect a USB flash drive (not included) to a free USB port on the unit.

**To format a USB flash drive:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Backup**.




3. Click **Browse** to locate the USB drive you want to format.




4. Select the correct drive, then click **Format**.

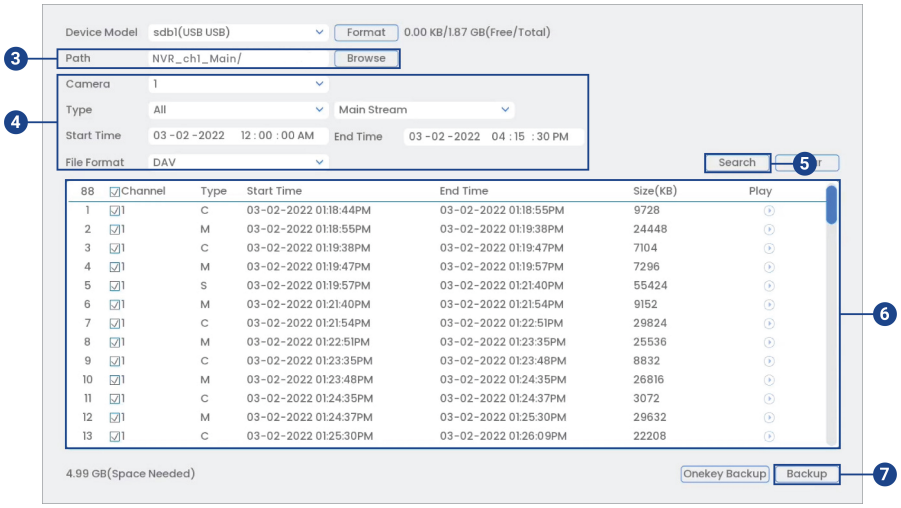
5. Select a format mode:
   - **FAT32:** Recommended — offers the greatest compatibility with other devices.
   - **NTFS:** Advanced users only — should only be used on drives larger than 32GB where file sizes will be larger than 4GB.
6. Click **OK**.

### 12.2 Backing Up Video

You can save video recordings from your system to a USB flash drive. Ensure you format new drives before backing up video (see 12.1 *Formatting the USB Flash Drive*, page 39 for details).

**To back up video:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Backup**.




3. Click **Browse** to select the USB backup device and the folder to save your backup files to.
4. Configure the following:
   - **Camera:** Select the channel you would like to search or select **All** to search all channels.
   - **Type:** Select the recording type you would like to search for or select **All** to search all recording types.
   - **Start Time / End Time:** Select the start and end time for your search.
   - **File Format:** Select **DAV** to save files to save files to **.dav** format. You can playback **.dav** files using the Lorex video player software. To download the Lorex video player software, go to your recorder's product support page. Visit help.lorextechnology.com and search your recorder's model number.
5. Click **Search**. A list of files that match your search criteria appears.
6. Check files you would like to backup.
7. Click **Backup**.

> **NOTE**
>
> HD video files saved on the system may take up a large amount of disk space. The size of video files selected and the amount of free space on your USB device is shown on screen.

### 12.3 Using Video Clip Backup

Video clip backup allows you to select a duration of video during playback mode and save it to a USB device (not included). For full instructions on video clip backup, see 11.4 *Video Clip Backup*, page 36.

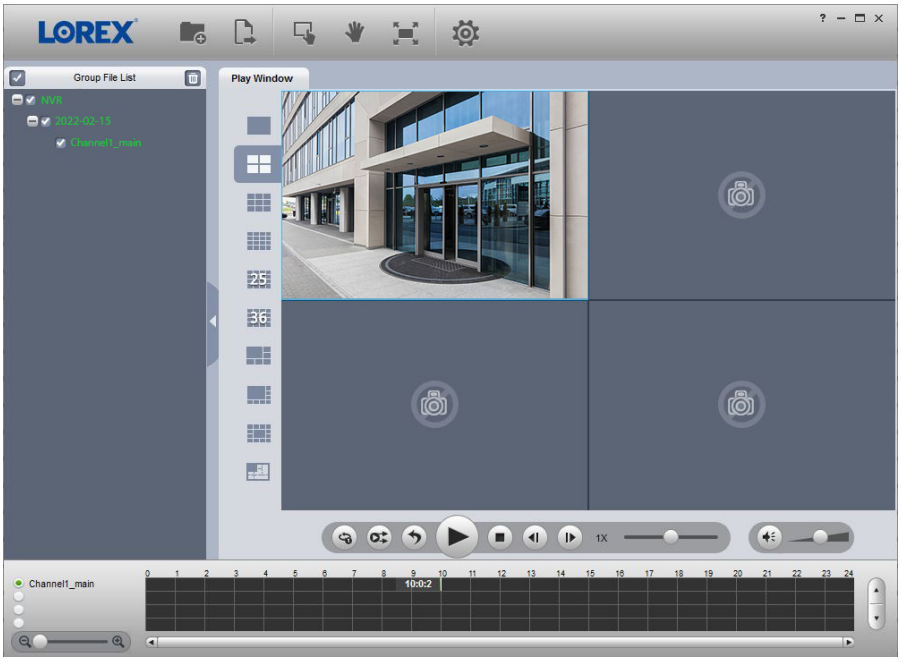
## 12.4 Viewing Backed Up Files

Use the free Lorex Player to play back **.dav** files.

### *12.4.1 Viewing Backed Up Files on PC*

1. Download and install the **Lorex Player for PC** from your recorder's product page. Visit help.lorextechnology.com and search your recorder's model number.
2. Double-click one of the files under the **Group File List** on the left to begin playback.

> **NOTE**
>
> By default, the video file will play in the top-left playback window as shown below. Select an unused playback window then double-click another file to play additional videos at the same time.




**OR**

Click  to open a backed up video file in another location.

3. Use the **Lorex Player** controls to control playback or select other files for playback.

> **NOTE**
>
> For a full overview of Lorex Player controls, see 12.4.3 *Lorex Player Controls*, page 43.

### *12.4.2 Viewing Backed Up Files on Mac*

1. Download and install the **Lorex Player for Mac** from the recorder's product page. Visit help.lorextechnology.com and search your recorder's model number.
2. Double-click the downloaded file in Safari to extract the **Lorex Player** app file.
3. Drag the **Lorex Player** app to your Desktop or Applications list. Double-click **Lorex Player** to open the application.

4. Double-click one of the files under the **Group File List** on the left to begin playback.

> **NOTE**
>
> By default, the video file will play in the top-left playback window as shown below. Select an unused playback window then double-click another file to play additional videos at the same time.




**OR**

Click to open a backed up video file in another location.

5. Use the **Lorex Player** controls to control playback or select other files for playback.

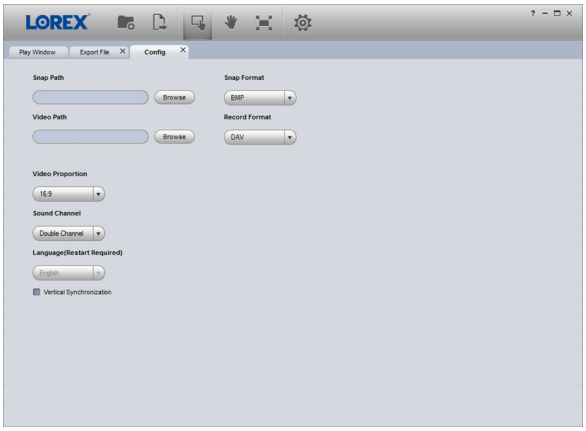
> **NOTE**
>
> For a full overview of Lorex Player controls, see 12.4.3 *Lorex Player Controls*, page 43.

### *12.4.3 Lorex Player Controls*




1. **File List:** Double-click to open a file.
2. **Viewing Mode:** Select between single-channel viewing and various split-screen options.
3. **Hide/Show File List**
4. **Playback Controls:**
   - : Playback files in sequence.
   - : Synchronize playback times.
   - : Play/pause playback.
   - : Stop playback.
   - : Previous frame.
   - : Next frame.
   - : Playback speed.
   - : Volume control.
5. **Zoom Timeline**
6. **Display Area:** Double-click a video file to expand. Click the controls inside the display area to do the following:
   - : View information about the video file.
   - : Start/stop a manual recording of the video file.
   - : Take a snapshot of the video file.
   - : Close the video file.

7. **Add Files:** Click to open backed up video files.
8. **Export Files:** Export a video file to a different format.
9. **Digital Zoom:** Click, then click-and-drag over a camera image to zoom in. Right-click to return to the full image.
10. **Drag:** Click, then click-and-drag to move around a camera image that has been digitally zoomed in.
11. **Fullscreen:** Click to open the player in full screen. Press **ESC** to exit full screen.
12. **Settings:** Click to open the configuration menu for the player. From here you can control the default file formats and save locations for snapshots and control the aspect ratio.



# 13 Motion Detection

Use motion detection on your camera to capture activity, trigger alarms, and receive notifications. Setting up your recorder to only record on motion detection can save hard disk drive space and eliminate the need to view a whole entire days worth of recording to see if an incident occurred. You can set motion detection zones to monitor certain areas in the camera's field-of-view and decrease or increase the motion sensitivity.

## 13.1 Status Icons

The system displays different icons in the bottom left–hand corner of the camera image to inform you of motion detection events:

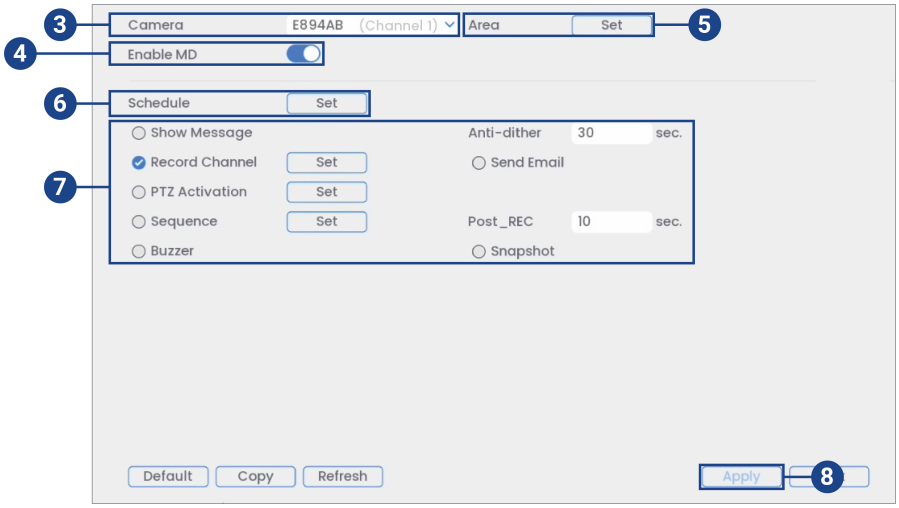
- **Motion detection:** Motion has been detected by the camera. An M icon is shown in the bottom left-hand corner of the camera image to show that motion was detected, but the system is not recording a motion event. This is because motion recording is not enabled on the channel, or the movement detected by the camera was not significant enough to trigger motion recording. See 13.2 *Configuring Motion Detection*, page 45 to configure settings for motion detection and recording.
- **Motion recording:** Motion-triggered video recording. An M icon is shown in the bottom left-hand corner of the camera image when a motion event is being recorded.

## 13.2 Configuring Motion Detection

Select channels that you want to enable motion detection on and adjust preferences.

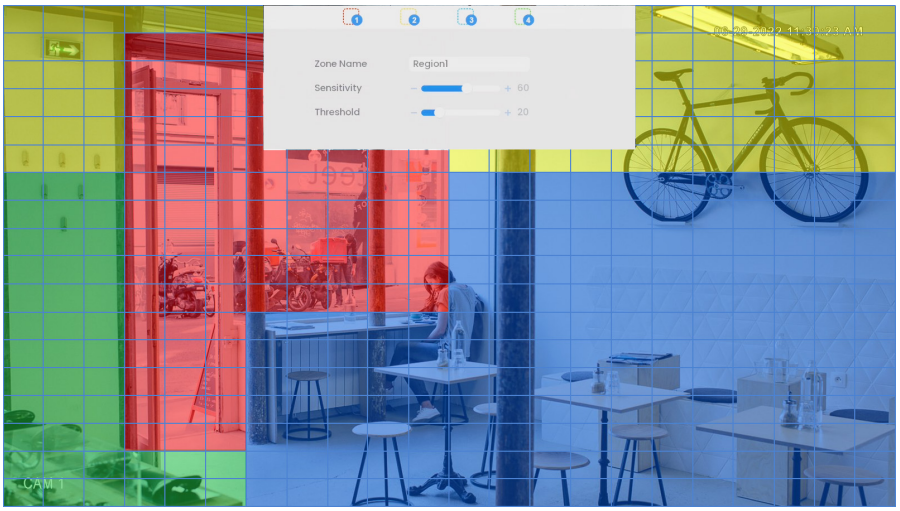
**To configure motion detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Motion** tab from the side panel.



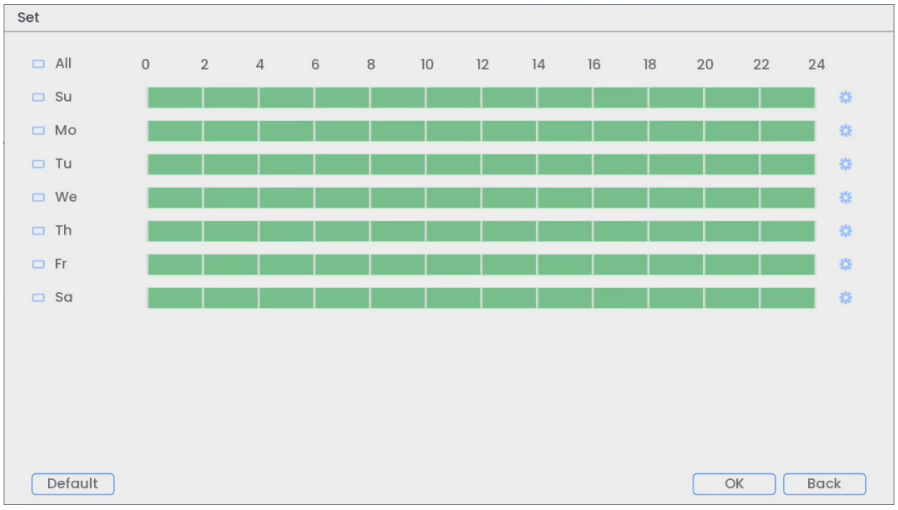

3. Select a channel to configure motion detection.
4. Check to enable motion detection on the selected channel.

5. Click **Set** next to **Area** to configure which areas of the image will be enabled for motion detection. A grid will appear on the monitor:



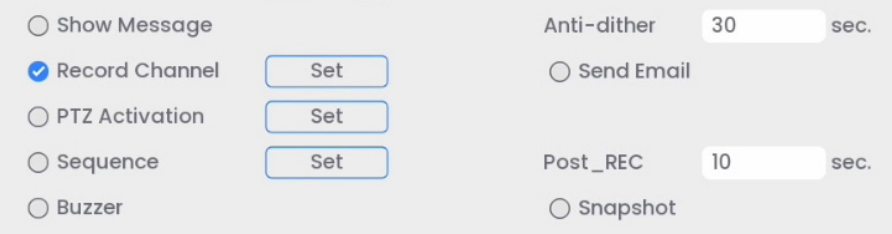

- The camera image appears with a red grid overlay. This means the entire image is enabled for motion detection.
- Click or click-and-drag to add / remove boxes from the active area. Cells that have been removed from the active area appear transparent.
- Hover near the top of the image to reveal zone selection. You can set up to 4 different zones with different sensitivity and threshold values.
- Right-click when finished.

6. Click **Set** next to **Schedule** to choose which days and times of the week to enable motion detection:




- Click or click-and-drag along each of the green timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

7. Choose how the system will react to motion detection:




- 
- **Show Message:** Check to enable an on-screen pop-up when one of your cameras detects motion. On-screen pop-up shows the channels an event occurred on and the type of event.
- **Send Email:** Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 22.6.6 *Configuring Email Alerts*, page 114).
- **Record Channel:** Select the channels that will record when motion is detected on the selected channel. Set the length of recording following a motion detection event in the **Post_REC** field.
- **Anti-dither:** After an initial motion event, the system will continue to record video if a second motion event occurs within the set **Anti-dither** period.
- **PTZ Activation:** Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence:** Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer:** Check to enable the system buzzer.
- **Snapshot:** Select the numbered tiles next to this option to save a snapshot of the corresponding channels.

8. Click **Apply** to save changes.
9. *(OPTIONAL)* Click **Copy** to apply the settings for the current channel to one or more other channels.

# 14 Active Deterrence

Lorex Active Deterrence cameras feature bright, customizable warning lights, colorful **Smart Security Lighting™**, sirens, and pre-recorded voice prompts. Active Deterrence features can be used in combination with other detection features, such as smart motion detection. By enabling automatic deterrence, these visual and audio alerts will trigger when motion is detected, in turn deterring unwanted visitors (see 14.1 *Automatic Deterrence Settings*, page 48). You can also trigger the lights and sirens manually from the recorder and remotely on the Lorex Home app (see 14.2 *Manual Deterrence Features*, page 57).

Refer to your camera's documentation to locate the warning light, **Smart Security Lighting™**, and embedded speaker for sirens and voice prompts on your camera.

For a complete list of compatible deterrence cameras, navigate to your recorder series at lorex.com/compatibility.

**NOTE**

If a **Smart Plan** is not enabled properly on your recorder, the smart motion feature will not work. Please make sure to enable the smart motion feature before continuing. Refer to Configuring Smart Plan, page 94 for further details.




## 14.1 Automatic Deterrence Settings

Set preferences for automatic warning light, voice prompt, and **Smart Security Lighting™** on compatible Lorex deterrence cameras.

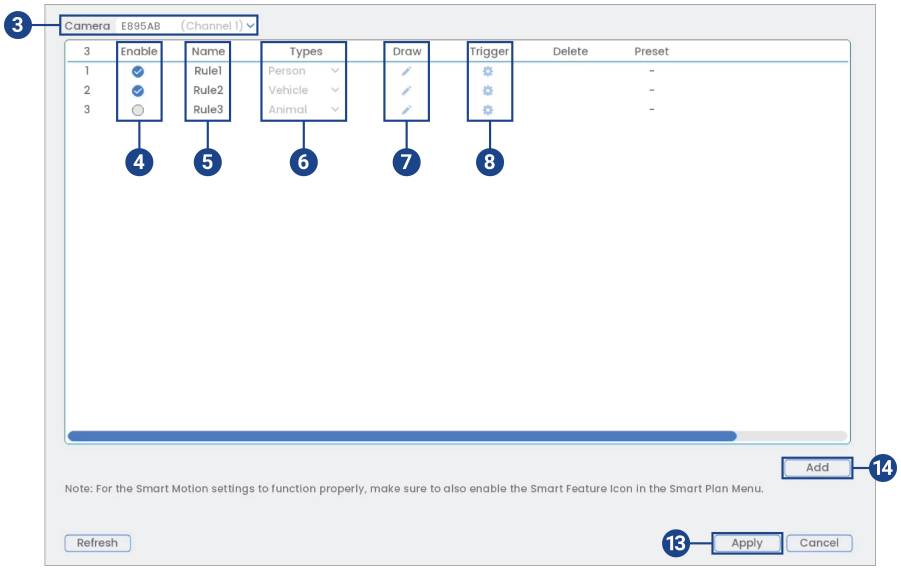
### *14.1.1 Automatic Warning Light*

The system allows you to activate bright, white warning lights to deter intruders. Select channels that you want to enable the automatic warning light on and adjust preferences.

**To configure automatic warning light deterrence settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Events**, then **Event Settings**. Click the **Smart Motion** tab from the side panel.

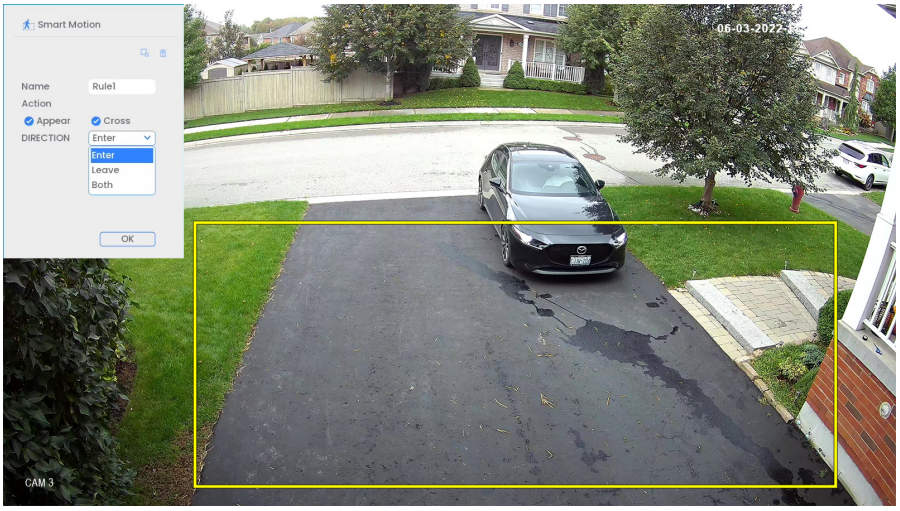



3. Select a channel of a connected deterrence camera.
4. Check to enable the smart motion detection rule that you want to use.
5. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.
6. Select between **Person**, **Vehicle**, or **Animal** detection types.

**NOTE**

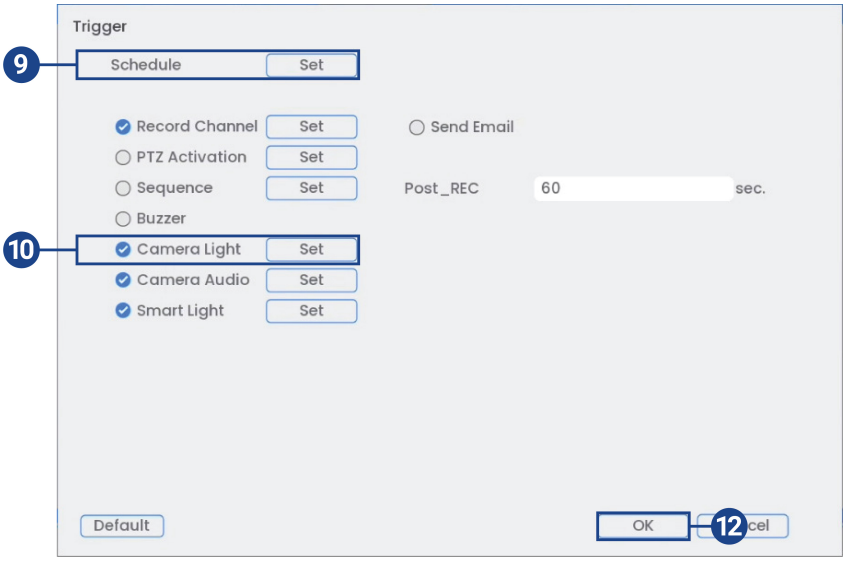
The first three smart motion detection rules were added by default. The detection type for the three default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

7. Click the **Draw** icon and customize the active area for automatic deterrence:

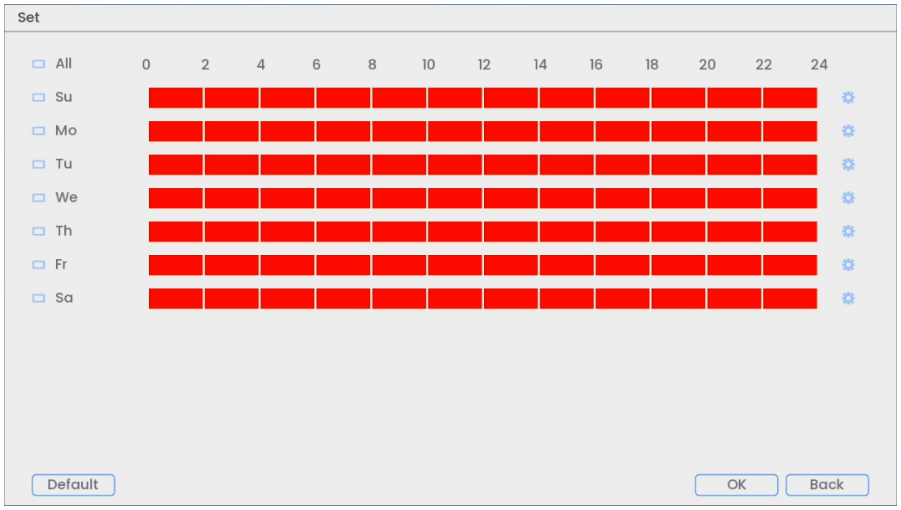



- **Action**: Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction**: Determine which direction an object needs to travel in order to trigger automatic deterrence. You can select **Enter** for movement entering the defined area, or **Leave** for movement exiting the defined area, or **Both** for both types of directions.
- To draw, click-and-drag the corners of the yellow box to resize the area. For most accurate results, set an area where objects of interest will move within the bounding box as well as into/out of.
- Click **OK** when finished.

8. Click the **Trigger** icon to adjust automatic deterrence features.

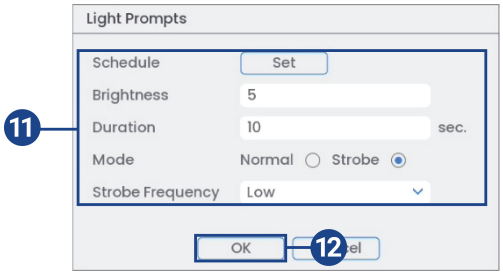


9. Click **Set** next to **Schedule** to choose which days and times or the week to enable automatic deterrence:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

10. To enable an automatic deterrence warning light, check **Camera Light** and click **Set**.




11. Adjust warning light preferences:

- **Schedule**: Click **Set** to customize a schedule specifically for automatic warning light.
- **Brightness**: Set the warning light brightness level.
- **Duration**: Choose how long the warning light will stay on following a smart motion detection event.
- **Mode**: Select **Normal** for a solid white light or **Strobe** for a flashing light. If you select **Strobe**, set how quickly the light will flash under **Strobe Frequency**.

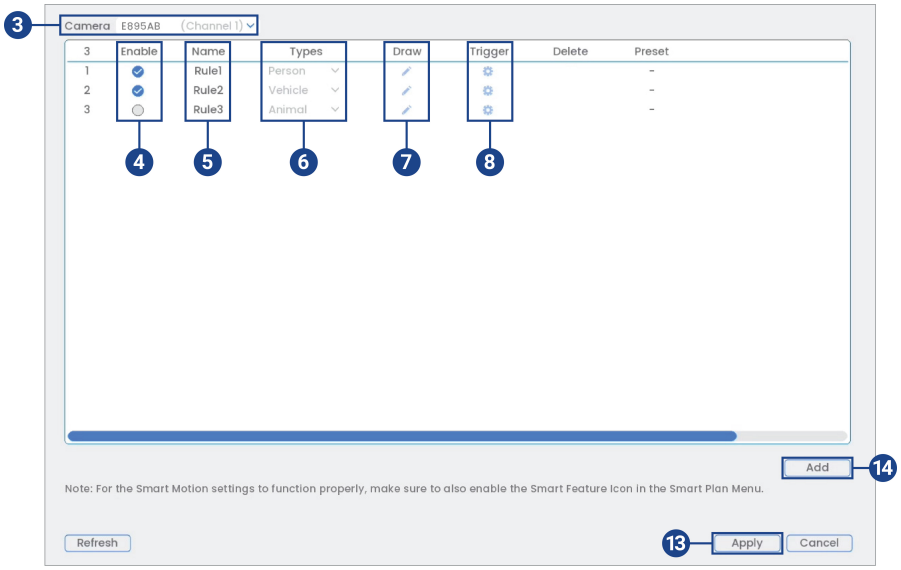
12. Click **OK**, click **OK** again.
13. Click **Apply** to save changes.
14. Click **Add** to create additional active areas for automatic deterrence on the selected channel.

### *14.1.2 Automatic Voice Prompt*

The system allows you to activate pre-recorded voice prompts as verbal warnings. Select channels that you want to enable the automatic voice prompt on and adjust preferences.

**To configure automatic voice prompt deterrence settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Motion** tab from the side panel.

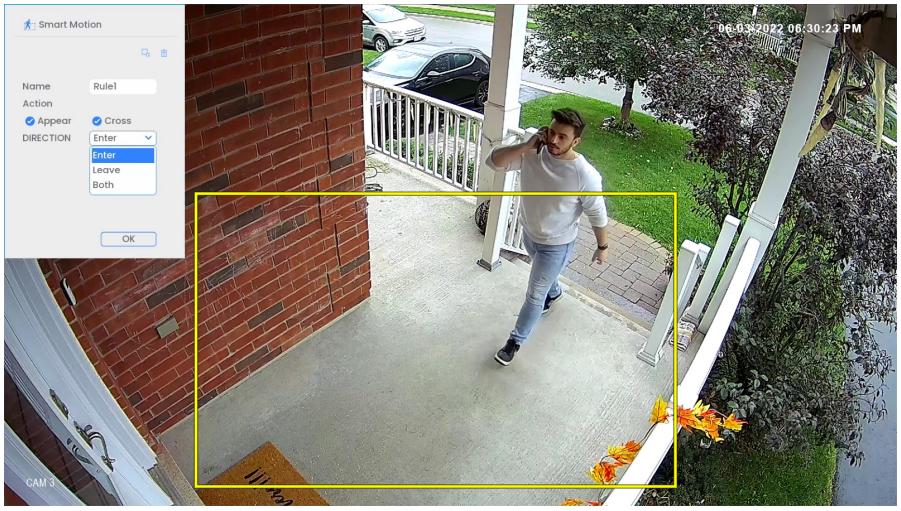



3. Select a channel of a connected deterrence camera.
4. Check to enable the smart motion detection rule that you want to use.
5. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.
6. Select between **Person**, **Vehicle**, or **Animal** detection types.

**NOTE**

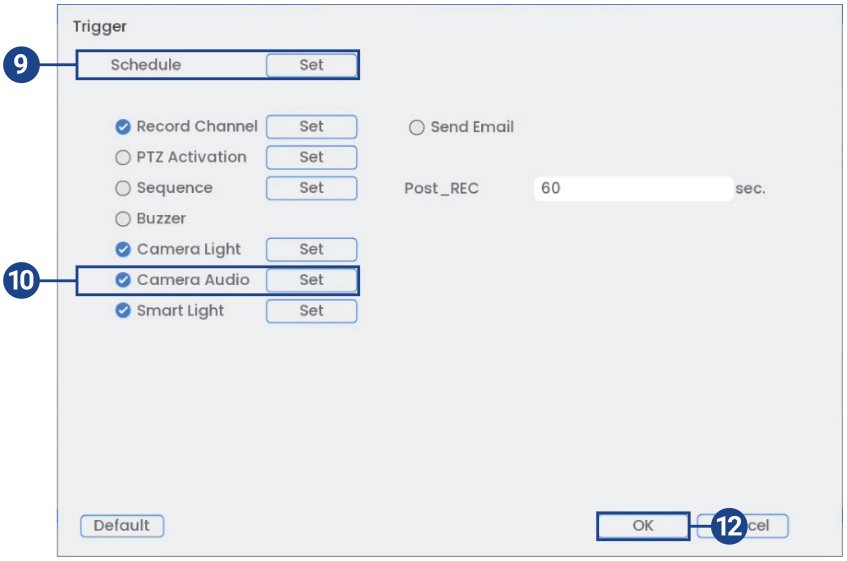
The first three smart motion detection rules were added by default. The detection type for the three default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

7. Click the **Draw** icon and customize the active area for automatic deterrence:

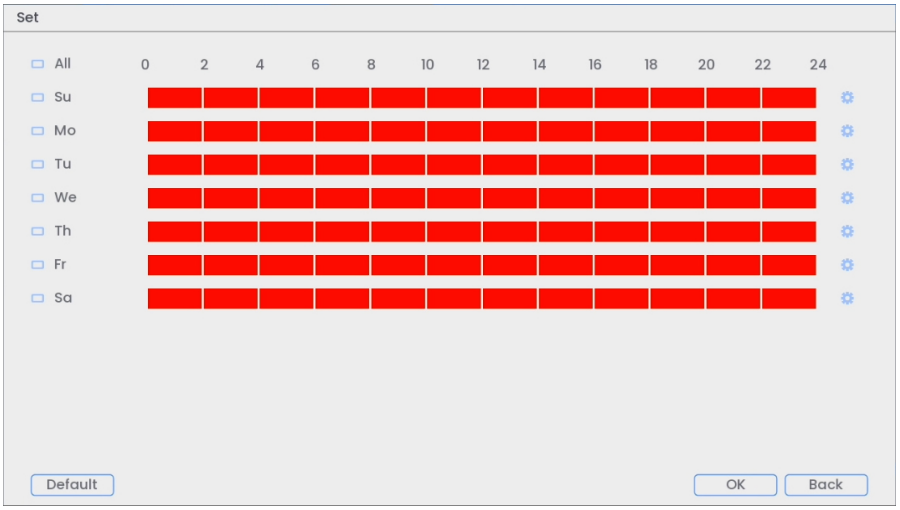



- **Action**: Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction**: Determine which direction an object needs to travel in order to trigger automatic deterrence. You can select **Enter** for movement entering the defined area, or **Leave** for movement exiting the defined area, or **Both** for both types of directions.
- To draw, click-and-drag the corners of the yellow box to resize the area. For most accurate results, set an area where objects of interest will move within the bounding box as well as into/out of.
- Click **OK** when finished.

8. Click the **Trigger** icon to adjust automatic deterrence features.

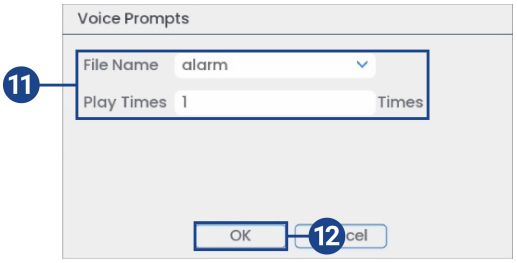


9. Click **Set** next to **Schedule** to choose which days and times of the week to enable automatic deterrence:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

10. To enable automatic voice prompt, check **Camera Audio** and click **Set**.




11. Adjust voice prompt preferences:
    - **File Name**: Select **Alarm** or any other one of the pre-recorded voice prompts.
    - **Play Times**: Choose how many times the voice prompt will play following a smart motion detection event.
12. Click **OK**, click **OK** again.
13. Click **Apply** to save changes.
14. Click **Add** to create additional activate areas for automatic deterrence on the selected channel.

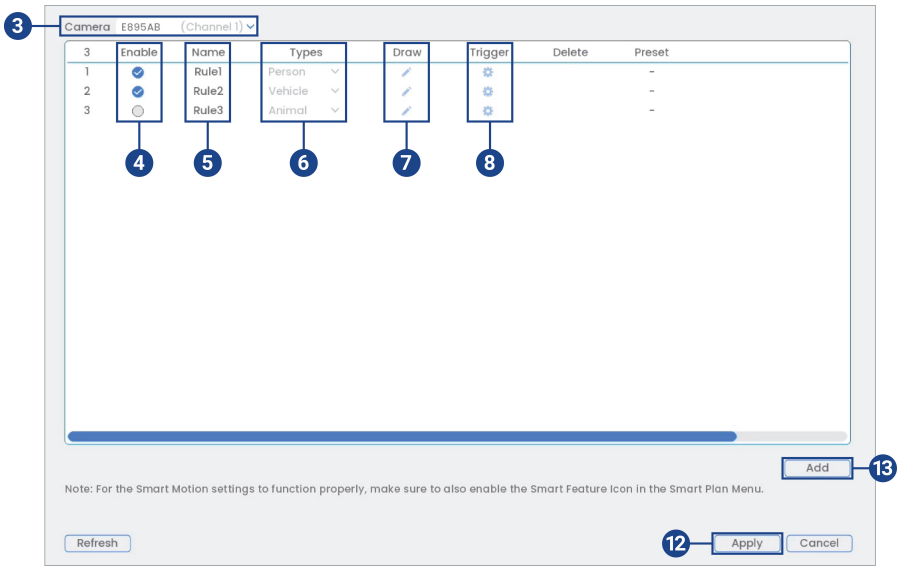
### *14.1.3 Automatic* Smart Security Lighting™

The system allows you to activate a colorful **Smart Security Lighting™** upon smart motion detection. Select channels that you want to enable the automatic **Smart Security Lighting™** on and adjust preferences.

**Smart Security Lighting™** is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

**To configure automatic Smart Security Lighting™ deterrence settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Motion** tab from the side panel.

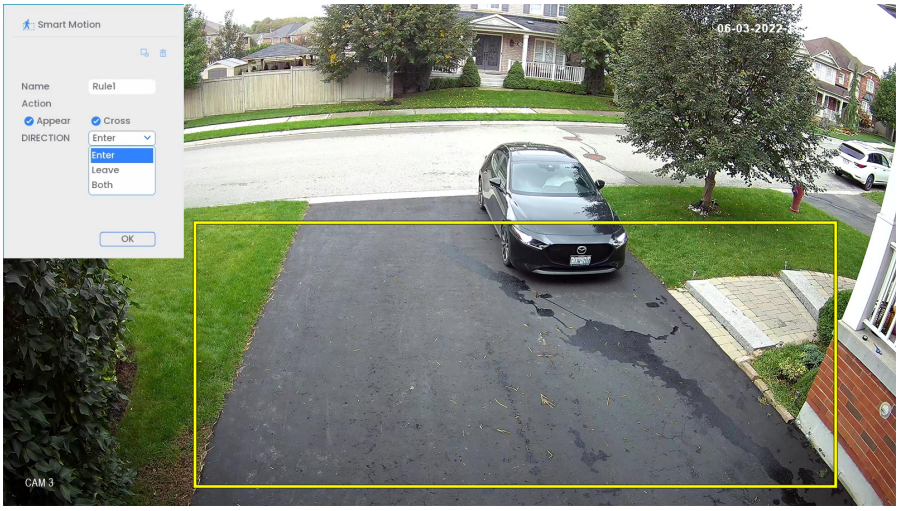



3. Select a channel of a connected deterrence camera.
4. Check to enable the smart motion detection rule that you want to use.
5. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.
6. Select between **Person**, **Vehicle**, or **Animal** detection types.

**NOTE**

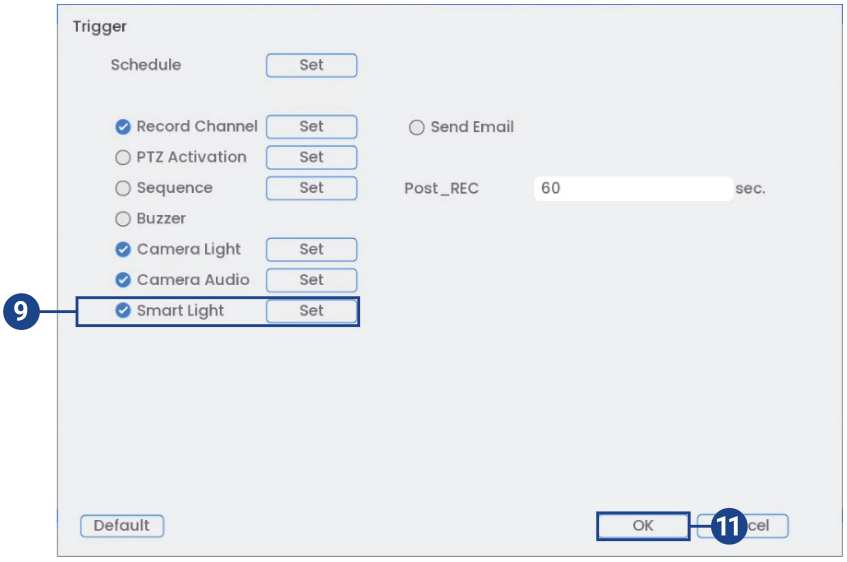
The first three smart motion detection rules were added by default. The detection type for the three default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

7. Click the **Draw** icon and customize the active area for automatic deterrence:



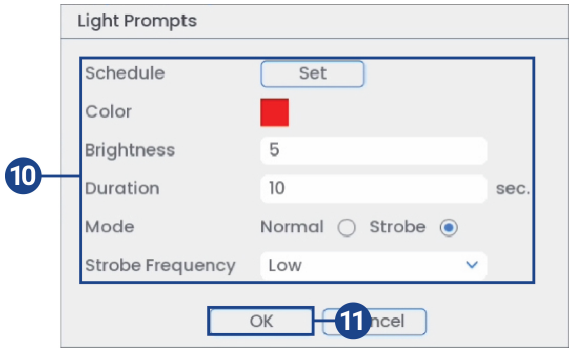

- **Action**: Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction**: Determine which direction an object needs to travel in order to trigger automatic deterrence. You can select **Enter** for movement entering the defined area, or **Leave** for movement exiting the defined area, or **Both** for both types of directions.
- To draw, click-and-drag the corners of the yellow box to resize the area. For most accurate results, set an area where objects of interest will move within the bounding box as well as into/out of.
- Click **OK** when finished.

