User Manual
N920 Series

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N920 Series

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

N920A62

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

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

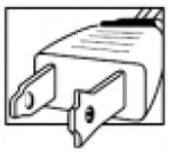
1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. 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.

1.5 Recycling

- Safely and responsibly recycle this product. Recycle according to your local waste and recycling laws.

2 Package Contents

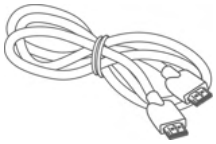
Your security recorder package includes the following components:

4K+ Fusion Wired NVR

Power Adapter

Ethernet Cable

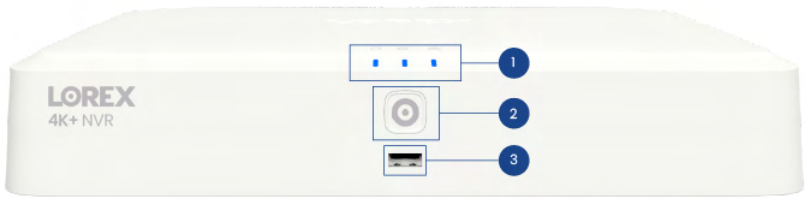
USB Mouse



HDMI Cable

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. **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.
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 29 *Connecting Audio Devices*, page 154.
6. **VGA:** Connect a VGA monitor (not included) to view the system interface.

7. **HDMI:** Connect to an HDMI monitor or TV (not included) using the included HDMI cable to view the system interface.

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 RJ45 Ethernet extension cables.

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 25.2 *Setting the Monitor Resolution (Display)*, page 110 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)

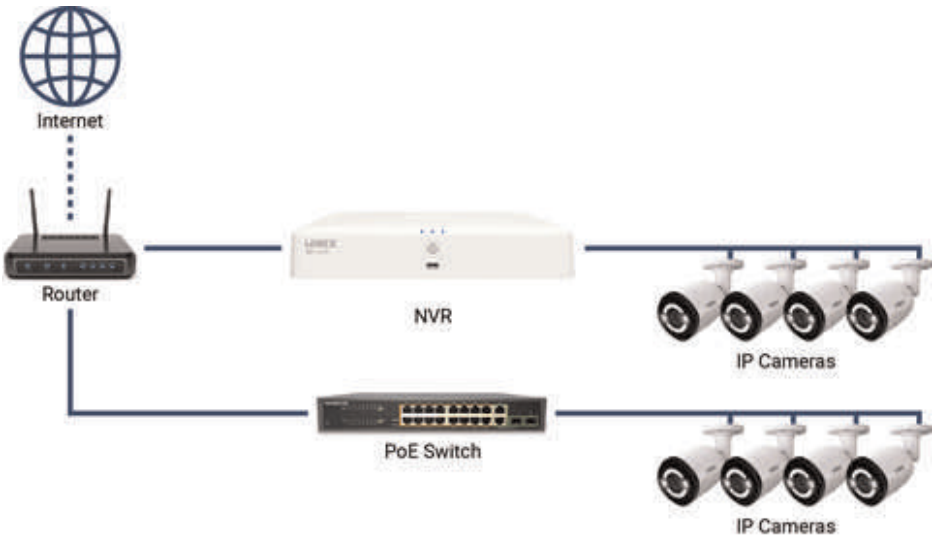
For flexibility, you may also connect IP cameras to the same Local Area Network (LAN) as the NVR instead of connecting them directly to the NVR. This is accomplished by connecting the cameras to the same router as the NVR.

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:

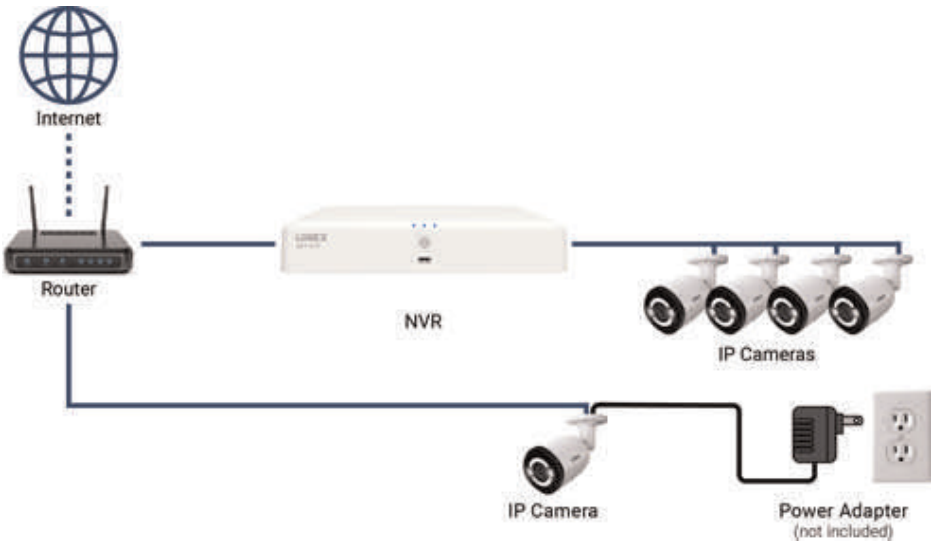


1. Connect an Ethernet cable from the LAN port on an external PoE switch (sold separately on lorex.com) to your router using a CAT5e or higher Ethernet cable. Connect the power cable to the PoE switch and to a power outlet or surge protector.

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.

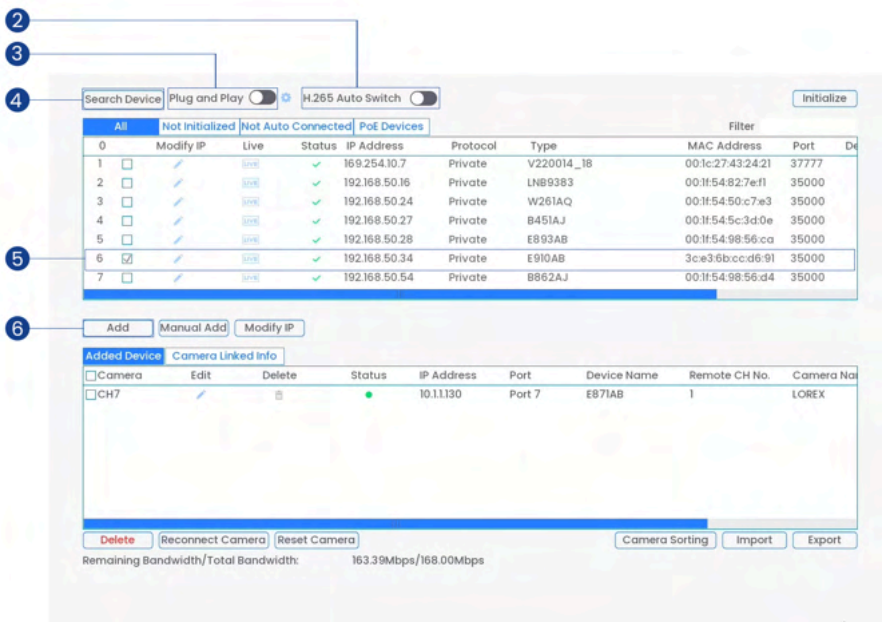
Step 1 of 2 — Alternative option B: Connecting cameras to your local network using power adapters:



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. *(Optional — Disabled by default)* Check to enable automatically switching your camera's compression to H.265 during connection. If you want to use H.264 encoding, leave **H.265 Auto Switch** unchecked when you add your cameras.
3. *(Optional)* To automatically detect and connect network cameras once the cable is plugged in, check **Plug and Play**.
4. Click **Search Device**. 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.

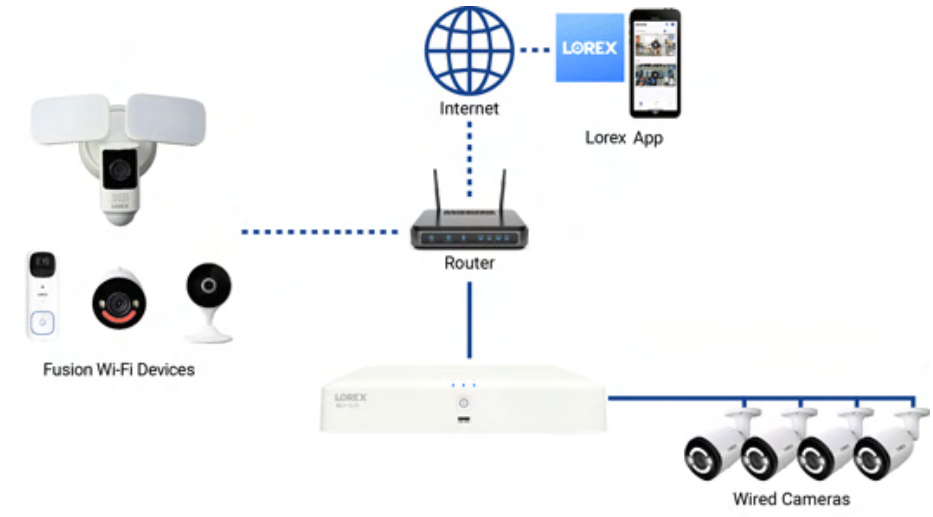
5. Check the camera(s) you would like to add.

6. Click **Add**. The **Status** indicator turns green to show the camera is successfully connected. If the camera's **Status** is red, hover over it to learn why.

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** 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 App

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

2. Create a **Lorex** app account (for detailed instructions, refer to 26 *Connecting Remotely Using the* **Lorex** *App*, page 147).
3. 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

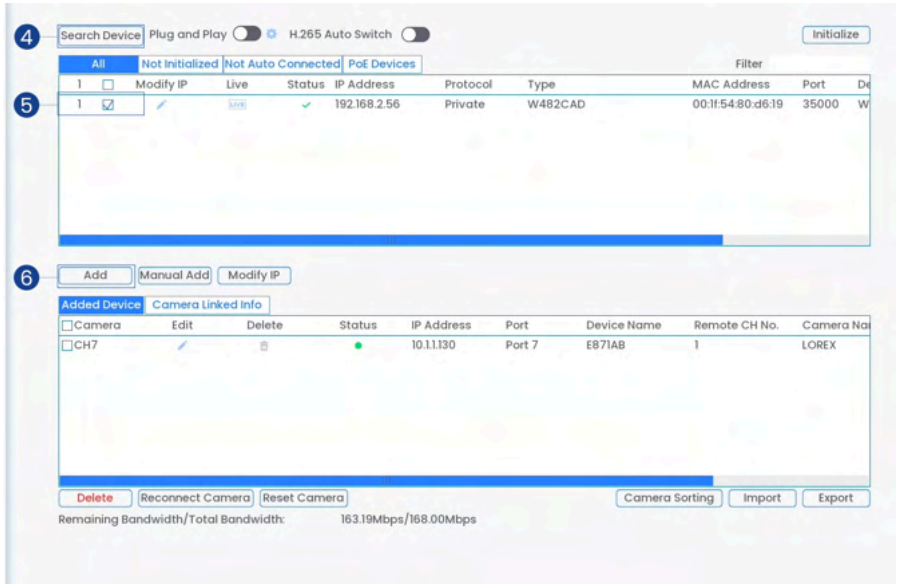
Connect your Lorex Fusion Wi-Fi camera to the app and then from your recorder scan your network to add it.

5.3.1 Connecting Your New Lorex Fusion Wi-Fi Camera to Your Recorder

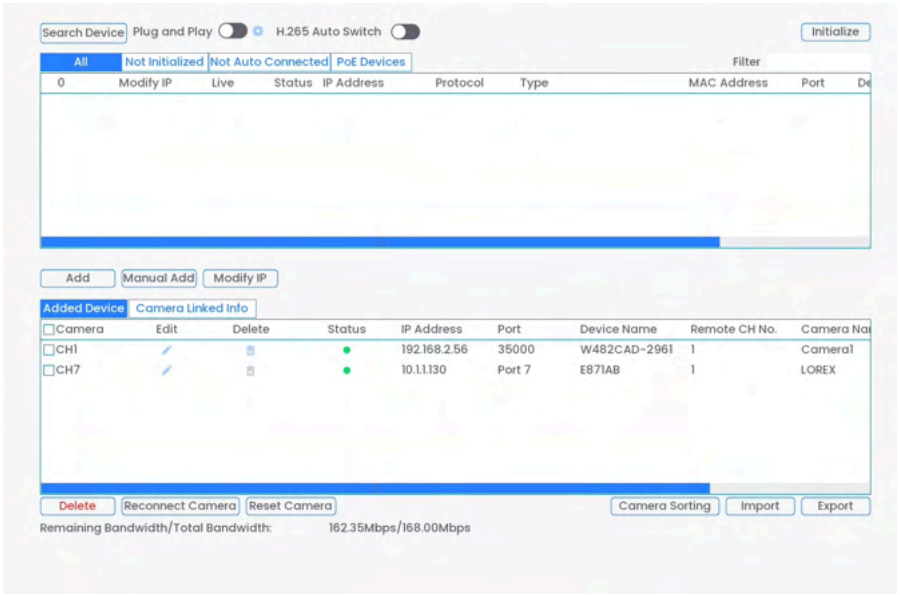
To connect your new Fusion Wi-Fi camera to the recorder:

1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Device List**. Click **Registration.**
3. Connect your new Lorex Fusion Wi-Fi camera to a power source. Wait until your camera is in hotspot mode.

4. Click **Search Device** to detect Wi-Fi cameras.



5. Check your Lorex Fusion Wi-Fi camera.
6. Click **Add**. Your Lorex Fusion Wi-Fi camera will appear in the section below.



NOTE

If your Lorex Fusion Wi-Fi camera's **Status** shows as **Connection Failed**, hover over the text to learn why.