8. Click the **Trigger** icon to adjust automatic deterrence features.

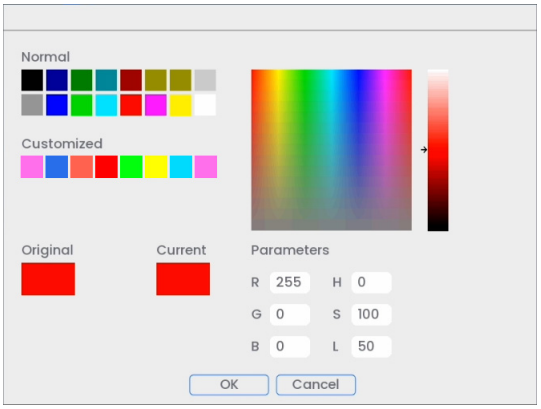



9. To enable automatic **Smart Security Lighting™**, check **Smart Light** and click **Set**.

10. Adjust **Smart Security Lighting™** preferences:




- **Schedule**: Click **Set** to configure a schedule specifically for **Smart Security Lighting™**.
- **Color**: Click on the red color box to open the color settings. Set a custom color by clicking through the rainbow color palette or by entering an RGB color code. Click **OK** to select the color.




- **Brightness**: Set the **Smart Security Lighting™** brightness level.
- **Duration**: Choose how long the **Smart Security Lighting™** will stay on following a smart motion detection event.
- **Mode**: Select **Normal** for a solid light or **Strobe** for a flashing light. If you select **Strobe**, set how quickly the light will flash under **Strobe Frequency**.

11. Click **OK**, click **OK** again.
12. Click **Apply** to save changes.
13. Click **Add** to create additional active areas for automatic deterrence on the selected channel.

## 14.2 Manual Deterrence Features

The system has multiple options for activating deterrence features manually. Set preferences for Siren and **Smart Security Lighting™** on compatible Lorex deterrence cameras to activate them manually from the system or your app.

### *14.2.1 Siren*

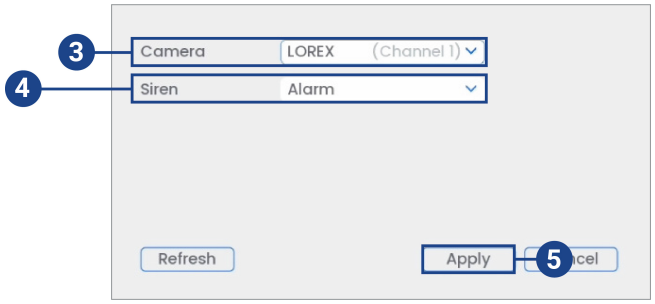
The system allows you to activate the siren to play alarm noises and deter intruders. Select channels that you want to enable the siren on and adjust preferences.

The siren feature is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

**To configure siren deterrence settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Events**, then **Event Settings**. Click the **Siren** tab from the side panel.




3. Select a channel of a connected deterrence camera.
4. Select one of the siren options from the drop-down list.
5. Click **Apply** to save changes.

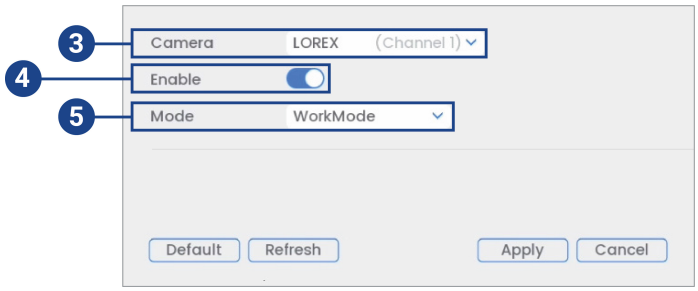
### *14.2.2* Smart Security Lighting™

The system allows you to activate a colorful **Smart Security Lighting™** that can be set to different modes. Select channels that you want to enable the **Smart Security Lighting™** on and adjust preferences.

**Smart Security Lighting™** is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

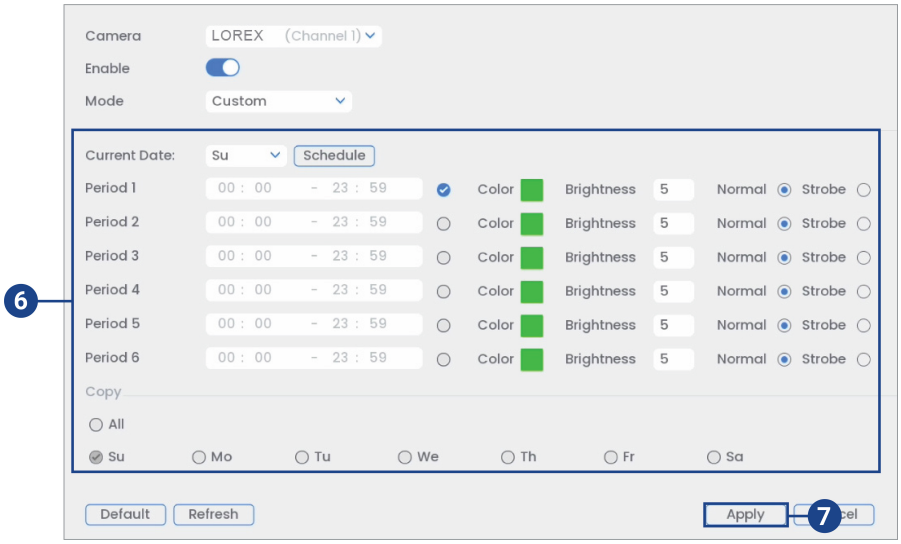
**To configure Smart Security Lighting™ deterrence settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Security Lighting** tab from the side panel.




3. Select a channel of a connected deterrence camera.
4. Check to enable **Smart Security Lighting™**.
5. Select between the different lighting modes or select **Custom** to customize the colors.

6. *(OPTIONAL)* Adjust **Custom** mode preferences:




- **Current Date**: Select the weekday from the drop-down menu and then click **Schedule** to choose the times of the week to enable **Smart Security Lighting™**.
- **Period (1–6)**: Choose the time that **Smart Security Lighting™** will be active.
- **Color**: Click on the green color box to open the color settings. Set a custom color by clicking through the rainbow color palette or by entering an RGB color code. Click **OK** to select the color.
- **Brightness**: Set the **Smart Security Lighting™** brightness level.
- Select **Normal** for a solid light or **Strobe** for a flashing light.
- **Copy**: Copy your preferences onto other weekdays or **All**.

7. Click **Apply** to save changes.

### *14.2.3 Color Night Vision Booster*

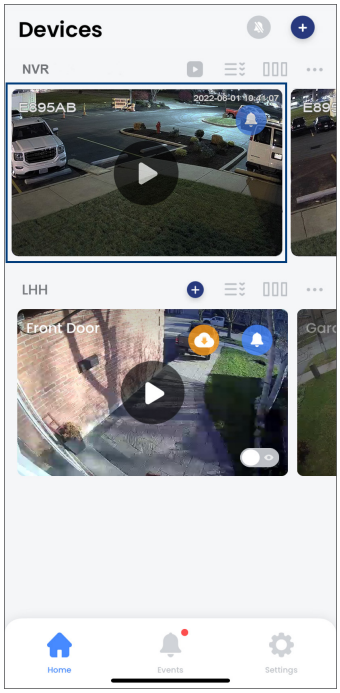
Add a boost of light to get better visibility in dark spots. To access the color night vision booster feature you must first download the **Lorex Home app**. Refer to 23 *Connecting Remotely Using the* **Lorex Home** *App*, page 131for more support on using the app.

Color night vision booster is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

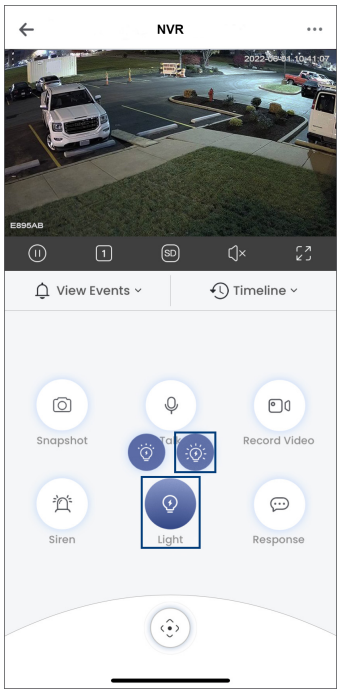
**To activate the color night vision booster feature:**

1. Open your **Lorex Home app**.

2. Login to your account.




3. Under your recorder, swipe left and tap the camera channel that you want to enable color night vision booster on.




4. In the Live View display, tap the Light icon .

5. Tap the color night vision booster icon on the top right. Tap it again to manually turn it off.

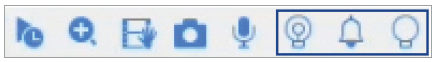
| NOTE |
| --- |
| Color night vision booster automatically turns off after 3 minutes. |

### *14.2.4 Manually Activate Deterrence Features*

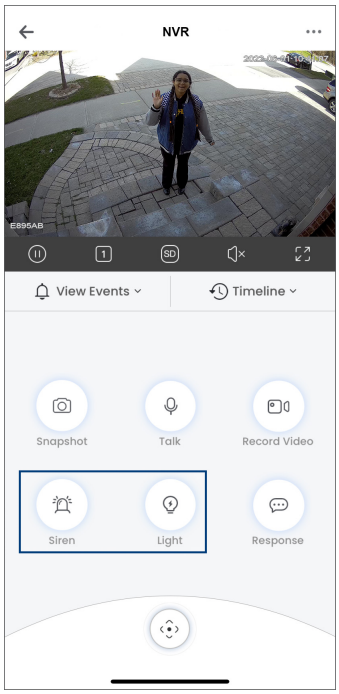
The system has multiple options for activating warning light, siren, **Smart Security Lighting™**, and color night vision booster manually.

**To activate deterrence features on a single camera:**

- Hover the mouse pointer near the top of the camera image in Live View to reveal the Camera Toolbar. Click to activate the warning light, click to activate the siren, or click to activate the **Smart Security Lighting™**.

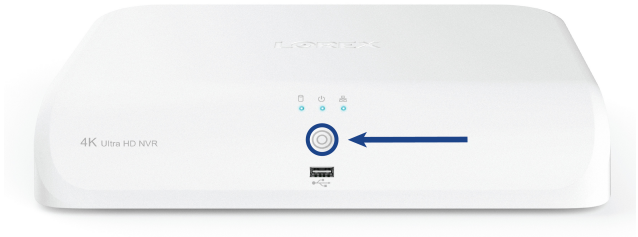


- Activate deterrence features using the **Lorex Home app**. Go to your camera's live feed and press the deterrence buttons for warning light, siren, and color night vision booster.




**To activate warning light and siren deterrence features on all connected cameras:**

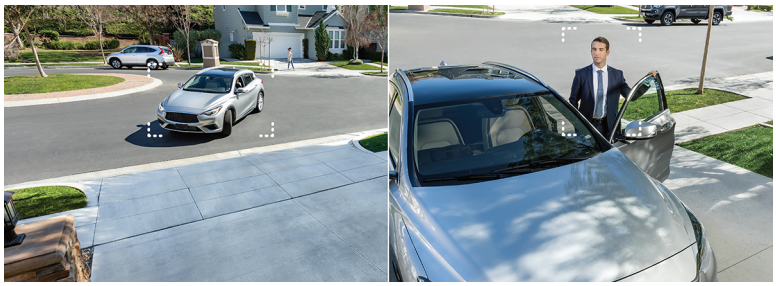
- Push and hold the front panel panic button on the recorder for 3 seconds.



- From the Live View display, click the panic button  on the navigation bar.

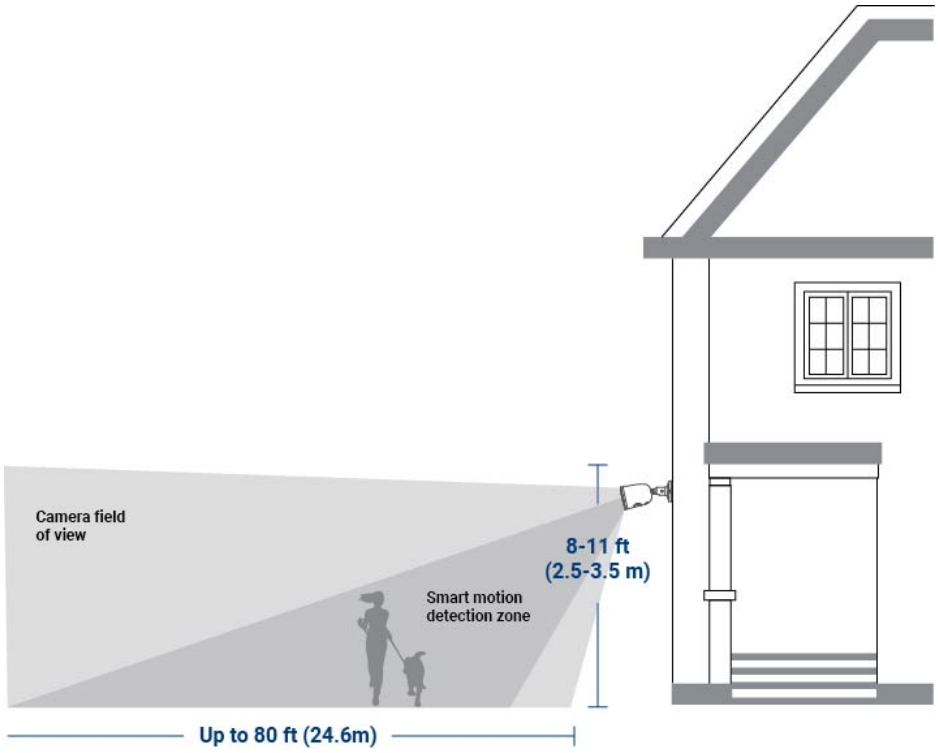
# 15 Smart Motion Detection

The system supports detection of people and vehicles with compatible IP cameras only. This helps deliver more relevant notifications when using the Lorex Home app for remote viewing. You can also link warning light deterrence to person, vehicle, and/or animal detection on compatible Lorex deterrence cameras for an added level of smart security.



## 15.1 Ensuring Accurate Person, Vehicle & Animal Detection

The following are important camera installation notes to ensure accurate person, vehicle, and/or animal detection. Refer to the documentation that came with your camera or search for your camera model number at lorex.com for full mounting instructions.




**Person Detection**

| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2ft (2.5m) | 2.8ft (0.86m) | 20ft (6.12m) |
| 15° | 9.8ft (3m) | 4.5ft (1.39m) | 19.7ft (6.03m) |
| 15° | 11.5ft (3.5m) | 6.3ft (1.93m) | 19.3ft (5.90m) |

**Vehicle Detection**

| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2ft (2.5m) | 3.5ft (1.07m) | 80ft (24.6m) |

**Animal Detection**

| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2–11.5ft (2.5–3.5m) | 6.8ft (2.1m) | 9.1ft (2.8m) |

- Angle the camera so that objects of interest appear in the bottom 2/3 of the camera image.
- Choose a location where objects of interest will be no further than 20ft (6.1m) from the camera.
- Angle the camera 15° down from the level position.
- Install the camera between 8.2-11.5ft (2.5-3.5m) off of the ground.

**Accuracy** of person, vehicle, and animal detection will be influenced by multiple factors, such as the object's distance from the camera, the size of the object, and the height and angle of the camera. Night vision will also impact the accuracy of detection.

### 15.2 Configuring Person, Vehicle & Animal Detection

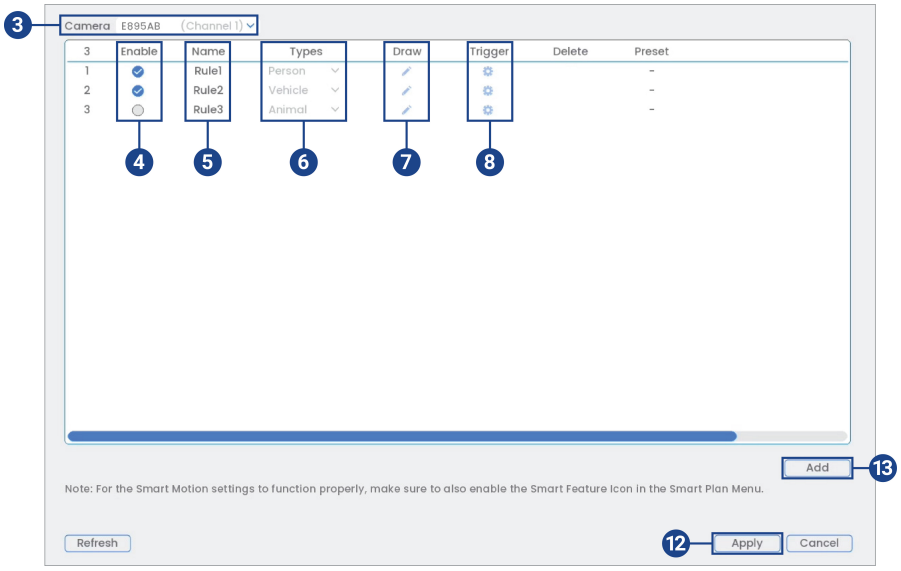
The system allows you to monitor for smart motion events and differentiate between person, vehicle, and animal shapes. Adjust preferences for person, vehicle, and/or animal detection per channel.

**NOTE**

If a Smart Plan is not enabled properly on your camera, the Smart Motion feature will not work. Please make sure to enable the Smart Motion feature before continuing. Refer to 22.4.1 *Configuring Smart Plan*, page 101for full instructions.

**To configure person, vehicle, and animal detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Motion** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure smart motion detection.
4. Check to enable the smart motion detection rules that you want to use.
5. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.

6. Select between **Person**, **Vehicle**, or **Animal** detection types.

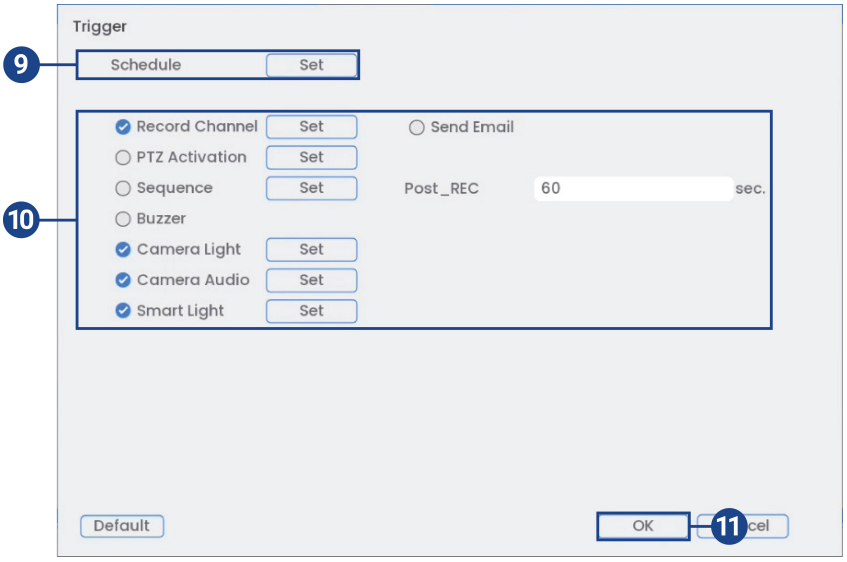
> **NOTE**
>
> The first three smart motion detection rules were added by default. The detection type for the three default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

7. Click the **Draw** icon and customize the active area for smart motion detection:

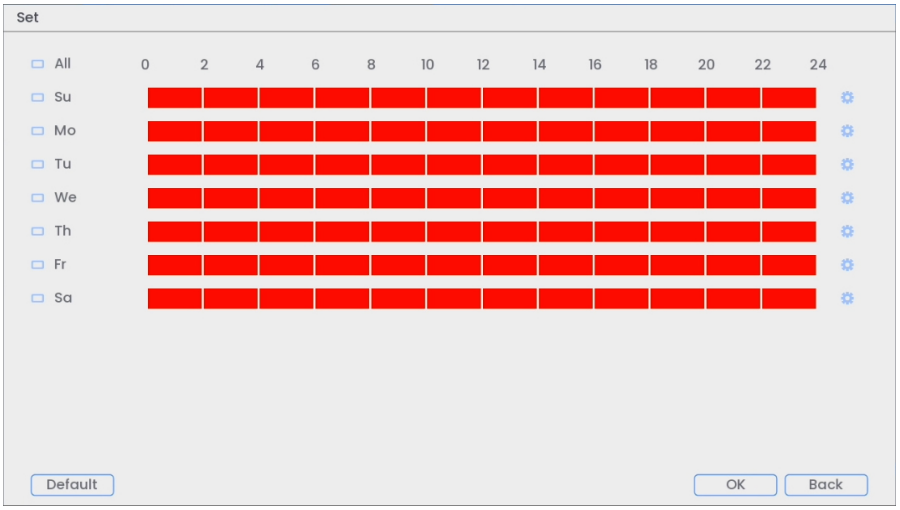



- **Action**: Check **Appear** to detect if an object of interest appears in the defined area. Check **Cross** to detect if an object of interest enters or exits the defined area. Check both to enable each type of action.
- **Direction**: Determine which direction an object needs to travel in order to trigger automatic deterrence. You can select **Enter** for movement entering the defined area, or **Leave** for movement exiting the defined area, or **Both** for both types of directions.
- To draw, click-and-drag the corners of the yellow box to resize the area. For most accurate results, set an area where objects of interest will move within the bounding box as well as into/out of.
- Click **OK** when finished.

8. Click the **Trigger** icon to adjust how the system will react to smart motion detection.



9. Click **Set** next to **Schedule** to choose which days and times of the week to enable smart motion detection:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

10. Choose how the system will react to smart motion detection:

- 
- **Record Channel**: Select the channels that will record when smart motion is detected on the selected channel. Set the length of recording following a smart motion detection event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer**: Check to enable the system buzzer.
- **Camera Light**: Check to enable warning light. Click **Set** to change the warning light mode to **Strobe** or choose how long the warning light will stay on following a smart motion detection event.
- **Camera Audio**: Check to enable voice prompts. Click **Set** to select a pre-recorded voice message or alarm sound. Choose how many times the prompt will play following a smart motion detection event.
- **Smart Light**: Check to enable **Smart Security Lighting™**. Click Set to select a custom color or choose how long the light will stay on following a smart motion detection event. Click on the red color box to open the custom color settings.

11. Click **OK**, click **OK** again.
12. Click **Apply** to save changes.
13. Click **Add** to create additional active areas for smart motion detection on the selected channel.

### 15.3 Searching for Person, Vehicle & Animal Detection (Smart Search)

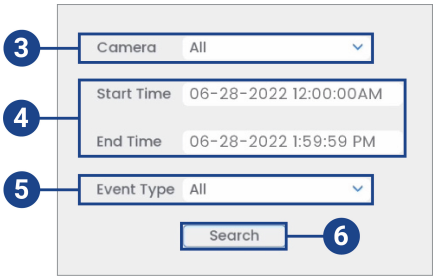
Smart Search lets you filter recorded video to search for person detection events, vehicle detection events, animal detection events or all three.

**NOTE**

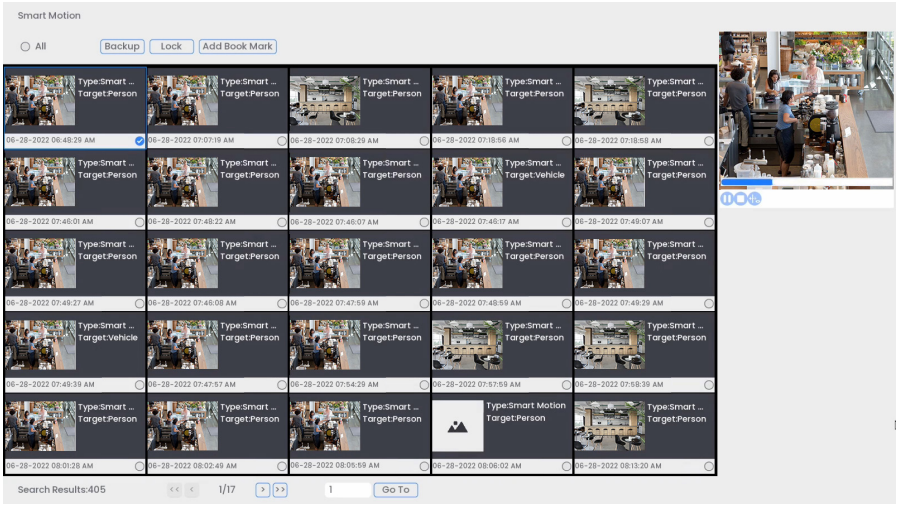
In order to use Smart Search, you must configure at least one channel's smart detection settings. See the procedure above for full instructions.

**To perform a Smart Search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.
2. Click the **Smart Motion** tab from the side panel.




3. Select a channel to search for detection events from, or select **All**.
4. Enter a start and end time for your search.
5. Select the type of smart motion detection for your search, or select **All**.
6. Click **Search**.



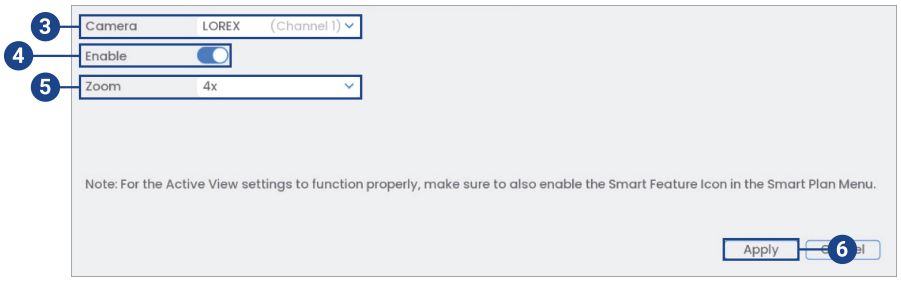

7. Events that match your search criteria are displayed. You now have the following options:
   - Click a thumbnail to preview the event. Double-click the preview window to view in full screen.
   - Check thumbnails to perform other actions:
     - **Backup:** Back up events.
     - **Lock:** Lock events.
     - **Add Book Mark:** Bookmark events.

### 15.4 Configuring Active View

Track motion that is detected by following and zooming in on the moving object.

**To configure the active view settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Motion** tab from the side panel, then **Active View** from the top panel.




3. Select a camera to configure active view for.
4. Check to enable active view.
5. Click to select the zoom setting between 2x, 4x, 6x, or 8x.
6. Click **Apply** to save changes.

# 16 Face Detection

**WARNING**

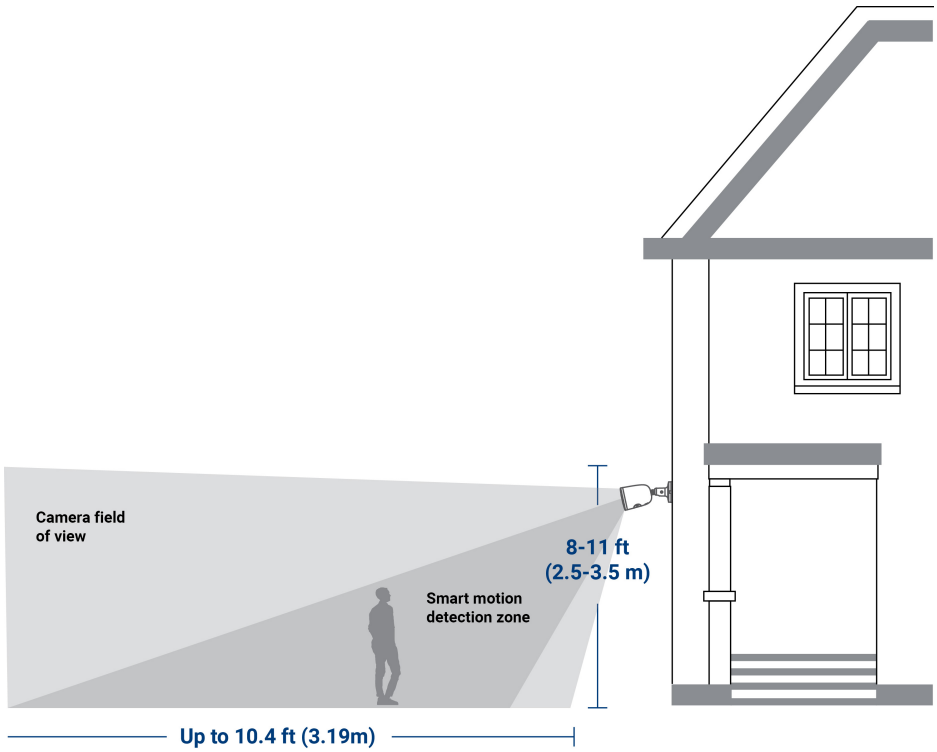
**Facial recording without consent is illegal in certain jurisdictions.** Lorex Technology does not assume liability for any use of its product that fails to conform with local laws.

The Face Detection feature allows you to detect and capture faces in the camera's field-of-view while triggering alarms and/or notifications.

Face Detection is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

## 16.1 Ensuring Face & Mask Detection Accuracy

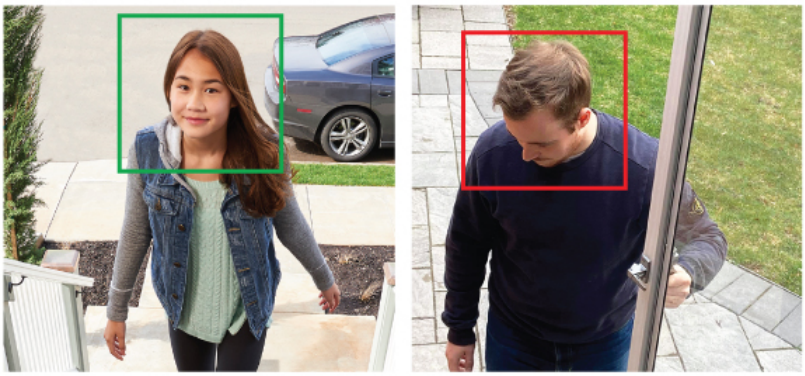
The following are important camera installation notes to ensure accurate Face Detection. For full camera mounting instructions, see your camera's documentation at lorex.com.




| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2ft (2.5m) | 2.8ft (0.86m) | 10.4ft (3.19m) |
| 15° | 9.8ft (3m) | 4.5ft (1.39m) | 9.9ft (3.02m) |
| 15° | 11.5ft (3.5m) | 6.3ft (1.93m) | 9ft (2.75m) |

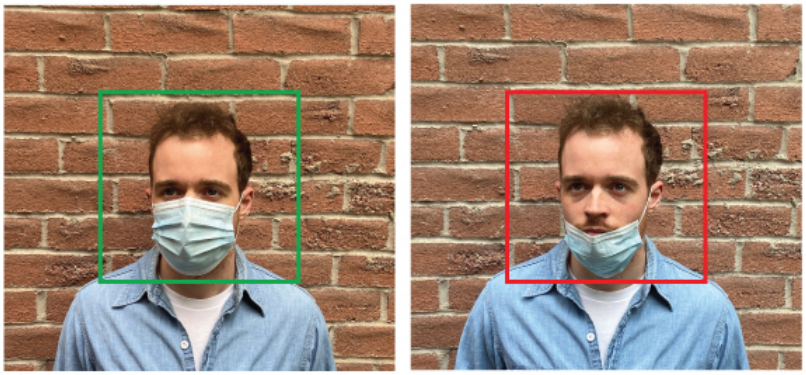
- Install in a bright area and avoid facing direct sunlight with strong backlights and dark shadows.
- Choose a location where objects of interest will be no further than 10.4ft (3.19m) from the camera.
- Position the camera about 9.8ft (3m) off the ground to detect the full proportion of a face.
- Angle the camera around 15° down from the level position.
- Point the camera directly where objects of interest will be facing.

**High Accuracy Face Detection Vs. Low Accuracy Face Detection**:



**Accuracy** will be influenced by lighting conditions and the distance/angle of a person's face to the camera. To distinguish facial features, the camera must be positioned head on with a clear view of a person's face. Obscured and partially/fully covered faces will not be accurately captured. To improve the range of face detection in low light conditions, color night vision will switch to black & white. If you cannot meet these requirements for installation, it may be best to follow the guidelines for person and vehicle detection instead.

**Mask Detection**



From the Face Detection tab, set the **Alarm Type** to **Mask Detect**. Using mask detection, a person improperly wearing or not wearing a face mask will be captured in the side preview panel and a notification will be sent from the **Lorex Home app**. Check **Auto Response** to remind visitors to: "*Please wear your face mask.*"

| NOTE |
| --- |
| You can use the face detection feature without using mask detection. |

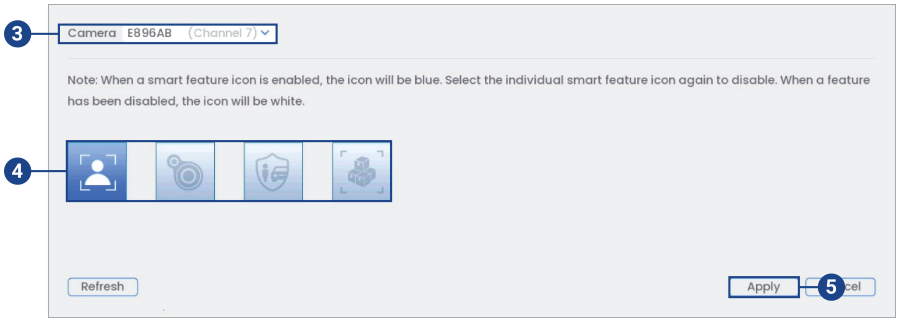
### 16.2 Enable Face & Mask Detection in Smart Plan

The face detection option cannot be used simultaneously with other smart plans. To enable the **Face Detection** feature, disable all other smart plans.

**To enable face detection in smart plan settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Events**, then **Event Settings**. Click the **Smart Plan** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure face detection.
4. Deselect the other smart feature icons, then select the **Face Detection** feature icon.

> **NOTE**
>
> When a smart feature icon is enabled, the icon appears blue. Click the blue smart feature icon again to disable it. When a feature is disabled, the icon appears white.

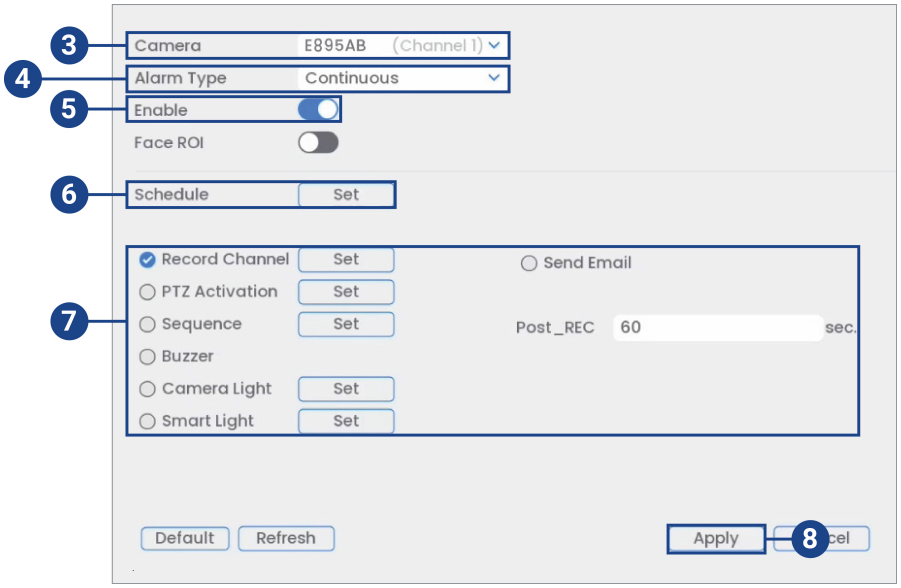
5. Click **Apply** to save changes.

### 16.3 Configuring Face Detection

The system allows you to monitor for face events. Select channels that you want to enable face detection on and adjust preferences.

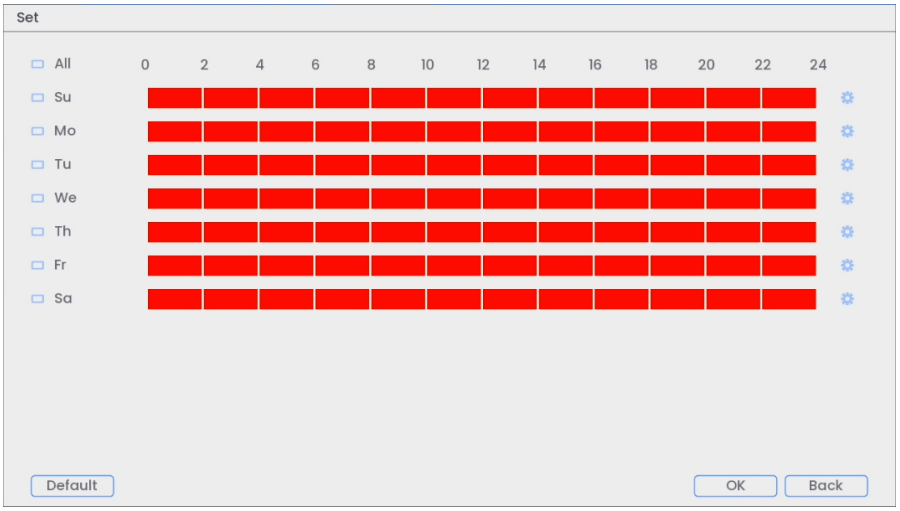
**To configure face detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Face Detection** tab from the side panel.



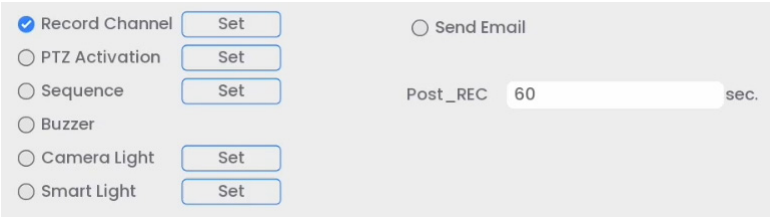

3. Select a channel with a compatible camera you would like to configure for face detection.
4. Select **Continuous**.
5. Check to enable face detection on the selected channel.

6. Click **Set** next to **Schedule** to choose which days of the week to enable face detection:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

7. Choose how the system will react to face detection:




- 
- **Record Channel**: Select the channels that will record when a face is detected on the selected channel. Set the length of recording following a face detection event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer**: Check to enable the system buzzer.
- **Camera Light**: Check to enable warning light. Click **Set** to change the warning light mode to **Strobe** or choose how long the warning light will stay on following a face detection event.
- **Smart Light**: Check to enable **Smart Security Lighting™**. Click Set to select a custom color or choose how long the light will stay on following a face detection event. Click on the red color box to open the custom color settings.

8. Click **Apply** to save changes.

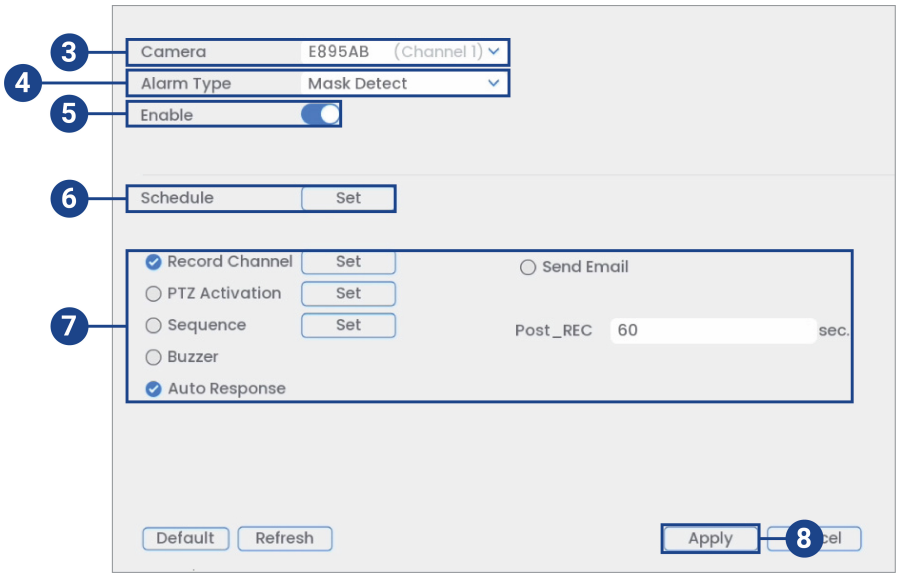
9. *(OPTIONAL)* Click **Copy** to apply the settings for the current channel to one or more other channels.

### 16.4 Configuring Mask Detection

Select channels that you want to enable mask detection on and adjust preferences.

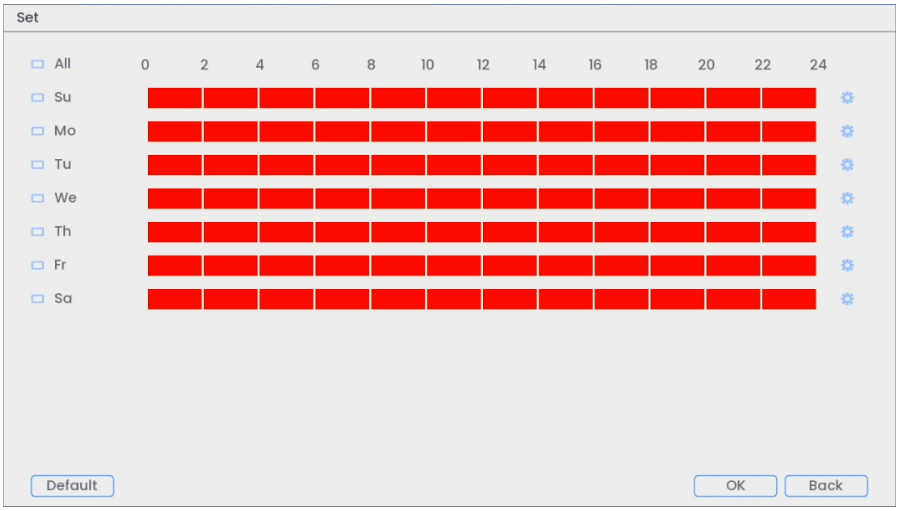
**To configure mask detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Face Detection** tab from the side panel.



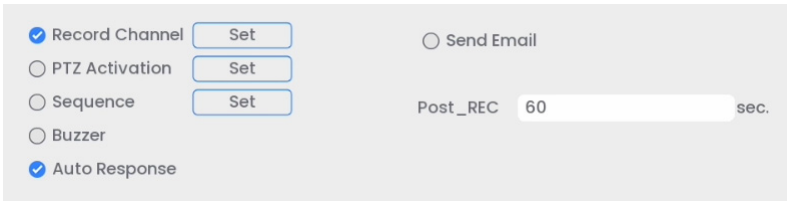

3. Select a channel with a compatible camera you would like to configure for face detection.
4. Select **Mask Detect**.
5. Check to enable mask detection on the selected channel.

6. Click **Set** next to **Schedule** to choose which days of the week to enable mask detection:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

7. Choose how the system will react to mask detection:




- 
- **Record Channel**: Select the channels that will record when a face is detected on the selected channel. Set the length of recording following a face detection event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer**: Check to enable the system buzzer.
- **Auto Response**: Check to enable an automatic audio response when a face is detected without a mask.

8. Click **Apply** to save changes.
9. *(OPTIONAL)* Click **Copy** to apply the settings for the current channel to one or more other channels.

### 16.5 Live Preview of Face & Mask Detection

Preview captured face detection and mask detection on your camera's live view display.

**To preview face and/or mask detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Face Preview**.
2. Click **Enable** for the face preview panel to appear on the right side of the screen. Click **Disable** for the face preview panel to disappear from live view.

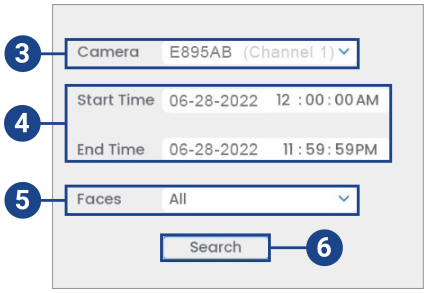



## 16.6 Searching for Face & Mask Detection (Smart Search)

Search for face detection events on a specific channel or the entire system. You can also choose to back up events (USB flash drive required – not included).

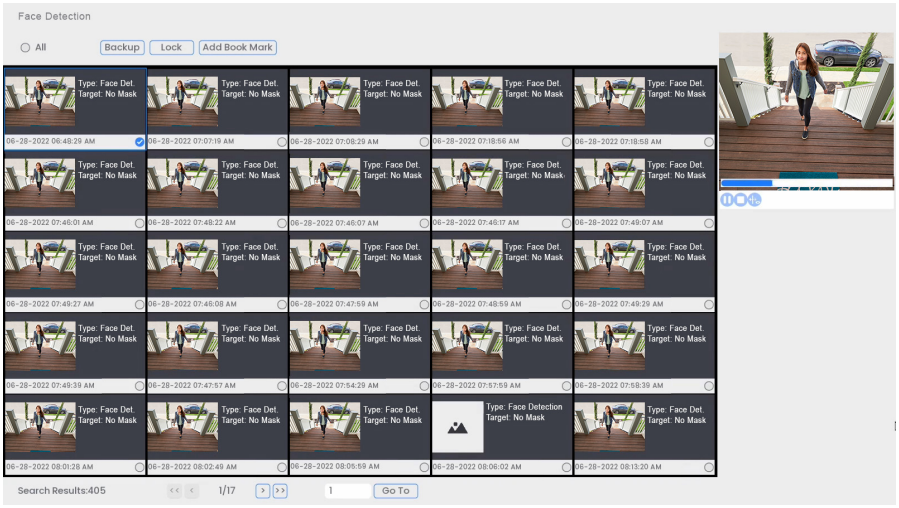
**To perform a Smart Search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.
2. Click the **Face Detection** tab from the side panel.




3. Select a channel to search for detection events from, or select **All**.
4. Enter a start and end time for your search.
5. Select the type of face detection for your search, or select **All**.

6. Click **Search**.




7. Events that match your search criteria are displayed. You now have the following options:
   - Click a thumbnail to preview the event. Double-click the preview window to view in full screen.
   - Check thumbnails to perform other actions:
     - **Backup:** Back up events.
     - **Lock:** Lock events.
     - **Add Book Mark:** Bookmark events.

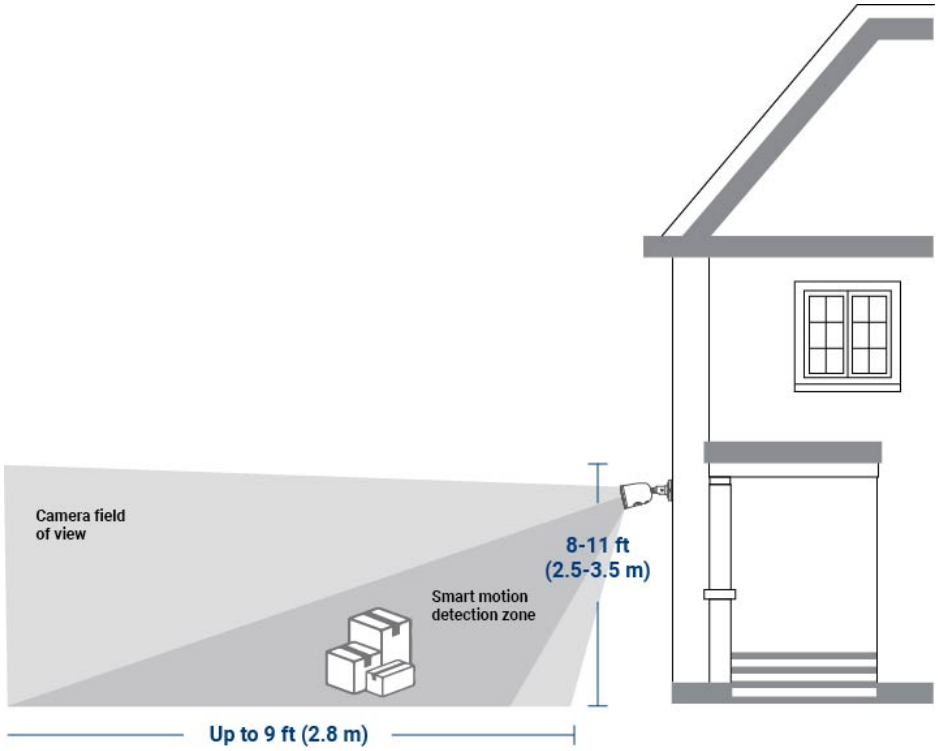
# 17 Package & Envelope Detection

The package and envelope detection feature allows you to create a bounding box within the camera's field-of-view to notify you of package/envelope deliveries or pick-ups. This feature is used to detect and record mail, boxes, a courier, or a mail truck. Upon detection, the camera begins recording and will have an exact update on the event.

Package and envelope detection is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

## 17.1 Ensuring Package & Envelope Detection Accuracy

The following are important camera installation notes to ensure accurate package and envelope detection. For full camera mounting instructions, see your camera's documentation at lorex.com.




| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2–11.5ft (2.5 — 3.5m) | 6.8ft (2.1m) | 9.1ft (2.8m) |

The image below is a good example of camera placement, angle, and height for your camera to detect packages/envelopes. This view captures the path leading up to the door and the door stoop, where packages/envelopes are typically dropped-off. Note that there are no obstructions between the camera and the bounding box; monitoring a simple environment with a clear view ensures accurate detection and minimizes false alerts.

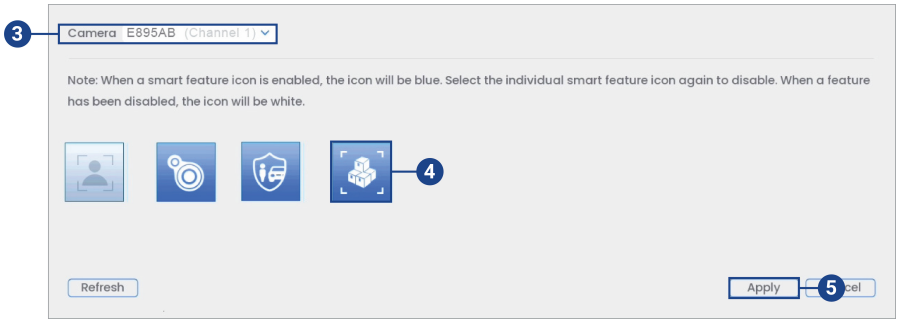


### 17.2 Enable Package & Envelope Detection in Smart Plan

For certain Lorex IP cameras, the package and envelope detection feature cannot be used simultaneously with other smart plans and is disabled by default. If a Smart Plan is not enabled properly on your camera, the **Package/Envelope Detection** feature will not work. Please make sure to enable the Package/Envelope feature before continuing.

**To enable package and envelope detection in smart plan settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Plan** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure package and envelope detection.
4. Select the **Package/Envelope Detection** feature icon.

> **NOTE**
>
> If your Lorex IP camera cannot use the package and envelope detection simultaneously with other smart plans, you will need to disable all other smart plans. When a smart feature icon is enabled, the icon appears blue. Click the blue smart feature icon again to disable it. When a feature is disabled, the icon appears white.

5. Click **Apply** to save changes.

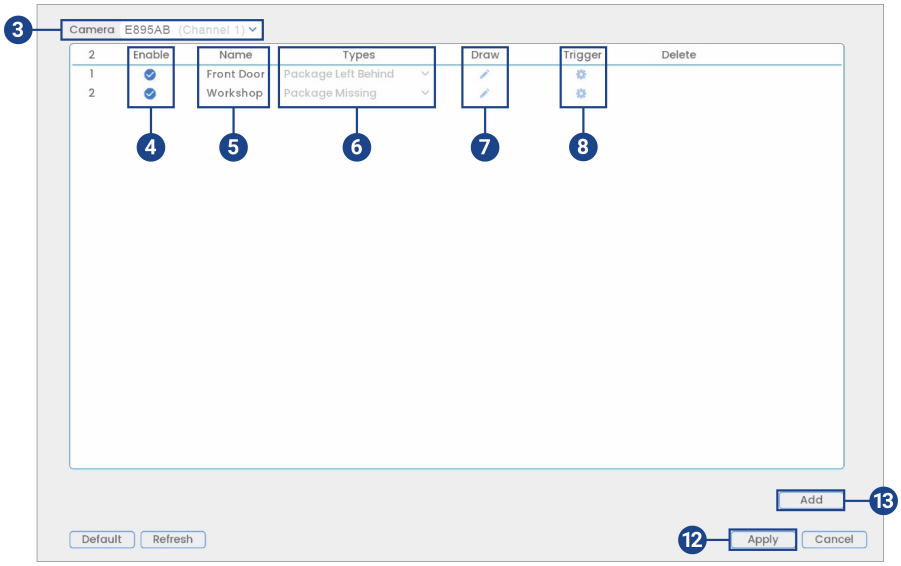
### 17.3 Configuring Package & Envelope Detection

The system allows you to define an area and set a period to detect packages/envelopes that are either left behind or missing. Select channels that you want to enable package/envelope detection on and adjust preferences.

**To configure package and envelope detection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

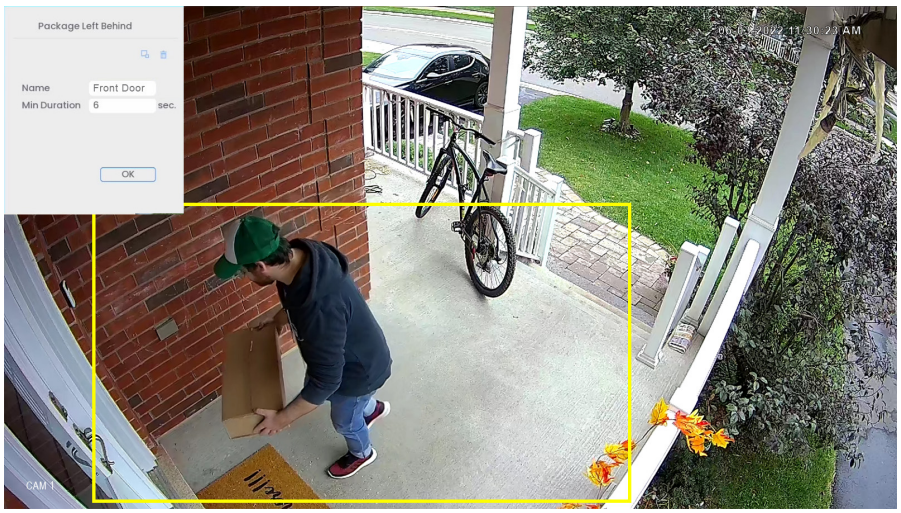
2. Click **Events**, then **Event Settings**. Click the **Package/Envelope Detection** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure package/envelope detection.
4. Check to enable the package/envelope detection rules that you want to use.
5. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.
6. Select between **Package Left Behind** or **Package Missing** detection types.

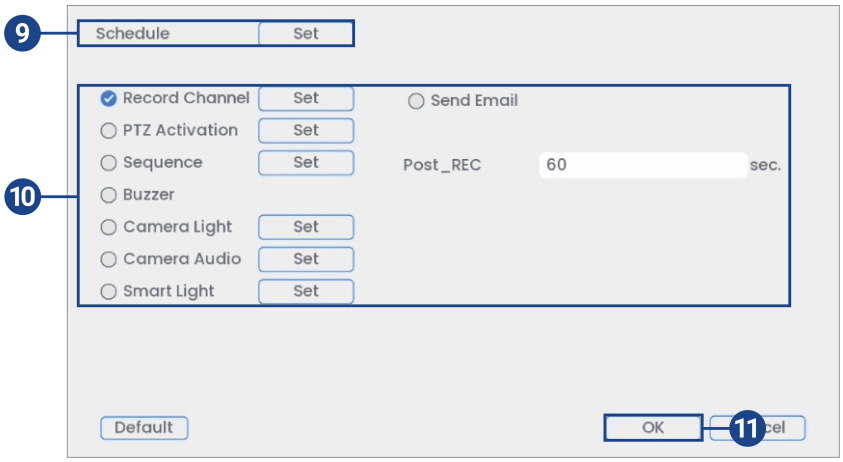
> **NOTE**
>
> The first two package/envelope detection rules were added by default. The detection type for the two default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

7. Click the **Draw** icon and customize the active area for package/envelope detection:

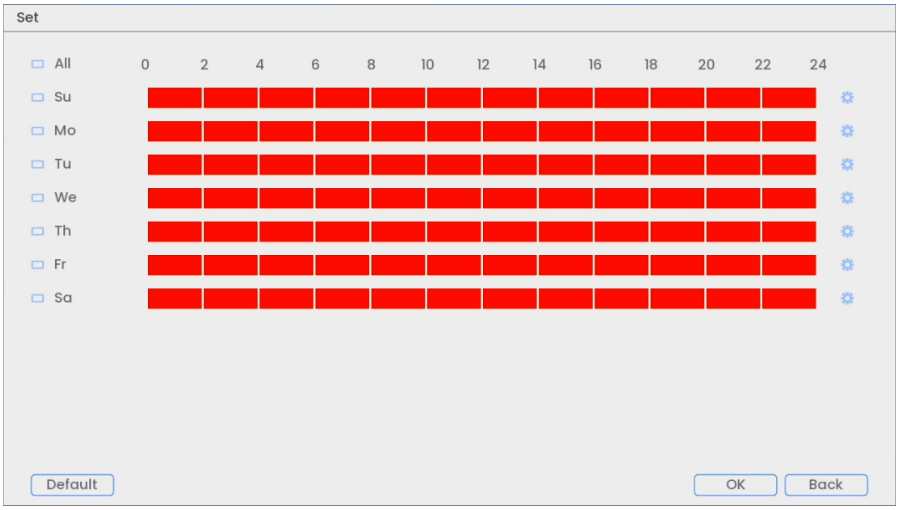



- To draw, click-and-drag the corners of the yellow box to resize the area. For most accurate results, set an area where objects of interest will move within the bounding box as well as into/out of.
- Under **Min Duration**, type in the number of seconds before the device triggers an event.
- Click **OK** when finished.

8. Click the trigger modifying icon to adjust how the system will react to package/envelope detection.




9. Click **Set** next to **Schedule** to choose which days and times of the week to enable package/envelope detection:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

10. Choose how the system will react to package/envelope detection:

- 
- **Record Channel**: Select the channels that will record when a package or envelope is left behind or missing on the selected channel. Set the length of recording following a package/envelope detection event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer**: Check to enable the system buzzer.
- **Camera Light**: Check to enable warning light. Click **Set** to change the warning light mode to **Strobe** or choose how long the warning light will stay on following a package/envelope detection event.
- **Camera Audio**: Check to enable voice prompts. Click **Set** to select a pre-recorded voice message or alarm sound. Choose how many times the prompt will play following a package/envelope detection event.
- **Smart Light**: Check to enable **Smart Security Lighting™**. Click Set to select a custom color or choose how long the light will stay on following a package/envelope detection event. Click on the red color box to open the custom color settings.

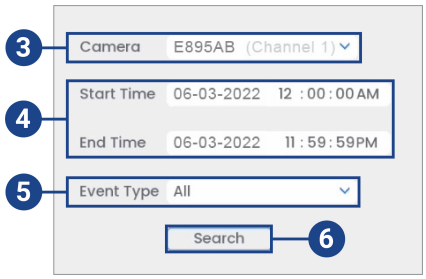
11. Click **OK**, click **OK** again.
12. Click **Apply** to save changes.
13. Click **Add** to create additional active areas for smart motion detection on the selected channel.

### 17.4 Searching for Package & Envelope Detection (Smart Search)

Search for package/envelope events on a specific channel or the entire system. You can also choose to back up events (USB flash drive required – not included).

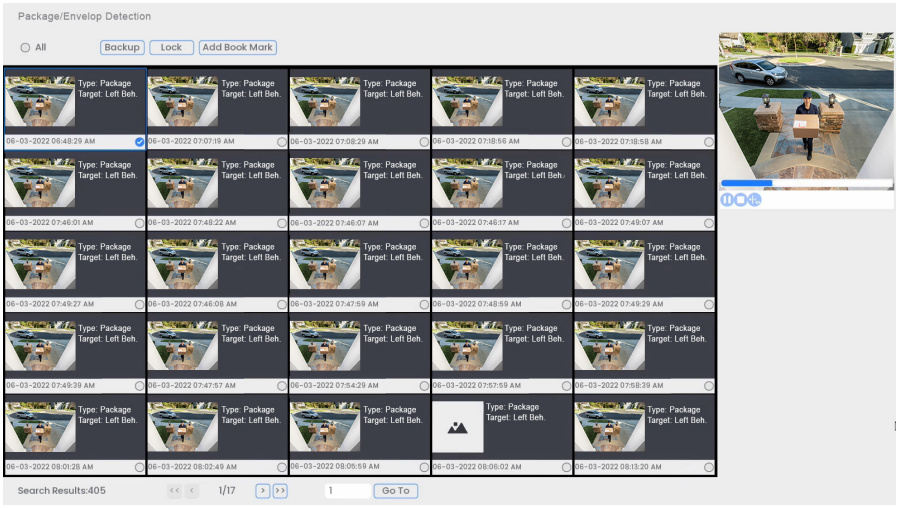
**To perform a Smart Search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.
2. Click the **Package/Envelope Detection** tab from the side panel.




3. Select a channel to search for detection events from, or select **All**.
4. Enter a start and end time for your search.
5. Select the type of package/envelope detection for your search, or select **All**.

6. Click **Search**.




7. Events that match your search criteria are displayed. You now have the following options:
   - Click a thumbnail to preview the event. Double-click the preview window to view in full screen.
   - Check thumbnails to perform other actions:
     - **Backup:** Back up events.
     - **Lock:** Lock events.
     - **Add Book Mark:** Bookmark events.

# 18 Heat Map

Heat map works as a graphical overlay that displays the area and frequency of motion detected in the camera's image using a warm-to-cool color scheme. The warm colors indicate sections with the most motion detected, red being the highest detected areas, and the cool colors point to the lowest detected areas.



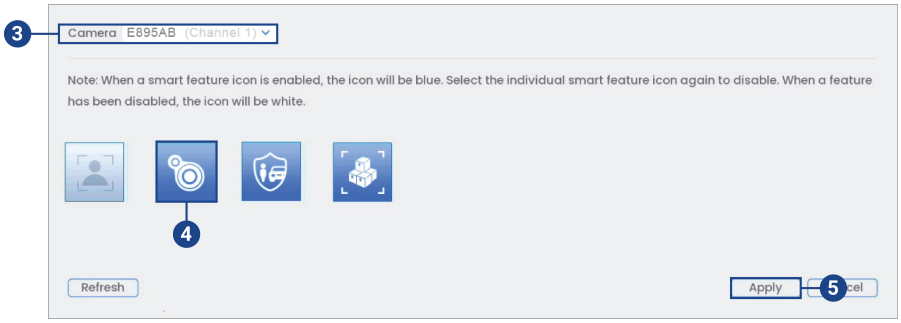

Heat Map is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

## 18.1 Enable Heat Map in Smart Plan

If a Smart Plan is not enabled properly on your camera, the heat map feature will not work. Please make sure to enable the **Heat Map** feature before continuing.

**To enable heat map in smart plan settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Plan** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure heat map.
4. Select the **Heat Map** feature icon.

> **NOTE**
>
> When a smart feature icon is enabled, the icon appears blue. Click the blue smart feature icon again to disable it. When a feature is disabled, the icon appears white.

5. Click **Apply** to save changes.

## 18.2 Configuring Heat Map

Use the heat map feature to see hot and cold areas of the camera's image. Select channels to use heat map on and adjust preferences.

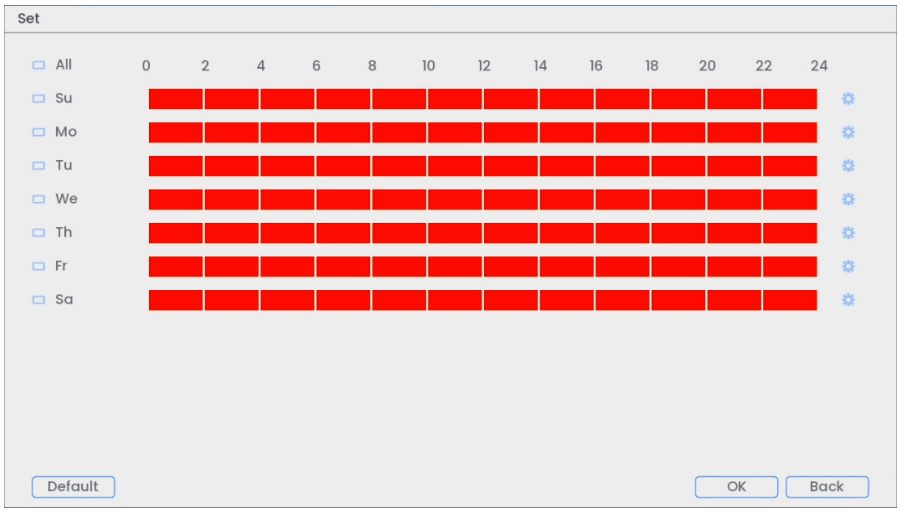
**To configure heat map:**

1. From the Live View display, right-click to open the Quick Menu, then click Main Menu.

2. Click **Events**, then **Event Settings**. Click the **Heat Map** tab from the side panel.




3. Select a channel with a compatible camera.
4. Check to enable heat map on the selected camera.
5. Click **Set** next to **Schedule** to choose which days and times of the week to enable heat map:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

6. Click **Apply** to save changes.

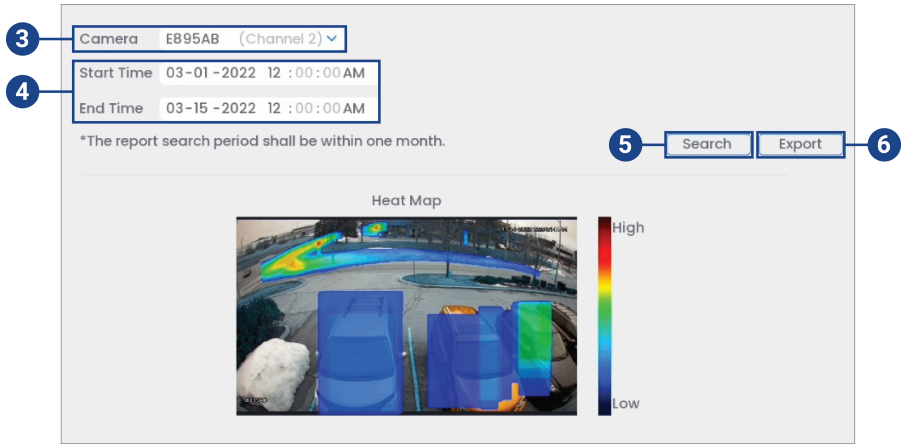
### 18.3 Searching for Heat Map (Smart Search)

Search for heat mapping on a specific channel or the entire system. You can also choose to back up events (USB flash drive required – not included).

**To perform a Smart Search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.

2. Click the **Heat Map** tab from the side panel.




3. Select a camera to search for heat map.
4. Choose a start time and end time for your search.
5. Click **Search**.
6. All heat mapping data matching your search criteria is displayed. You now have the option to export:

   - Connect a USB flash drive (not included) to a free USB port on the unit and click **Export**.
   - Select a folder for exporting and click **OK**.

# 19 Safeguard™

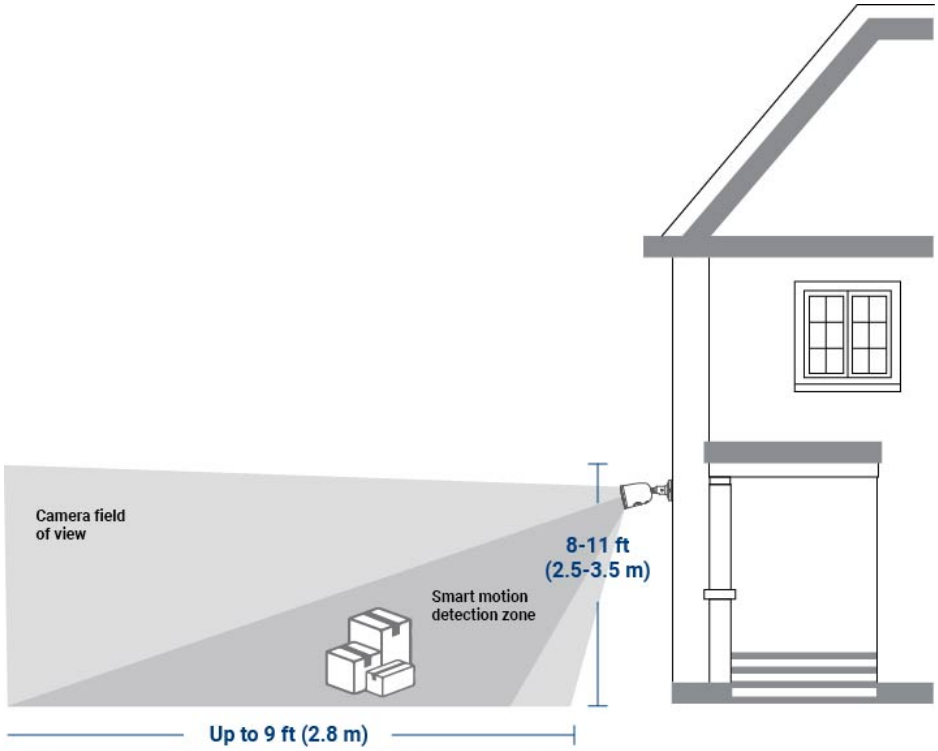
The **Safeguard™** feature allows you to create a bounding box within the camera's field-of-view to notify you on whether an object is left behind or missing.

- **Left Behind**: For an object to be detected as left behind, it must be a newly added object placed in a set area and unattended over a specified amount of time. This is useful to keep track of certain areas in which objects are not to be placed.
- **Missing**: The missing object rule allows you to set a region around an object and if the object is moved or missing from the detection area an alarm will be triggered. This is useful to monitor certain areas that contain valuable items.

**Safeguard™** is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

## 19.1 Ensuring Safeguard Detection Accuracy

The following are important camera installation notes to ensure accurate Safeguard detection. For full camera mounting instructions, see your camera's documentation at lorex.com.




| Angle | Height | Minimum Distance | Maximum Distance |
|---|---|---|---|
| 15° | 8.2–11.5ft (2.5 — 3.5m) | 6.8ft (2.1m) | 9.1ft (2.8m) |

## 19.2 Configuring Safeguard™

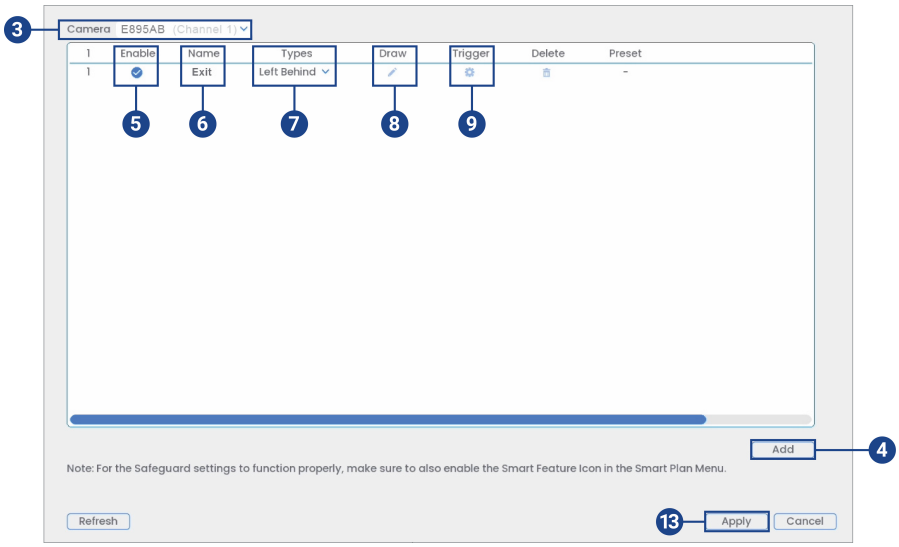
The system allows you to define an area and set a period to detect objects that are either left behind or missing. Select channels that you want to enable **Safeguard™** on and adjust preferences.

**NOTE**

If a Smart Plan is not enabled properly on your camera, the **Safeguard™** feature will not work. Please make sure to enable the **Safeguard™** feature before continuing. Refer to 22.4.1 *Configuring Smart Plan*, page 101 for full instructions.

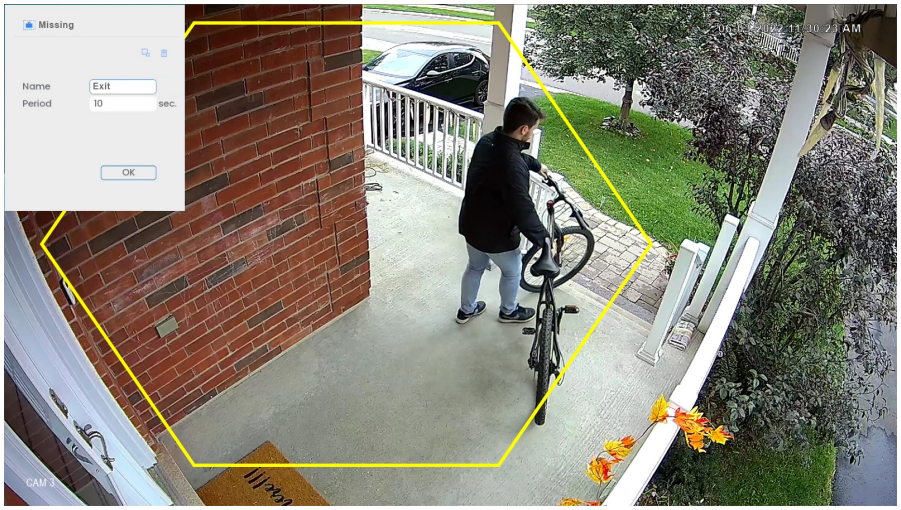
**To configure Safeguard™:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Safeguard** tab from the side panel.




3. Select a channel with a compatible camera you would like to configure **Safeguard™**.
4. Click **Add** to create a **Safeguard™** rule.
5. Check to enable the rule.
6. Set a name for the rule by double-clicking the mouse over the **Name** of the rule.
7. Select between **Left Behind** or **Missing** detection types.

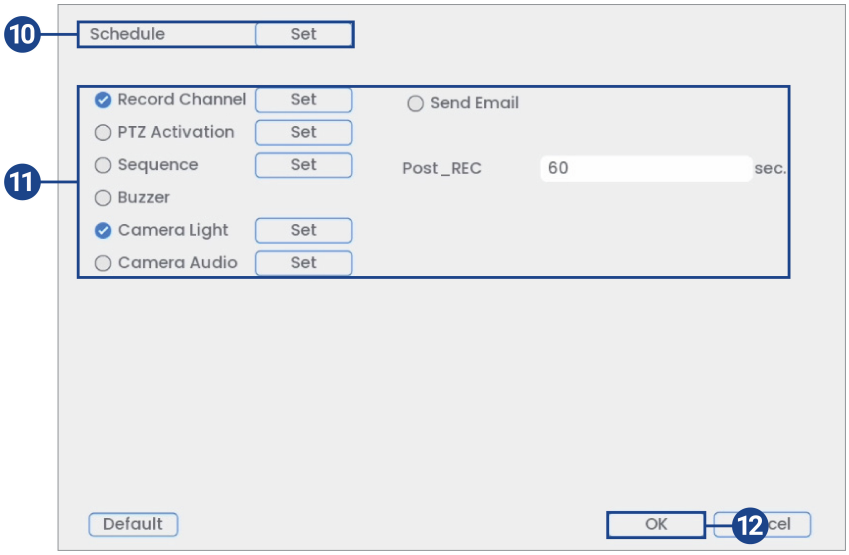
8. Click the **Draw** icon and customize the active area for **Safeguard™**:



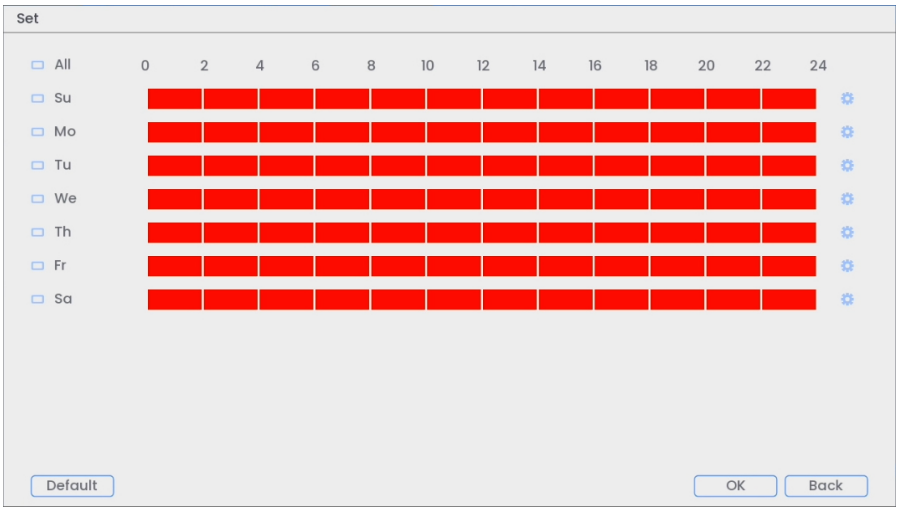

- To draw, click-and-drag the corners of the yellow polygon shape to resize the area. For most accurate results, use **Safeguard™** in areas that are simple, without frequent or obvious light change, and with low-density traffic. False alarms increase in high-density areas where there are too many people.
- Under **Period**, type in the number of seconds before the device triggers an event.
- Click **OK** when finished.

> **NOTE**
>
> Safeguard is a smart feature that may be used in high-traffic areas. Increasing the time period before the system is triggered may help to reduce false alerts.

9. Click the **Trigger** icon to adjust how the system will react to **Safeguard™** detection.



10. Click **Set** next to **Schedule** to choose which days and times of the week to enable **Safeguard™**:




- Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

11. Choose how the system will react when **Safeguard™** is triggered:

- 
- **Record Channel**: Select the channels that will record when **Safeguard™** is triggered on the selected channel. Set the length of recording following a **Safeguard™** event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Buzzer**: Check to enable the system buzzer.
- **Camera Light**: Check to enable warning light. Click **Set** to change the warning light mode to **Strobe** or choose how long the warning light will stay on following a **Safeguard™** event.
- **Camera Audio**: Check to enable voice prompts. Click **Set** to select a pre-recorded voice message or alarm sound. Choose how many times the prompt will play following a **Safeguard™** event.

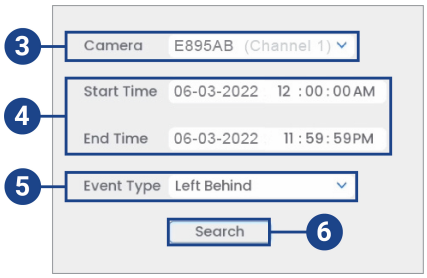
12. Click **OK**, click **OK** again.
13. Click **Apply** to save changes.
14. Click the icon underneath **Delete** to remove the active area for **Safeguard™** on the selected channel.

### 19.3 Searching for Safeguard™ events (Smart Search)

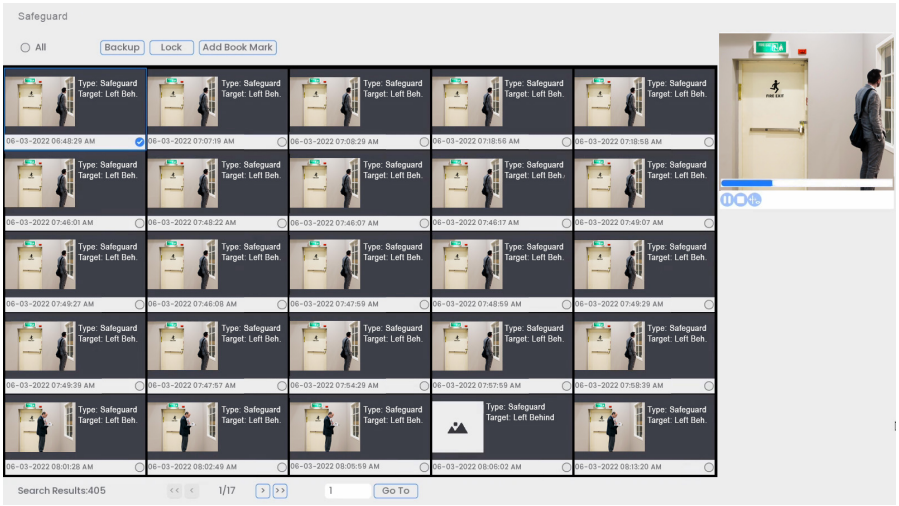
Search for **Safeguard™** events on a specific channel or the entire system. You can also choose to back up events (USB flash drive required – not included).