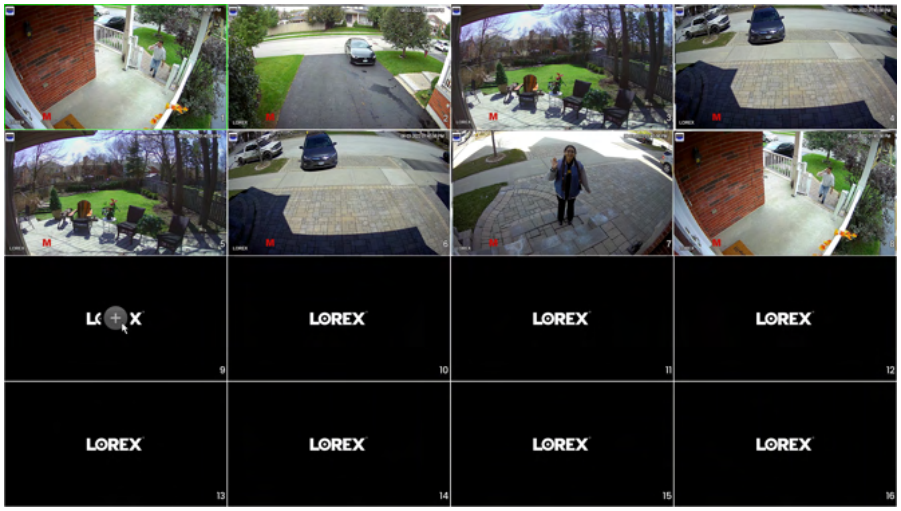
5.3.2 Connecting Your Existing Lorex Fusion Wi-Fi Camera to Your Recorder

NOTE

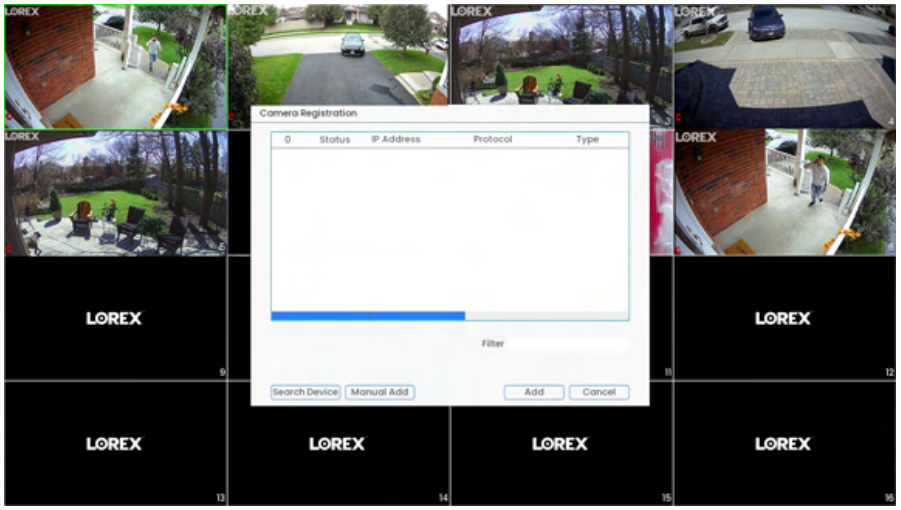
- Ensure your Lorex Fusion Wi-Fi camera and recorder are connected to the same **Lorex** app account and network.
- Ensure your Lorex Fusion Wi-Fi camera is powered on for Fusion setup.

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

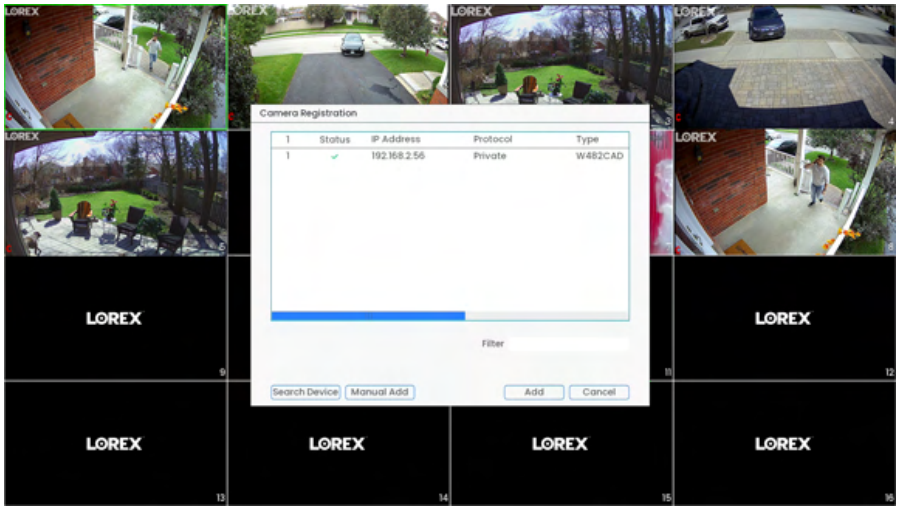
1. From the Live View display, click the pair icon in the center of the Fusion Wi-Fi channel's screen.



2. Click **Search Device**.



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



5.4 Adjusting Fusion Settings

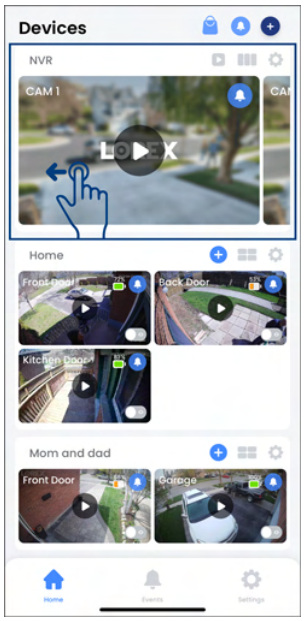
Ensure you turn off duplicate notifications in the app and adjust preferences for your recording schedule on the recorder.

5.4.1 Turning Off Duplicate Notifications

After Fusion setup, your Lorex Fusion Wi-Fi camera may be connected to the **Lorex** 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** app.
2. Under your Fusion recorder, swipe left to find your Lorex Fusion Wi-Fi camera.



3. Tap **...** then **Notifications**.
4. Tap the slider to enable **Alert Notifications**.

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

After Fusion setup, some Lorex Fusion Wi-Fi cameras 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 29.

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

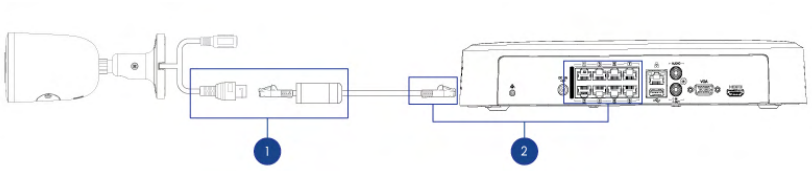
NOTE

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.

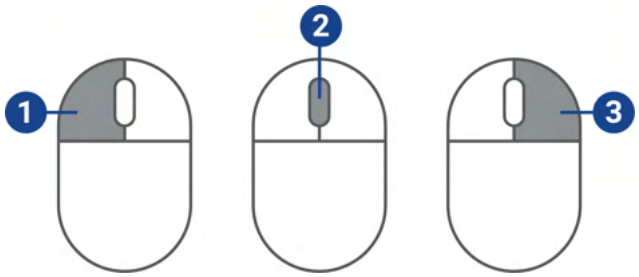
You can also connect cameras to a network switch or router (see 4.8 *Connecting Wired Cameras to the Local Area Network (LAN) (Alternative Camera Setup)*, page 10 for details). If your switch does not support PoE, or you are connecting cameras to a router, you will require a power adapter for each camera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



1. Connect the camera to an 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 25.6.1 *Configuring General System Settings*, page 124.
- **Holiday:** See 25.6.2 *Configuring Holidays*, page 124.

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 Address** 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.

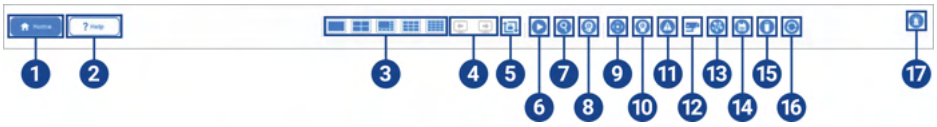
> **NOTE**
>
> To access the on-screen display, you must connect the included mouse and a monitor (not included) to the recorder. See 4 *Basic System Setup*, page 7 for full instructions.

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.



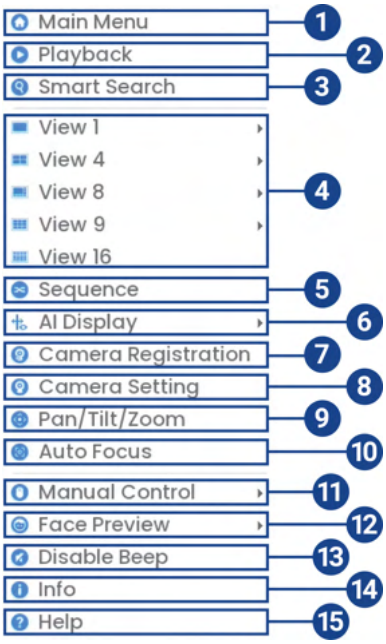
1. **Home (Main Menu):** See 25 *Using the Main Menu*, page 110 for full instructions on using the Main Menu.
2. **Help**: Offers additional information and support on using the system.
3. **Viewing Modes:** Select how many channels are shown on screen during live viewing.
4. **Previous / Next Channel(s):** Display previous / next channel(s) in single or quad channel viewing mode.
5. **Sequence Control:** Start or stop Sequence Control. In Sequence Control, 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 34.
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 28 *Pan/Tilt/Zoom (PTZ) Cameras*, page 150.
10. **Camera Setting:** Click to open camera image settings. For full details, see 9.5 *Camera Image Settings*, page 26.
11. **Alarm:** View alarms in progress. See 25.7.6 *Alarm Status* 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 25.6.3 *Selecting DHCP or Static IP Address (TCP/IP)*, page 125.
14. **HDD Manager:** Configure hard disk drive read/write options (see 25.6.13 *Configuring Hard Disk Drive Type*, page 134 for details) or format drives (see 25.6.12 *Formatting the Hard Disk Drive*, page 134 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. **Upgrade:** Check for system 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 25 *Using the Main Menu*, page 110.
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 34.
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. **AI Display:** Enable **AI Rule** & **AI Area** to display in Live View the smart detection areas that you have drawn on each camera.

> **NOTE**
>
> **AI Rule** & **AI Area** must be enabled in **Display** settings. See 25.2 *Setting the Monitor Resolution (Display)*, page 110.

7. **Camera Registration:** Check the camera's that you want added to the NVR.
8. **Camera Setting:** Configure image settings for cameras. For full details, see 9.5 *Camera Image Settings*, page 26.
9. **Pan/Tilt/Zoom:** Control and configure settings for Pan-Tilt-Zoom (PTZ) cameras. For full instructions on connecting and using PTZ cameras, see 28 *Pan/Tilt/Zoom (PTZ) Cameras*, page 150.
10. **Auto Focus:** Access zoom/focus controls for auto-focus cameras (not included).
11. **Manual Control:** Select manual recording and snapshot options. For details, see 10.4 *Setting up Scheduled or Manual Recording*, page 31.
12. **Face Preview: Enable** or **Disable** face events to show on the right side of the screen..
13. **Disable Beep:** Temporarily disable the current audible warning.

> **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.

14. **Info:** Displays system information, such as model number, device ID, IP address, etc.

15. **Help**: Offers additional information and support on using the system.

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 25.6.1 *Configuring General System Settings*, page 124 to set a custom playback length.
2. **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. **Instant Record:** 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 Talk:** *(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. **Aspect Ratio**: Click to manually change the aspect ratio to **20:9** or **16:9**.

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:

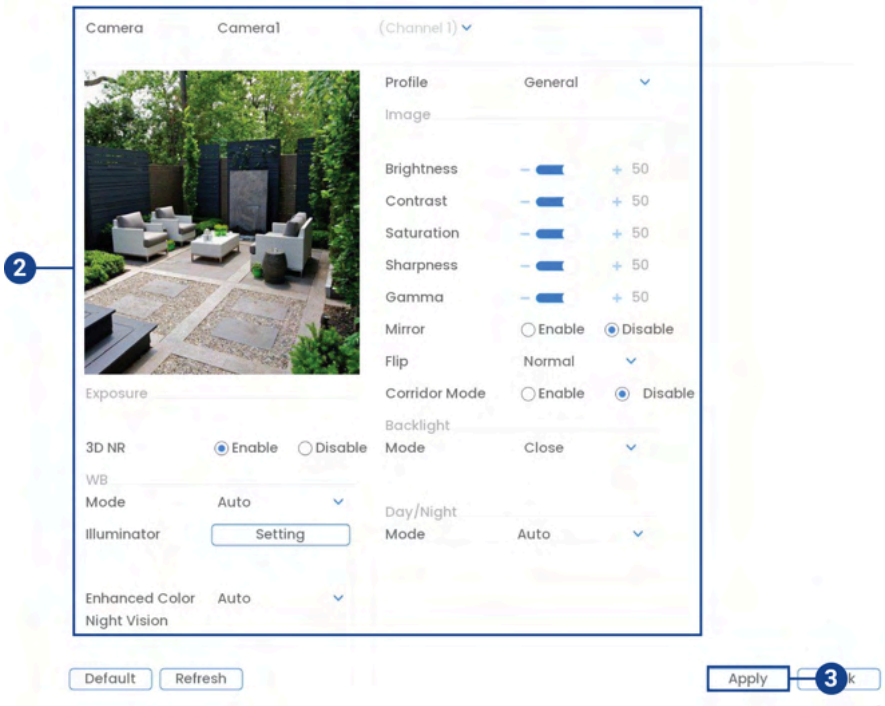
- Right-click to close the Number Keyboard.

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.