**To perform a Smart Search:**

1. From the Live View display, right-click to open the Quick Menu, then click **Smart Search**.
2. Click the **Safeguard** tab from the side panel.




3. Select a channel to search for detection events from, or select **All**.
4. Enter a start and end time for your search.
5. Select the type of **Safeguard™** detection for your search, or select **All**.
6. Click **Search**.




7. Events that match your search criteria are displayed. You now have the following options:
   - Click a thumbnail to preview the event. Double-click the preview window to view in full screen.
   - Check thumbnails to perform other actions:
     - **Backup:** Back up events.
     - **Lock:** Lock events.
     - **Add Book Mark:** Bookmark events.

# 20 Sound Detection

Sound detection uses the built-in microphone to trigger recording when abnormal audio or intense sounds are detected near the camera. Ensure that the camera is not near constant background noise that will trigger audio detection and create false alerts.

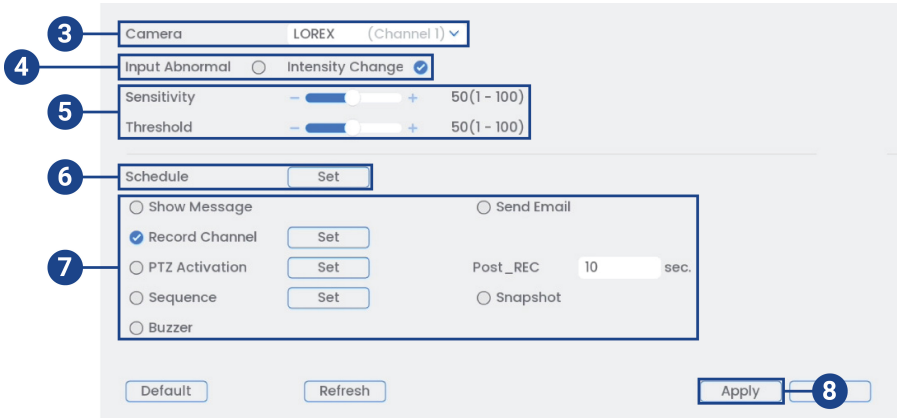
Sound Detection is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

## 20.1 Configuring Sound Detection

Make sure you already have the camera audio enabled on the main and sub-stream of the channel you are configuring, see 26 *Connecting Audio Devices*, page 153 for details.

**To configure sound detection:**

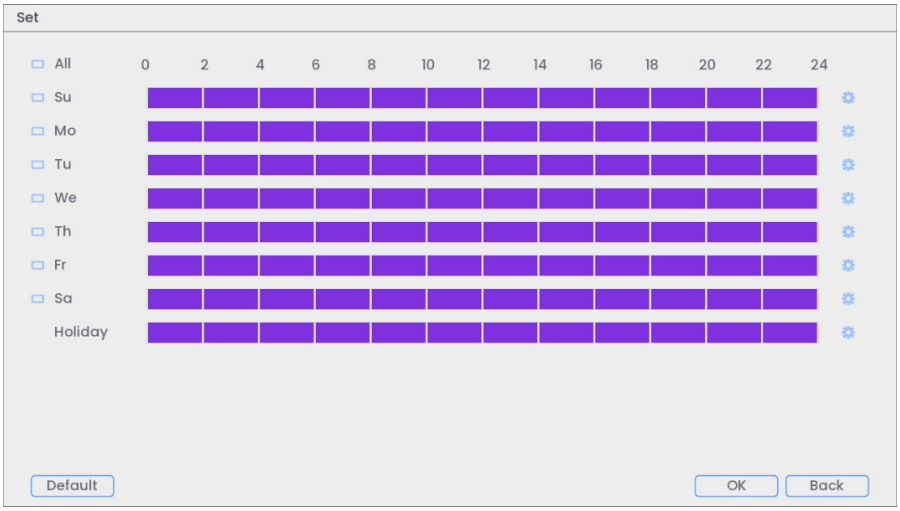
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Sound Detection** tab from the side panel.




3. Select a channel with a compatible camera.
4. Check **Audio Abnormal** to trigger the system when the audio has stopped working, or check **Intensity Change** to trigger the system when the sound intensity exceeds the sensitivity and threshold levels
5. Adjust your audio detection settings:
   - **Sensitivity**: Adjust the sensitivity bar to increase or decrease the amount of sound required to trigger an event above the threshold. Sensitivity is a finer setting than the threshold setting.
   - **Threshold**: Adjust the threshold bar to determine how loud a sound must be to trigger an audio detection event.

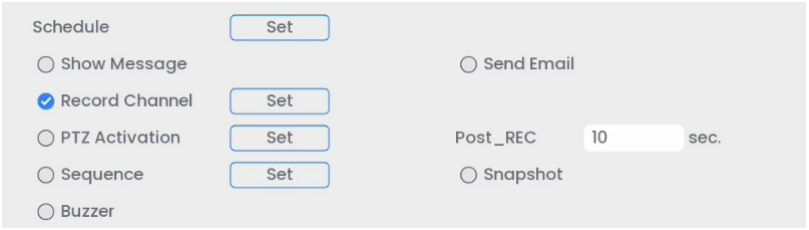
> **NOTE**
>
> To avoid receiving too many notifications from a noisy environment, set the **Threshold** level to high. The system is triggered easily when the **Sensitivity** level is set to high and **Threshold** level is set to low.

6. Click **Set** next to **Schedule** to choose which days and times of the week to enable sound detection:




- Click or click-and-drag along each of the purple timelines to quickly add or remove time from each day's schedule in 30–minute segments.
- Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
- To make fine adjustments to a schedule, click . This will allow you to set exact start and end times for a schedule.
- Click **OK** when finished.

7. Choose how the system will react to sound detection:




- 
- **Record Channel**: Select the channels that will record when abnormal or intense sounds are detected on the selected channel. Set the length of recording following a sound detection event in the **Post_REC** field.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 19.6.3 Configuring Email Alerts, page 90).
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding channels in the sequence.
- **Snapshot:** Select the numbered tiles next to this option to save a snapshot of the corresponding channels.
- **Buzzer**: Check to enable the system buzzer.

8. Click **Apply** to save changes.

# 21 Managing Passwords and User Accounts

Passwords are enabled by default and are required to access the Main Menu or connect to the system using a computer or mobile device. You will be prompted to create a custom password after you connect for the first time.

> **NOTE**
>
> If you forget the password to the system, contact technical support to have it reset.

## 21.1 User Accounts

**The system includes the following default accounts:**

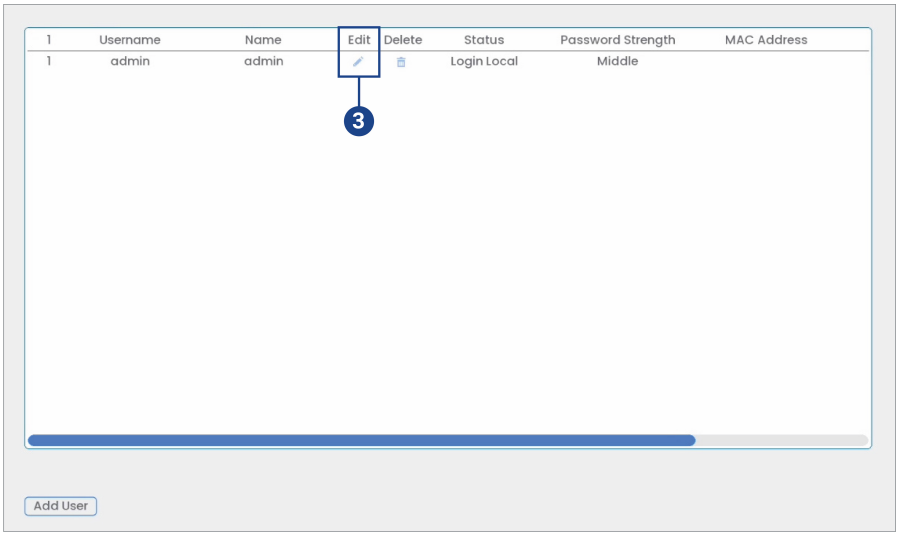
- **admin:** The administrator account has full access to the system, may configure all system settings, and can manage user accounts.
- **user:** User accounts are secondary accounts which can be assigned limited access to system settings and camera feeds.

### *21.1.1 Changing Passwords*

You can change the system password of the administrator and user accounts.

**To change an account password:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **User** tab from the side panel.
3. Click the **Edit** icon next to the account you want to change the password for.




4. Configure the following:
   - **Modify Password:** Check to modify password.
   - **Old Password:** Enter the current password.
   - **New Password:** Enter the new password you want to use for the system.

     > **NOTE**
     >
     > Passwords for the system must be a minimum of 8 characters, and must include at least 2 of the following character types: lowercase, uppercase, numeric, and special characters.

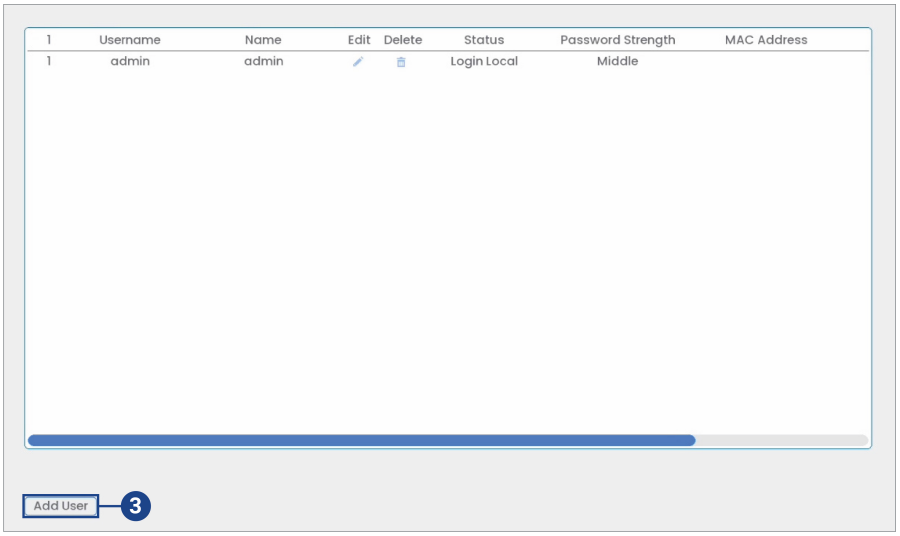
   - **Confirm Password:** Re-enter the new password.
5. Click **OK**.

### *21.1.2 Adding Users*

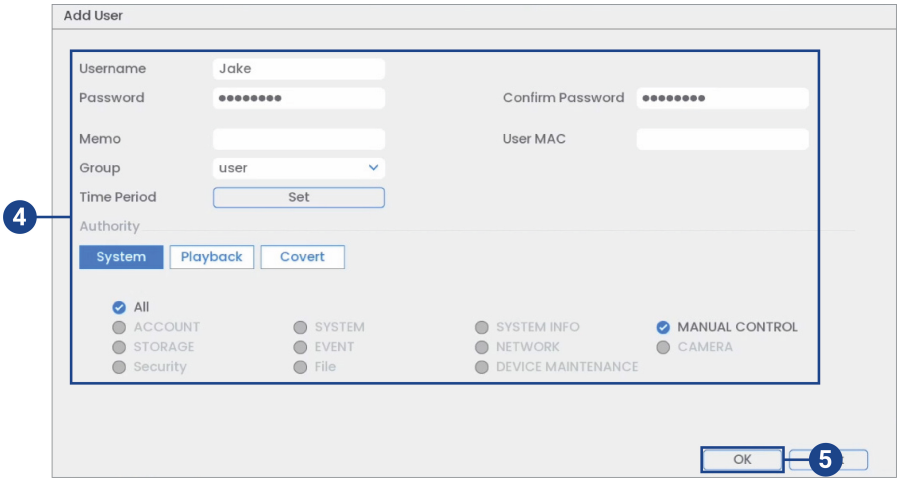
You can allow multiple users to log in to the system. When adding different users, you can assign what menus they have access to. For example, you may want your friend to monitor your system while you are away, while not giving full access to your system.

**To add a user:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **User** tab from the side panel.




3. Click **Add User**.




4. Configure the following:

- **Username:** Enter a name for the user account.
- **Password:** Enter a password for the user account. Enter the password again under **Confirm Password**.
- **Memo:** (Optional) Enter a description of the user account.
- **Group:** Select the group you would like to assign to this user account. A user account cannot be given permissions its group does not have.
- **Time Period**: Create a custom schedule for when the user can access the system.
- **Authority:** Check the permissions you would like the user account to have. Under the **System** tab, select the menus the user account may access. Under the **Playback** tab, select which channels the user account may access recorded video from. Under the **Covert** tab, select the channels the user account may view live video from.

5. Click **OK**.

> **NOTE**
>
> Now, you can log in to the system locally, or remotely using the user name and password you created. When logging into the system with a user account, the user will only have access to the menus you assigned.

### *21.1.3 Modifying Users*

Modify account details, such as account username or permissions.

**To modify a user:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **User** tab from the side panel.
3. Click the **Edit** icon  next to the account you want to modify.
4. Update account details as needed, then click **OK**.

### *21.1.4 Deleting Users*

Remove a user from the system.

**To remove a user:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **User** tab from the side panel.
3. Click the **Delete** icon  next to the account you want to delete.
4. Click **OK**.

## 21.2 Account Groups

Account groups can be used to easily manage permissions for multiple user accounts. User accounts can be given all the permissions of a group, but cannot be given permissions that the group does not have.

**The system includes the following groups by default:**

- **admin**: Accounts in the admin group are system administrators. They have full access to the system, may configure all system settings, and can manage user accounts.
- **user**: Accounts in the user group are normal users. They have limited access to system menus.

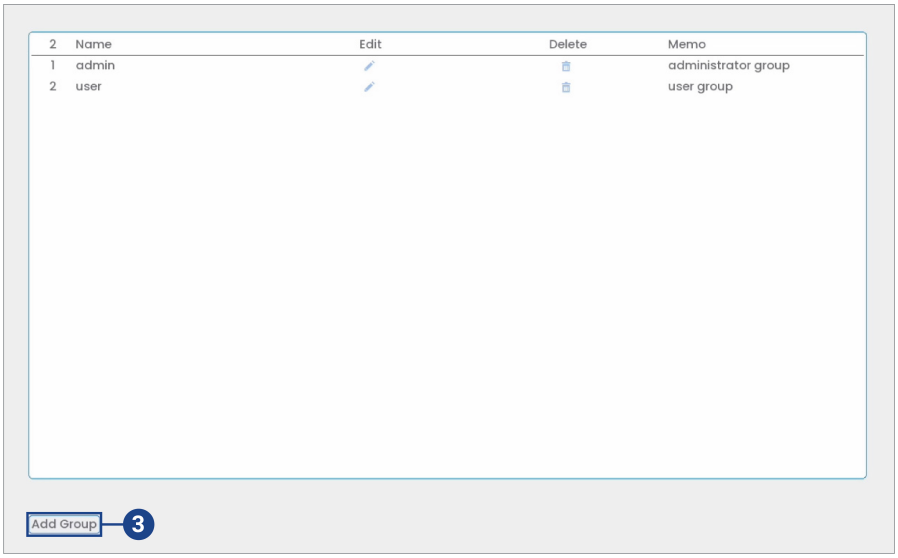
### *21.2.1 Adding Groups*

Add a new group with unique system permissions.

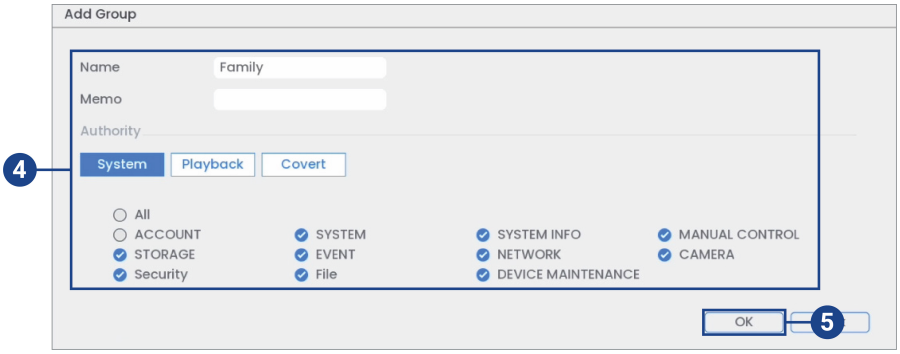
**To add a group:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Users**, then the **Group** tab from the side panel.




3. Click **Add Group**.




4. Configure the following:
   - **Name:** Enter a name for the group.
   - **Memo:** (Optional) Enter a description of the group.
   - **Authority:** Check the permissions you would like the user account to have. Under the **System** tab, select the menus the user account may access. Under the **Playback** tab, select which channels the user account may access recorded video from. Under the **Covert** tab, select the channels the user account may view live video from.
5. Click **OK**.

### *21.2.2 Modifying Groups*

Change an existing group's name or permissions.

**To modify a group:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **Group** tab from the side panel.
3. Click the **Edit** icon next to the account you want to modify.
4. Update group details as needed, then click **OK**.

### *21.2.3 Deleting Groups*

Remove a group.

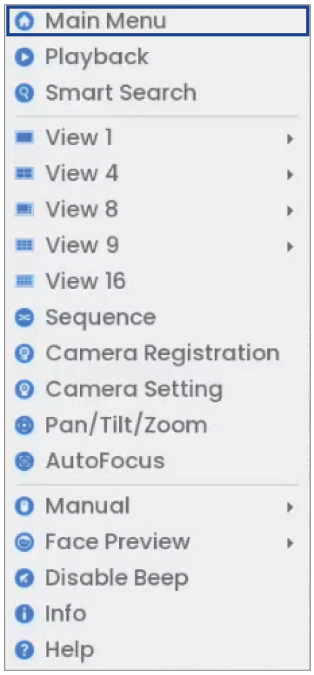
**To delete a group:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Users**, then the **Group** tab from the side panel.
3. Click the **Delete** icon  next to the group you want to delete.
4. Click **OK**.

# 22 Using the Main Menu

**To open the main menu:**

- From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

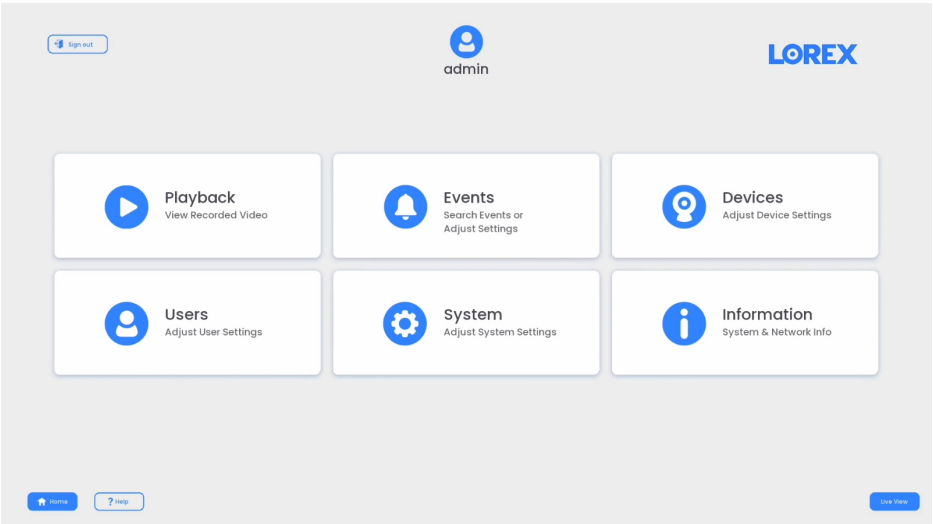



**OR**

- From the Live View display, hover the mouse near the bottom of the screen, then click Home on the Navigation Bar.



## 22.1 Main Menu Overview

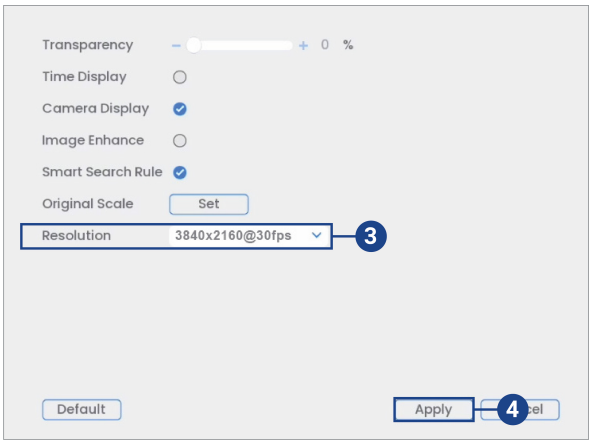



## 22.2 Setting the Monitor Resolution (Display)

Configure the system's monitor resolution and other display settings.

**To set the monitor resolution:**

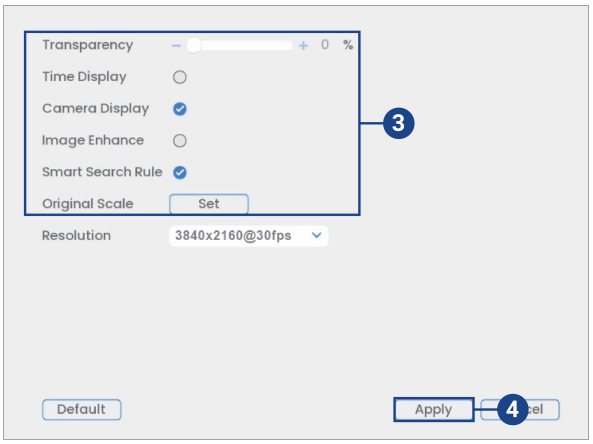
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Display**. Click the **Display** tab from the side panel.




3. Under **Resolution**, select the correct resolution for your monitor.
4. Click **Apply** to save changes. Click **OK** again to restart the system using the new resolution.

**To configure other display settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Display**. Click the **Display** tab from the side panel.



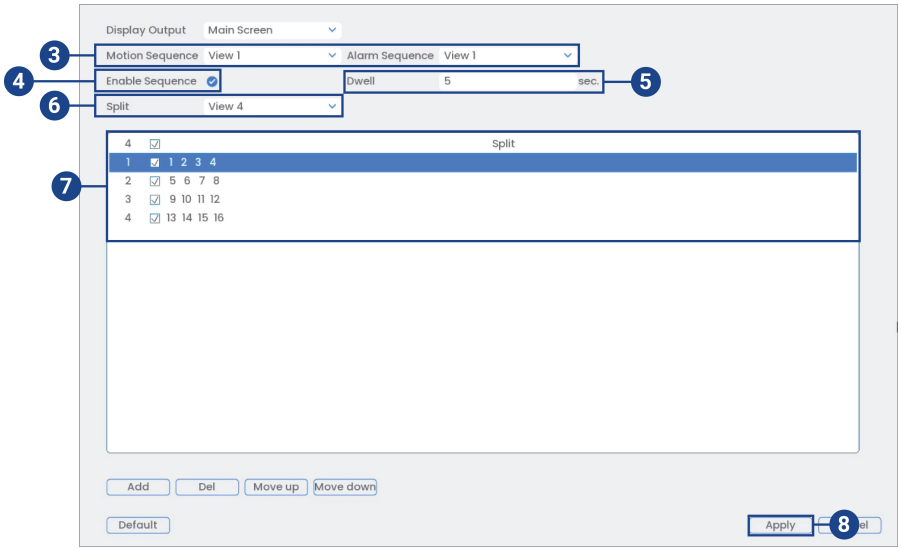

3. Configure the following:
   - **Transparency:** Select the menu transparency.
   - **Time Display:** Check to show the time on the monitor.
   - **Camera Display:** Check to show the channel names on the monitor.
   - **Image Enhance:** Check for the system to digitally improve the video quality on the live display. This setting does not affect recordings.
   - **Smart Search Rule:** Check to display captured faces on the right side of the live display. Face detection must be enabled on the correlating channel.
   - **Original Scale:** Set the system to show the true aspect ratio of the cameras on the live display. This may add black bars on the top and bottom of the image.
4. Click **Apply** to save changes.

### 22.3 Configuring Sequence Mode

**Sequence mode** cycles through connected channels to give you an overview of what is happening on all cameras. You can customize the order that channels appear in Sequence mode, as well as configure which viewing modes should be used.

**To configure Sequence mode:**

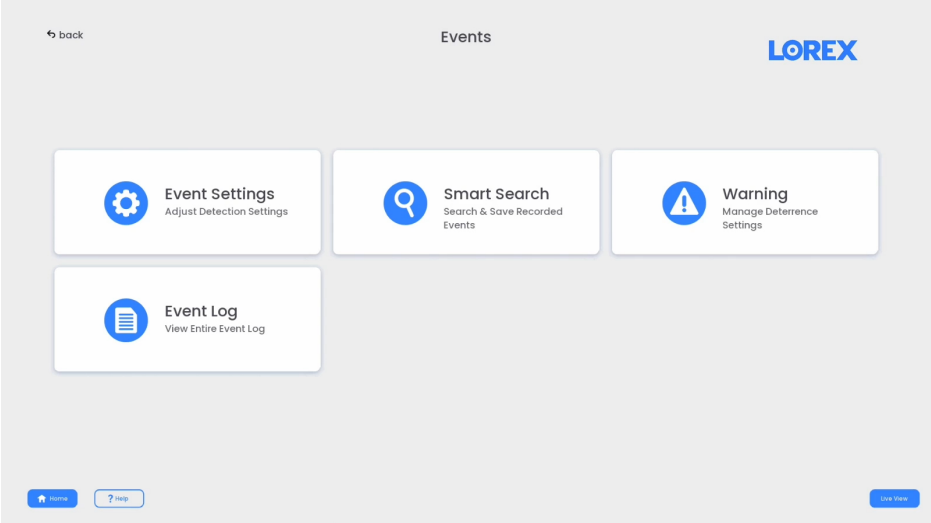
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Display**. Click the **Sequence** tab from the side panel.




3. Choose how many channels will appear on screen when Sequence mode is triggered by motion detection (you must check **Sequence** when configuring motion detection — see 13 *Motion Detection*, page 45for details).
4. Check to enable Sequence mode.
5. Enter the amount of time in seconds that each channel or page will appear on screen during Sequence mode.
6. Select a viewing mode to configure. It is recommended to start with **View 1** and make your way to **View 9**. By default, all viewing modes are included in the Sequence mode cycle.
7. Configure the order of channels shown on screen for each viewing mode. Uncheck channels / channel groups that you want to remove from the Sequence mode cycle.
8. Click **Apply** to save changes.

### 22.4 Events Menu

The Events Menu allows you to set the smart plan feature, configure event settings, as well as search and filter through recorded events.

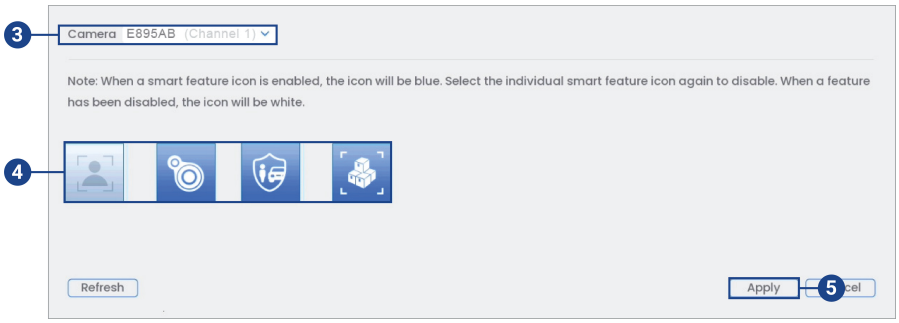



### *22.4.1 Configuring Smart Plan*

To use a smart feature on your camera, it must be enabled in the Smart Plan settings from your system. Select the smart plan feature for each camera.

**To configure your smart plan settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**. Click the **Smart Plan** tab from the side panel.




3. Select the camera you would like to enable a smart plan feature on.
4. Select the icon for a smart feature that you want to enable:
   - **Face Detection**. The face detection feature cannot be used simultaneously with other smart plans and is disabled by default. To enable the face detection feature, disable all other smart plans.
   - **Heat Map**
   - **Smart Motion Detection, Safeguard, and Active View**
   - **Package and Envelope Detection**. For certain Lorex IP cameras, the package and envelope detection feature cannot be used simultaneously with other smart plans and is disabled by default. In such a case, disable all other smart plans to enable the package and envelope detection feature.

| NOTE |
| --- |
| When a smart feature icon is enabled, the icon will be blue. Select the individual smart feature icon again to disable. When a feature has been disabled, the icon will be white. |

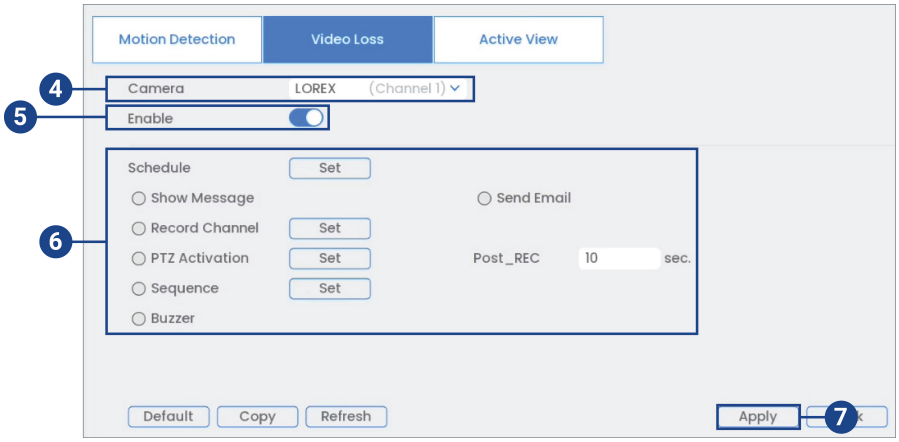
5. Click **Apply** to save changes.

### *22.4.2 Configuring Video Loss Settings*

Configure video loss settings and how the system reacts to a video loss event. **Video loss** means that video from one or more cameras was interrupted or disabled. It could be caused by a number of factors, such as a loose or damaged connection, loss of power to a camera, or a blocked camera lens.

**To configure video loss settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Settings**.
3. Click the **Motion** tab from the side panel, then the **Video Loss** tab from the top panel.




4. Select the channel you would like to configure.
5. Check to enable video loss events for the selected channel.
6. Choose how the system will react to video loss events:

   - **Schedule:** Click **Set** to configure a schedule for video loss events. It is recommended to leave this on the default setting, so you can be alerted at any time one of your cameras loses video.
   - 
   - **Show Message:** Check to show a popup message on the monitor if one of your cameras loses video.
   - **Send Email:** Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 22.6.6 *Configuring Email Alerts*, page 114).
   - **Record Channel:** Click the checkbox to enable video recording when video loss occurs. Click **Set** to select which channels the system will record when video loss occurs on the currently selected channel.
   - **PTZ Activation:** Check to enable PTZ actions when video loss occurs (PTZ camera required; not included). Click **Set** to select which PTZ actions will be taken by each camera.
   - **Post_REC:** Enter the number of seconds the system will record after video loss occurs.
   - **Sequence:** Check to enable a custom sequence mode when motion is detected on the selected channel. Click **Set** to select which channels you would like to display in the custom sequence mode.
   - **Buzzer:** Check to enable the system buzzer when video loss occurs on the currently selected channel.

7. Click **Apply** to save changes.

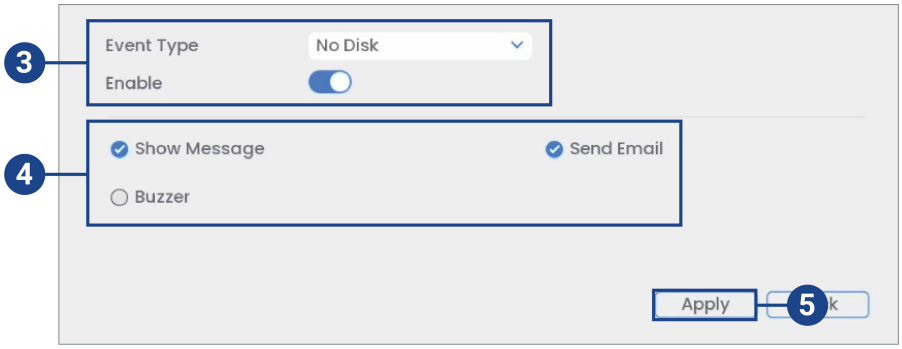
### *22.4.3 Configuring Hard Disk Drive Warnings*

Hard disk drive warnings will notify you if an issue is detected with the hard disk drive.

**To configure hard disk drive warnings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Events**, then **Warning**. Click the **HDD** tab from the side panel.



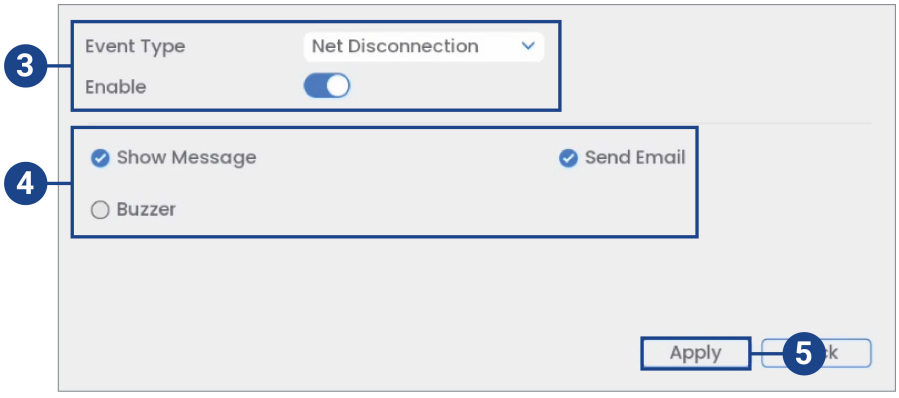

3. Under **Event Type**, select the hard disk drive event you would like to configure. Check **Enable** to activate the selected warning.
   - **No Disk:** No hard disk drive detected.
   - **Disk Error:** A hard disk drive error has been detected.
   - **Disk Full:** The hard disk drive is full or almost full. You can enter the percentage of disk space remaining that will trigger a warning under **Less Than** (e.g. when less than 10% of the hard disk drive is empty, trigger a warning). Disk Full warnings will not occur if overwrite is enabled.
   - **All:** Configure warnings for all hard disk drive events.
4. Configure the responses the system will take when the selected event occurs:
   -
   - **Show Message:** Show a popup message on the monitor.
   - **Send Email:** Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 22.6.6 *Configuring Email Alerts*, page 114).
   - **Buzzer:** Check to activate the system buzzer.
5. Click **Apply** to save changes.

### *22.4.4 Configuring Network Warnings*

Network warnings will notify you if there your system loses connection to the Internet or local network or if there is an issue on your network.

**To configure network warnings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Warning**. Click the **Network** tab from the side panel.



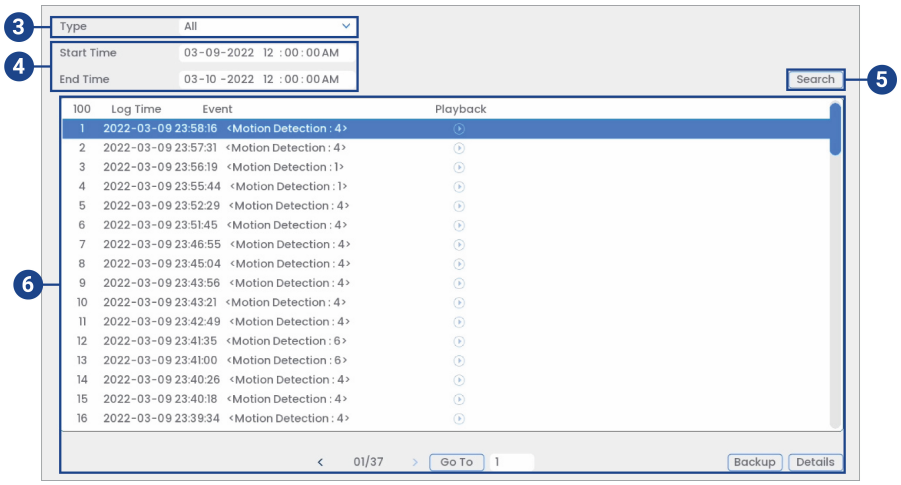
3. Under **Event Type**, select the event type you would like to configure. Check **Enable** to activate the selected warning.
   - **Net Disconnection:** The system has lost connection to the network.
   - **IP Conflict:** More than one device on your network has the same IP address.
   - **MAC Conflict:** More than one device on your network has the same MAC address.
   - **All:** Configure responses for all network events.
4. Configure the following for the selected event type:
   - 
   - **Show Message:** Check to show a popup message when the selected event occurs.
   - **Send Email:** Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 22.6.6 *Configuring Email Alerts*, page 114).
   - **Buzzer:** Check to activate the system buzzer.
5. Click **Apply** to save changes.

### *22.4.5 Searching Event Logs*

Search all channels for events, including motion detection and video loss.

**To access the log menu:**

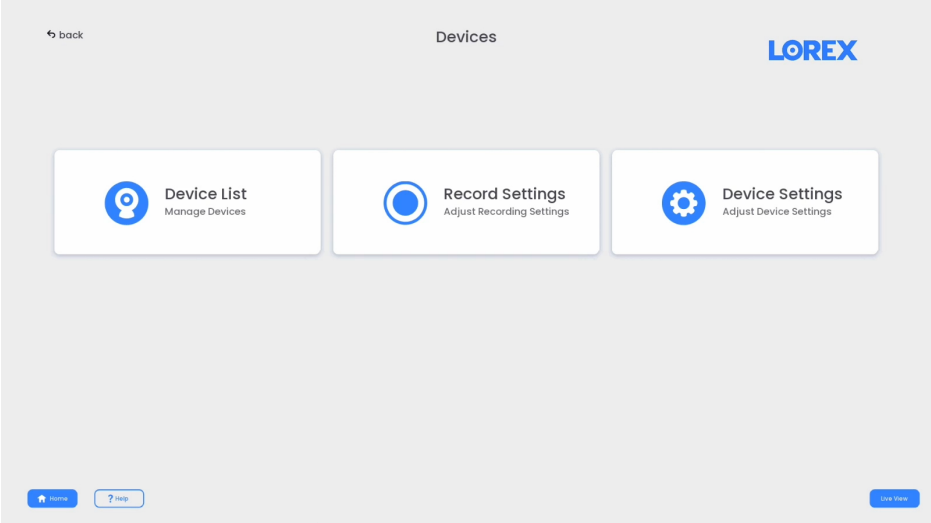
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Log**.




3. Select an event type to search for.
4. Enter a start and end time for your search.
5. Click **Search**.
6. Events that match your search criteria are displayed:
   - The **Event** column is formatted to show **[Event Type]: [Channel Number]>**.
   - Click **Details** to see more information on the selected event.
   - Smart Motion events have more options than other events. You can view the event by clicking the icon in the **Playback** column, or back up the video clip to a USB flash drive (not included) by clicking **Backup**.

## 22.5 Device Menu

The Device Menu allows you to manage IP cameras, set recording parameters, and assign custom titles for your cameras.

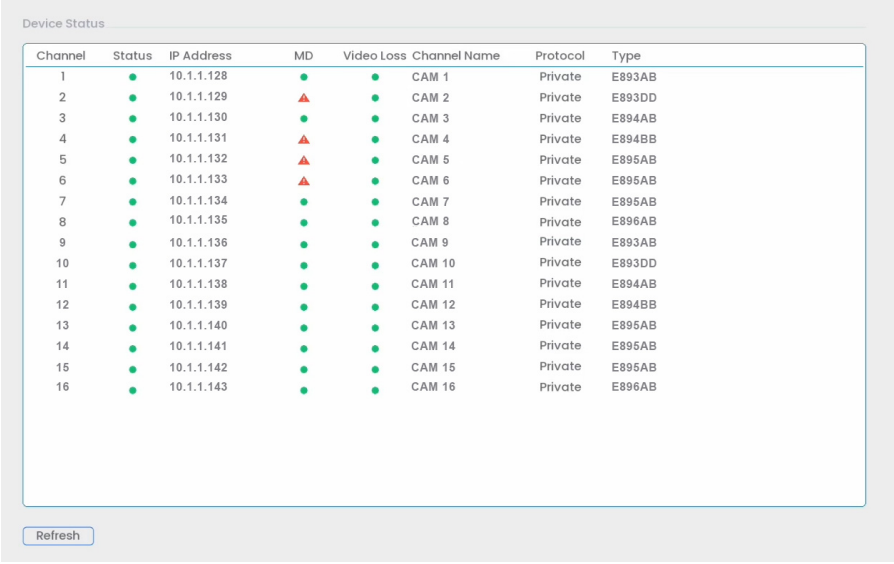



### *22.5.1 Viewing Camera Status*

View the connection and alarm status for all connected cameras.

**To view camera status:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Device List**. Click the **Status** tab from the side panel.



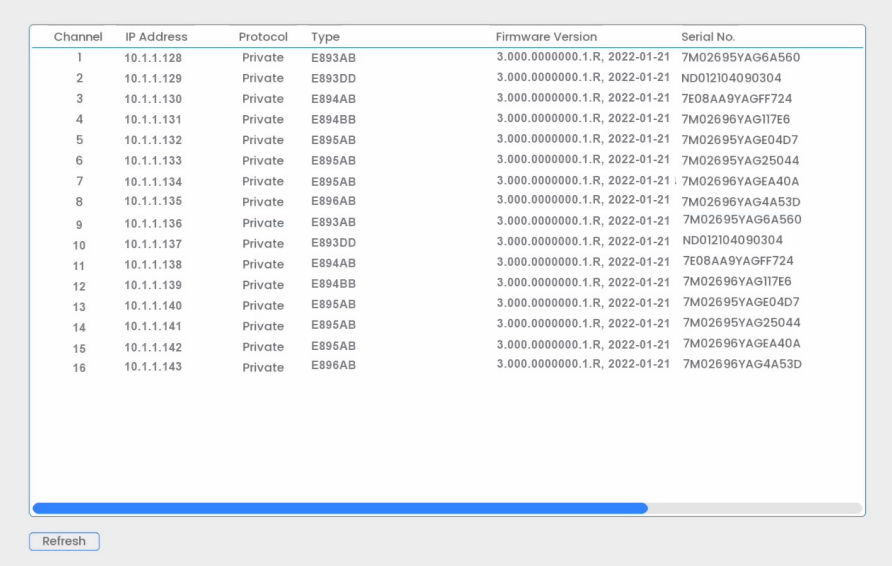

### *22.5.2 Camera Firmware Versions*

View firmware versions for connected cameras.

**To view camera firmware versions:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Devices**, then **Device List**. Click the **Firmware** tab from the side panel.




### *22.5.3 Upgrading Camera Firmware*

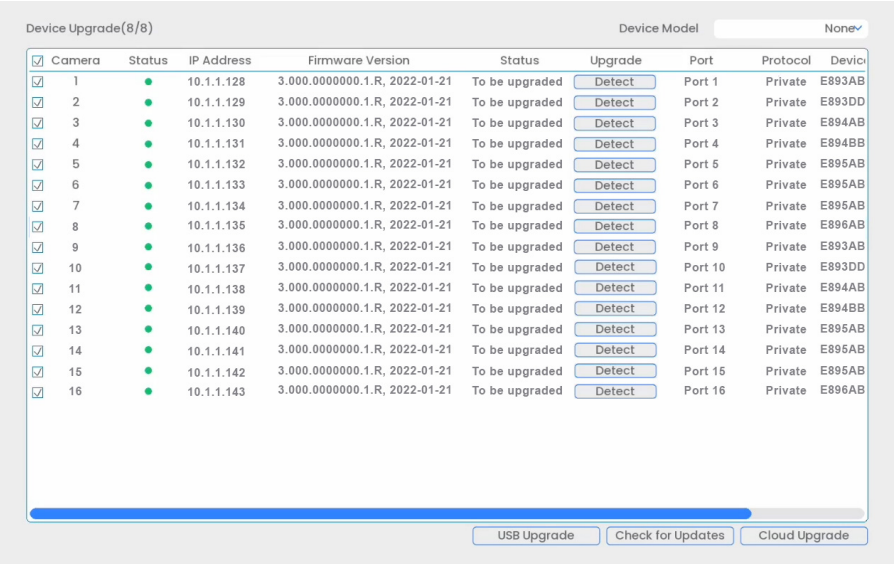
You can update the firmware for connected IP cameras through the NVR. Firmware upgrades provide enhanced functionality for the cameras. Typically, a camera firmware upgrade will not be necessary unless directed to do so by technical support.

**To upgrade the camera firmware:**

1. Download the camera firmware file.

> **NOTE**
>
> Make sure that the firmware file you are using is compatible with your IP camera model.

2. Extract the firmware file and copy it to a USB thumb drive (not included).
3. Insert the USB thumb drive (not included) into a USB port on the system.
4. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
5. Click **Devices**, then **Device List**. Click the **Upgrade** tab from the side panel.



6. Click **Select**. Select the firmware file on the USB drive and click **OK**.
7. Check the cameras you would like to apply the upgrade to in the list and then click **USB Upgrade**.

> **CAUTION**
>
> Wait for the firmware upgrade to complete before turning off or unplugging the cameras or NVR. The cameras will restart during the firmware update process.

### *22.5.4 Configuring Video Overlay Settings*

The Overlay tab allows you to configure the text and information that appears overtop of the camera image, such as time and channel display.

**To configure video overlay settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Device Settings**. Click the **Overlay** tab from the side panel.




3. Under **Channel**, select the camera you would like to configure.
4. Configure the following settings:
   - **Time Display:** Check to display the time information during live view. Click to choose the position of the time display overlay. Click-and-drag the time display to reposition it. Right-click when finished.
   - **Camera Name:** Check to display the channel name. Enter the camera's name and click to choose the position of the channel name overlay. Click-and-drag the channel name to reposition it. Right-click when finished.
5. Click **Apply** to save changes.
6. **(Optional)** Click **Copy** to copy overlay settings to other channels.

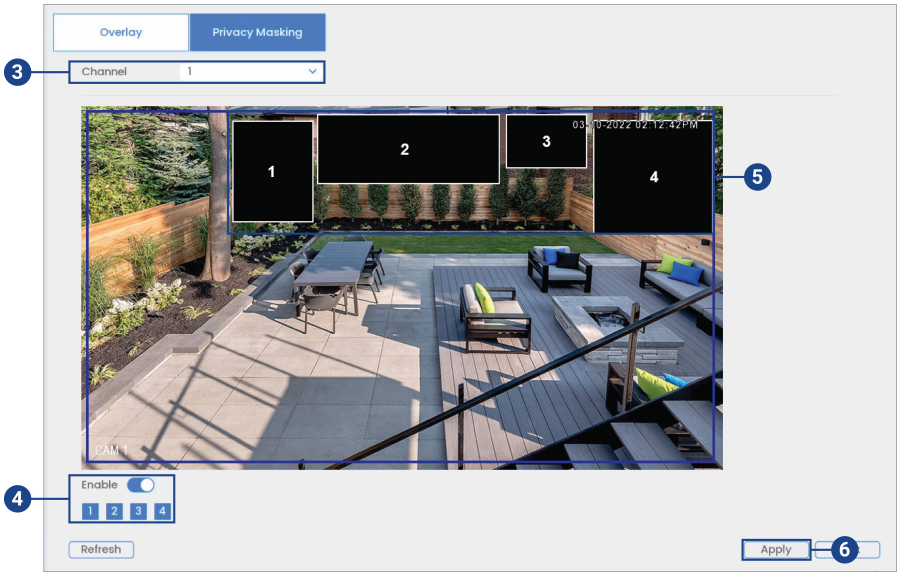
### *22.5.5 Configuring Privacy Masking*

Privacy Masking, also known as the "Good Neighbor" feature, allows you to hide areas in the camera's field of view when recording.

**To configure privacy masking settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Devices**, then **Device Settings**. Click the **Overlay** tab from the side panel, then click the **Privacy Masking** tab from the top panel.



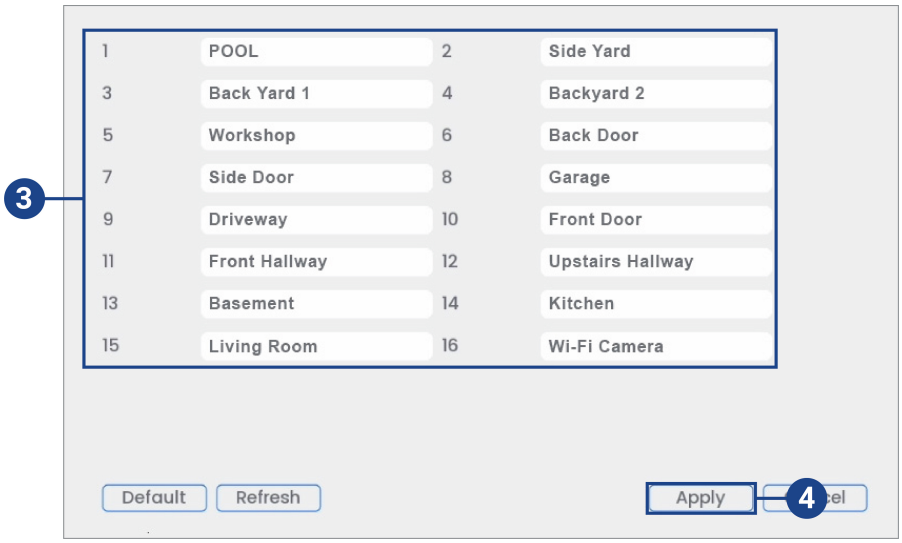

3. Under **Channel**, select the camera you would like to configure.
4. Check to enable privacy masking, then select 1–4 privacy masking boxes per channel.
5. Click-and-drag the outer white line around the privacy masking box to resize.
6. Click **Apply** to save changes.

### *22.5.6 Creating Custom Channel Names*

You can assign custom names to your cameras. For example, you can name your cameras based on their location (e.g. hallway or front door).

**To create custom channel names:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Device Settings**. Click the **Channel Name** tab from the side panel.




3. Click a channel to enter a custom name.
4. Click **Apply** to save changes.

### *22.5.7 Configuring Snapshot Recording Settings*

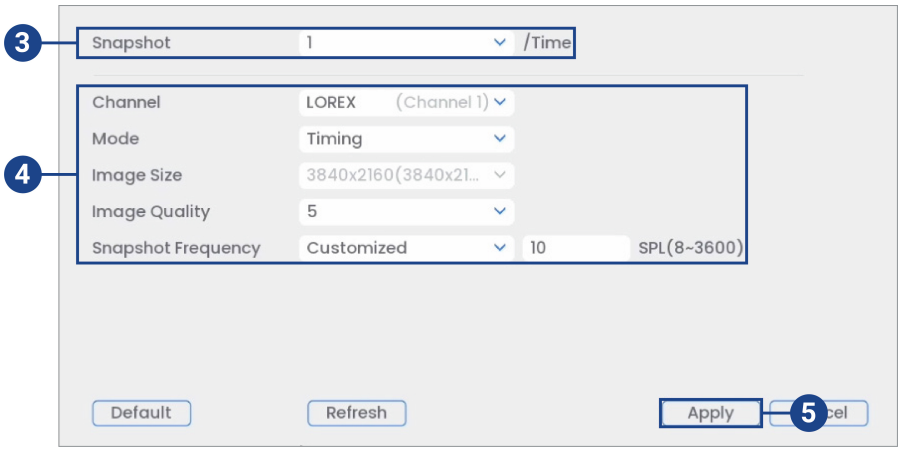
The system can be set to record snapshot images when a camera detects motion. These snapshots can be viewed through the Playback menu or can be attached to email alerts and push notifications. Use the following procedure to set the snapshot parameters for each camera.

**NOTE**

Snapshot recording must be enabled for motion detection in the Events menu. See 13 *Motion Detection*, page 45 for details.

**To configure snapshot recording settings:**

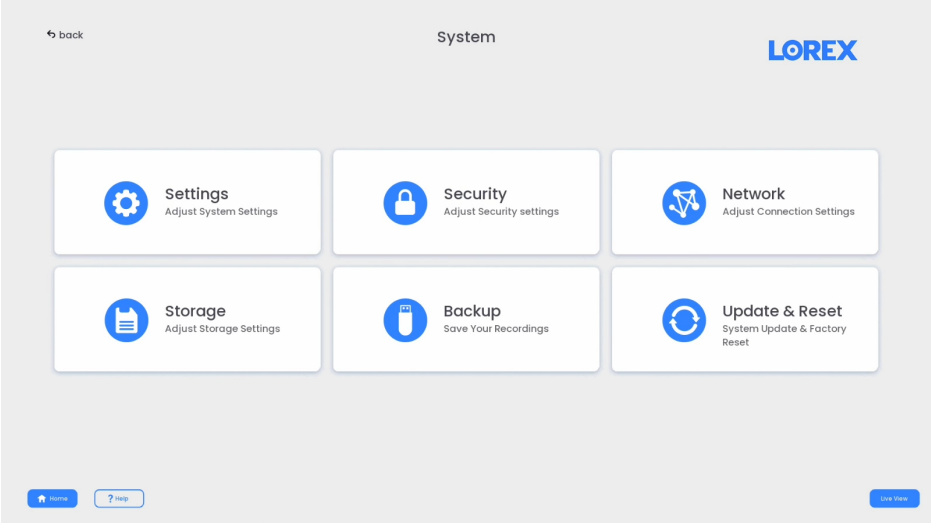
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Record Settings**. Click the **Snapshot** tab from the side panel.




3. Under **Snapshot**, select the number of snapshots the system will take when the snapshot button is pressed.
4. Configure the following settings for snapshots saved automatically from motion detection or the snapshot schedule:
   - **Channel:** Select the channel you would like to configure.
   - **Mode:** Select **Timing** for the system to take snapshots at fixed intervals throughout the day, or select **Trigger** for the system to take snapshots only when triggered by motion detection (snapshot recording must be enabled in the motion detection menu - see 13 *Motion Detection*, page 45 for details).
   - **Image Size:** The image size is the same as the Main Stream resolution of the camera.
   - **Image Quality:** Select the snapshot image quality between **1** (lowest) and **6** (highest)
   - **Snapshot Frequency:** Enter the time between snapshots in seconds.
5. Click **Apply** to save changes.

## 22.6 System Menu

Configure general system settings, recording schedule, motion settings, and more.

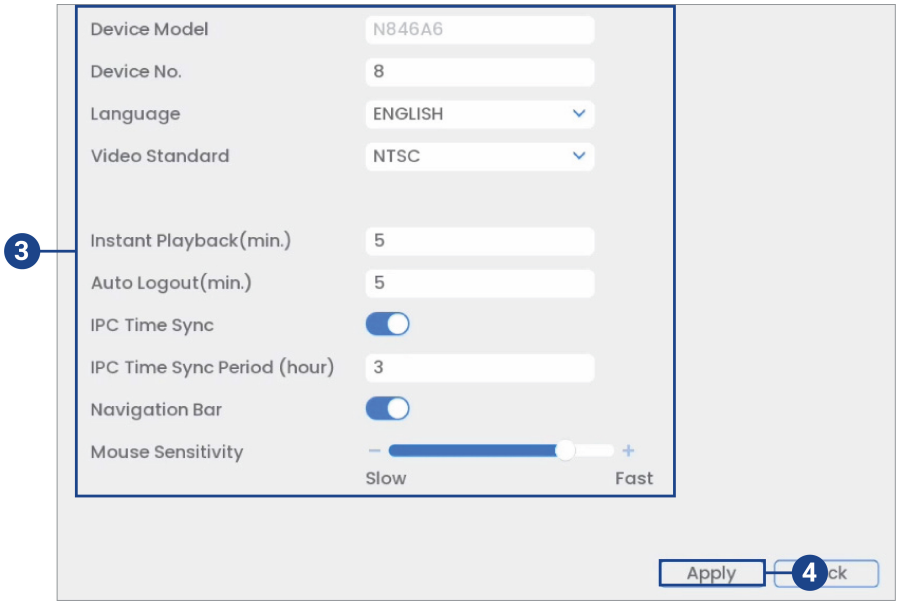



### *22.6.1 Configuring General System Settings*

Configure miscellaneous system settings.

**To configure general settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Settings**. Click the **General** tab from the side panel.



3. Configure the following:
   - **Device Model:** The camera model name.
   - **Device No.:** Not supported.
   - **Language:** Set the system languages. Available options are English, French, and Spanish.
   - **Video Standard:** Select **NTSC** (North America) or **PAL** (Europe).
   - **Instant Playback:** Select the amount of time (in minutes) the system will go back when instant playback is activated in live view.
   - **Auto Logout:** Select the idle time (in minutes) before the system will logout the current user.
   - **IPC Time Sync:** Check to enable.
   - **IPC Time Sync Period:** Select how often (in hours) the NVR will update the time on the IP cameras.
   - **Navigation Bar:** Check to enable the Navigation Bar that comes up when you left click in live view.
   - **Mouse Sensitivity:** Use the slider to adjust the mouse speed.
4. Click **Apply** to save changes.

### *22.6.2 Configuring RS–232*

This system can use the RS-232, also referred to as the communication port, to connect to external control devices or for debugging.

**To configure RS-232 parameters:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Settings**. Click the **RS232** tab from the side panel.
3. Configure the following:
   - Under **Function**, select a serial port control protocol:
     - **Console:** Upgrade the program and debug with the console and mini terminal software.
     - **Keyboard:** Control the system with a special keyboard.
     - **Adapter:** Connect your PC directly for transparent transmission of data.
     - **Net Keyboard:** Configure the function to a protocol COM in order to overlay card number.
     - **PTZ Matrix:** Connect PTZ matrix control.
   - **Baud rate:** Select the proper baud rate, with 115200 being the default.
   - **Data bit:** Select the proper data bit between the value range from 5 to 8, with 8 being the default.
   - **Stop bit:** Select between the values 1 or 2 bit seconds.
   - **Parity:** Select between None, Odd, Even, Mark, and Null.
4. Click **Apply** to save changes.

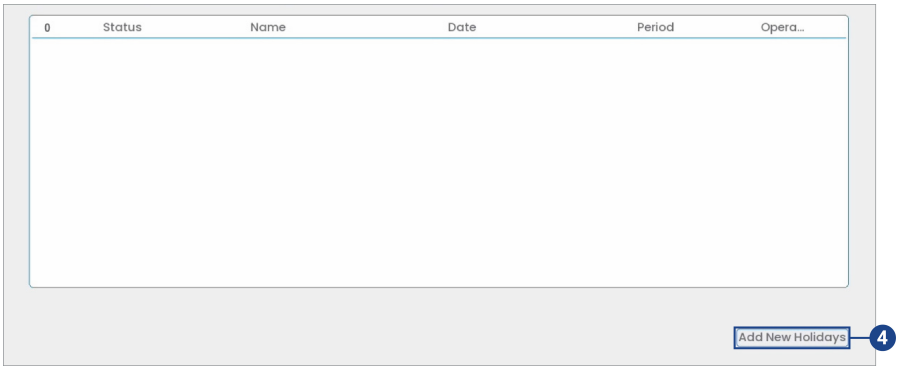
### *22.6.3 Configuring Holidays*

You can set certain days as holidays. Holidays have a special recording schedule.

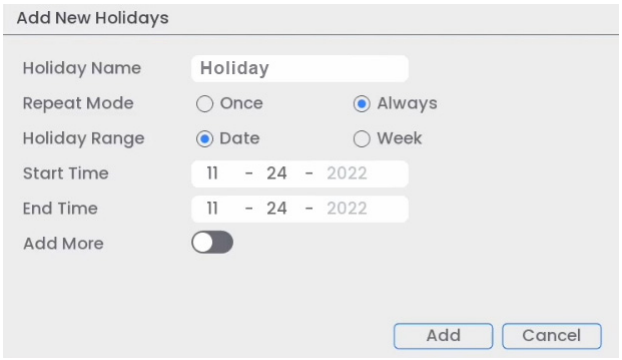
**To configure holidays:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Settings**.

3. Click the **General** tab from the side panel, then the **Holiday** tab from the top panel.

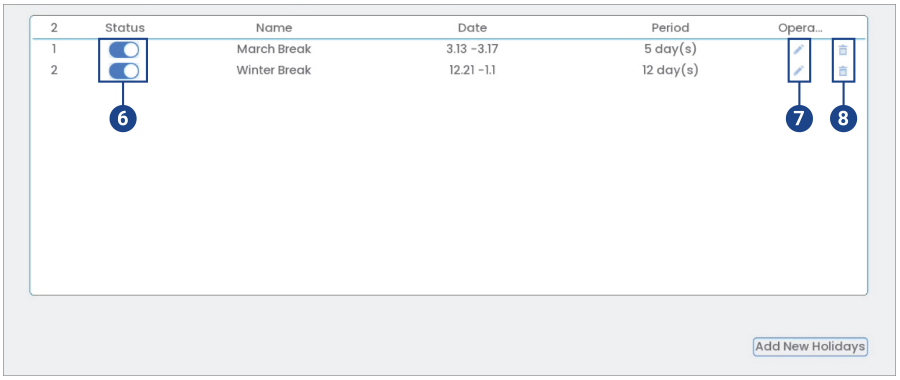



4. Click **Add New Holidays**.
5. Configure the following:




- **Holiday Name:** Enter a name for this holiday.
- **Repeat Mode:** Select **Once** for the holiday to occur only this year or **Always** for the holiday to be repeated each year.
- **Holiday Range:** Select **Date** to select a specific date, or select **Week** to select holidays based on which week they fall on.
- **Start Time/End Time:** Enter when the date for when the holiday starts and ends.
- **Add More**: Check to add another holiday to the recording schedule.

6. Once a holiday has been created, you can check to enable or disable the **Status**.



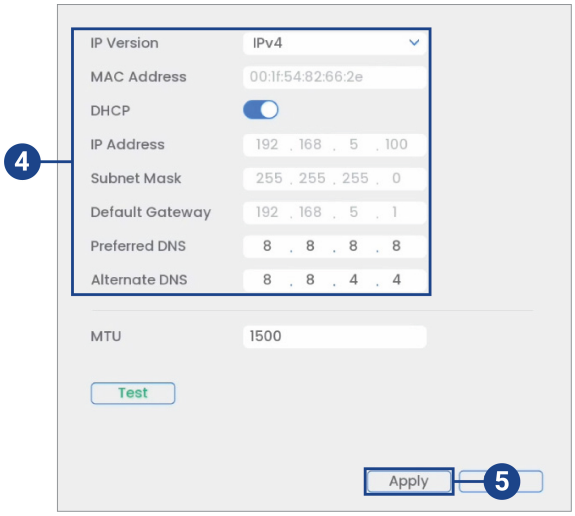

7. Click the **Edit** icon next to the holiday you want to modify.
8. Click the **Delete** icon next to the holiday you want to delete.

### *22.6.4 Selecting DHCP or Static IP Address (TCP/IP)*

Configure IP address settings.

**To configure IP address settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Network**. Click the **TCP/IP** tab from the side panel.




3. Check **DHCP** (recommended) to let the system automatically obtain an IP address from the router.
   **OR**

   Uncheck **DHCP** to assign a static IP address (advanced users only).

4. **If you uncheck DHCP, configure the following:**

   - **IP Version:** Select **IPv4** or **IPv6**.
   - **MAC Address:** Enter the MAC address you would like to assign to the system. Make sure that no other device on your network is using the same MAC address.
   - **IP Address:** Enter the IP address you would like to assign to the system. Make sure that no other device on your network is using the same IP address.
   - **Subnet Mask:** Enter the subnet mask for your network.
   - **Default Gateway:** Enter the gateway address for your network.
   - **Preferred DNS:** Enter the address of your primary DNS server.
   - **Alternate DNS:** Enter the address of your secondary DNS server.

5. Click **Apply** to save changes.

### *22.6.5 Configuring System Ports (Connection)*

Configure ports used by the system for remote connectivity. If you are using DDNS connectivity, port forwarding is required for the HTTP Port (default: **80**) and TCP (Client) Port (default: **35000**).

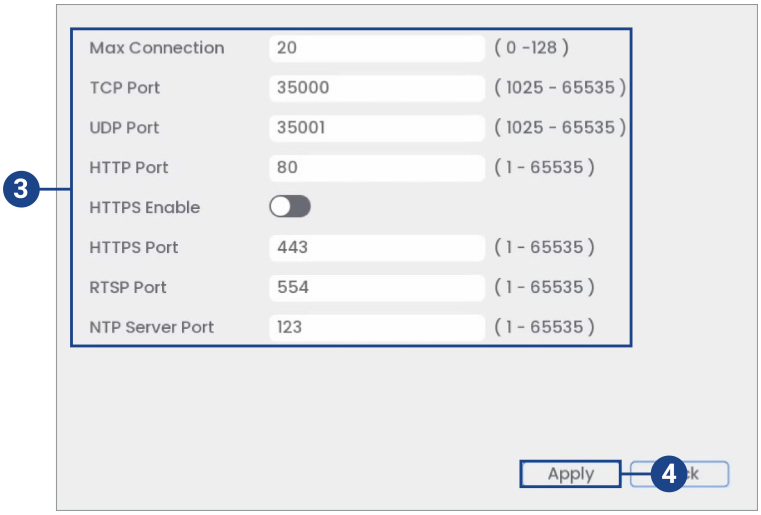
**NOTE**

Port forwarding is not required unless you are using DDNS for remote access. Using mobile apps does not require port forwarding or DDNS setup.

**To configure system ports:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **System**, then **Network**. Click the **Connection** tab from the side panel.




3. Configure the port numbers as needed.
4. Click **Apply** to save changes.

> **NOTE**
>
> Up to 3 devices may connect to the system at the same time.

### *22.6.6 Configuring Email Alerts*

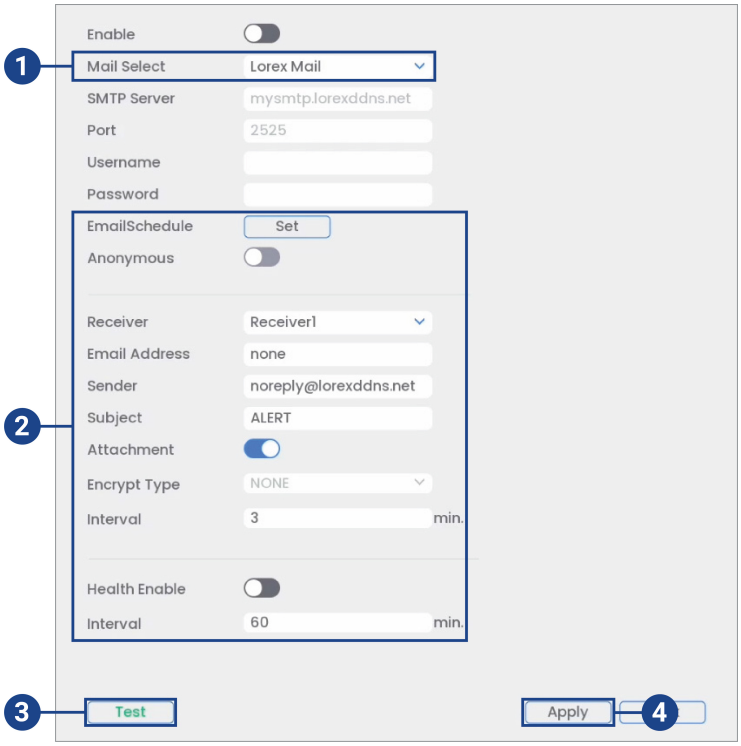
You can configure the system to send out email alerts for motion detection or other events.

> **NOTE**
>
> To send out motion detection alerts, you must enable the **Send Email** option for motion detection on each camera you would to receive alerts from. For details, see 13 *Motion Detection*, page 45.

**To configure Email Alerts:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Network**. Click the **Email** tab from the side panel.
3. Check **Enable** to enable email notifications.

**If you want to use Lorex's email server (recommended):**




1. Under **Mail Select**, select **Lorex Mail** to use the Lorex email server to send out alarm notifications. This is the recommended setting.
2. Configure the following:

   - **Email Schedule:** Configure time periods during which email alerts will be sent.
   - **Receiver:** Enter the email address that will receive alerts.
   - **Sender:** Enter the sender's email address.
   - **Subject:** Enter the subject line for the email alert.
   - **Attachment:** Check to include an image attachment of the camera.

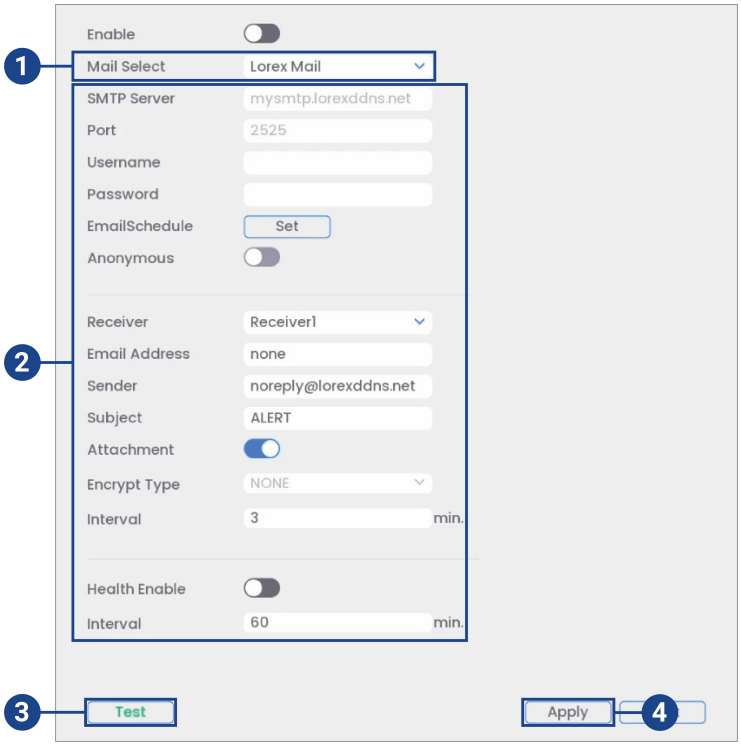
     **NOTE**

     You must enable the Snapshot option for motion detection on each camera you would to receive attachments. For details, see 13 *Motion Detection*, page 45.

   - **Interval:** Enter the interval between alert emails.
   - **Health Enable:** Check to enable health check emails. Health check emails will be sent periodically to ensure that the system is functioning normally. Enter the interval in minutes for health check emails.

3. Click **Test** to send a test email.
4. Click **Apply** to save settings.

**If you want to use your own email server (advanced):**




1. Under **Mail Select**, select **Customize**.
2. Configure the following:

   - **SMTP Server:** Enter the SMTP server address.
   - **Port:** Enter the port used by the SMTP server.
   - **Username:** Enter the SMTP user name.
   - **Password:** Enter the SMTP password.
   - **Anonymous:** Check if your server supports anonymous log ins. Otherwise, leave this unchecked.
   - **Receiver:** Select the receiver from the drop-down.
   - **Email Address**: Enter the email address that will receive alerts.
   - **Sender:** Enter the sender's email address.
   - **Subject:** Enter the subject line for the email alert.
   - **Attachment:** Check to include an image attachment of the camera.

   **NOTE**

   You must enable the Snapshot option for motion detection on each camera you would to receive attachments. For details, see 13 *Motion Detection*, page 45.

   - **Encrypt Type:** Select **SSL** or **TLS** if your server uses encryption. Select **None** if your server does not use encryption.
   - **Interval:** Enter the interval between alert emails.
   - **Health Enable:** Check to enable health check emails. Health check emails will be sent periodically to ensure that the system is functioning normally. Enter the interval in minutes for health check emails.

3. Click **Test** to send a test email.
4. Click **Apply** to save settings.

### *22.6.7 Configuring Switch Settings (Advanced)*

Configure the networking settings for the internal PoE switch.

**CAUTION**

It is recommended to leave this menu on the default settings. Changing the information in this menu may disrupt the connection to the cameras.

**To configure switch settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Network**. Click the **Switch** tab from the side panel.




3. Configure the **IP Address**, **Subnet Mask**, and **Default Gateway** for the internal PoE switch.
4. Click **Apply** to save changes. The system will restart.

### *22.6.8 P2P Setting*

The P2P Setting menu is used only to enable / disable remote access to the system using a P2P connection.

**CAUTION**

P2P connection is the primary method used for remote access to your security system using the Lorex Home app. If you disable P2P connectivity, you will only be able to access your system over the Internet using DDNS. See28 *DDNS Setup (Advanced)*, page 163 28 *DDNS Setup (Advanced)*, page 163 for details.

**To change P2P setting:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Network**. Click the **P2P** tab from the side panel.




3. Check **Enable** to use P2P, or uncheck to disable.
4. Click **Apply** to save changes.

### *22.6.9 Configuring Pre-Recording*

The system can pre-record video when motion detection events occur. This will ensure that the system records the entire event when motion is detected. By default, the system pre-records 4 seconds of video every time motion is detected.

**NOTE**

Ensure you have set your preferences for motion detection (see 13 *Motion Detection*, page 45 for details).

**To configure pre-recording:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Storage**.
3. Click the **Schedule** tab from the side panel, then the **Record** tab from the top panel.




4. Under **Channel**, select the camera you would like to configure or select **All**.
5. Under **PreRecord**, select the duration for pre-recording.
6. Click **Apply** to save changes.

### *22.6.10 Formatting the Hard Disk Drive*

Format the hard disk drive to erase all saved data. If you install a new hard disk drive, you must format the hard disk drive using the procedure below before you will be able to record.

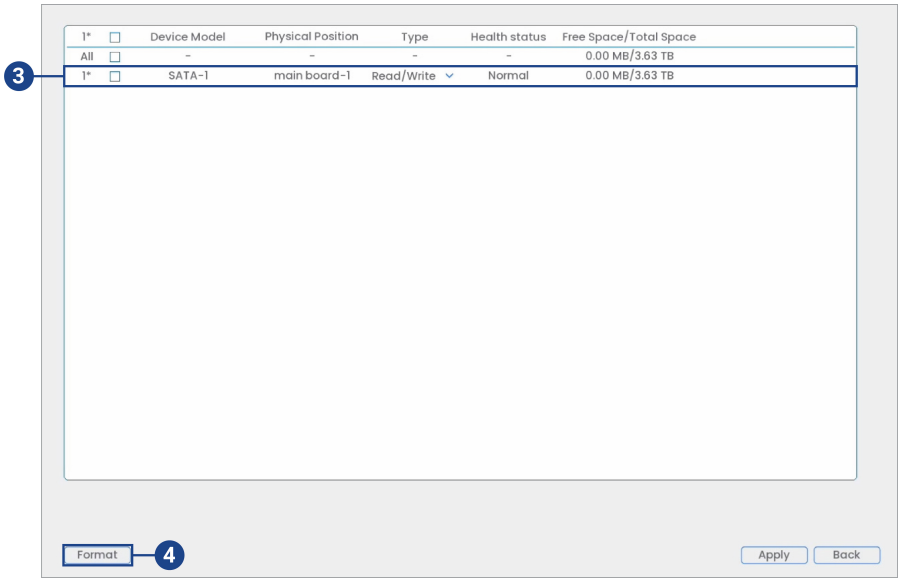
**To format the hard disk drive:**

**CAUTION**

Formatting the hard disk drive erases **all data** on the hard disk drive. **Formatting cannot be undone.**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **System**, then **Storage**. Click the **HDD Manager** tab from the side panel.




3. Select the hard dive you would like to format.
4. Click **Format**, then click **Yes** to confirm.

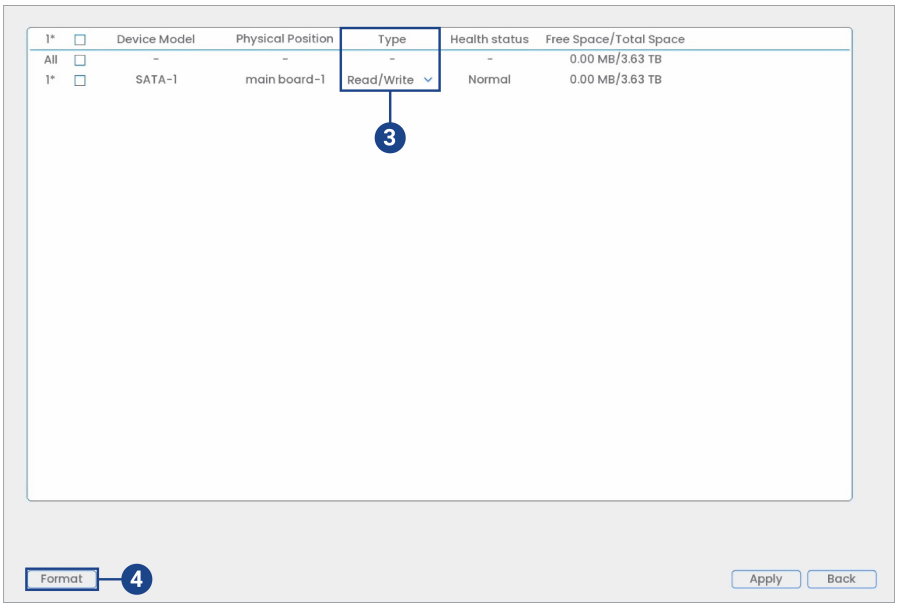
### *22.6.11 Configuring Hard Disk Drive Type*

The system supports the following hard disk drive types:

- **Read/Write:** Normal recording hard disk drive.
- **Read-Only:** The system can playback data from this hard disk drive, but it will not record to it.

**To set the hard disk drive type:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Storage**. Click the **HDD Manager** tab from the side panel.




3. Select the hard disk drive type under the **Type** column next to the hard disk drive you would like to configure.

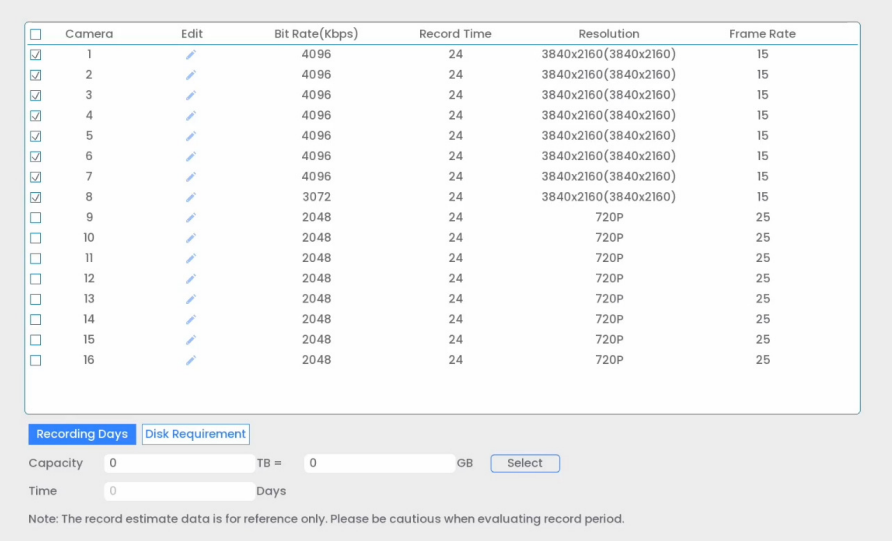
4. Click **Apply** to save changes. The system will restart to complete this operation.

### *22.6.12 Configuring Record Estimate (Recording Calculator)*

Use the recording calculator to get an estimate of your maximum recording time in days for the installed hard disk drive, or how much hard disk drive space would be required to retain a specific amount of days.

**To obtain a recording estimate:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Storage**. Click the **Record Estimate** tab from the side panel.




3. Select **Recording Days** for the total number of days worth of recordings your hard disk drive can store, or select **Disk Requirement** for the total storage needed to record for a specific number of days
4. For **Recording Days** mode, click **Select** to choose your hard disk drive from a list to output the total number of days your hard disk drive can store. For **Disk Requirement** mode, enter a number of days to output the total amount of storage required.
5. Click **Apply** to save changes.