- **Profile:** 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 **Enable** to flip the image horizontally.
- **Flip:** Select **180°** to flip the image vertically, or select **Normal** for the default orientation. You can also select **90°** or **270°**.
- **Corridor Mode:** Not supported.
- **Blacklight Mode:** Select one of the following backlight compensation modes:
  - **Close:** Disable this function.
  - **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.
- **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 **Enable** 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.
- **Illuminator:** *(Compatible camera required)* Click **Setting** to adjust the illuminator intensity in the image for ambient lighting conditions. Under **Fill Light**, select **IR Mode** to emit light in the infrared spectrum for clearer night vision. Under **Mode**, select **Auto** for the system to automatically adjust the illuminator intensity.
- **Enhanced Color Night Vision:** *(Compatible camera required)* When set to **Auto**, the system will use quad-pixel technology to enhance Color Night Vision in low light conditions.

  > **NOTE**
  >
  > - When set to Auto, the system uses Quad-Pixel Technology, combining four pixels into one to capture more light and maintain color images even in very low-light conditions. When in quad-pixel, the camera resolution reduces by 4 times, meaning that a 4K camera is now down scaled to 1080p. The benefit is to continue viewing color images in lower lighting conditions.
  > - Using Enhanced Color Night Vision will lower the camera's resolution to 3MP.
  > - If the there is not enough light for Enhanced Color Night Vision, the camera will automatically switch to black & white mode. Select **Off** to disable Enhanced Color Night Vision.

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 smart motion event is being recorded.

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. 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.
   - **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:** Click on **More** 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 29 *Connecting Audio Devices*, page 154.

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

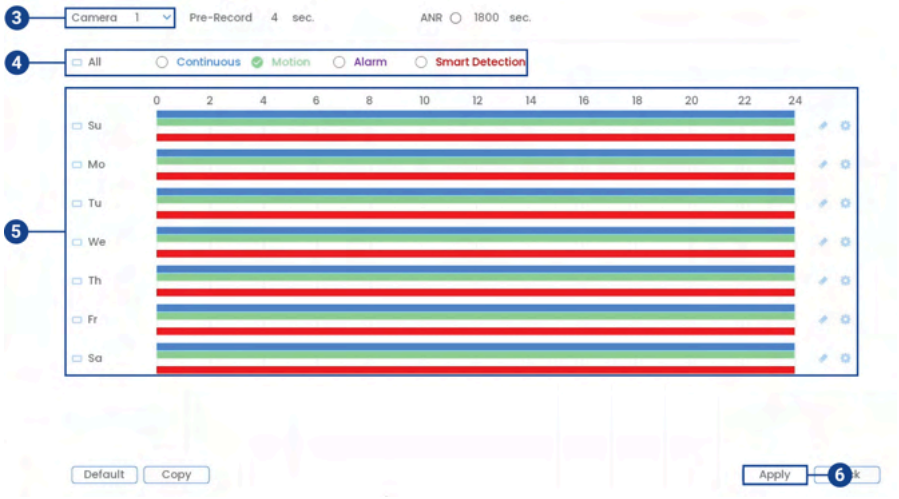
You can set a custom recording schedule according to your needs. For example, you can set the system to record continuously during business hours and record on motion detection only outside of business hours.

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. Select the camera 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.
   - **Motion**: 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.

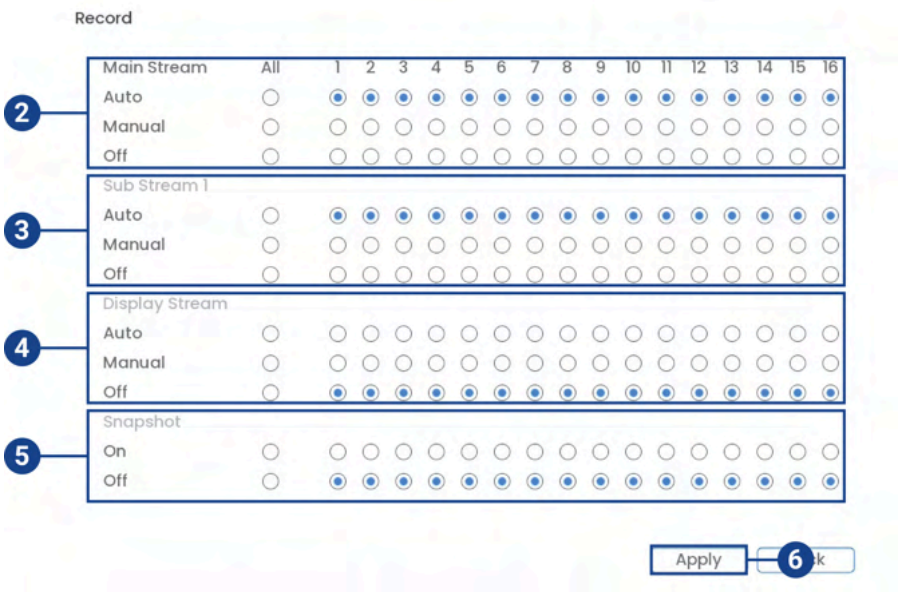
10.4 Setting up Scheduled or Manual Recording

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 30.

To set options for manual recording:

1. From the Live View display, right-click to open the Quick Menu. Click **Manual Control**, 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.
   - **Off:** 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.
   - **Off:** 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 Display 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.
   - **Off:** The system will not record the Display Stream for this channel. This option is not recommended.
5. Under **Snapshot**, select **On** to enable snapshot recording on each channel. Or, select **Off** to disable snapshot recording.

> **NOTE**
>
> To set more preferences for snapshots recording, see 25.5.8 *Configuring Snapshot Recording Settings*, page 122.

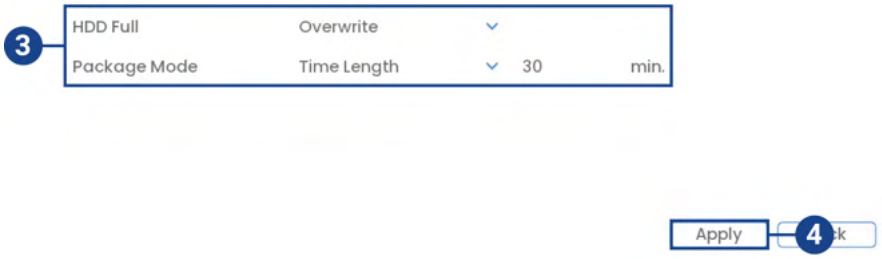
6. Click **Apply** to save changes.

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.

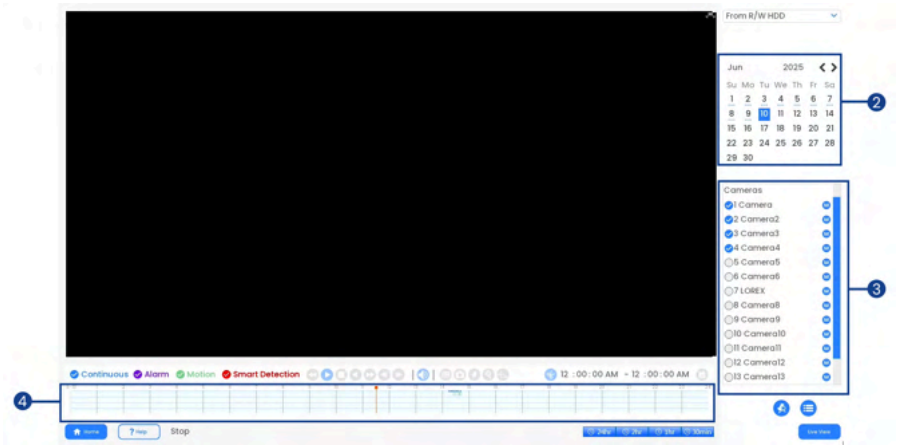
11 Playback

Search through and playback recorded video files on the system.

11.1 Playing Back Video from the Hard Disk Drive

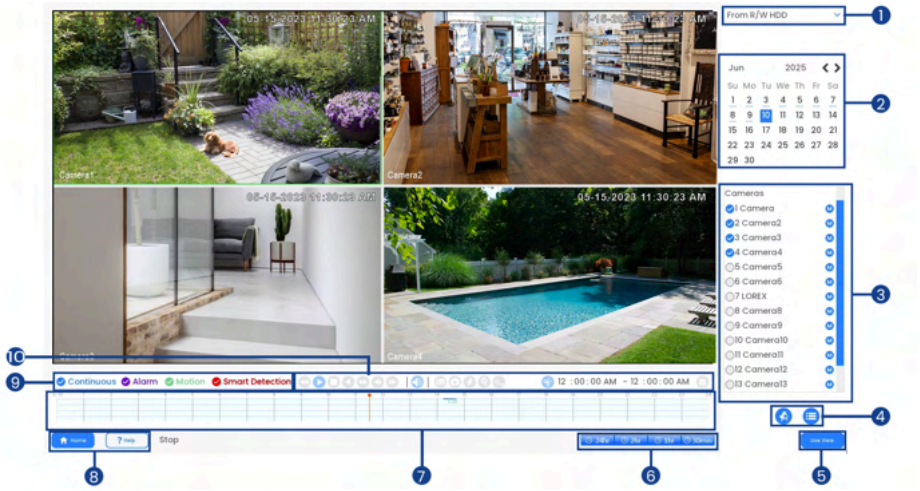
To play back recorded video:

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. **Home (Main Menu) & Help**: 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 Backward**
- **Fast Forward:** 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.

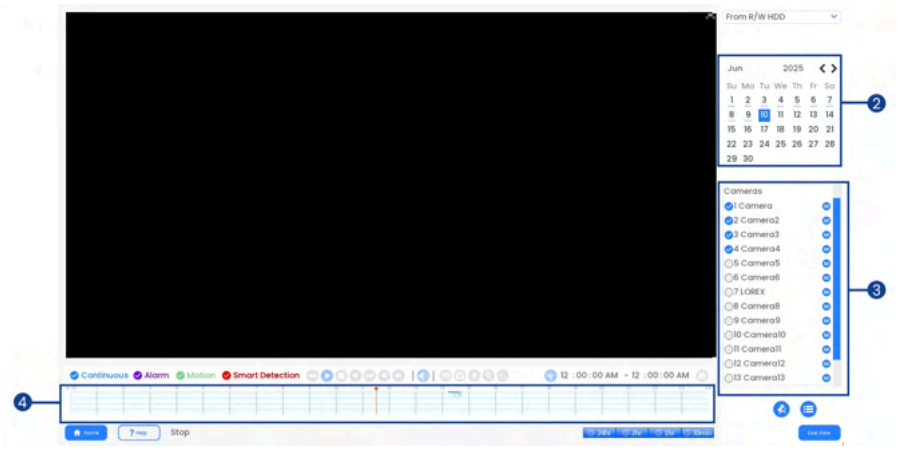
- **Area Search:** Click to select an area of the camera image and play back all recordings with motion in the selected area. For full details, see 11.3 *Area Search*, page 36.
- **Snapshot:** Click to take a snapshot from the video playing. You will need to have a USB plugged in to save it.
- **Add 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.
- **Color Search:** Click to filter, browse, and search for color in recordings.
- **Number Search:** Click to filter, browse, and search for numbers on vehicles in recordings.

11.3 Area Search

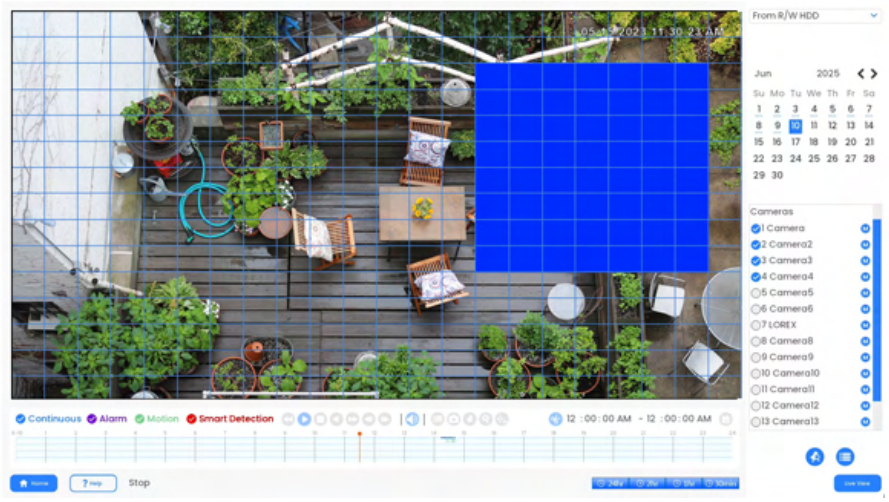
Play back all recordings from a single channel with motion in a specific area of the camera image.

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.