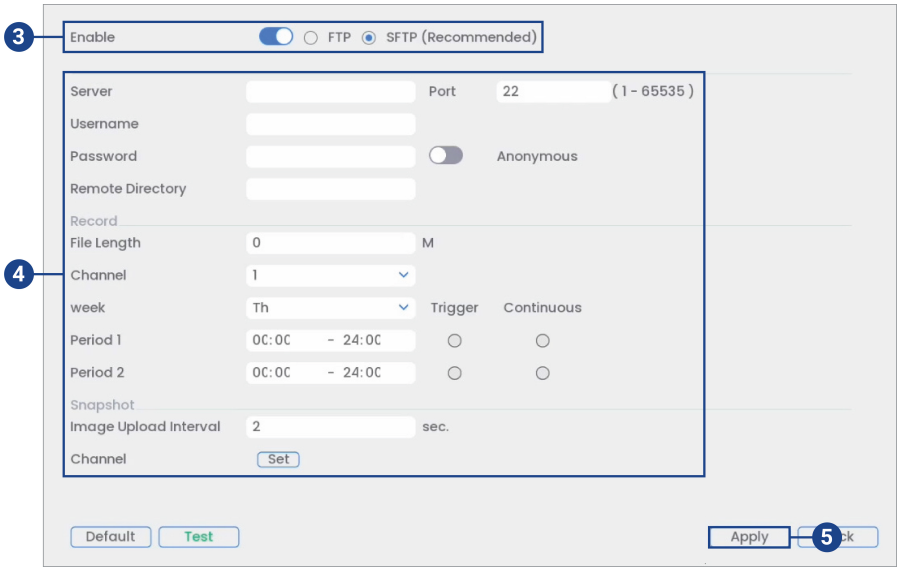
### *22.6.13 FTP (Advanced)*

Send recordings and/or snapshots to an FTP server.

**To configure FTP settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **System**, then **Storage**. Click the **FTP** tab from the side panel.



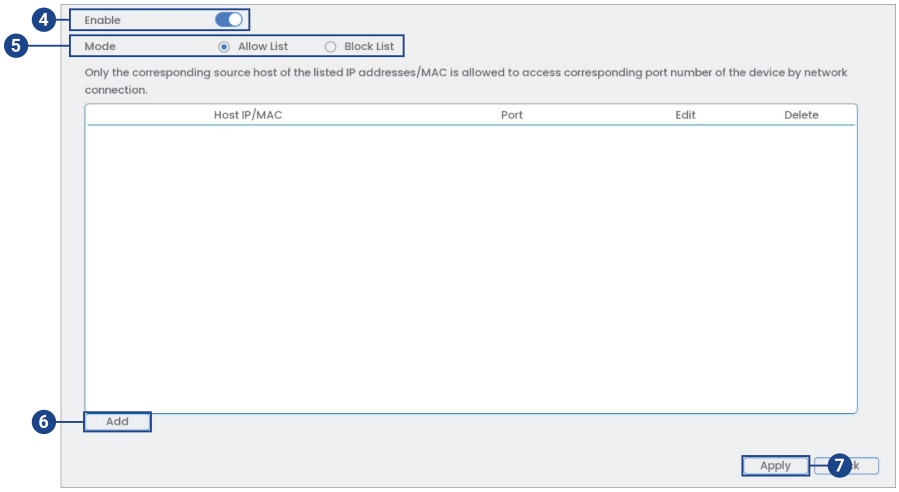

3. Check **Enable** to allow FTP connection, and select either **FTP** or **SFTP** depending on your configuration.
4. Configure the following:
   - **Server:** Enter the FTP server's address.
   - **Port:** Enter the FTP port.
   - **Username:** Enter your FTP username.
   - **Password:** Enter your FTP password.
   - **Anonymous:** Enable if your FTP server supports anonymous login.
   - **Remote Directory:** Enter the directory to save recordings and/or snapshots to.
   - **File Length:** Enter the recording file length in minutes.
   - **Channel:** Select a channel to set FTP recording preferences for.
   - **Week:** Select a day of the week to configure FTP recording settings for, or select **All** to apply to all days of the week.
   - **Image Upload Interval:** Enter the interval between snapshots in seconds.
   - **Channel:** Select a channel to set the snapshot preference for.
5. Click **Apply** to save changes.

### *22.6.14 Configuring IP Filter*

Configure permissions for external IP addresses attempting to access the unit.

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Security**.

3. Click the **Security** tab from the side panel, then the **Firewall** tab from the top panel.

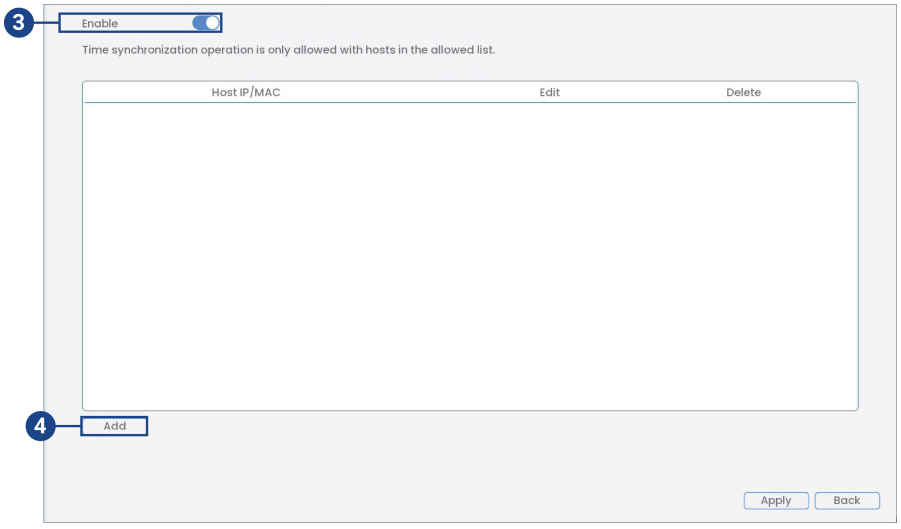



4. Check **Enable**.
5. Select **Allow List** to add IP addresses or ranges that are permitted to access the recorder, or select **Block List** to add IP addresses or ranges that are not permitted to access the recorder.
6. Click **Add** to enter an IP address or range.
7. Click **Apply** when finished.

### *22.6.15 Configuring IP Filter — Sync Time-Allowlist*

Configure permissions for external IP addresses that are permitted to sync the recorder's time.

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Security**. Click the **Security** tab from the side panel, then the **Sync Time-Allowlist** tab from the top panel.



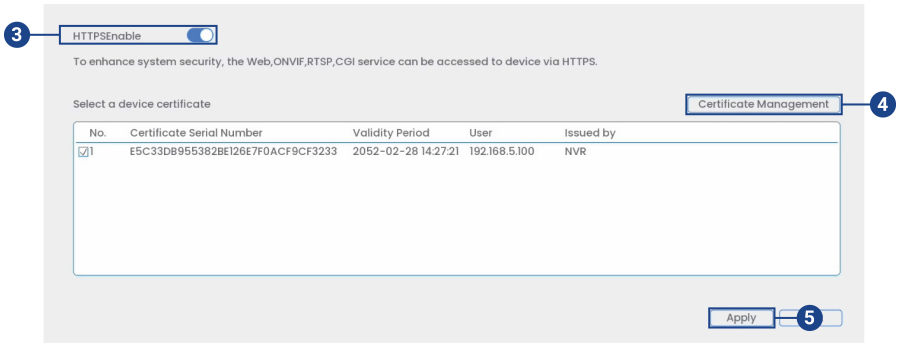

3. Check **Enable**.
4. Click **Add**, then configure the following:
   - **Type**: Select the address type.
   - **IP Address**: Enter a single IP address.
   - Click **OK**.
5. Click **Apply** when finished.

### *22.6.16 Configuring HTTPS (Advanced)*

Set up an SSL Certificate to enable HTTPS login.

**To configure an HTTPS connection:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Security**. Click the **HTTPS** tab from the side panel.




3. Check to enable HTTPS.
4. Click **Certificate Management** to create a certificate or import a third-party certificate.
5. Click **Apply** to save changes.

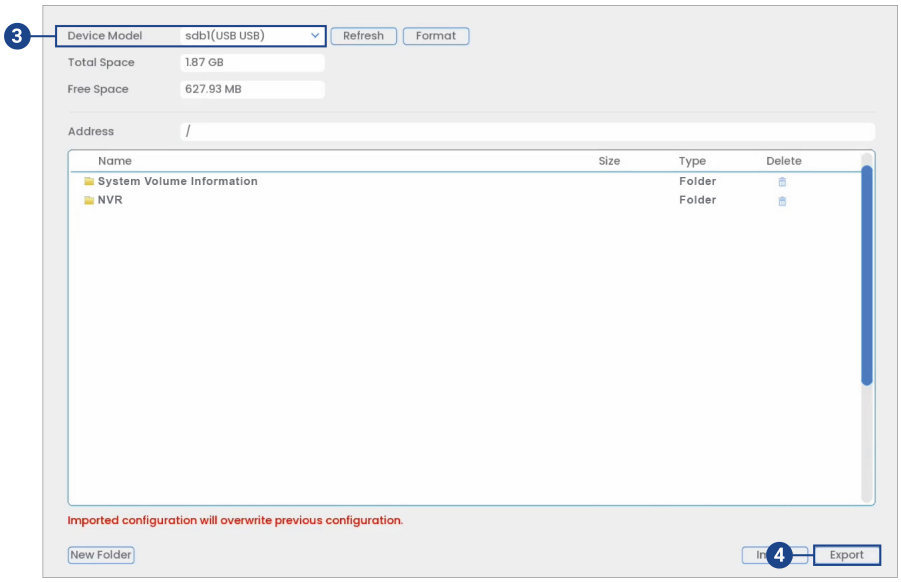
### *22.6.17 Saving Your System Configuration to a USB Thumb Drive*

The system allows you to save your current system configuration to a USB thumb drive (not included). This is useful if you want to backup your current settings.

| NOTE |
| --- |
| This function only saves settings created in system menus. It does not save or backup any video. |

**To save your system configuration to a USB thumb drive:**

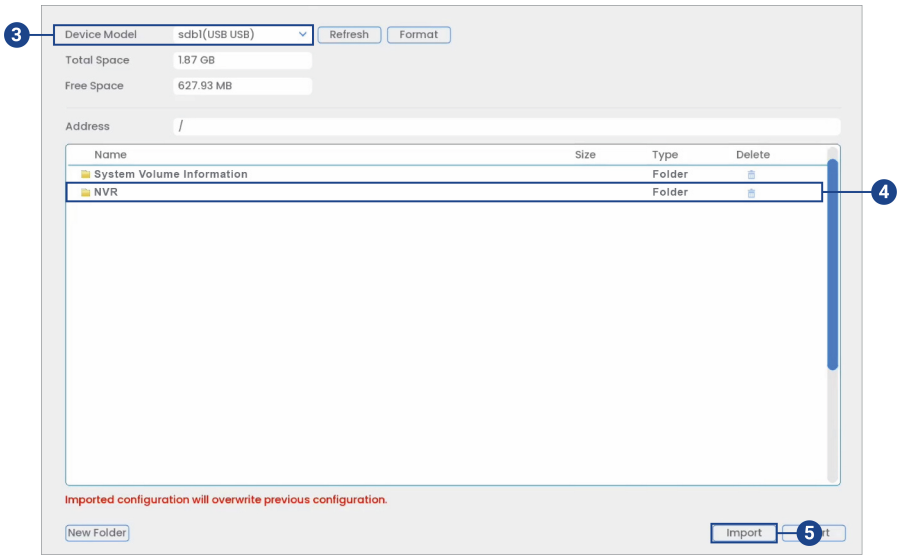
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Config Backup** tab from the side panel.




3. Under **Device Model**, select the USB device where you would like to save the configuration.
4. Click **Export** to save your current system configuration.

**To restore a saved system configuration:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Config Backup** tab from the side panel.



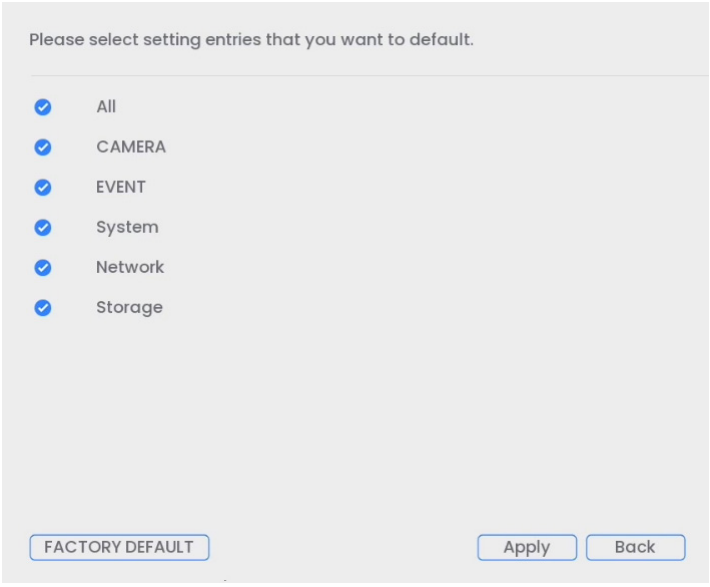

3. Under **Device Model**, select the USB device where the system configuration is saved.
4. Click the folder with the configuration file you would like to restore. Configuration file folders are labeled “Config” and then the time and date the configuration was saved (e.g., *Config_20220425103727*).
5. Click **Import** to restore the system configuration.
6. Click **OK** to confirm. The system will restart to complete the operation.

### *22.6.18 Restore Default Settings*

Restore the system to its default settings.

**To restore default settings:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Default** tab from the side panel.



3. Check the menus you would like to reset to default settings.
4. Click **Apply** to begin restoring to default settings.

### *22.6.19 Upgrading Firmware Manually*

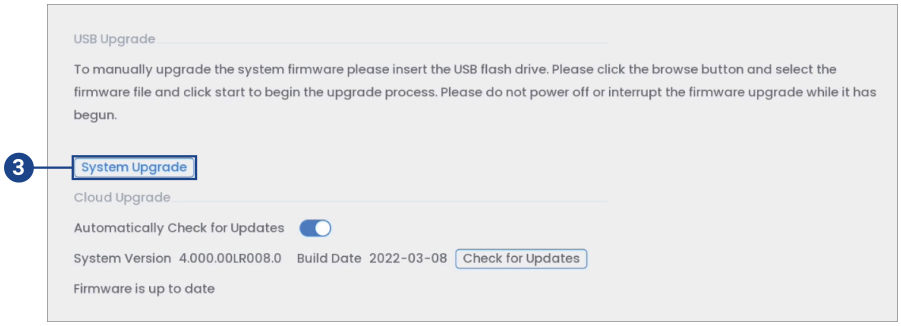
The primary method for upgrading system firmware is automatically over the Internet. The system also supports firmware upgrades from a USB thumb drive (not included).

**Prerequisite:**

- Save the **.bin** firmware file for your unit onto a USB flash drive (not included), and connect the drive to one of the system's free USB ports.

**To upgrade firmware manually:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Upgrade** tab from the side panel.



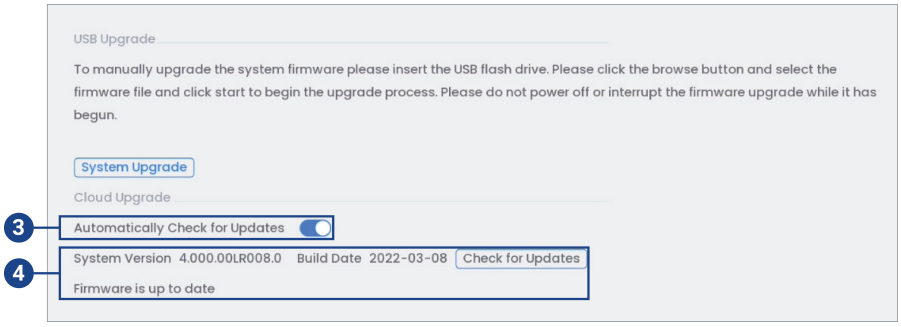

3. Click **System Upgrade**.
4. Click on the **.bin** firmware file for your recorder.
5. Click **Start**.

### *22.6.20 Automatic Firmware Upgrades*

Firmware upgrades provide enhanced functionality. The system will automatically check for firmware upgrades if it is connected to the Internet.

**To configure automatic firmware upgrade:**

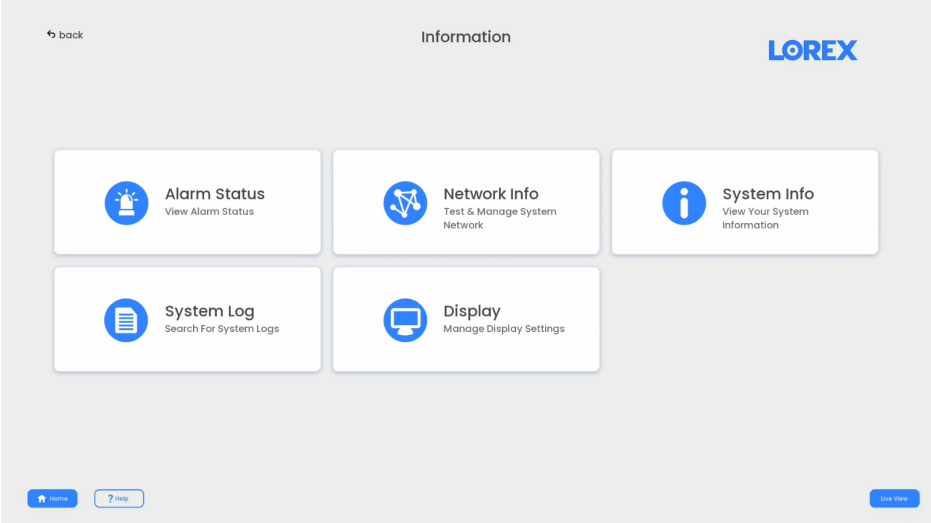
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Upgrade** tab from the side panel.




3. Ensure **Automatically Check for Updates** is checked. If it was previously unchecked, click **OK** to save changes.
4. Click **Check for Updates** to check for a newer firmware version.
5. If a newer version is found, click **Upgrade Now** to upgrade the system.

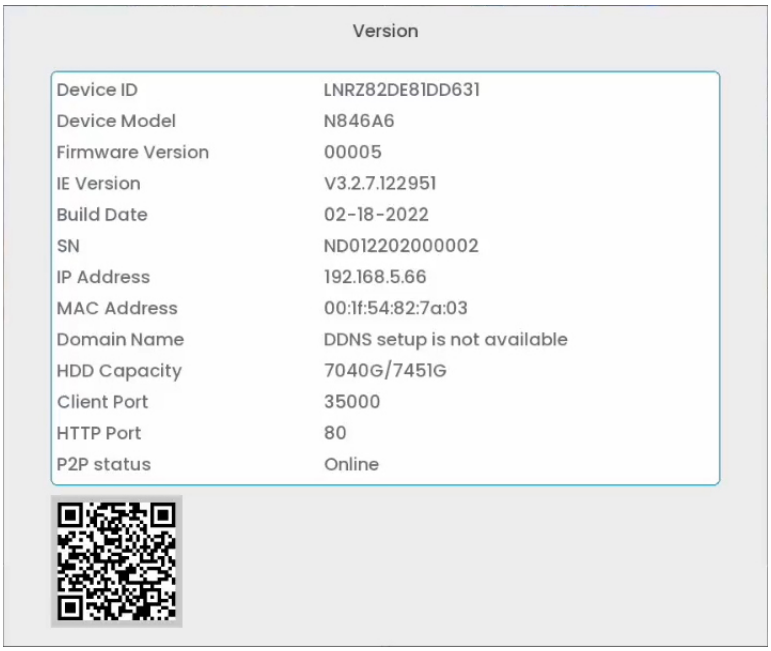
## 22.7 Information Menu

View system information related to storage, network status, system warnings, and more.




### *22.7.1 Version Information*

View system information such as device ID, model number, IP address, and firmware version.

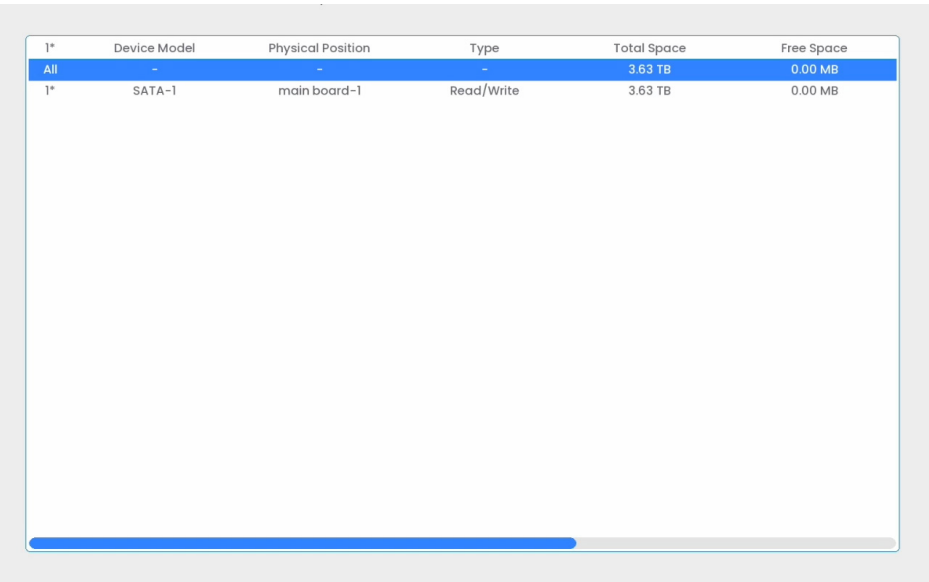



**To access the Version Info menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Info**.

### *22.7.2 Hard Disk Drive Information*

View information related to the hard disk drives installed in the system, including capacity, status, and type.

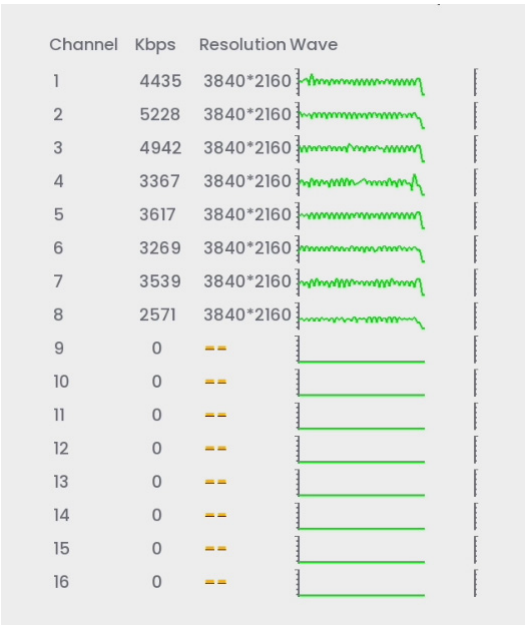



**To access HDD Info:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **System Info**. Click the **HDD Info** tab from the side panel.

### *22.7.3 BPS*

Shows bitrates of connected cameras. The bitrate is the amount of data the camera is sending to the system.

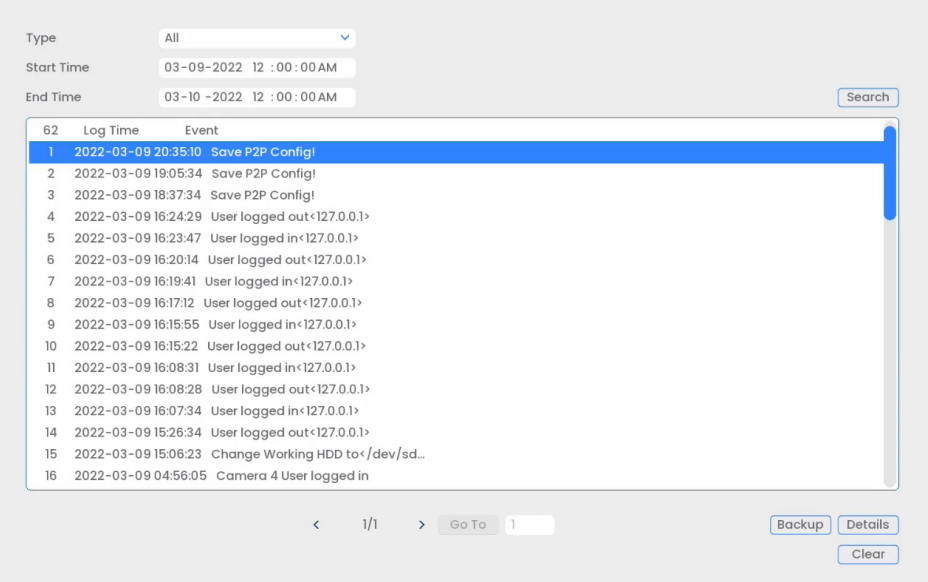



**To access the BPS menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **System Info**. Click the **BPS** tab from the side panel.

### *22.7.4 System Log*

Search for system logs in a certain time range.

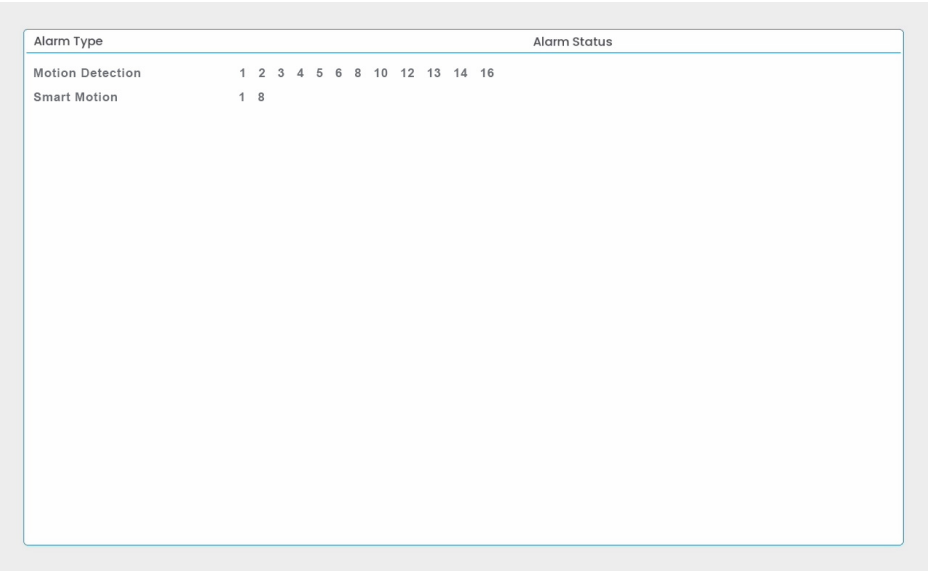



**To access the log menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **System Log**.

### *22.7.5 Alarm*

View a summary of active system alarms. Activated alarms are highlighted in white. Additional info such as channels that are currently detecting motion is shown.




**The following alarms are shown in the Alarm Status menu:**

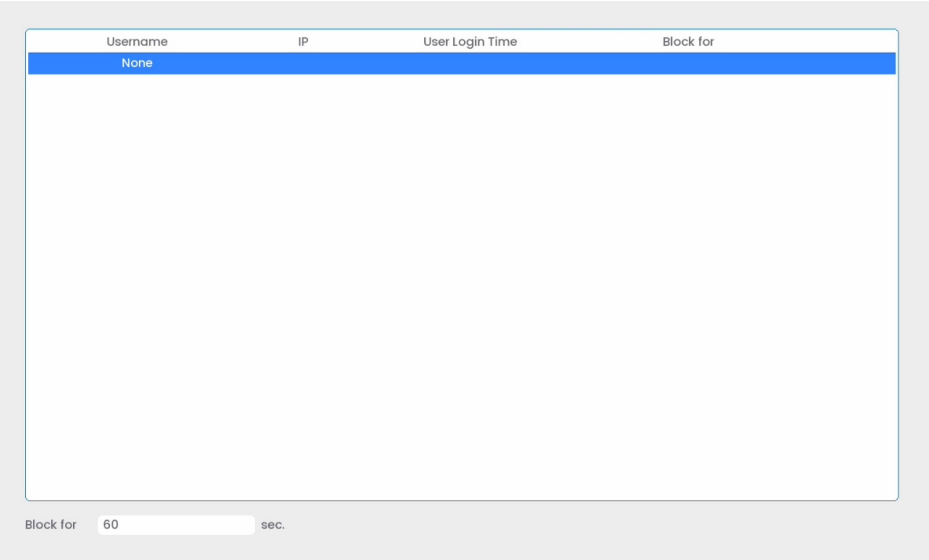
- **Motion Detection:** Shows channels with active motion alarms.
- **Smart Motion:** Shows channels with active smart motion alarms.

**To access Alarm Status:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Alarm Status**.

### *22.7.6 Online Users*

View all users connected to the system using computers or mobile devices.

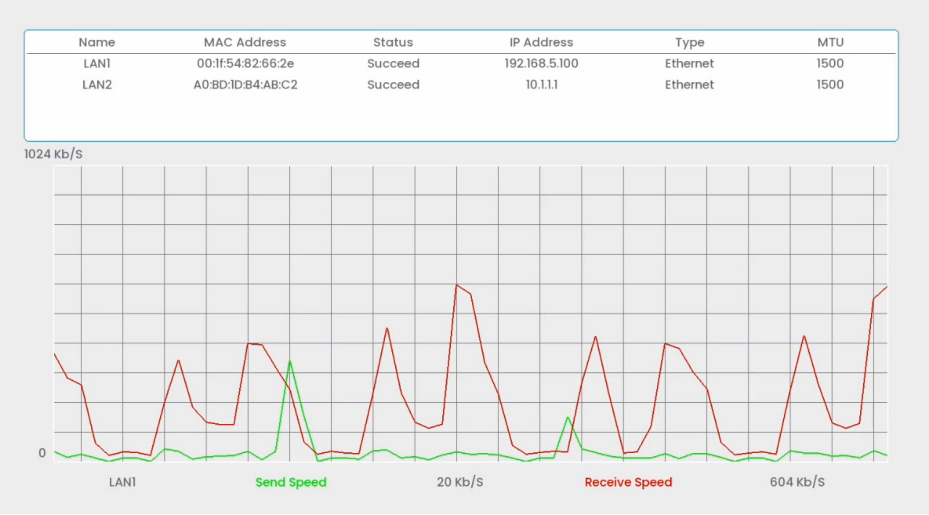



**To access the online users menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Network Info**. Click the **Online Users** tab from the side panel.

### *22.7.7 Network Load*

View network traffic your system is sending and receiving.

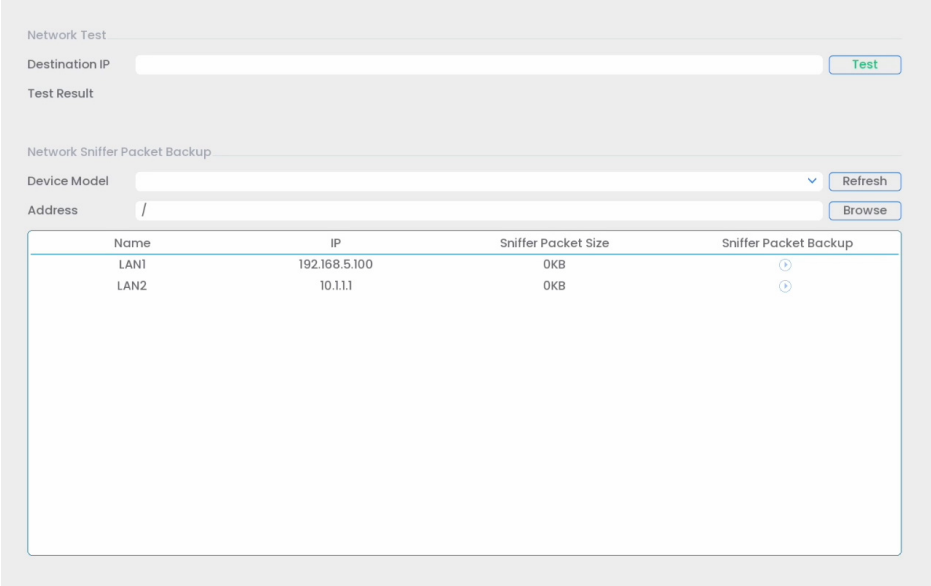



**To access the network load menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Network Info**. Click the **Net Load** tab from the side panel.

### *22.7.8 Network Test*

Test if your system can connect to other devices over the LAN or Internet. You can enter the IP address of a device and click **Test** to determine if your system can connect to it.



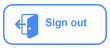

**To access the network test menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Network Info**. Click the **Network Test** tab from the side panel.

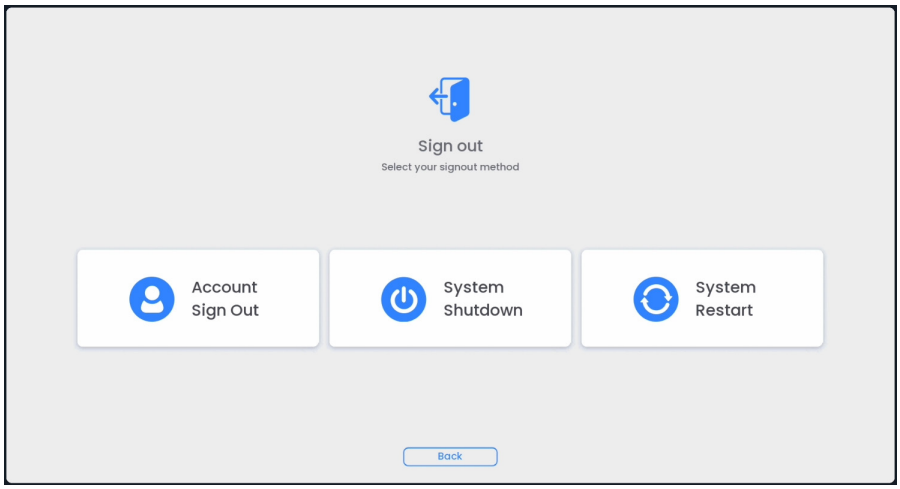
### 22.8 Sign Out Menu

Sign out, shut down, or restart the system.

**To access the sign out menu:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click 

on the top left of the screen.
3. Select one of the following:




- **Account Sign Out:** Log out the account that is currently active.
- **System Shutdown:** Power off the system.
- **System Restart:** Manually shut the system off, and then restart.

# 23 Connecting Remotely Using the *Lorex Home* App

You can connect to your security system over the Internet using our free Lorex **Home** app for iOS and Android devices. Securely connect to your system from anywhere with no recurring fees for live viewing.



**The Lorex Home app allows you to**:

- View live video from cameras
- Play back recorded video from the hard disk drive
- Manually record video clips or take a snapshot of live video
- Activate deterrence features including warning lights, sirens, quick responses, color night vision booster, and **Smart Security Lighting™***
- Set preferences for push notifications, informing you of smart motion detection and other system events

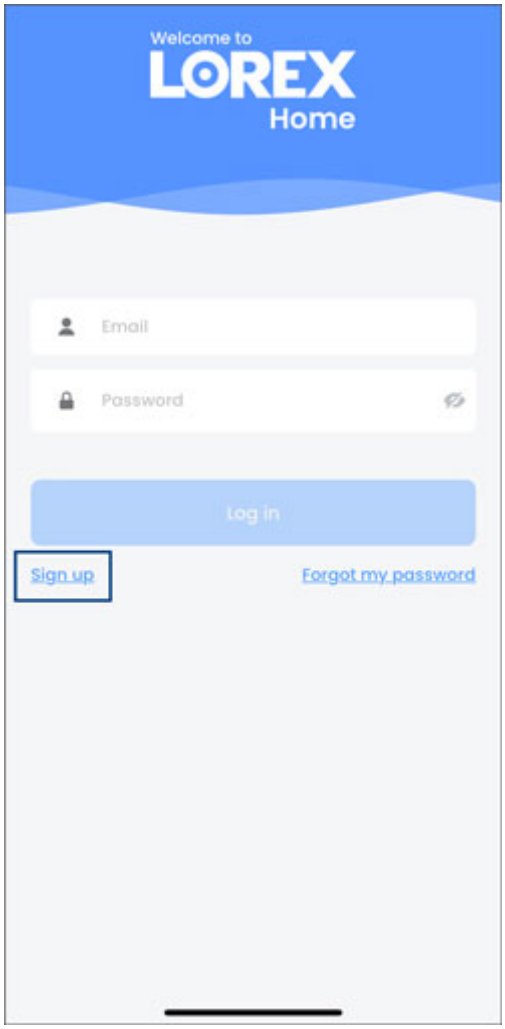
* On supporting devices.

**To create your Lorex Home app account:**

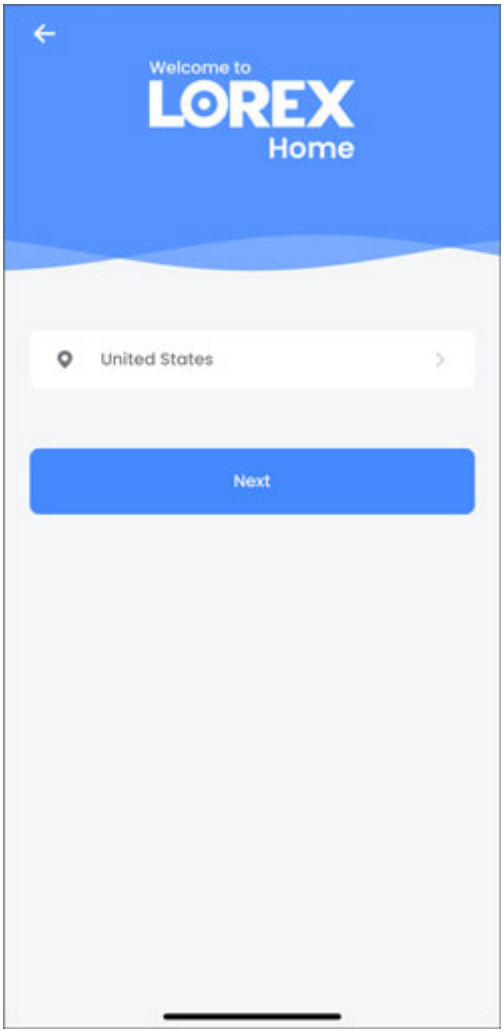
1. Download the **Lorex Home** app from the App Store® or Google Play™ store.

2. Open the **Lorex Home** app.

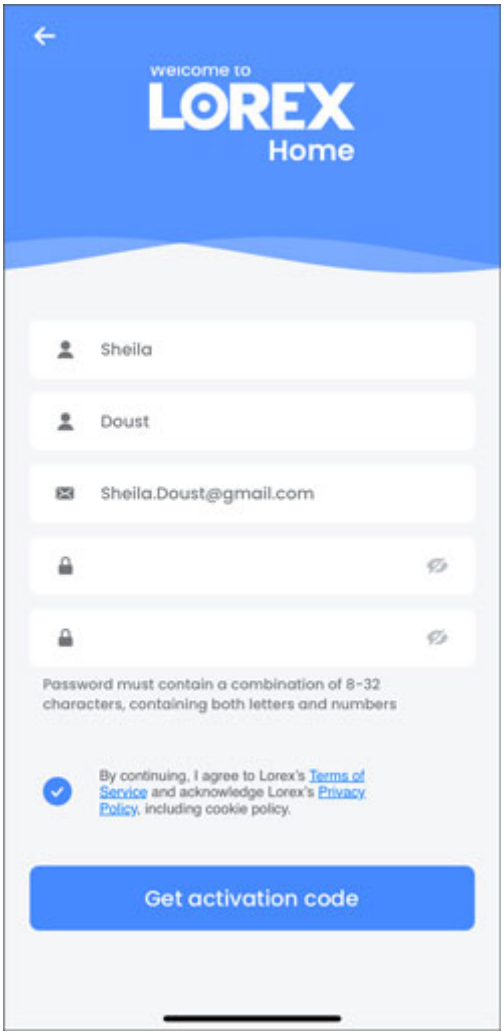
3. Tap **Sign up**.


Welcome to
LOREX
Home
Email
Password
Log in
Sign up
Forgot my password

4. Select your country from the drop-down list, then tap **Next**.

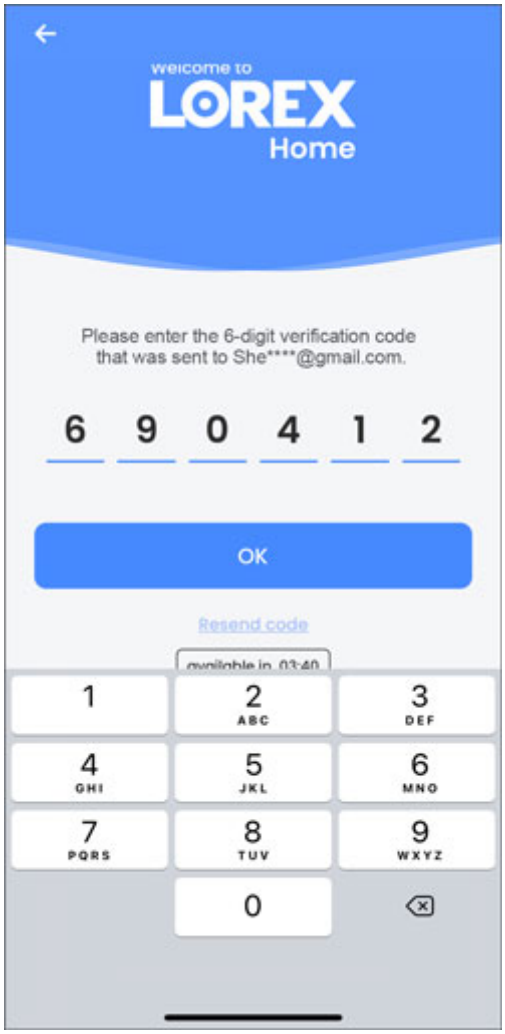


5. Enter your information and a secure password, then tap **Get activation code**.




6. Lorex will send an activation code to the email that you have provided. Retrieve the 6–digit activation code from your email.

7. Enter the 6–digit code, then tap **OK**.




Your **Lorex Home** app account is now set up and ready to pair with your Lorex system.

**NOTE**

To connect your Lorex system to the **Lorex Home** app, your recorder must be connected to your network.

For advanced support for the app, go to your recorder's product support page. Visit help.lorextechnology.com and search your recorder's model number.

# 24 Smart Home & Voice Assistance

The recorder is compatible with third-party smart home solutions, including Amazon Alexa® and Google Assistant®. You can use these services to take your security experience to the next level, with smart home options that make accessing your system even easier.

For compatibility information, as well as full instructions on setup and use, visit lorex.com/SmartHome.

For instructions on enabling audio for voice assistance (only applicable to audio capable cameras), see 26 *Connecting Audio Devices*, page 153.

Google and Google Home are trademarks of Google LLC.

Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

## 24.1 Link With Amazon Alexa®

Link your Lorex system connected to the **Lorex Home** app to your Amazon Alexa® device.

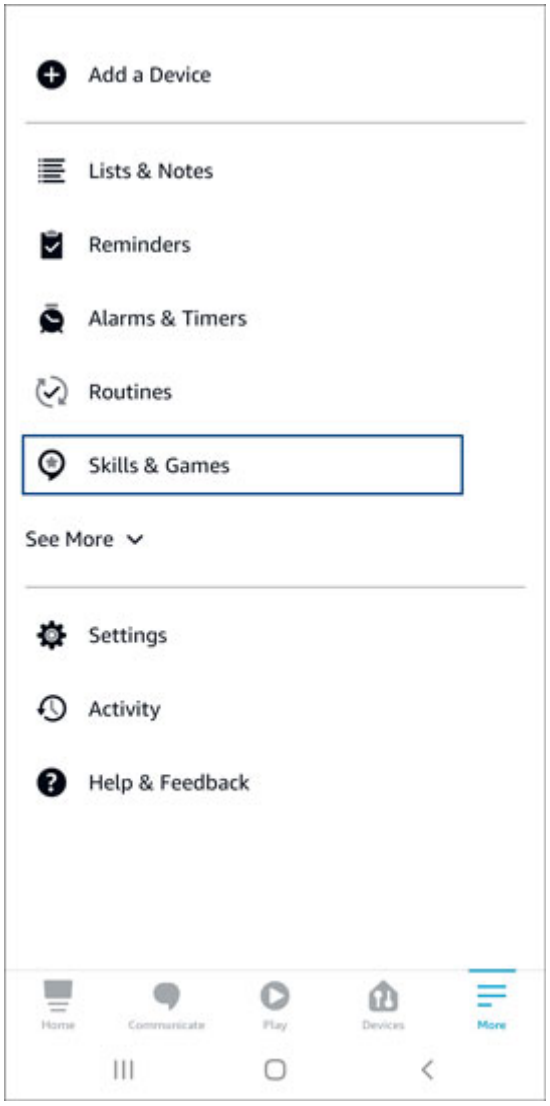
**NOTE**

To link accounts, you must first download the **Lorex Home** app, create an account, and connect your Lorex system to the app. For detailed instructions, refer to 23 *Connecting Remotely Using the* **Lorex Home** *App*, page 131.

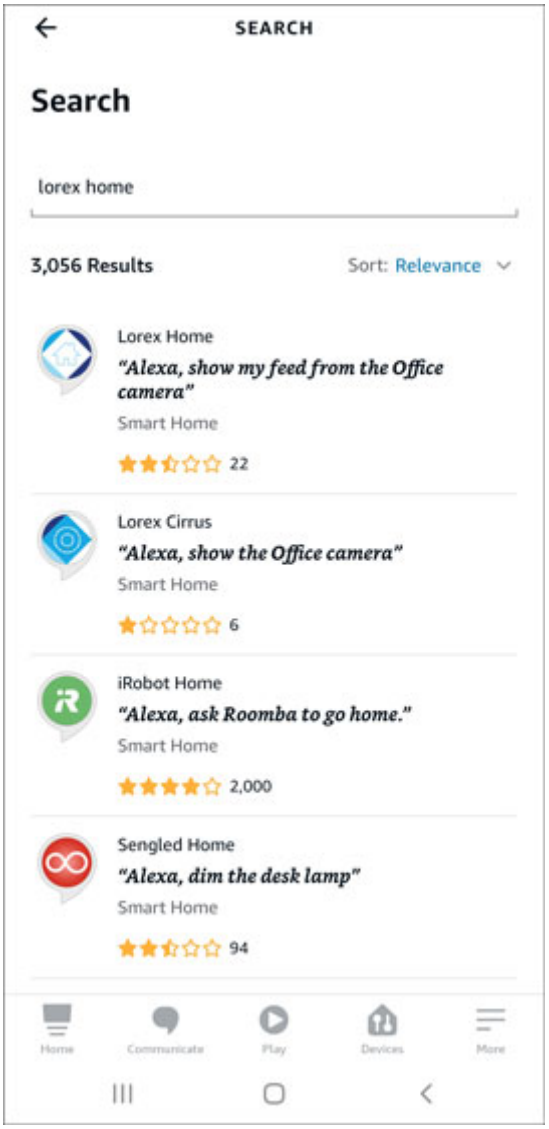
**To link your Lorex Home app account to your Amazon Alexa® device:**

1. Open your **Amazon Alexa** app and login.
2. Tap the **More** settings tab.

3. Tap **Skills & Games**.

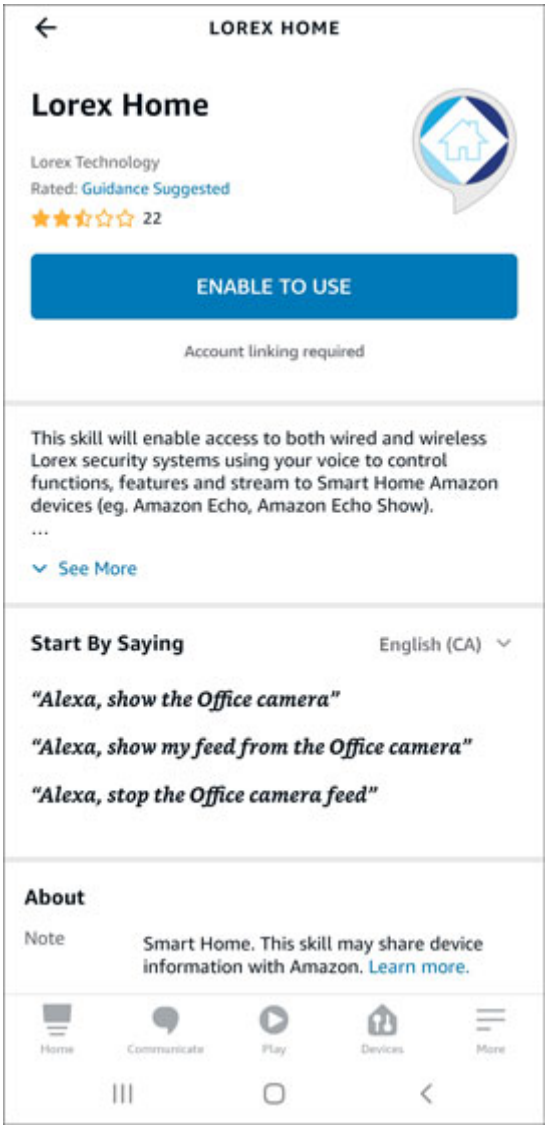


4. Tap the search icon and enter **Lorex Home**.

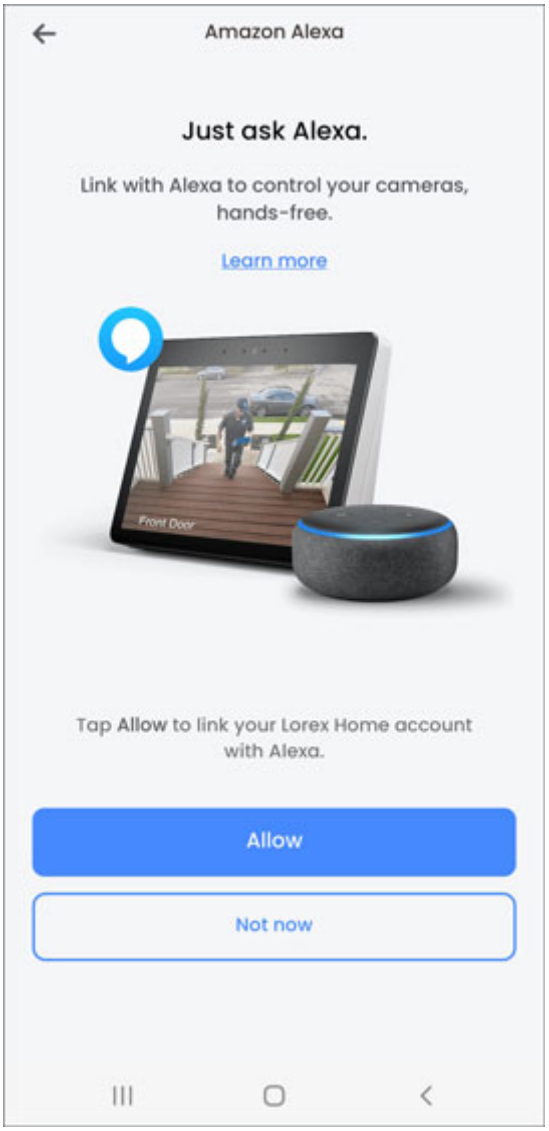



5. Tap **Lorex Home**.

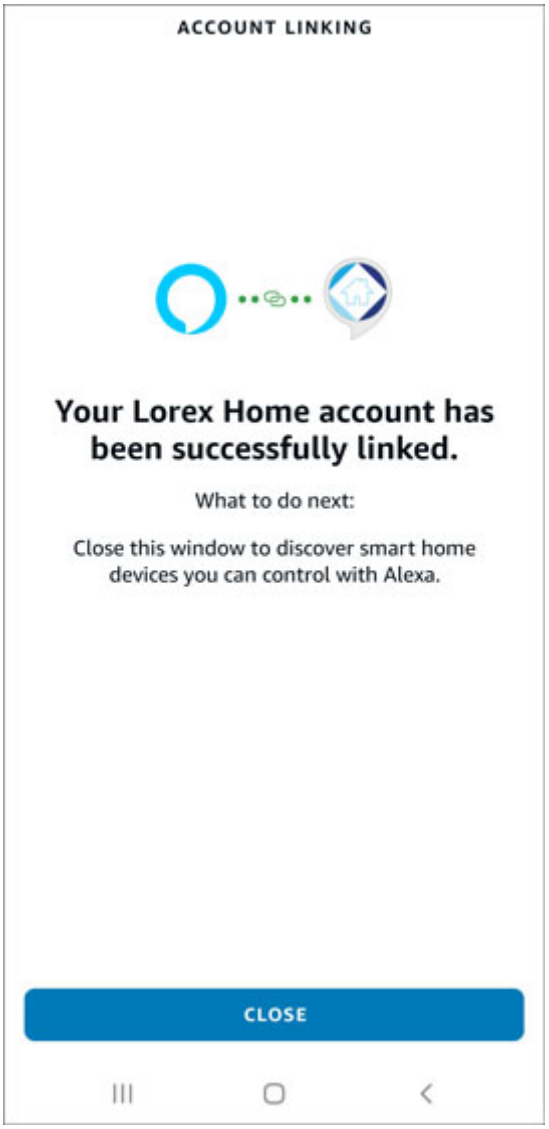
6. Tap **ENABLE TO USE**.



7. Tap **Allow**.


Amazon Alexa
Just ask Alexa.
Link with Alexa to control your cameras, hands-free.
Learn more
Front Door
Tap Allow to link your Lorex Home account with Alexa.
Allow
Not now

8. Tap **Close**.




Your Amazon Alexa® device will automatically discover your devices connected to the **Lorex Home** app. For instructions on enabling audio for voice assistance (only applicable to audio capable cameras), see 26.2 *Enable Audio For Amazon Alexa®*, page 154.

### 24.2 Link With Google Assistant®

Link your Lorex system connected to the **Lorex Home** app to your Google Assistant® device.

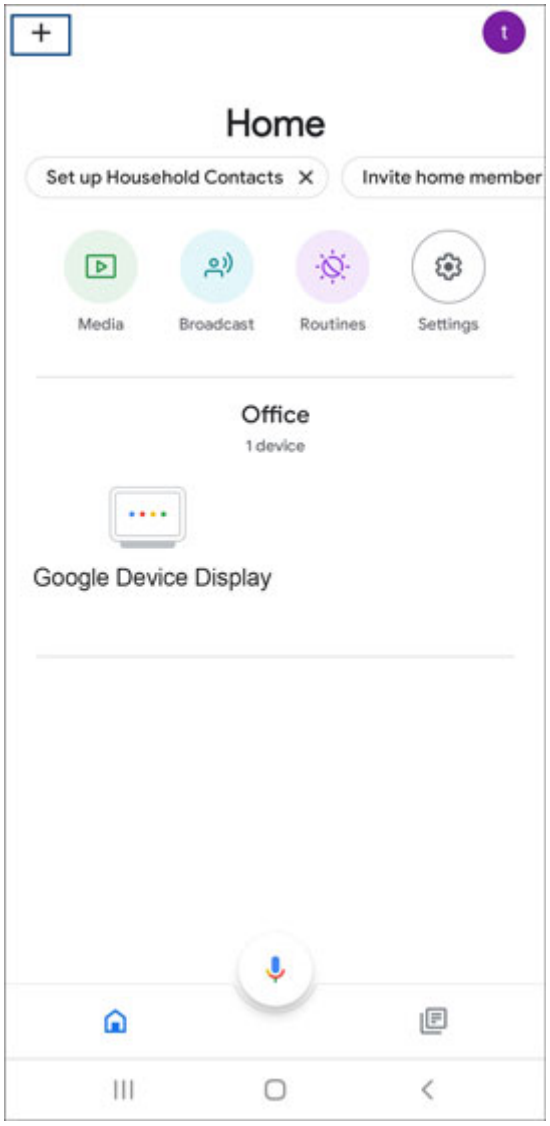
**NOTE**

To link accounts, you must first download the **Lorex Home** app, create an account, and connect your Lorex system to the app. For detailed instructions, refer to 23 *Connecting Remotely Using the* **Lorex Home** *App*, page 131.

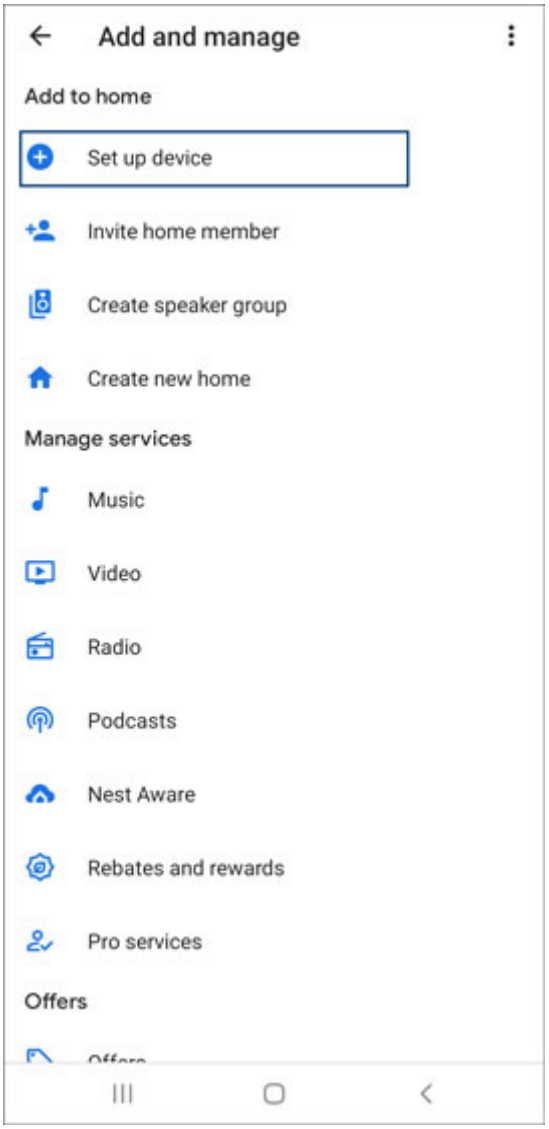
**To link your Lorex Home app account to your Google Assistant® device:**

1. Open your **Google Home** app and login.

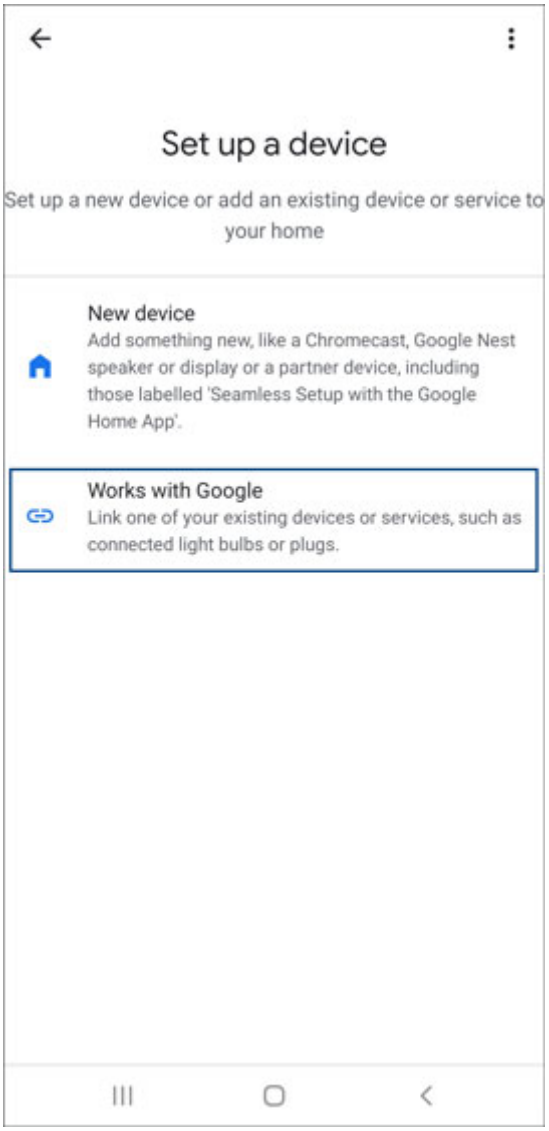
2. From the **Home** screen, tap the + icon in the top left corner.



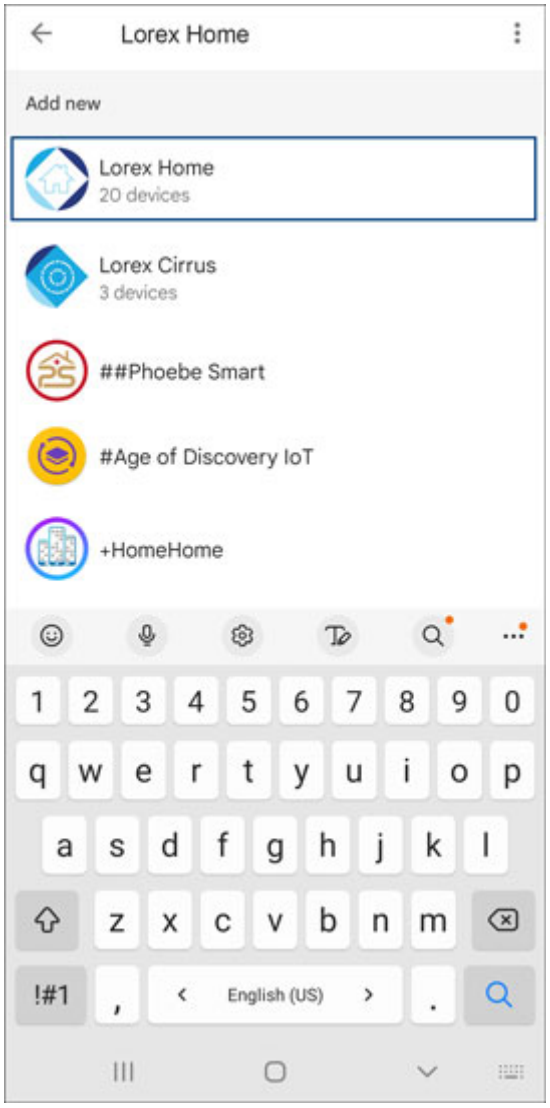
3. Tap **Set up device**.



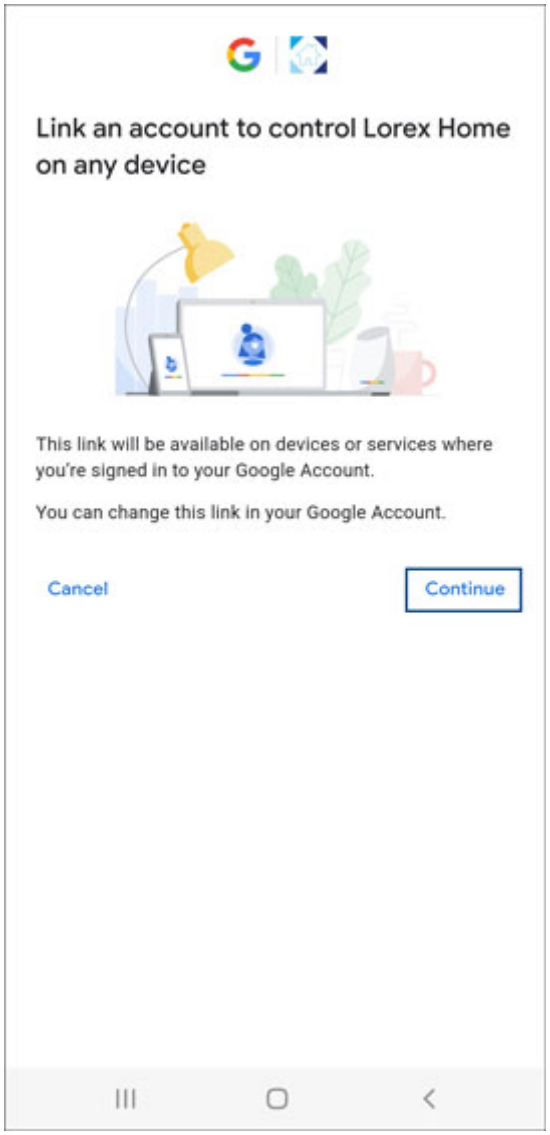
4. Tap **Works with Google**.



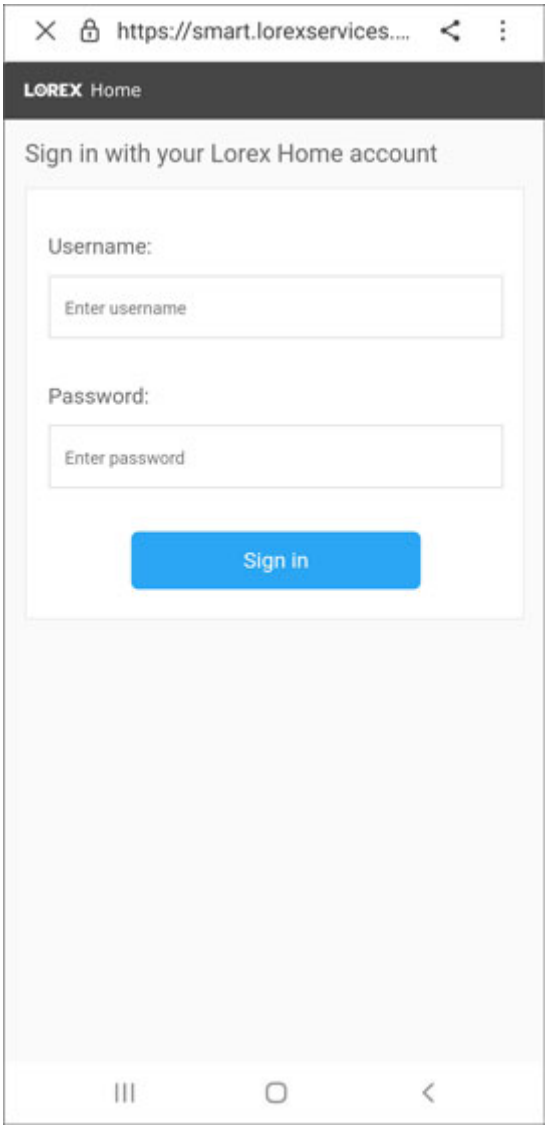
5. Tap **Search** and enter **Lorex Home**, then tap the **Lorex Home** app.



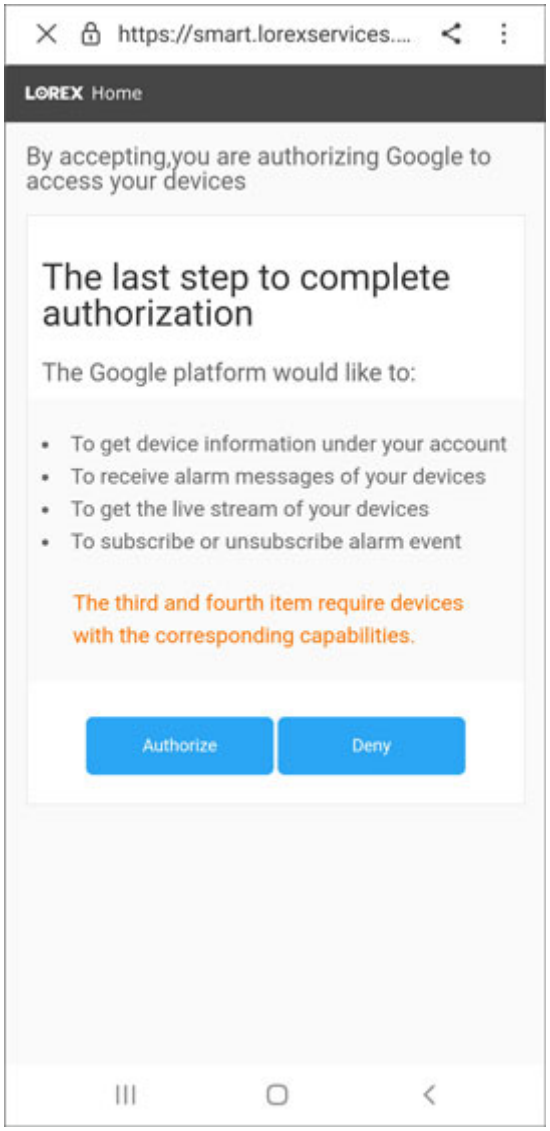
6. Tap **Continue**.



7. Sign in with your **Lorex Home** app account.



8. Tap **Authorize**.




Your **Lorex Home** app account is now linked to your Google Assistant® device. For instructions on enabling audio for voice assistance (only applicable to audio capable cameras), see 26.3 *Enable Audio for Google Assistant®*, page 155.

# 25 Pan/Tilt/Zoom (PTZ) Cameras

Pan/Tilt/Zoom (PTZ) cameras are specialty cameras that move according to commands given by the recorder. You can move PTZ cameras manually using the recorder's on-screen display, or create preset locations and patterns for the camera to follow automatically.



## 25.1 Connecting PTZ Cameras to the Recorder

Lorex HD PTZ cameras connect to your recorder just like any other camera with no need to run special wiring — these cameras can accept PTZ commands directly through the Ethernet cable.

> **CAUTION**
>
> When the PTZ camera powers on, it will perform an initial diagnostics check. The camera will move around during this process, so ensure the camera module is not resting against another object or surface.

**To connect Lorex PTZ cameras:**




1. Connect the Ethernet cable to one of the video inputs on the recorder.
2. *(OPTIONAL)* Connect the PTZ camera's power adapter to a power outlet.

> **CAUTION**
>
> Most PTZ cameras have a higher power requirement than fixed cameras. If you are planning to connect more than one PTZ camera to the system, check the power requirement in your PTZ camera's documentation to ensure you remain within the total PoE power output of the recorder (220W). Connecting the included power adapter to your PTZ camera as shown above will force it to draw power from the wall outlet rather than the recorder's PoE switch.

## 25.2 Basic PTZ Controls

Controlling PTZ cameras.

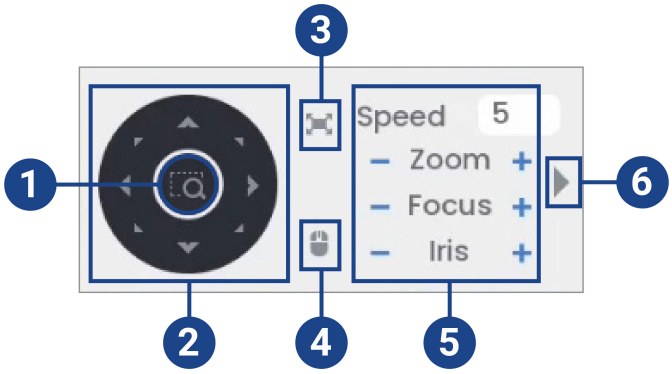
**NOTE**

Ensure you have completed initial setup of your PTZ camera in order to control the camera using the recorder. See 25.1 *Connecting PTZ Cameras to the Recorder* for more details.

**To access the PTZ controls:**

- Open the Live View screen for your PTZ camera in single-channel view (fullscreen). Right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
- Right-click again to close PTZ controls.

**To use the PTZ controls:**




1. **Navigation Controls:** Click the directional arrows to move the PTZ camera manually.
2. **Zoom-to-Area:** Click, then click-and-drag to draw a box on the camera image. The PTZ camera will zoom in to the selected area.
3. **Full Screen:** Click to enable/disable full screen mode. Double-click the mouse to exit the full screen.
4. **Mouse Tracking:** Click to enable/disable mouse tracking. When enabled, click-and-drag in the direction you would like the PTZ camera to move. The camera will follow the path of the mouse cursor.
5. **PTZ Settings:**
   - **Speed:** The speed of PTZ camera movement. A higher value means the camera will move faster.
   - **Zoom:** Optical zoom level. Click + to zoom in, and – to zoom out.
   - **Focus:** Manually control focus level. Click + to focus on objects further from the camera, or – to focus on objects closer to the camera.
   - **Iris:** Controls the amount of light coming through the lens. Click + to allow more light, or – for less.
6. **Advanced:** Expand to show advanced options. For a full overview, see 25.3 *Advanced PTZ Controls*, page 150.

## 25.3 Advanced PTZ Controls

Using advanced options for PTZ cameras, including presets, tours, patterns, etc.

**NOTE**

Ensure you have completed initial setup of your PTZ camera in order to control the camera using the recorder. See 25.1 *Connecting PTZ Cameras to the Recorder* for more details.

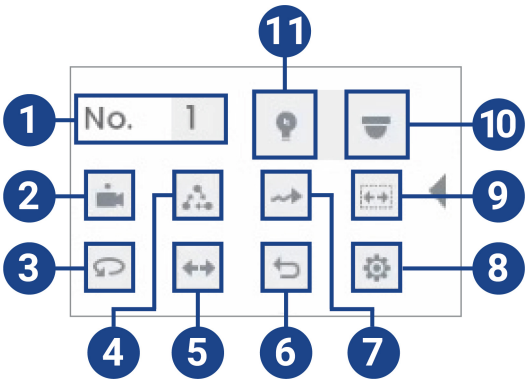
**To access the advanced PTZ controls:**

- Open the Live View screen for your PTZ camera in single-channel view (fullscreen). Right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
- Click the arrow on the far-right side of the PTZ control panel to access advanced options.

- Right-click again to close PTZ controls.

**To use advanced PTZ controls:**

> **NOTE**
>
> Depending on your PTZ camera model, some of the features in the advanced menu may not be supported. Refer to your camera documentation to confirm which features are supported by your camera.




1. **No.:** Enter the ID number for a preset, tour, or pattern you want to activate.
2. **Preset:** Move the camera to the preset number specified in the **No.** field. For instructions on setting up preset locations, see 25.4 *Presets*, page 151.
3. **AutoPan:** Set the camera to rotate 180° back and forth.
4. **Tour:** Perform the tour number specified in the **No.** field. For instructions on creating a tour, see 25.5 *Tours*, page 151.
5. **Flip:** Rotate the camera 180° from its current position.
6. **Reset:** Move the camera to the home position.
7. **Pattern:** Perform the pattern number specified in the **No.** field. For instructions on creating a pattern, see 25.6 *Patterns*, page 152.
8. **Configuration:** Click to open the configuration menu, where you can configure presets, tours, patterns and autoscans.
9. **AutoScan:** Move the camera between a predetermined left and right point. For instructions on creating an autoscan, see 25.7 *AutoScan*, page 152.
10. **OSD Menu:** Click to open the camera's OSD menu. This may not be supported on all camera models.
11. **Auxiliary Settings:** Not supported.

### 25.4 Presets

Presets will save a camera position for quick retrieval.

**To add preset locations:**

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click  .
3. Click the **Preset** tab.
4. Enter the number of the preset you want to create under **Preset**.
5. Move the camera to the desired position and click **Set**.

**To go to a preset location:**

- Under **No.**, select the number of the preset you want to go to, then click  .

### 25.5 Tours

Tours will cycle through a set of presets.

**To add tours:**

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click  .
3. Click the **Tour** tab.
4. Under **Patrol No.**, enter the number of the tour you want to create.
5. Under **Preset**, select a preset you want to add to the tour.
6. Click **Add Preset**.
7. Repeat steps 5 & 6 to add additional presets to the tour.

**To run a tour:**

- Under **No.**, select the number of the tour you want to go to, then click  .

### 25.6 Patterns

Patterns automatically move the camera according to manually-entered movements.

**To add patterns:**

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click  .
3. Click the **Pattern** tab.
4. Under **Pattern**, enter the number of the pattern you want to create.
5. Move the camera to the desired starting position, then click **Start**.
6. Using the on-screen controls, move the camera in any pattern you wish. When finished, click **End**.

**To run a pattern:**

- Under **No.**, select the number of the pattern you want to go to, then click  .

### 25.7 AutoScan

An autoscan automatically cycles between a left and right point.

**To configure autoscan:**

1. From the Live View display of your PTZ camera, right-click to open the Quick Menu, then click **Pan/Tilt/Zoom**.
2. The PTZ controls open. Click  to open advanced PTZ controls, then click  .
3. Click the **Border** tab.
4. Move the camera into the desired left position and click **Left**.
5. Move the camera into the desired right position and click **Right**.

**To run autoscan:**

- Click  .

# 26 Connecting Audio Devices

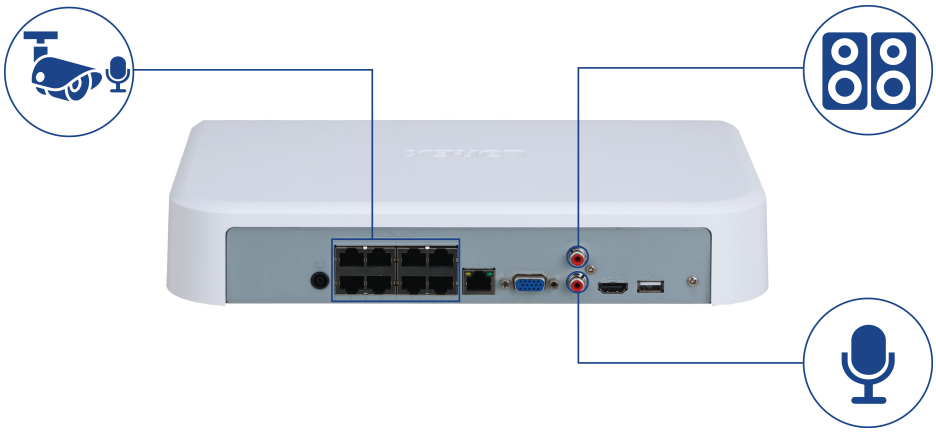
The system supports Lorex HD audio cameras, which transmit audio through the same network cable used for video connection and powering the camera. The system can also record audio using the **AUDIO IN** port on the rear panel. You must first have a self-powered microphone or an audio camera with an RCA-type audio connection to use this port.

- To utilize the listen-in feature, your camera must have a built-in speaker.
- To utilize the two-way talk feature, your camera must have a built-in speaker and microphone.

**NOTE**

Use of an external microphone allows you to record audio on one channel on the system as long as the connected camera has a built-in speaker.

The first RCA-type connector on the back panel is the **AUDIO OUT** port, which can be used to connect a self-powered speaker that will play audio from the system (requires audio-capable camera or self-power microphone).



## 26.1 Enable Audio Recording

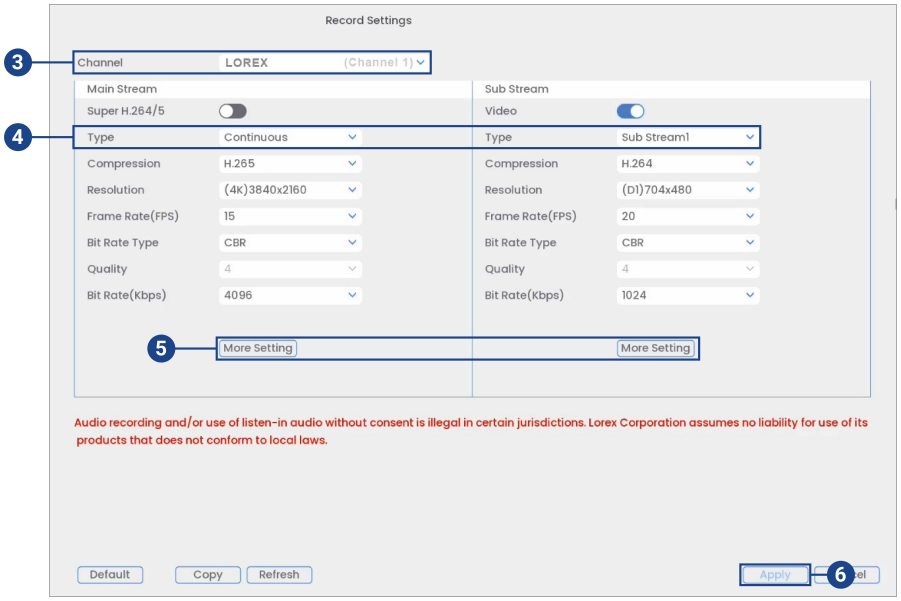
**CAUTION**

Audio recording and / or use of listen-in audio without consent is illegal in certain jurisdictions. Lorex Corporation assumes no liability for use of its products that does not conform with local laws.

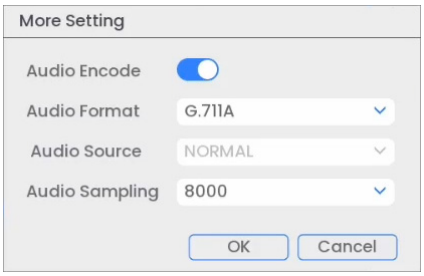
**To enable audio recording:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Devices**, then **Record Settings**. Click the **Record Settings** tab from the side panel.