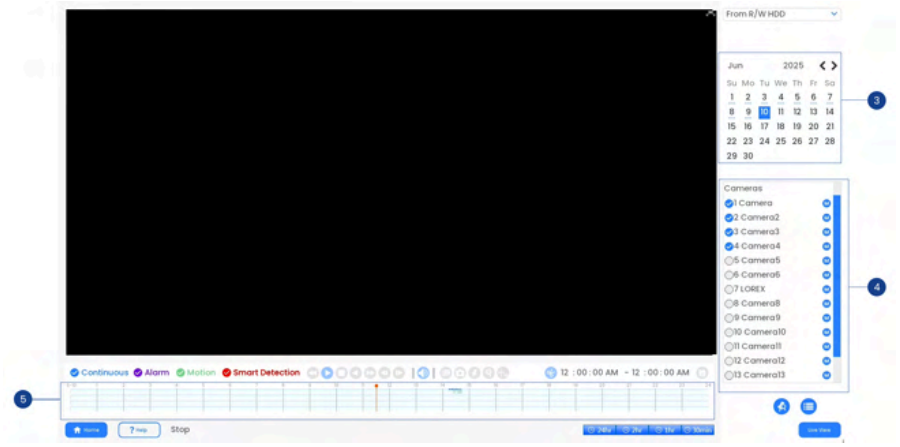
11.4 Video Clip Backup

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:

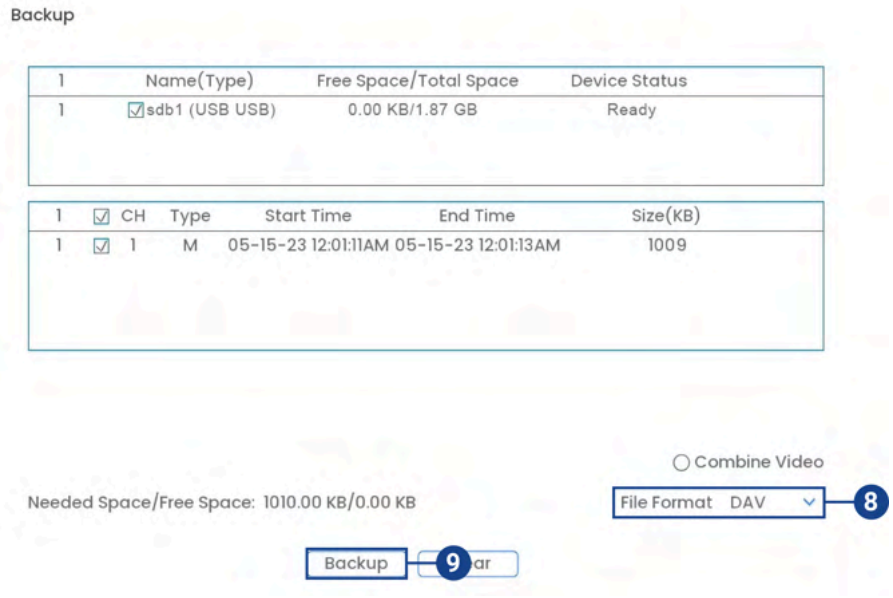
1. Connect the USB thumb drive (not included) to a free USB port on the recorder.

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**.

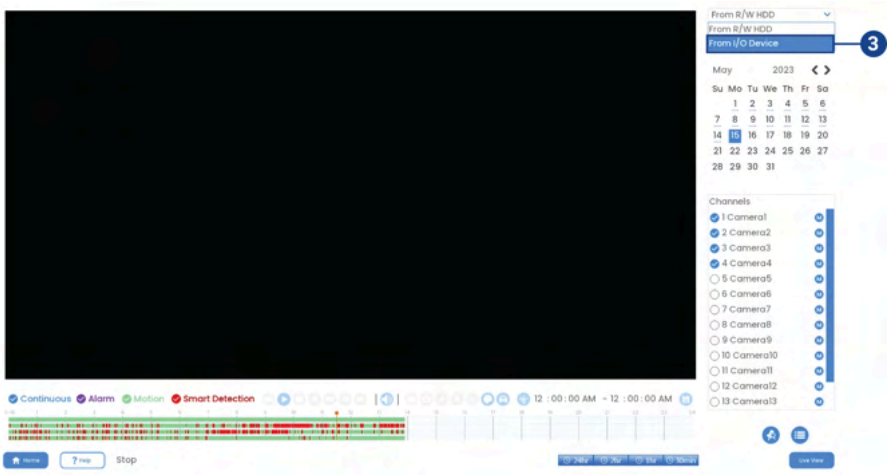
11.5 Playing Back Video from a USB Drive

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 40.

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. Select the video file you want to open from the file list, then click **OK**. Click the play icon 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.

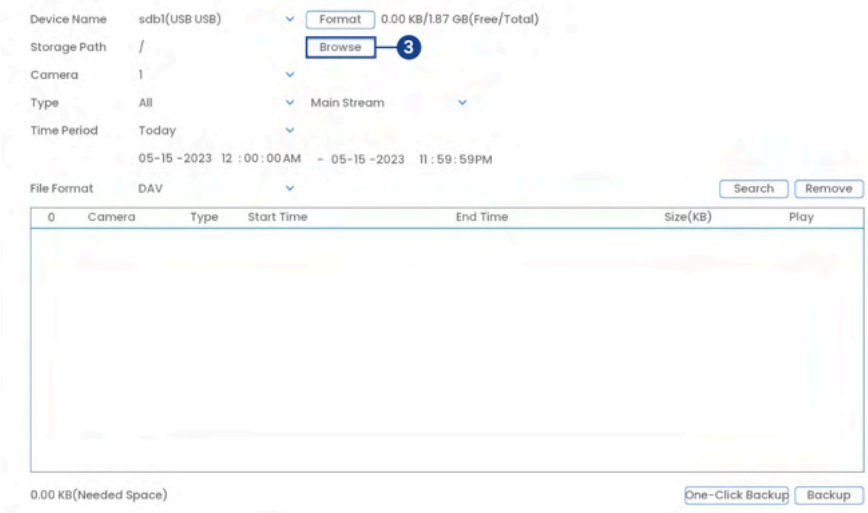
⚠ CAUTION
Formatting the USB device will permanently erase all data. **This step cannot be undone.**

Prerequisite:

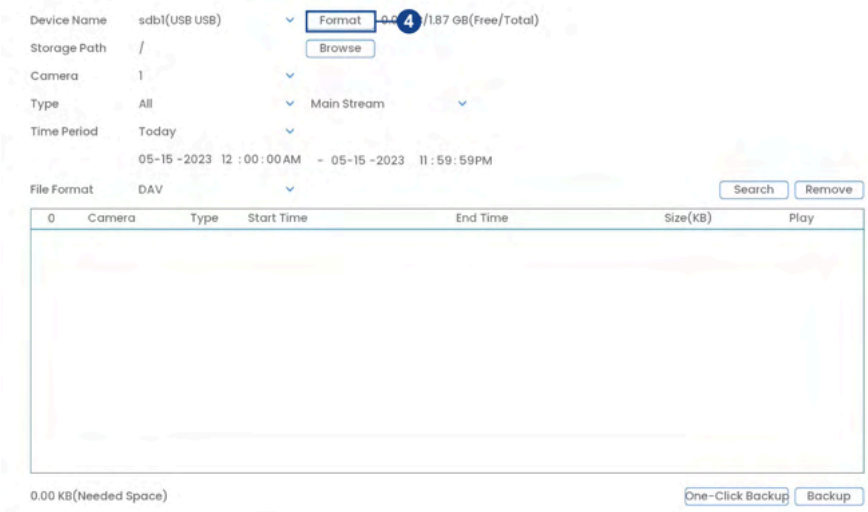
- Connect a USB flash drive (not included) to a free USB port on the unit.

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**.

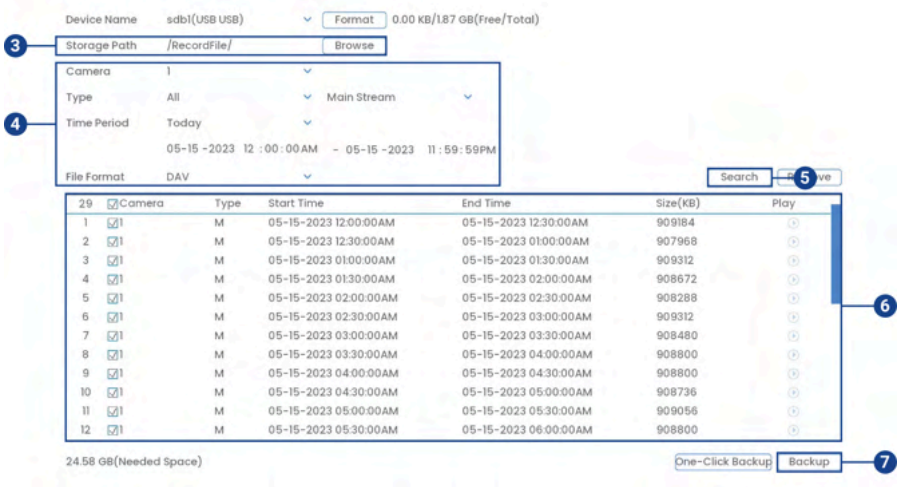
5. Select a format mode:
   - **FAT32:** Recommended — offers the greatest compatibility with other devices.
   - **NTFS:** Advanced users only — should only be used on drives larger than 32GB where file sizes will be larger than 4GB.
6. Click **OK**.

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 40 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.
   - **Time Period:** Select the time period for your search, then enter the start and end time.
   - **File Format:** Select **DAV** to save files to save files to **.dav** format. You can playback **.dav** files using the Lorex video player software. The Lorex Player is automatically downloaded in the same folder as the recordings that have been downloaded.
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

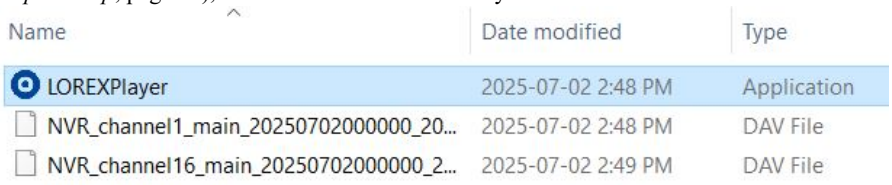
Video clip backup allows you to select a duration of video during playback mode and save it to a USB device (not included). For full instructions on video clip backup, see 11.4 *Video Clip Backup*, page 37.

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 Cloud Client for PC** from your recorder's product page. Backup a recording in .dav format (for full instructions on video clip backup, see 11.4 *Video Clip Backup*, page 37), and find the Lorex cloud Player within the downloaded folder.



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

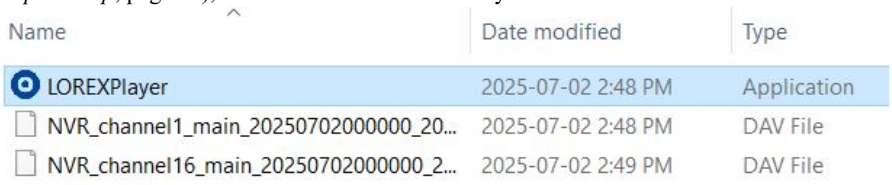
Click  to open a backed up video file in another location.

3. Use the **Lorex Cloud Client** 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 44

12.4.2 Viewing Backed Up Files on Mac

1. Download and install the **Lorex Cloud Client for PC** from your recorder's product page. Backup a recording in .dav format (for full instructions on video clip backup, see 11.4 *Video Clip Backup*, page 37), and find the Lorex cloud Player within the downloaded folder.



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.

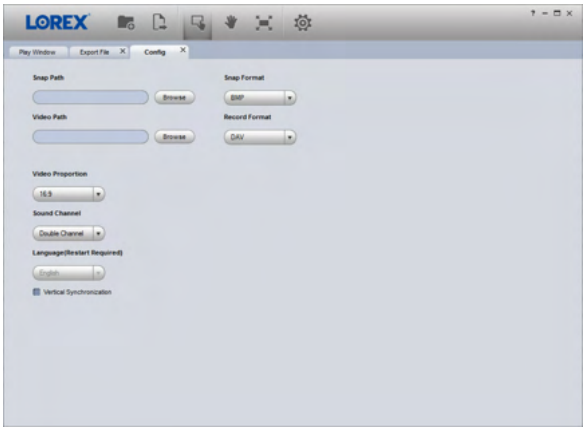
5. Use the **Lorex Player** controls to control playback or select other files for playback.

> **NOTE**
>
> For a full overview of Lorex Player controls, see 12.4.3 *Lorex Player Controls*, page 44

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 Active Deterrence

Lorex Active Deterrence cameras feature bright, customizable warning lights, color night vision booster, colorful **Smart Security Lighting**, sirens, and alarm/camera pre-recorded messages. 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 13.1 *Smart Motion Activated Deterrence*, page 46). You can also trigger the lights and sirens manually from the recorder and remotely on the Lorex Home app (see 13.3 *Manually Activated Deterrence*, page 58).

Refer to your camera's documentation to locate the warning lights, **Smart Security Lighting**, and embedded speaker for sirens and alarm/camera pre-recorded messages on your camera.

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

13.1 Smart Motion Activated Deterrence

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

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 , page for further details.

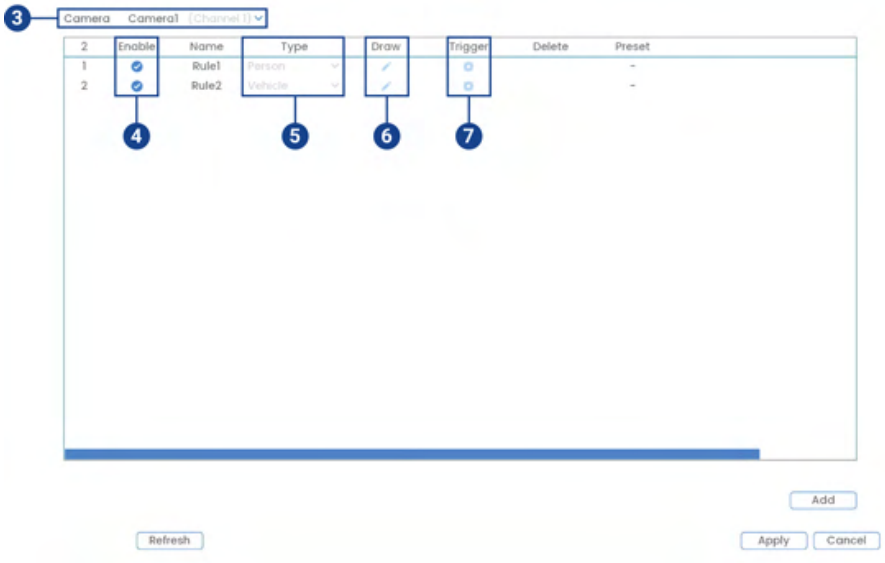
13.1.1 Smart Motion Activated Warning Lights

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 lights:

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

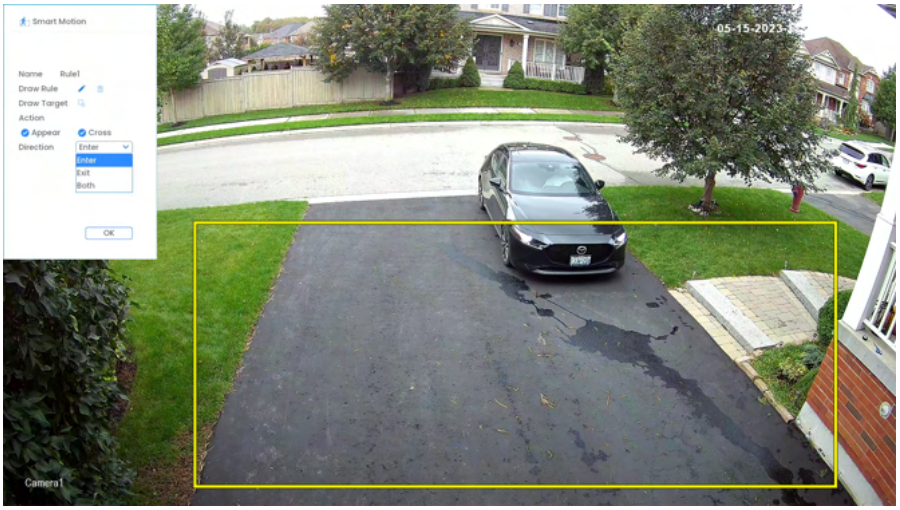
2. Click **Events**, then **Event Settings**. Click the **Person & Vehicle** tab from the side panel.



3. Select a camera to configure.
4. Check to enable the detection rule that you want to use.
5. Select between **Person** or **Vehicle** detection types.

> **NOTE**
>
> The first two smart motion 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.

6. Click the **Draw** icon and customize the active area for automatic warning light:

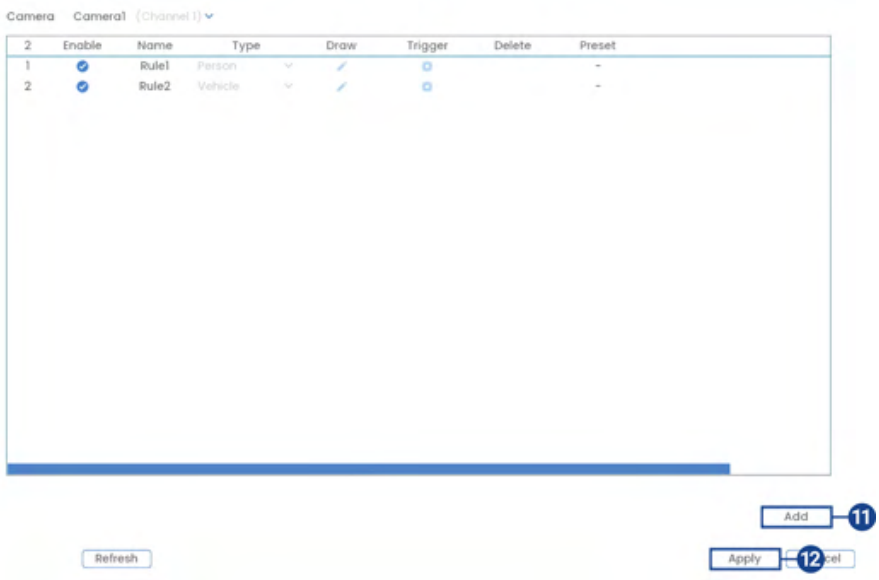


- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **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 crosses through 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 **Exit** for movement exiting the defined area, or **Both** for both types of directions.
- Click **OK** when finished.

7. Click the **Trigger** icon .

8. Check **Warning Lights**, and then click **Setting**.

9. Adjust warning lights preferences:
   - **Schedule**: Click **Setting** choose which days and times or the week to enable automatic warning lights. 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.
   - **Brightness**: Set the warning lights brightness level.
   - **Duration**: Choose how long the warning light will stay on following a smart motion detection event.
   - **Mode**: Select **Solid** for solid white lights or **Flashing** for flashing lights. If you select **Flashing**, set how quickly the lights will flash under **Flashing Frequency**.
10. Click **OK**.
11. Click **Add** to create additional active areas for automatic warning lights on.



12. Click **Apply** to save changes.

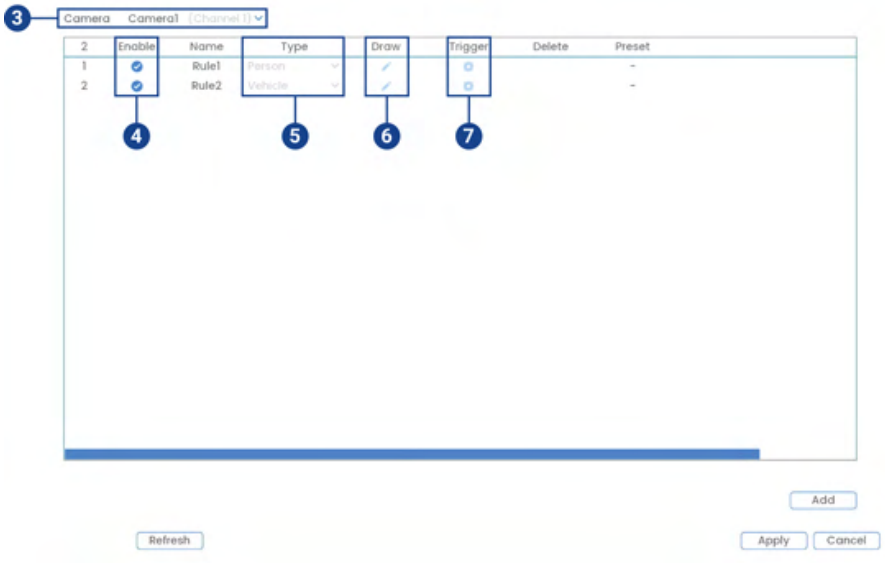
13.1.2 Smart Motion Activated Alarm & Camera Pre-record Messages

The system allows you to activate alarms & camera pre-recorded messages as verbal warnings. Select cameras that you want to enable alarms & camera pre-recorded messages and adjust preferences.

To configure automatic alarms & camera pre-recorded messages:

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 **Person & Vehicle** tab from the side panel.



3. Select a camera to configure.
4. Check to enable the detection rule that you want to use.
5. Select between **Person** or **Vehicle** detection types.

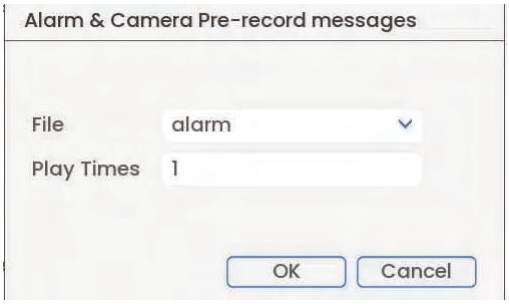
> **NOTE**
>
> The first two smart motion detection rules were added by default. The detection type for the two default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

6. Click the **Draw** icon and customize the active area for automatic alarm & camera pre-record messages:

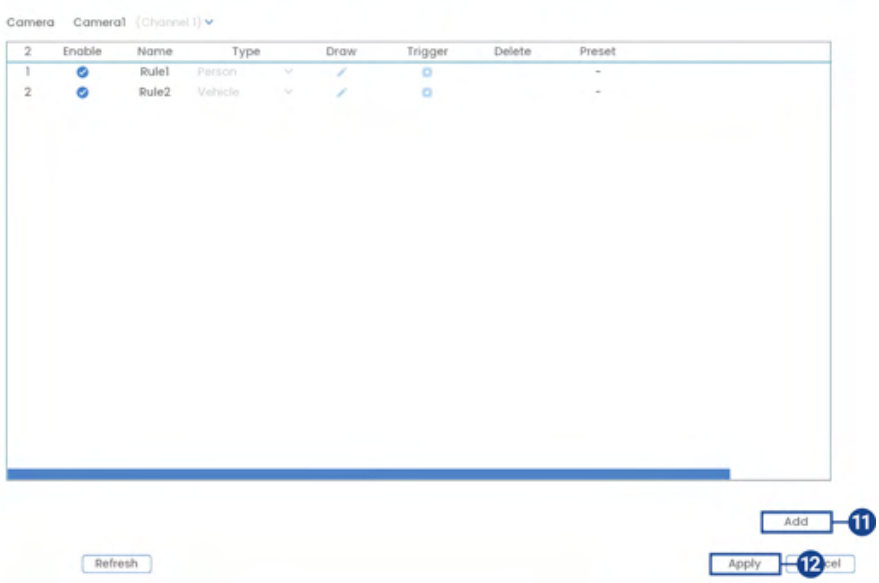
- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **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 crosses through 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 **Exit** for movement exiting the defined area, or **Both** for both types of directions.
- Click **OK** when finished.

7. Click the **Trigger** icon .

8. Check **Alarm & Camera Pre-record messages**, and then click **Setting**.



9. Adjust voice prompt preferences:
   - **File**: Select **Alarm** or any other one of the camera pre-recorded messages.
   - **Play Times**: Choose how many times the voice prompt will play following a smart motion detection event.
10. Click **OK**.
11. Click **Add** to create additional activate areas for automatic alarm & camera pre-record messages.



12. Click **Apply** to save changes.

13.1.3 Smart Motion Activated Smart Security Lighting

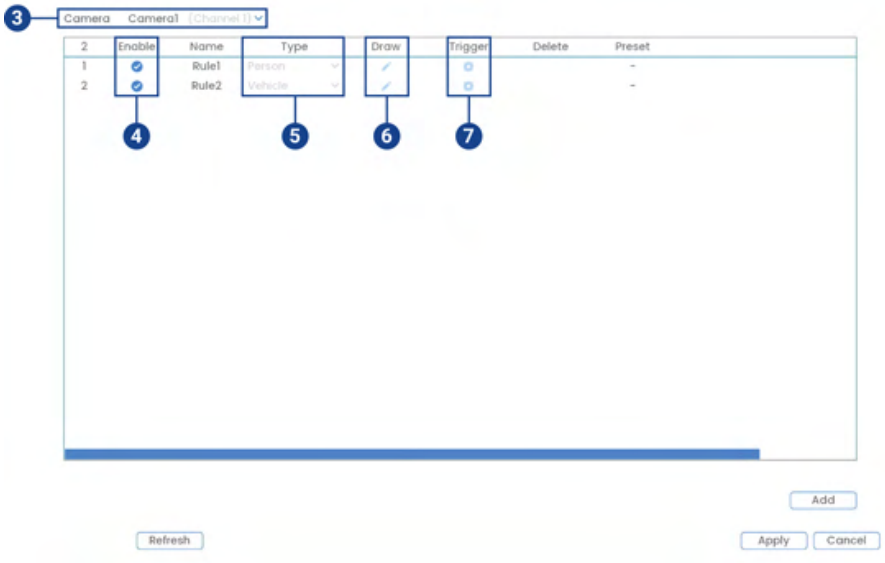
The system allows you to activate a colorful **Smart Security Lighting** upon smart motion detection. Select channels that you want to enable the automatic **Smart Security Lighting** on and adjust preferences.

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:

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

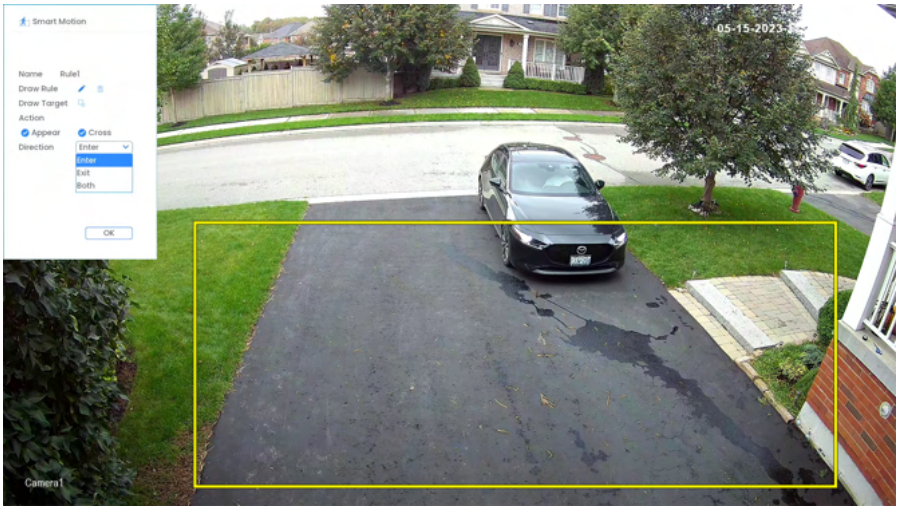
2. Click **Events**, then **Event Settings**. Click the **Person & Vehicle** tab from the side panel.



3. Select a camera to configure.
4. Check to enable the detection rule that you want to use.
5. Select between **Person** or **Vehicle** detection types.

> **NOTE**
>
> The first two smart motion 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.

6. Click the **Draw** icon and customize the active area for automatic **Smart Security Lighting**:



- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **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 crosses through 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 **Exit** for movement exiting the defined area, or **Both** for both types of directions.
- Click **OK** when finished.

7. Click the **Trigger** icon .

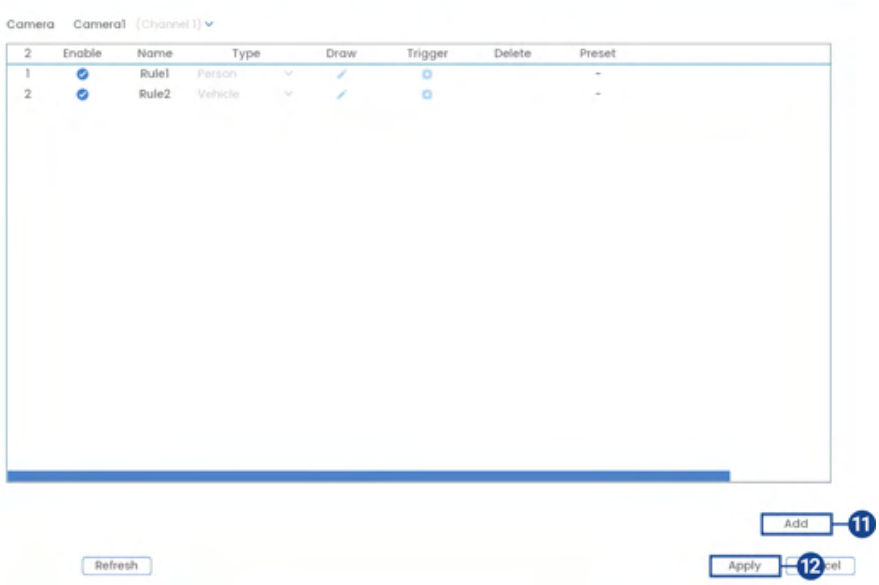
8. Check **Smart Security Lighting**, and then click **Setting**.