3. Select the channel where the audio camera is connected.
4. Select the type of recording to enable audio for. If you wish to record audio at all times, ensure you configure both **Continuous** and **MD (Motion Detection)** recording.
5. Click on **More Setting** to configure the following:




- **Audio Encode:** Check box to enable/disable.
- **Audio Format:** Select an audio codec (**G711A** recommended).
- **Audio Source:** Remains as **NORMAL** setting.
- **Audio Sampling:** Select an audio sampling rate (**8000** recommended).
- Click **OK** to save.

6. Click **Apply** to save all changes.

### 26.2 Enable Audio For Amazon Alexa®

**CAUTION**

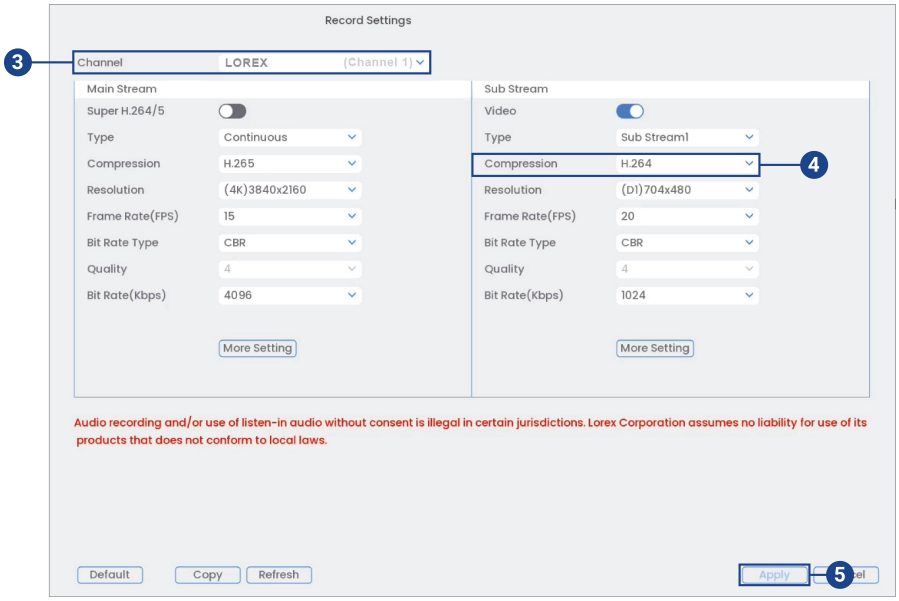
Audio recording and / or use of listen-in audio without consent is illegal in certain jurisdictions. Lorex Corporation assumes no liability for use of its products that does not conform with local laws.

Configure your system's audio settings to use voice commands with your Amazon Alexa® device. For instructions on linking your **Lorex Home** app account to your Amazon Alexa® device, see 24.1 *Link With Amazon Alexa®*, page 136.

**To enable audio for Amazon Alexa®:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Devices**, then **Record Settings**. Click the **Record Settings** tab from the side panel.




3. Select the channel where the audio camera is connected.
4. Under **Sub Stream**, change the **Compression** to **H.264**.
5. Click **Apply** to save changes.

### 26.3 Enable Audio for Google Assistant®

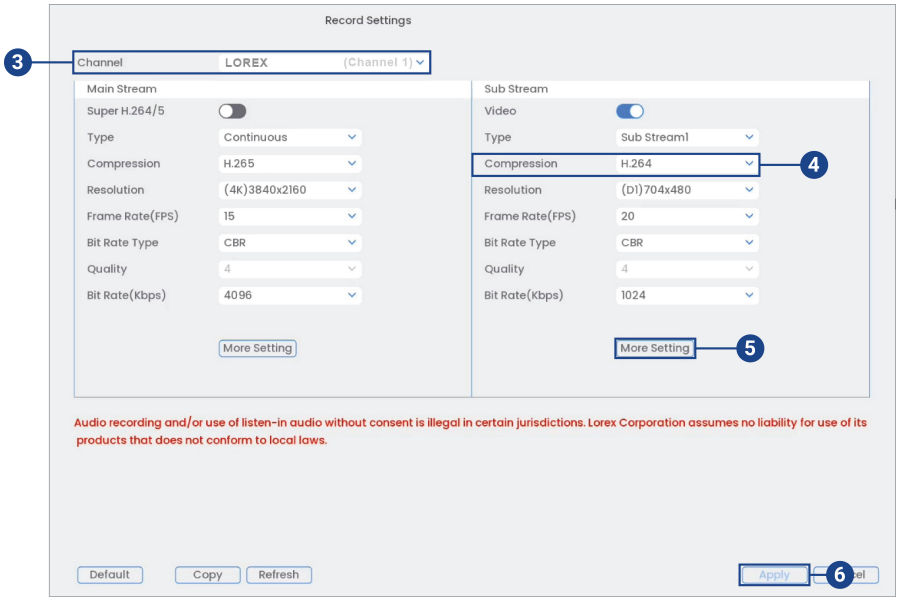
> **CAUTION**
>
> Audio recording and / or use of listen-in audio without consent is illegal in certain jurisdictions. Lorex Corporation assumes no liability for use of its products that does not conform with local laws.

Configure your system's audio settings to use voice commands with your Google Assistant® device for instructions on linking your **Lorex Home** app account to your Google Assistant® device, see 24.2 *Link With Google Assistant*®, page 141.

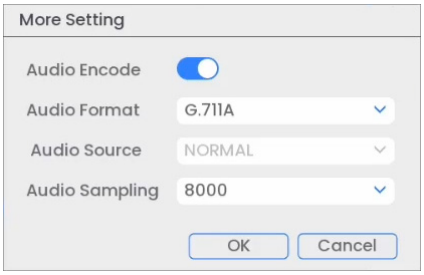
**To enable audio for Google Assistant®:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **Devices**, then **Record Settings**. Click the **Record Settings** tab from the side panel.




3. Select the channel where the audio camera is connected.
4. Under **Sub Stream**, change the **Compression** to **H.264**.
5. Under **Sub Stream**, click **More Setting** and configure the following:




- **Audio Encode**: Click to enable.
- **Audio Format**: Select an audio codec (**G711A** recommended).
- Click **OK**.

6. Click **Apply** to save changes.

**NOTE**

Your Google Assistant® device may not auto-detect Lorex devices on your **Lorex Home** app account. You may need to reconnect your Lorex Home app account to your Google Assistant device to begin using voice commands. From your **Google Home** app, navigate to **Home Settings > Works with Google > Reconnect Account**.

# 27 Replacing the Hard Disk Drive

The system comes with a pre-installed 3.5" SATA hard disk drive. You can replace the hard disk drive with one up to a maximum size of 10TB.

## 27.1 Removing the Hard Disk Drive

| ⚠ CAUTION |
| --- |
| Make sure that the system is OFF and the power adapter is disconnected before removing/installing a hard disk drive. |

**To remove the hard disk drive:**

1. Power off the system, and unplug all cabling from the system.
2. Turn the recorder over. Remove the bottom panel screws (6×).



3. Turn the recorder over carefully, then remove the top panel.

**CAUTION**

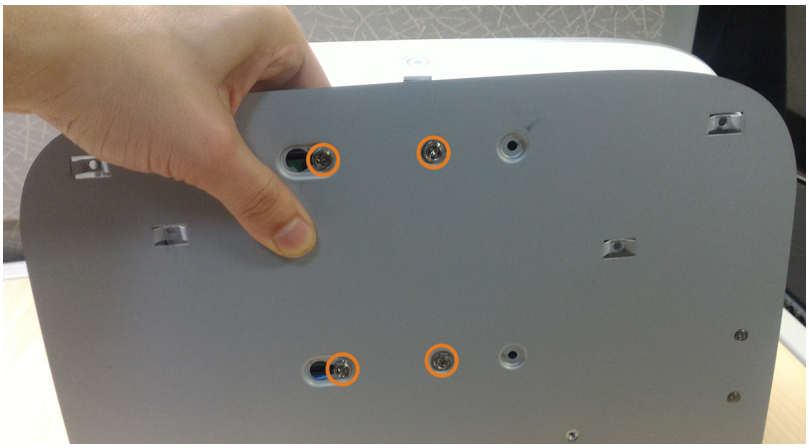
The wiring to the front panel button and USB port runs along the top panel of the recorder. When separating the top panel, rest it carefully beside the bottom panel as shown below.



4. Remove the power and SATA cables from the hard disk drive.




5. Carefully pick up the hard disk drive to lift the bottom panel, being mindful of the sharp edges of the bottom panel. Remove the hard disk drive screws (4×) from the bottom panel. Hold onto the hard disk drive so it remains in place when all screws have been removed.



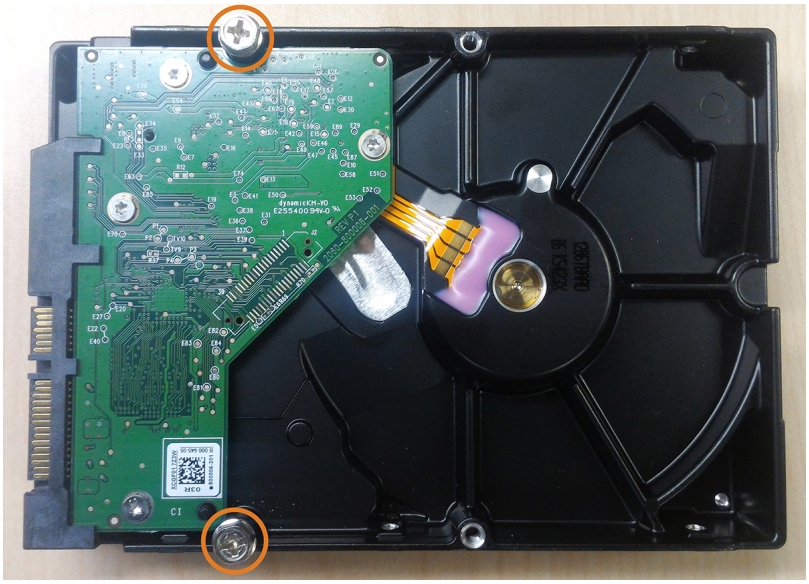
6. If you are not immediately going to install a new hard disk drive, replace the top panel and the 6 bottom panel screws.

## 27.2 Installing a New Hard Disk Drive

| ⚠ CAUTION |
| --- |
| Make sure that the system is OFF and the power adapter is disconnected before removing/installing a hard disk drive. |

**To install a new hard disk drive:**

1. Insert the 2 hard disk drive screws closest to the SATA and power ports on the hard disk drive and tighten them half way.



2. Power off the system, and unplug all cabling from the system.
3. Turn the recorder over. Remove the bottom panel screws (6×).



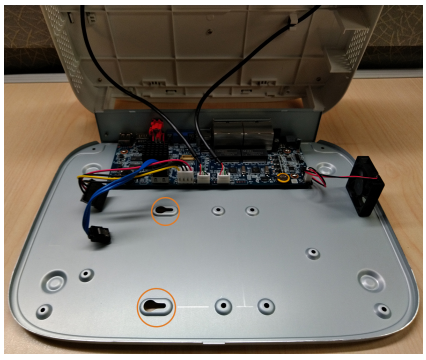
4. Turn the recorder over carefully, then remove the top panel.

**CAUTION**

The wiring to the front panel button and USB port runs along the top panel of the recorder. When separating the top panel, rest it carefully beside the bottom panel as shown below.

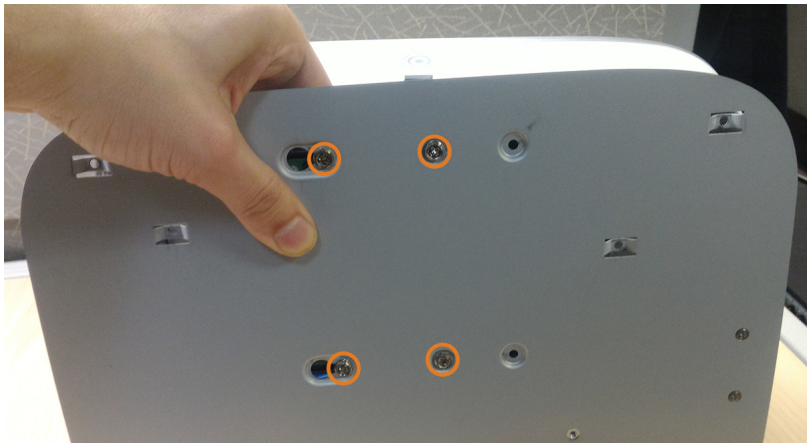



5. Line the 2 half-inserted hard disk drive screws with the 2 holes shown below.





6. Carefully pick up the bottom panel with the hard disk drive, being mindful of the sharp edges of the bottom panel. Slide the 2 pre-inserted screws into the locked position, then tighten the screws. Insert and tighten the 2 remaining hard disk drive screws.



7. Connect the power and SATA cables to the hard disk drive.




8. Replace the top panel and the 6 bottom panel screws.

# 28 DDNS Setup (Advanced)

Setting up DDNS connectivity allows you to view your recorder from any computer or compatible mobile device with Internet access.

**NOTE**

The primary connectivity option for the recorder uses the Lorex Home app to connect to your system over the Internet without the need for port forwarding or DDNS registration.

- For instructions on using the Lorex Home app for mobile devices, see 23 *Connecting Remotely Using the* **Lorex Home** *App*, page 131.

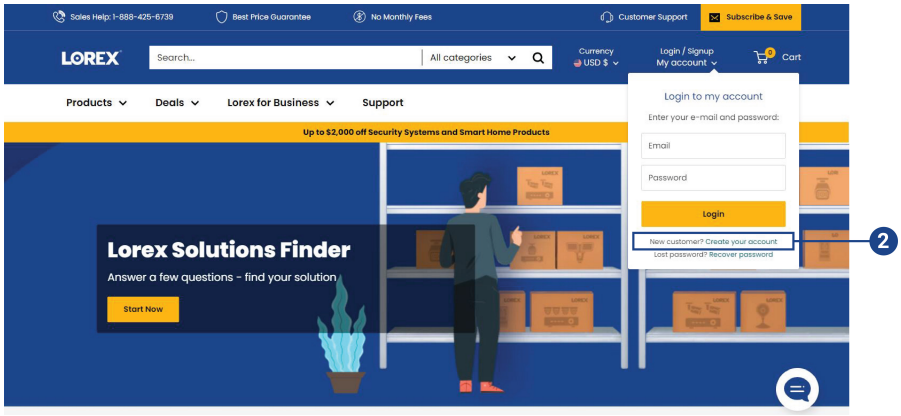
## 28.1 STEP 1: Port Forwarding

If you are using DDNS, you **must** port forward the HTTP and Client Ports (default: **80** and **35000**) on your router to your recorder's IP address before you can remotely connect to your system:

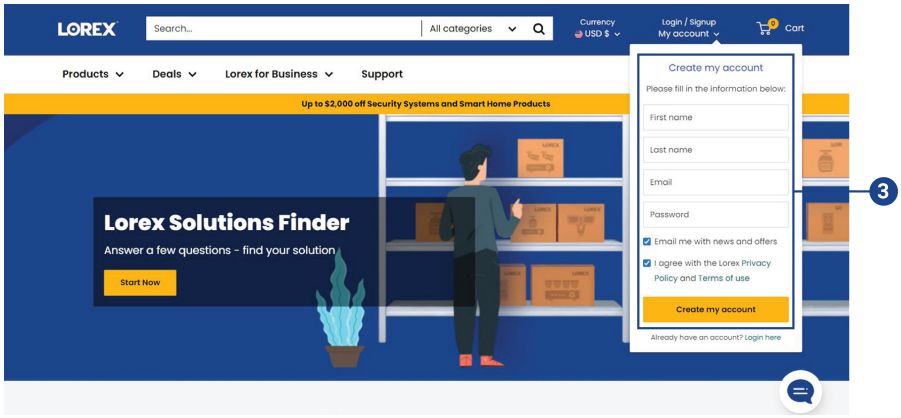
- Manually port forward the required ports on your router to your recorder's IP address by following your router manufacturer's instructions. For more information on port forwarding, see the reference guides on lorex.com.

## 28.2 STEP 2: Create a Lorex Account

1. Visit lorex.com and click **Login/Signup** at the top of the page.




2. Select **Create your account**.

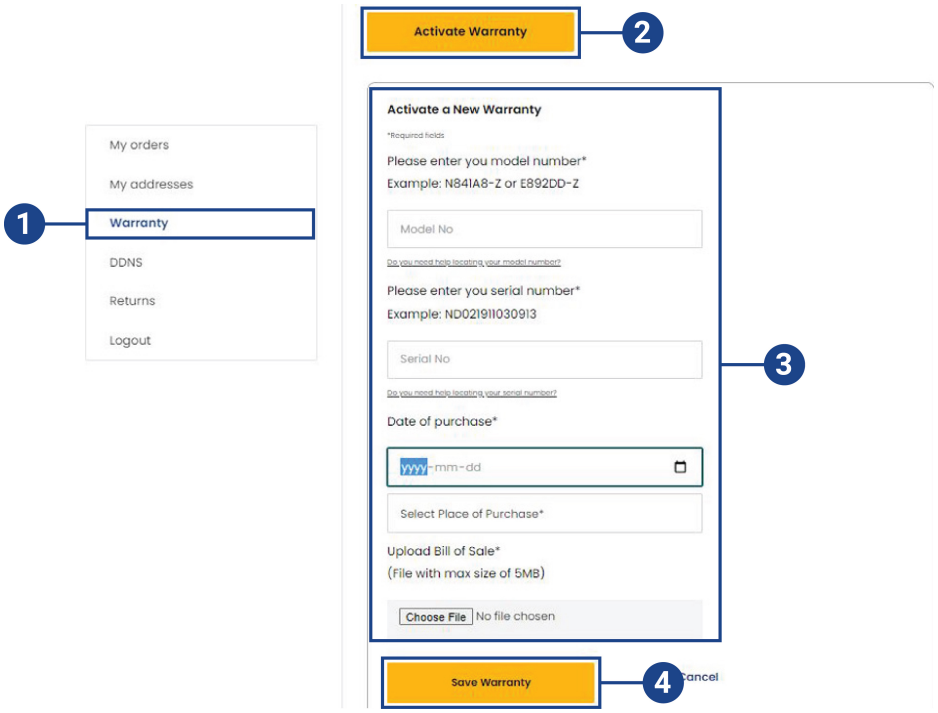



3. Enter basic information for account setup, and then select **Create my account**.

## 28.3 STEP 3: Activate Your Warranty

Activate the manufacturer's warranty on your recorder.

**To activate your product warranty:**

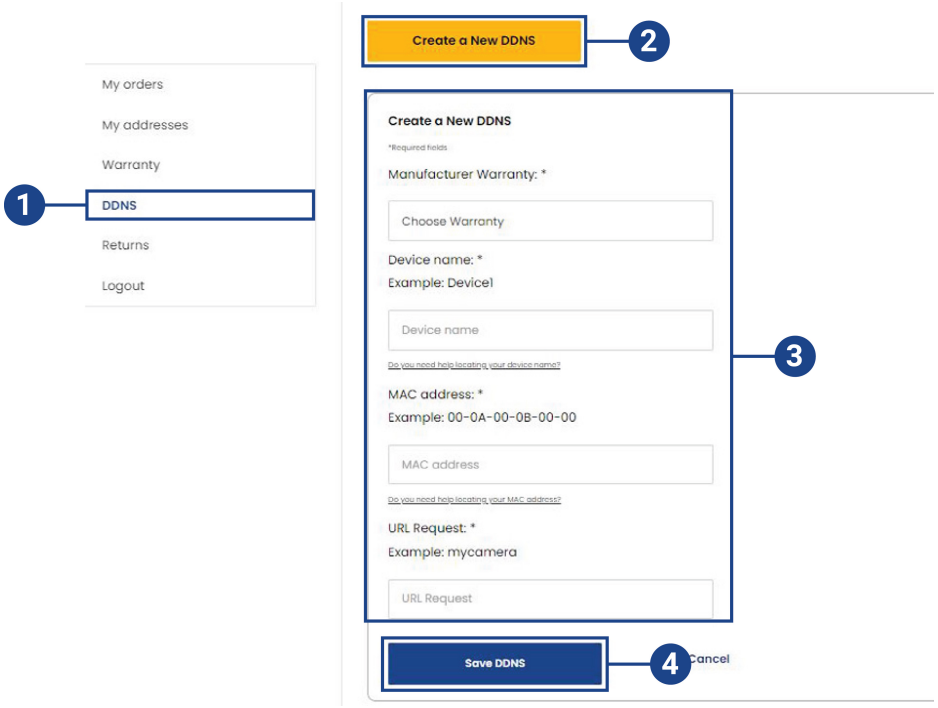



1. From your Lorex account, click the **Warranty** tab.
2. Select **Activate Warranty**.
3. Enter your product information (attaching bill of sale optional).
4. Select **Save Warranty**.
   Once submitted, your warranty information will be summarized under **Existing Warranties**.

### 28.4 STEP 4: Sign Up for a DDNS Account

Activate the manufacturer's warranty on your recorder.

**To sign up for a DDNS account:**




1. From your Lorex account, select the **DDNS** tab.
2. Select **Create a New DDNS**.
3. Select your recorder warranty from the drop-down next to **Manufacturer Warranty**. Enter the rest of your product information.

> **NOTE**
>
> - The **Device Name** can be any name of your choice (for example, “Store Security System”).
> - You can find your recorder’s **MAC Address** in the system information window on the recorder. From the Live View display, right-click and click **Info**, or click on the Navigation Bar.

4. Click **Save DDNS**.
   Once submitted, your DDNS account information will be summarized under **My DDNS Devices**. Make a note of your DDNS **URL**, **Username** and **Password**, as they will be needed to complete DDNS setup.

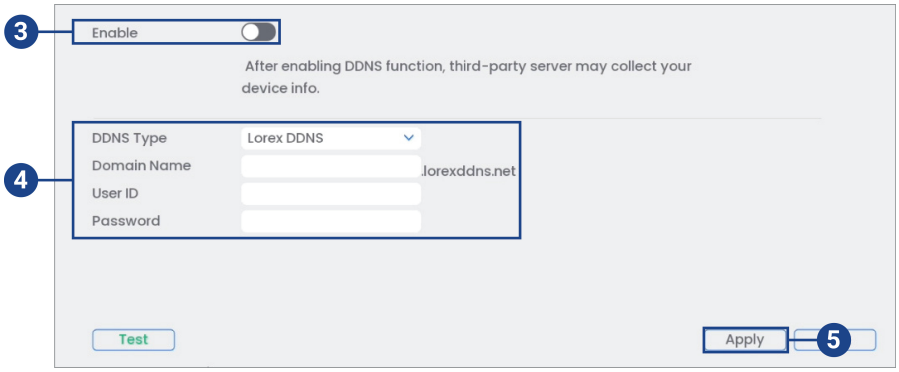
### 28.5 STEP 5: Enable DDNS on the Recorder

Enter your DDNS information into the menu of your recorder. You can find the information referenced below on your My Lorex account, or on the confirmation email sent to you after registering for DDNS service.

**To configure DDNS in the recorder:**

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.

2. Click **System**, then **Network**. Click the **DDNS** tab from the side panel.




3. Configure the following:

   - **DDNS Type:** Select **Lorex DDNS**.
   - **Domain Name:** Enter the first part of the DDNS domain that you requested during setup.
   - **User ID:** Enter the username provided in the DDNS confirmation email.
   - **Password:** Enter the password provided in the DDNS confirmation email.

4. Click **Apply**.

**You will now be able to access your system remotely using DDNS. Enter the full domain name into a web browser (e.g., http://www.tomsmithsecurity.lorexddns.net) and login using the provided credentials.**

| NOTE |
| --- |
| If your system uses an HTTP port other than 80, you will need to add a colon to the end of your DDNS domain name and enter the port number (e.g., http://www.tomsmithsecurity.lorexddns.net:81) |

# 29 Troubleshooting

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling Lorex technical support:

| Error | Possible Causes | Solutions |
|---|---|---|
| • System is not receiving power, or is not powering up. | • Cable from power adapter is loose or is unplugged. | • Confirm that all cables are connected correctly.<br>• Confirm that the power adapter is securely connected to the back of the unit. |
| | • Cables are connected, but system is not receiving sufficient power. | • Confirm that the system is powered on (LED indicators on the front should be ON).<br>• If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet.<br>• Confirm that there is power at the outlet:<br>◦ Connect the power cable to another outlet.<br>◦ Test the outlet with another device (such as a lamp or phone charger). |
| • Hard disk drive is not detected by the system. | • Hard disk drive cables are loose or not properly connected. | • Remove the housing and check that hard disk drive cables are firmly connected. |
| | • There is no hard disk drive in the system. | • Open the housing and install compatible hard disk drive. Make sure to format the drive after installing. For details, see 27 *Replacing the Hard Disk Drive*, page 157. |
| • Hard disk drive is full (0%) and the unit is no longer recording. | • Overwrite is not enabled. | • See 10.5 *Configuring HDD (Hard Disk Drive) Overwrite*, page 31 for full instructions on enabling hard disk drive overwrite. |
| • There is no picture on monitor/TV after connecting it to the system. | • Monitor/TV not detected by system. | • Power off the monitor/TV and system. Power on the monitor/TV, and then power on the system. |
| | • Input channel for system not selected on monitor/TV. | • On the monitor/TV, select the input channel the system is connected to. |
| | • Video cable is loose or has become disconnected. | • Check the video cable connection to the system and monitor/TV. |
| | Camera is not compatible with the recorder. | Visit lorex.com/compatibility and navigate to N846 Series for a list of all compatible cameras. |

| Error | Possible Causes | Solutions |
|---|---|---|
| • Mouse not detected by system. | • Mouse cable is not firmly connected to the system.<br>Mouse is not connected to the system. | • Firmly connect the mouse cable to one of the USB ports. |
| | • System needs to be reset | • Power off the system (disconnect power cable). Firmly connect a USB mouse to one of the USB ports. Reconnect the power cable to the DC 12V port on the rear panel. |
| • There is no picture on selected channels / camera picture is not being displayed. | • Camera cables are loose or have become disconnected. | • Check the camera video cable and connections.<br>• Disconnect and reconnect the cable at the system and at the camera.<br>• Try moving the camera to another channel or use another cable. |
| | Camera is not compatible with the recorder. | Visit lorex.com/compatibility and navigate to N846 Series for a list of all compatible cameras. |
| | Power output of the recorder's PoE switch is being exceeded. | If you have multiple PTZ cameras connected to the recorder's PoE ports, the camera power requirement may surpass the recorder's power output. Lorex PTZ cameras come with a power adapter, which you can use to power the camera instead of the recorder's PoE ports. See 25 *Pan/Tilt/Zoom (PTZ) Cameras*, page 149 for full instructions. |
| • There is no picture on selected channels / camera picture is not being displayed. | • Camera cables are loose or have become disconnected. | • Check the camera video cable and connections.<br>• Disconnect and reconnect the cable at the system and at the camera.<br>• Try moving the camera to another channel or use another cable. |
| | Camera is not compatible with the recorder. | Visit lorex.com/compatibility and navigate to N846 Series for a list of all compatible cameras. |
| | Power output of the recorder's PoE switch is being exceeded. | If you have multiple PTZ cameras connected to the recorder's PoE ports, the camera power requirement may surpass the recorder's power output. Lorex PTZ cameras come with a power adapter, which you can use to power the camera instead of the recorder's PoE ports. See 25 *Pan/Tilt/Zoom (PTZ) Cameras*, page 149 for full instructions. |

| Error | Possible Causes | Solutions |
|---|---|---|
| • Fusion Wi-Fi camera is not connecting to the recorder. | The recorder is not connected to the network using an Ethernet cable. | • Check the recorder Ethernet cable connection.<br>• Disconnect and reconnect the Ethernet cable for your system. |
| | Fusion Wi-Fi camera and recorder are not connected to the same Lorex Home app and network. | • Ensure both your Fusion WI-Fi camera and recorder are powered ON.<br>• Ensure both your Fusion Wi-Fi camera and recorder are connected to the same Lorex Home app account.<br>• Ensure both your Fusion Wi-Fi camera and recorder are connected to the same network. |
| | Camera is not compatible with the recorder. | Visit lorex.com/compatibility and navigate to N846 Series for a list of all compatible cameras. |
| • The system beeps at startup. | | • The beep at startup is normal. |
| • The system beeps during motion detection. | • Motion detection is enabled and the alarm buzzer is activated. | • See 13 *Motion Detection*, page 45 for instructions on configuring motion detection options. Uncheck the **Buzzer** option in the motion detection configuration screen. |
| • I am not receiving email notifications. | • Email notification is disabled. | • Ensure you have configured email notification. For details, see 22.6.6 *Configuring Email Alerts*, page 114. |
| | • **Send Email** setting not enabled in Event menu. | • Make sure that **Send Email** is checked for any events you want to be notified of. |

## 29.1 Top Reasons Your Lorex Camera May Lose Video or Go Black

There are a multitude of reasons why your security camera may lose video or go black. The following list of potential issues will walk you through the process of identifying the root cause and do a quick fix on the issue.

### *29.1.1 Going over PoE budget will result in video loss*



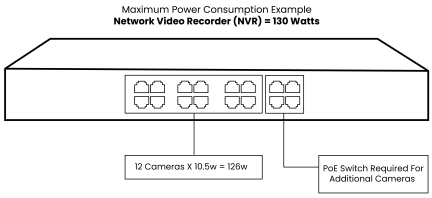
Our recorders use Power over Ethernet (PoE) technology to deliver power to IP cameras and the same PoE is used to transmit video back to the recorder.

Known as **Maximum Power Consumption** (wattage), each IP camera requires a specific amount of power to operate and function efficiently. You will find the Max Power Consumption on the camera's specification sheet in the Download section of the camera's product page.

Our Network Video Recorders (NVR) have a total power output or **PoE budget** of between **80 and 220 watts**. When adding additional cameras to your recorder, please ensure that you do not

exceed the PoE budget. If you go over your PoE budget, the system will shut down or drop a camera as it does not have enough power to supply to the camera, resulting in video loss.

When adding cameras to your recorder, please make sure you are within your wattage allowance. Please refer to the image below to get an idea on how to calculate your PoE budget.






### *29.1.2 When to use a PoE Switch?*

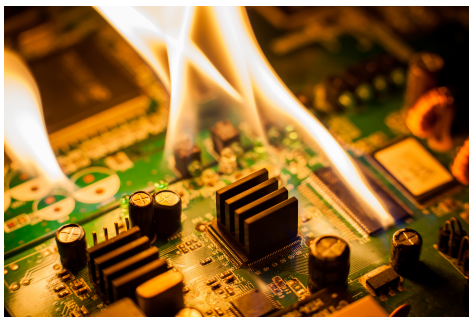
If you find that your recorder does not have enough power to support the camera(s) you have added, you have the option of using a PoE Switch to increase the power to the recorder and extend the range of your cameras at the same time. To purchase a PoE Switch, check out our 8 or 16-channel PoE Switches here.

### *29.1.3 Not enough power or total loss of it*

Loss of power is the most common reason why security cameras go black. It happens when power adapter is disconnected and cable that connect the camera to the recorder and monitor becomes loose and faulty.

To fix the issue, we recommend that you check any point of contact on your camera, recorder, and monitor.

### *29.1.4 Power surge and interference*



A power surge can burn your camera's circuit board and other components. Power surge is even more hazardous to metal cameras installed on vertical pole as there's a great likelihood of it getting hit by lighting strikes.

A quick fix would be to use power or lightning surge protectors. It's also a wise idea to screw the camera onto a block of wood and then attach the wood to the pole.

### *29.1.5 Not supported display output*

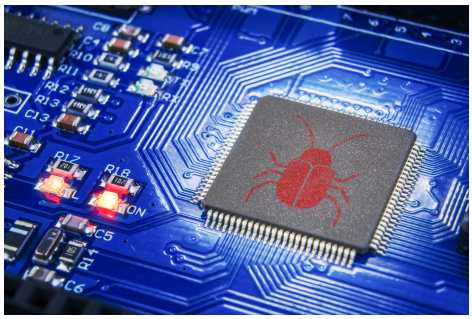
Before changing the display output of your recorder to higher resolution (e.g., 4K), please make sure that your monitor can support the higher resolution output of your recorder. If your monitor cannot support the higher resolution of your recorder, it will lose video signal and will turn black. Please read our guide before changing the display output of your recorder.

### *29.1.6 Twisted, bent or damaged cables*



The great advantage of using a wired security system is the reliability of the cables that came with the system. Unfortunately, cables get twisted, bent and damaged as you run them around tight corners of your property. As they get twisted and damaged, there is great likelihood that video signal will get cut off. Being extra careful in running the cable and personally checking its condition may help prevent video loss. To replace a damaged cable, check out our extensive collection of cables here.

### *29.1.7 Outdated firmware and hardware*



We always release new firmware updates to patch up vulnerabilities and fix compatibility issues on our recorders. If you have ruled out all possible causes but still experience video loss, then it may be time to upgrade the firmware of your recorder. To check if you have the latest firmware, please see our guide here.

### *29.1.8 Issue with compatibility*

All of our cameras are paired with specific recorders, apps, and software. If you pair your camera with the wrong recorder, app, or software, there is a great likelihood that you will encounter a compatibility issue along the way. To know if your Lorex product will work with other lineup, please see our Compatibility Chart.

### *29.1.9 Low internet bandwidth*

Your internet plan plays a major role in your camera's ability to connect to the internet. Low internet bandwidth creates hiccups that often lead to disconnection. If you are experiencing video loss, it may be good to check with your ISP and make sure your plan can support multiple devices. If you have gone through all the steps above and still experience disconnection or video loss, please connect with our Tech Support at 1.888.425.6739. We are more than happy to help you.

If you have gone through all the steps above and still experience disconnection or video loss, please connect with our Tech Support at 1.888.425.6739. We are more than happy to help you.

# 30 Technical Specifications

## 30.1 General

| | |
|---|---|
| **Video Transmission Technology** | IP |
| **Channels** | 16 Channels |

## 30.2 Inputs/Outputs

| | |
|---|---|
| **Video Input** | 16 ch: 8 x PoE, 8 x Wi-Fi Fusion |
| **Video Outputs**[1] | 1 × VGA/1 × HDMI |
| **Audio Input** | 1 ch: RCA type |
| **Audio Output** | 1 ch: RCA type |

## 30.3 Display

| | |
|---|---|
| **Display Output Resolution** | Up to 4K UHD |
| **Live Display** | 1, 4, 8, 9, 16 |
| **Live Display Speed (Max)** | 480fps NTSC/400fps PAL |
| **OSD** | On/Off |
| **System Navigation** | USB Mouse |

## 30.4 Recording

| | |
|---|---|
| **Recording Resolution** | 4K (8MP)/5MP/4MP/3MP/1080p/720p |
| **Recording Frame Rate** | 4K (8MP) @ 15fps, 5MP @ 30fps, 4MP @ 30fps, 1080p @ 30fps, 720p @ 30fps |
| **Recording Scheduling** | Per Channel: Continuous/Motion/Smart Motion (Person, Vehicle and Face)/Alarm/ Day/ Hour |
| **Back–up File Format** | DAV/ASF/AVI/MP4 |
| **Video Compression** | H.265/H.264 |

## 30.5 Playback

| | |
|---|---|
| **Simultaneous Playback** | Up to 4 channels, synchronized |
| **Playback Speed** | Variable Max 8× |
| **Search** | By Time/Date, All Motion Events or Smart Motion (Person, Vehicle and Face), Area Search |

## 30.6 Storage

| | |
|---|---|
| **Hard Disk Drive Bays** | 1 Bay |
| **Hard Disk Drive Capacity** | Up to 10 TB (SATA) |
| **Backup Media** | USB Flash Drive & USB HDD |

## 30.7 Special Features

| | |
|---|---|
| **Smart Motion Detection Support** | Person and Vehicle Motion Detection |
| **Wired/Wireless Fusion™ Support** | Yes |
| **Lorex Sensor Compatible** | Yes |
| **Face Detection Support** | Yes |
| **Mask Detection Support** | Yes |
| **Package Detection (Missing Package and Left Behind Package)** | Yes |
| **Smart Security Lighting™ Support** | Yes |

| | |
|---|---|
| **Active Deterrence Support** | Yes |
| **Active View Support** | Yes |
| **Selectable Siren Support** | Yes |
| **Panic Button** | Yes |
| **Smart Search** | Yes |

### 30.8 Smart Home

| | |
|---|---|
| **Voice Control** | Amazon Alexa™, Google Assistant™ |
| **Streaming Options** | Chromecast™, Apple TV™, Amazon Echo Show™, Google Home Hub™ |

### 30.9 Connectivity

| | |
|---|---|
| **Mobile Viewing**[4] | Android, iOS |
| **Compatible App** | Lorex Home™ |
| **PC/MAC Remote Viewing** | Yes/Lorex Cloud™ client |
| **Email Notification** | Text and Snapshot |
| **Network Interface** | 10/100 Base-TX, RJ45 |
| **Network Bit Rate** | 80Mbps, 48~8192kbps per camera |
| **DDNS** | Yes (Optional) |
| **USB Interface** | USB 2.0 × 2 |

### 30.10 Additional Specifications

| | |
|---|---|
| **FW Upgrade** | USB/Network |
| **Watchdog Function** | Yes |
| **Power Consumption** | Approx. 8.3W (without HDD) |
| **Supply Voltage** | 100VAC-240VAC, 50/60Hz, DC53V/1.8A |
| **Total PoE Power Output** | PoE: Max 25.5W for single port, 72W total |
| **Unit Dimensions (W × D × H)** | 12.9 × 9.6 × 2.1" (328 × 245 × 53 mm) |
| **Unit Weight** | 2.75 lbs (1.26kg) (without HDD) |
| **Operating Temperature** | 14° ~ 131°F / -10° ~ 50°C |
| **Humidity** | 10 ~ 90% RH |

**Disclaimers:**

1. 4K (8MP) IP cameras are required to take advantage of 4K recording.
2. Recording time may vary based on recording resolution and quality, lighting conditions and movement in the scene.
3. Lorex Fusion supports compatible Lorex wired cameras and Wi-Fi devices with sufficiente signal strengh between the Wi-Fi devices and your Wi-Fi router. All cameras must be connected to the same network. For full details on Wi-Fi cameras compatibility and instructions, visithttps://www.lorex.com/pages/fusion
4. Controlling certain features in your security system requires a compatible smart device. Availability and performance of certain features and services are smart device dependent and may not be available in all areas or networks. For compatibility, features, and instructions visitlorex.com/SmartHome
5. Compatible with certain Lorex IP cameras only. For a list of compatible cameras please visit lorex.com/compatibility
6. Accessing your security system remotely requires a high-speed Internet connection. Ensure your NVR has a wired connection to a router (not included). A minimum upload speed of 6Mbps is recommended for reasonable video performance.

7. HDMI output supports 4K HD for high definition multi-channel live or recorded video viewing. Image quality and resolution is dependent on the type of camera connected to the NVR, as well as TV/monitor resolution.

# 31 Notices

This product has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage. However, it is imperative that the user follows the guidelines in this manual to avoid improper usage, which may result in damage to the product, electrical shock and fire hazard injury.

### 31.1 FCC/IC

This equipment has been tested and found to comply with the limits for a digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential or commercial installation. 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.

### 31.2 CE

This product and the supplied accessories are marked with “CE” and comply with the applicable harmonized European standards listed under Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC.

### 31.3 Modification

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Toute modification non approuvée explicitement par le fournisseur de licence de l'appareil peut entraîner l'annulation du droit de l'utilsateur à utiliser l'appareil.

### 31.4 RoHS

This product is fully compliant with the European Union Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment ("RoHS") Directive (2002/95/EC). The RoHS directive prohibits the sale of electronic equipment containing certain hazardous substances such as lead, cadmium, mercury, and hexavalent chromium, PBB, and PBDE in the European Union.

### 31.5 ICES-003

This device meets the CAN ICES-3 (A) / NMB-3 (A) standards requirements.

**Website**
www.lorextechnology.com

**Copyright**
© 2022, Lorex Corporation
All rights reserved worldwide. Names and marks appearing herein are either registered trademarks or trademarks of Lorex Corporation and/or its subsidiaries. All other trademarks, trade names or company names referenced herein are used for identification only and are the property of their respective owners.

**Legal disclaimer**
As our product is subject to continuous improvement, Lorex Corporation & subsidiaries reserve the right to modify product design, specifications & prices without notice and without incurring any obligation.E&OE.

Publ. No.: LX400122
Release: 2.0
Commit: 59685
Head: 59691
Language: en-US
Modified: 2022-08-15
Formatted: 2022-08-25