9. Adjust **Smart Security Lighting** preferences:

- **Schedule**: Click **Setting** choose which days and times or the week to enable automatic warning lights. 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.
- **Color**: Click on the red color box to open the color settings. Set a custom color by clicking through the rainbow color palette or click **Professional** to enter an RGB code. Click **Apply** to save 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 **Solid** for a solid light or **Flashing** for a flashing light. If you select **Flashing**, set how quickly the light will flash under **Flashing Frequency**.

10. Click **OK**.



11. Click **Add** to create additional active areas for automatic **Smart Security Lighting** on the selected channel.
12. Click **Apply** to save changes.

13.2 Manually Activated 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** app. Refer to 26 *Connecting Remotely Using the* **Lorex** *App*, page 147 for more support on using the app.

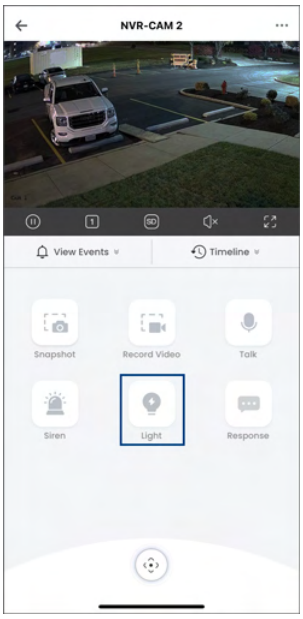
Color night vision booster is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

To activate the color night vision booster feature:

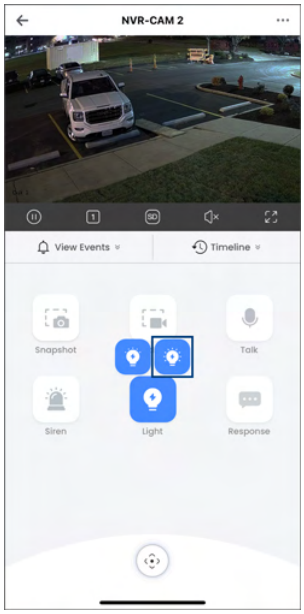
1. Open the **Lorex** app.
2. Login to your account.

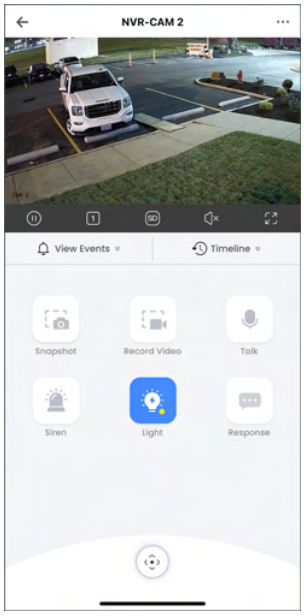
3. Under your recorder, swipe left and tap the camera channel that you want to enable color night vision booster on.

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 color night vision booster off.





NOTE

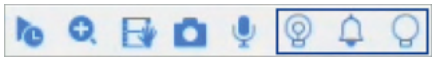
Color night vision booster automatically turns off after 3 minutes.

13.3 Manually Activated Deterrence

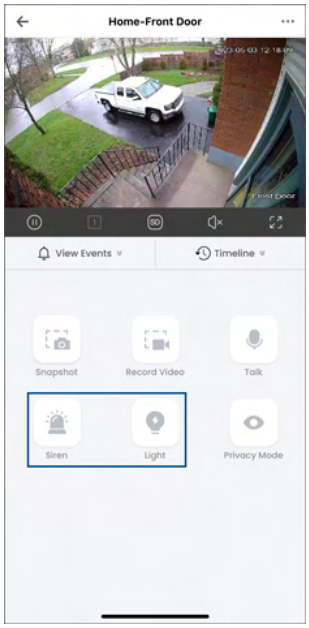
The system has multiple options for activating warning light, siren, **Smart Security Lighting**, and color night vision booster manually.

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** app. Go to your camera's live feed and press the deterrence buttons for the siren, warning light, 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.

14 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.

14.1 Status Icons

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

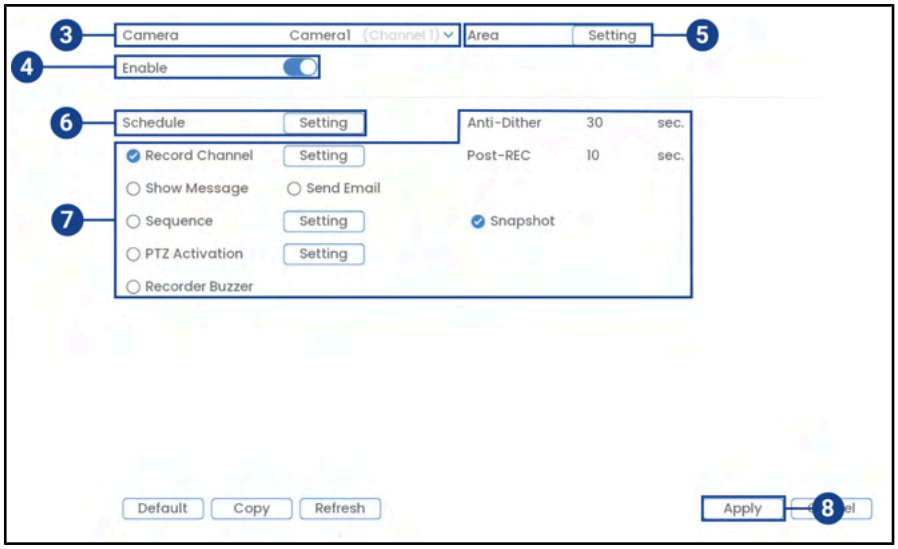
- **Motion detection:** Motion has been detected by the camera. An M icon is shown in the bottom left-hand corner of the camera image to show that motion was detected, but the system is not recording a motion event. This is because motion recording is not enabled on the channel, or the movement detected by the camera was not significant enough to trigger motion recording. See 14.2 *Configuring Motion Detection*, page 60 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.

14.2 Configuring Motion Detection

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

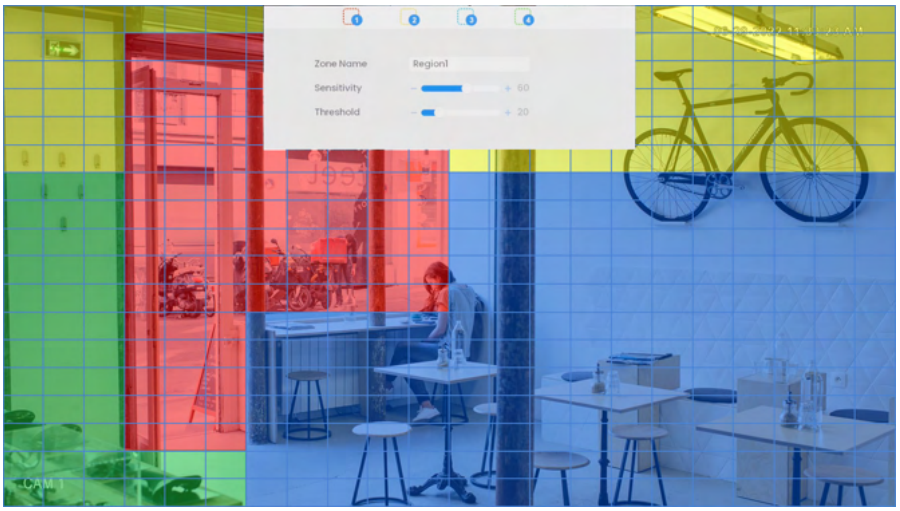
To configure motion detection:

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, then click the **Motion Detection** tab from the top panel.



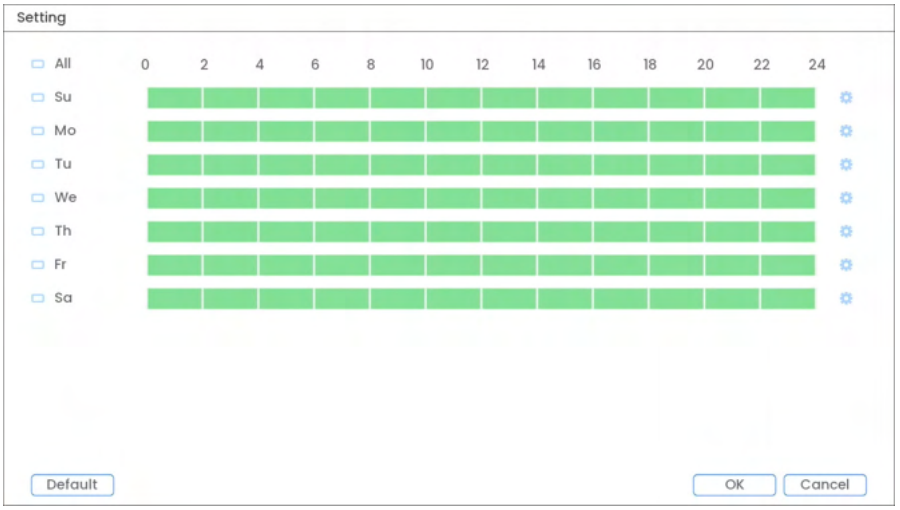
3. Select a camera to configure.
4. Check to enable motion detection.

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



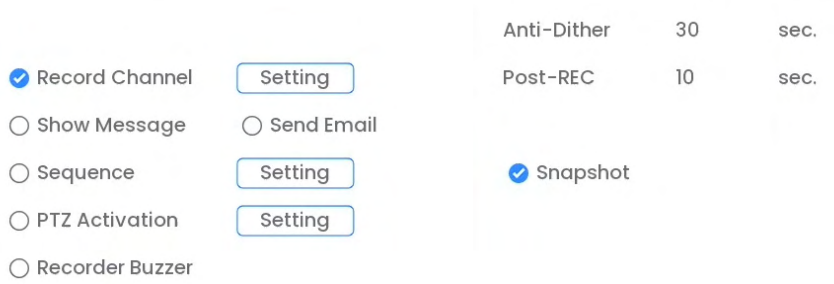
- The camera image appears with a red grid overlay. This means the entire image is enabled for motion detection.
- Click or click-and-drag to add / remove boxes from the active area. Cells that have been removed from the active area appear transparent.
- Hover near the top of the image to reveal zone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

6. Click **Setting** 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:

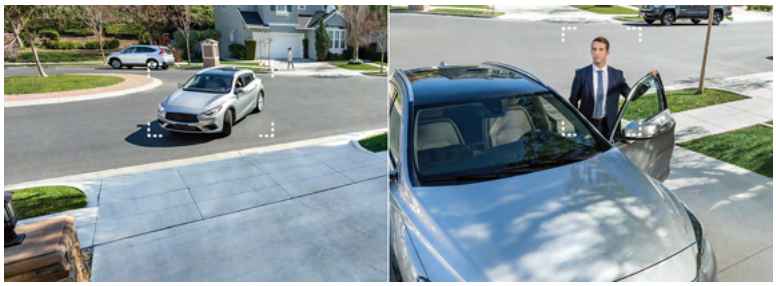


- **Anti-Dither:** After an initial motion event, the system will continue to record video if a second motion event occurs within the set **Anti-Dither** period.
- **Record Channel:** Select the cameras that will record when motion is detected. Set the length of recording following a motion detection event in the **Post-REC** field.
- **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 25.6.5 *Configuring Email Alerts*, page 127.
- **Sequence:** Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
- **Snapshot:** Select the numbered tiles next to this option to save a snapshot of the corresponding cameras.
- **PTZ Activation:** Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Recorder Buzzer:** Check to enable the system buzzer.

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

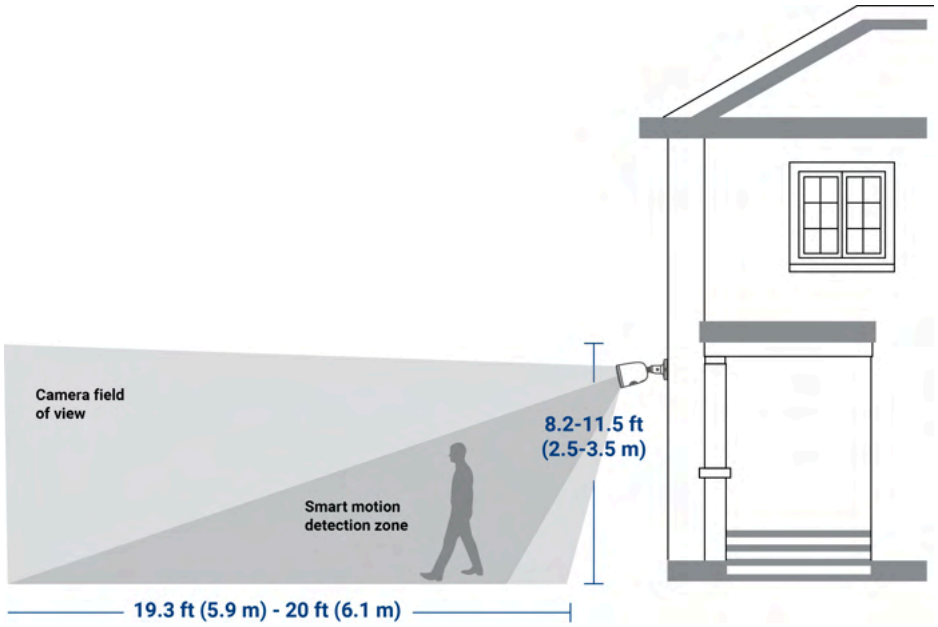
15 Person & Vehicle Detection

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 the warning lights, sirens, and more to person and vehicle detection on compatible Lorex deterrence cameras for an added level of smart security.



15.1 Ensuring Accurate Person Detection

The following are important camera installation notes to ensure accurate person 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

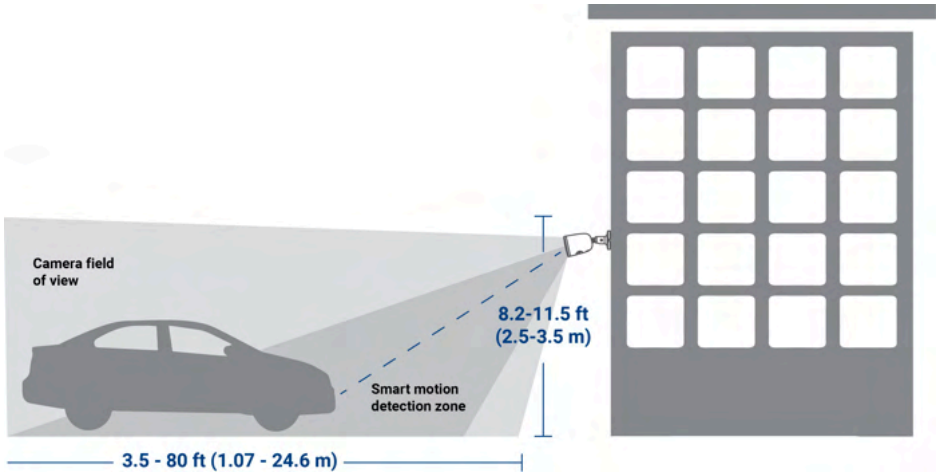
Angle	Height	Minimum Distance	Maximum Distance
15 °	8.2 ft (2.5 m)	2.8 ft (0.86 m)	20 ft (6.12 m)
15 °	9.8 ft (3 m)	4.5 ft (1.39 m)	19.7 ft (6.03 m)
15 °	11.5 ft (3.5 m)	6.3 ft (1.93 m)	19.3 ft (5.90 m)

- 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 20 ft (6.1 m) from the camera.
- Angle the camera 15 ° down from the level position.
- Install the camera between 8.2-11.5 ft (2.5-3.5 m) off of the ground.

Accuracy of person 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 Ensuring Accurate Vehicle Detection

The following are important camera installation notes to ensure accurate vehicle detection. Refer to the documentation that came with your camera at lorex.com for full mounting instructions.



Vehicle Detection

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

- 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 20 ft (6.1 m) from the camera.
- Angle the camera 15 ° down from the level position.
- Install the camera between 8.2-11.5 ft (2.5-3.5 m) off of the ground.

Accuracy of vehicle 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.

15.3 Configuring Person & Vehicle Detection

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

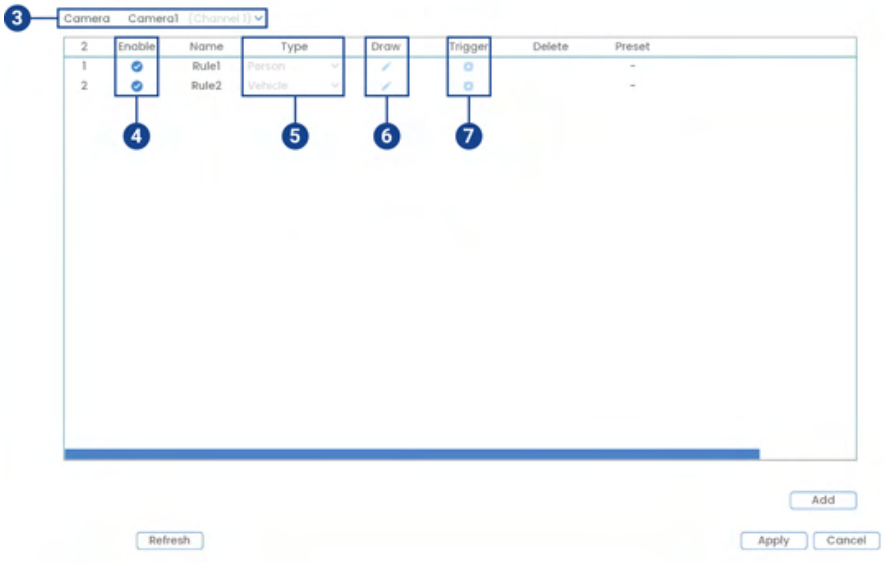
NOTE

- 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 , page for full instructions.
- The system can support smart detection in up to 6 channels.

To configure person & vehicle detection:

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

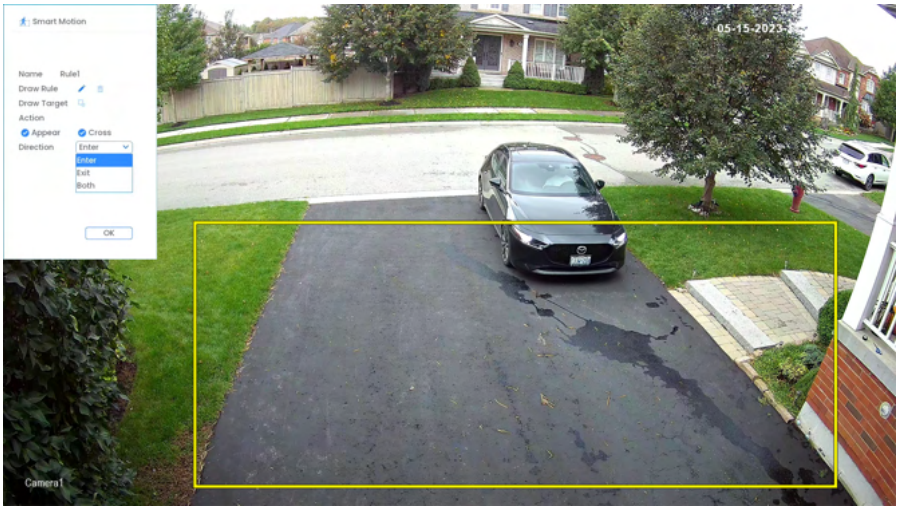
2. Click **Events**, then **Event Settings**. Click the **Person & Vehicle** tab from the side panel.



3. Select a camera to configure.
4. Check to enable the person & vehicle detection rules that you want to use.
5. Select between **Person** or **Vehicle** detection types.

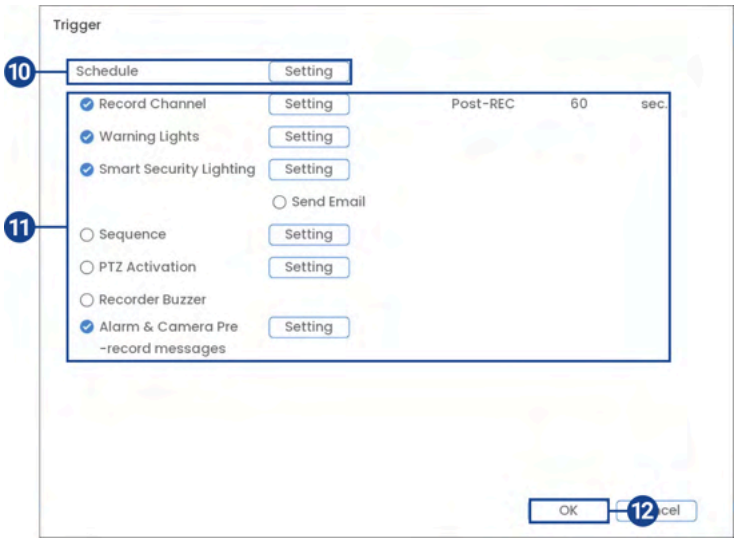
> **NOTE**
>
> The first two person & vehicle detection rules were added by default. The detection type for the two default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

6. Click the **Draw** icon and customize the active area for person & vehicle detection:

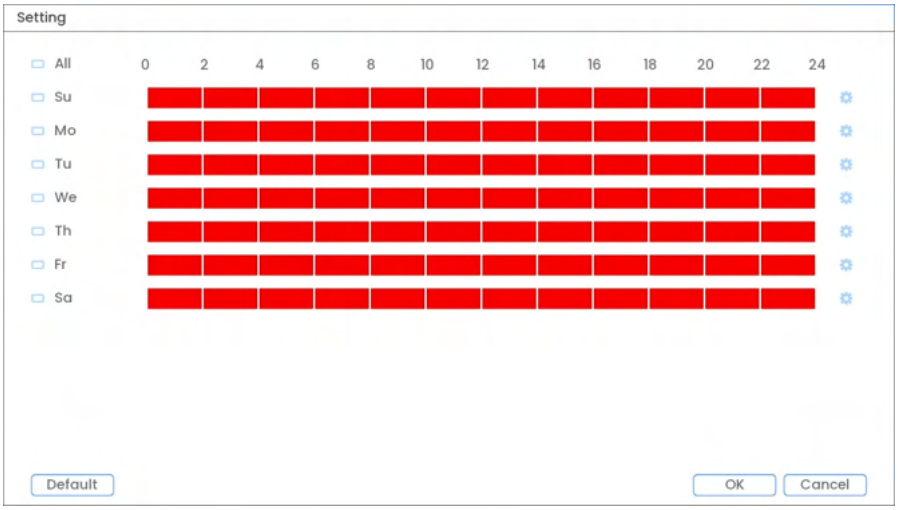


- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **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 crosses through 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 **Exit** for movement exiting the defined area, or **Both** for both types of directions.
- Click **OK** when finished.

7. Click the **Trigger** icon to adjust how the system will react to person & vehicle detection.

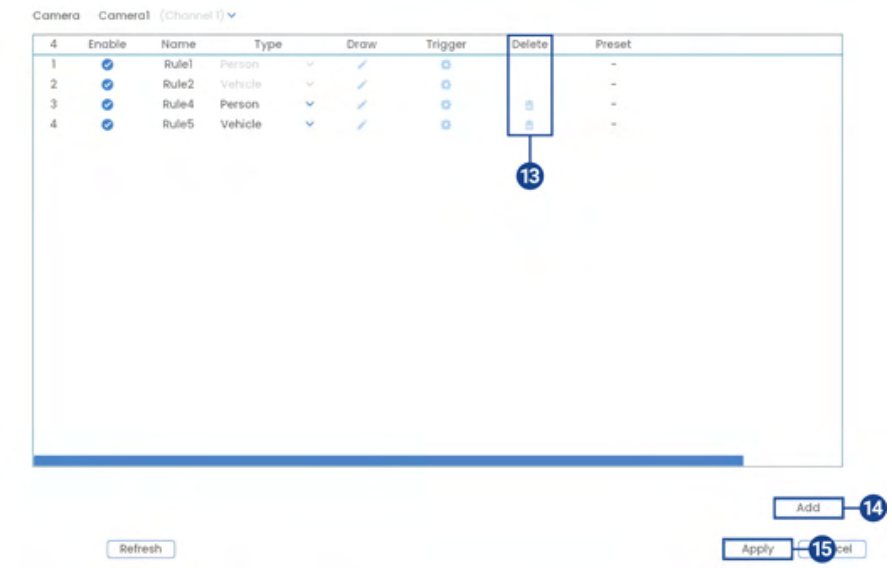


8. Click **Setting** next to **Schedule** to choose which days and times of the week to enable person & vehicle detection:



   - 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.
9. Choose how the system will react to smart motion detection:
   - **Record Channel**: Select the cameras that will record when a person & vehicle is detected. Set the length of recording following a person & vehicle detection event in the **Post-REC** field.
   - **Warning Lights**: Check to enable warning lights. Click **Setting** to change the warning light mode to **Flashing** or choose how long the warning light will stay on following a person & vehicle detection event. To learn more, see 13.1.1 *Smart Motion Activated Warning Lights*, page 46.
   - **Smart Security Lighting**: Check to enable **Smart Security Lighting**. Click **Setting** 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. To learn more, see 13.1.3 *Smart Motion Activated* **Smart Security Lighting**, page 52.
   - **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
   - **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them, see 25.6.5 *Configuring Email Alerts*, page 127.
   - **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
   - **Recorder Buzzer**: Check to enable the system buzzer.
   - **Alarm & Camera Pre-record Messages**: Check to enable alarm & camera pre-record messages. Click **Setting** to select a pre-recorded voice message or alarm sound. Choose how many times the prompt will play following a person & vehicle detection event. To learn more, see 13.1.2 *Smart Motion Activated Alarm & Camera Pre-record Messages*, page 49.
10. Click **OK**.

11. Click the **Delete** icon to remove the rule.



12. Click **Add** to create additional active areas for person & vehicle detection.
13. Click **Apply** to save changes.

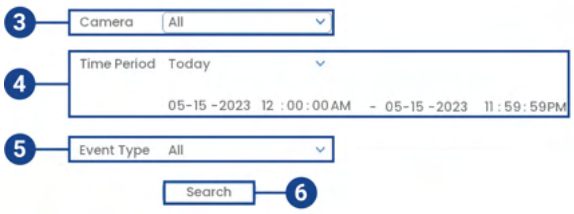
15.4 Searching for Person & Vehicle Detection (Smart Search)

Smart Search lets you filter recorded video to search for person and/or vehicle detection events.

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

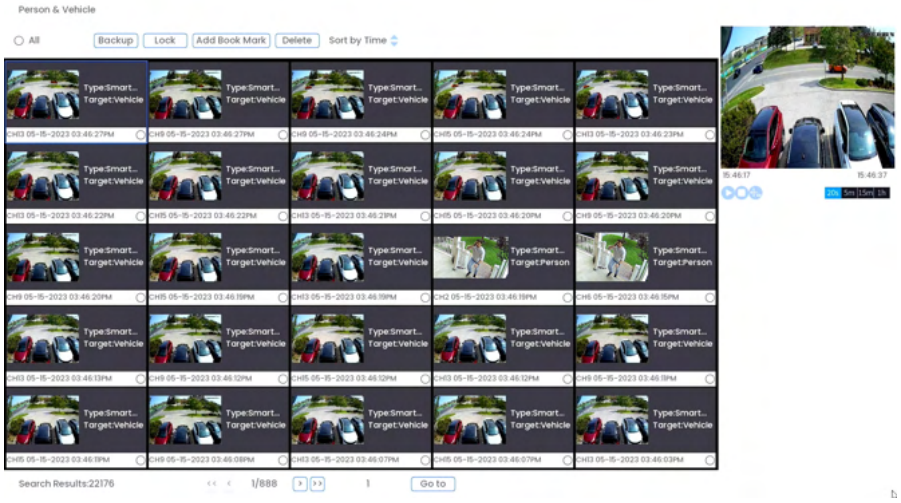
To perform a Smart Search:

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



3. Select a camera to search for detection events from, or select **All**.
4. Select the time period for your search, then enter the start and end time.
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.
     - **Delete:** Delete events.

15.5 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.

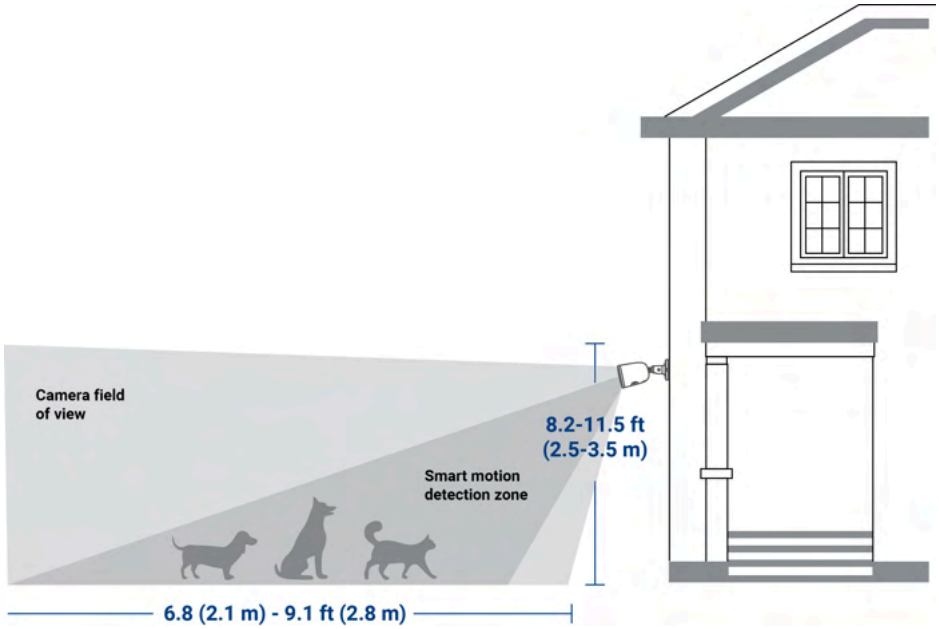
16 Animal Detection

The system allows you to maintain a watchful eye in real time on your pets even when you are not home. This smart feature is especially helpful if you have a large space to monitor so you can get alerts whenever your pet roams around. Using advanced smart motion detection, Lorex cameras can detect pets based on their weights, heights, and heat signatures, differentiating them from people, vehicles, and other moving objects. Select Lorex cameras also offer color night vision, so you can see your pet in the dark, and Two Way Talk, so you can listen for and respond to barks, howls, and meows.

Animal 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 Accurate Animal Detection

The following are important camera installation notes to ensure accurate 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.



Animal Detection

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

- 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 9.1 ft (2.8 m) from the camera.
- Angle the camera 15 ° down from the level position.
- Install the camera between 8.2-11.5 ft (2.5-3.5 m) off of the ground.

Accuracy of 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.

16.2 Configuring Animal Detection

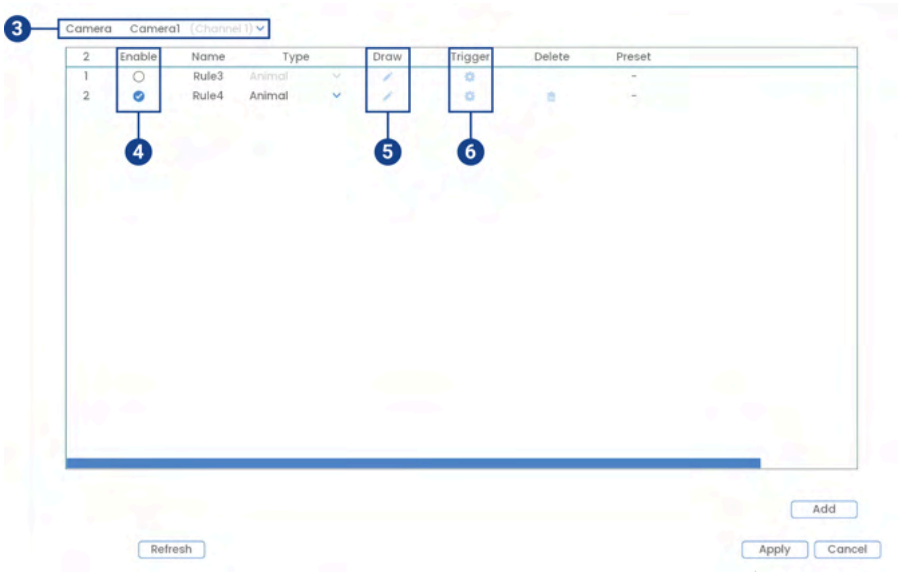
The system allows you to monitor for animal detection events. Adjust preferences for animal detection per camera.

NOTE

- If a Smart Plan is not enabled properly on your camera, the animal detection feature will not work. Please make sure to enable the Smart Motion feature before continuing. Refer to , page for full instructions.
- The system can support animal detection in up to 6 channels.

To configure 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 **Animal** tab from the side panel.

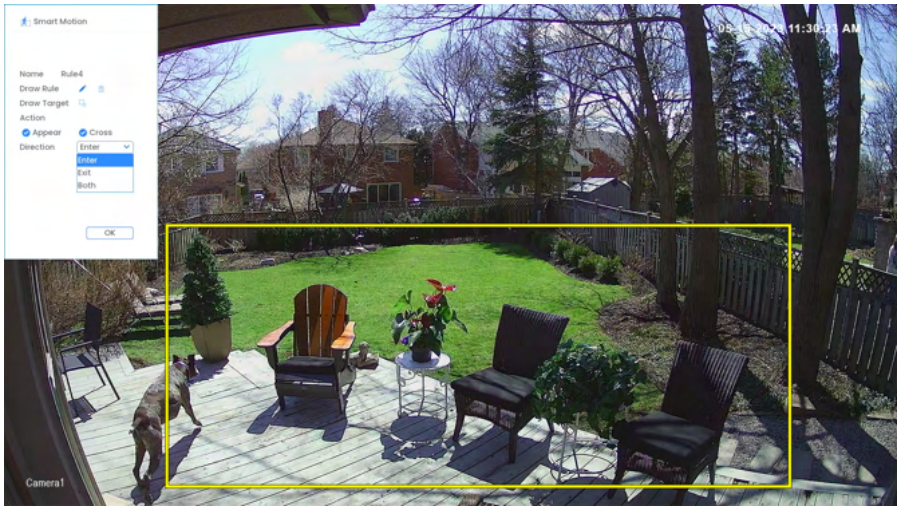


3. Select a camera to configure.
4. Check to enable the detection rule that you want to use.

NOTE

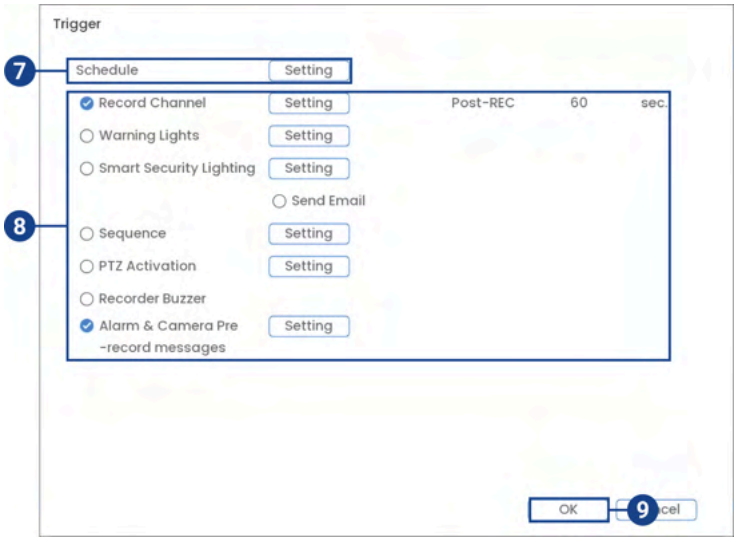
The first animal detection rule was added by default. The first default cannot be deleted, it can only be enabled or disabled. All rules added after can be deleted.

5. Click the **Draw** icon and customize the active area for animal detection:

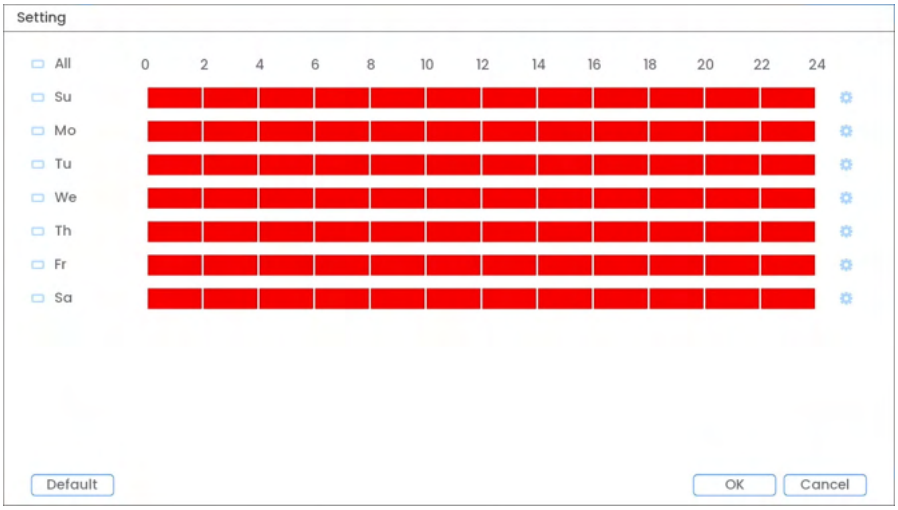


- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **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 crosses through 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 **Exit** for movement exiting the defined area, or **Both** for both types of directions.
- Click **OK** when finished.

6. Click the **Trigger** icon to adjust how the system will react to animal detection.

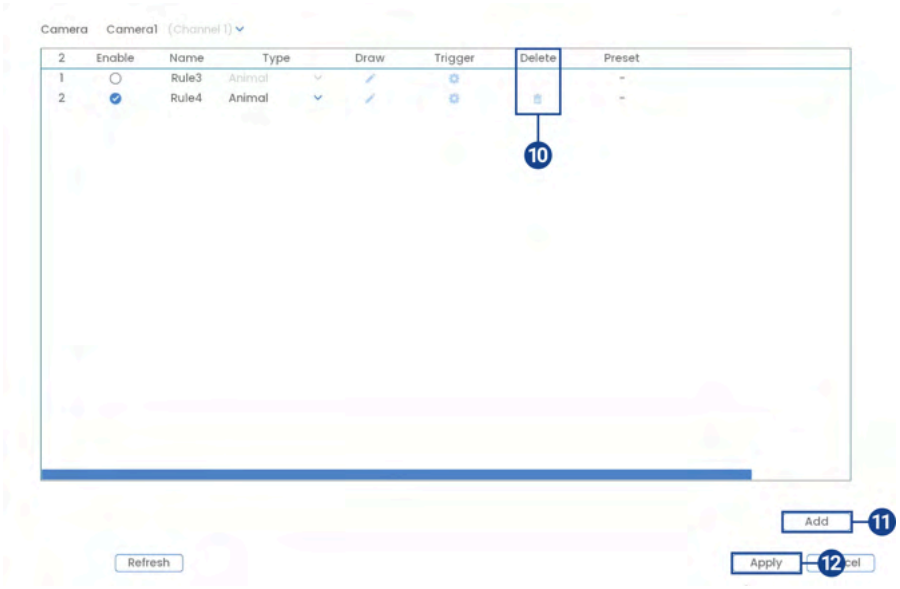


7. Click **Setting** next to **Schedule** to choose which days and times of the week to enable smart motion detection:



   - 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.
8. Choose how the system will react to smart motion detection:
   - **Record Channel**: Select the cameras that will record when an animal is detected. Set the length of recording following an animal detection event in the **Post-REC** field.
   - **Warning Lights:** Check to enable warning lights. Click **Setting** to change the warning lights to **Flashing** or choose how long the warning lights will stay on following an animal detection event. To learn more, see 13.1.1 *Smart Motion Activated Warning Lights*, page 46.
   - **Smart Security Lighting:** Check to enable **Smart Security Lighting**. Click **Setting** to select a custom color or choose how long the light will stay on following an animal detection event. Click on the red color box to open the custom color settings. To learn more, see 13.1.3 *Smart Motion Activated* **Smart Security Lighting**, page 52.
   - **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them, see 25.6.5 *Configuring Email Alerts*, page 127.
   - **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
   - **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
   - **Recorder Buzzer**: Check to enable the system buzzer.
   - **Alarm & Camera Pre-record Messages:** Check to enable alarm & camera pre-record messages. Click **Setting** to select a pre-recorded voice message or alarm sound. Choose how many times the pre-recorded message will play following an animal detection event. To learn more, see 13.1.2 *Smart Motion Activated Alarm & Camera Pre-record Messages*, page 49.
9. Click **OK**.

10. Click the **Delete** icon to remove the rule.



11. Click **Add** to create additional active areas for animal detection.
12. Click **Apply** to save changes.

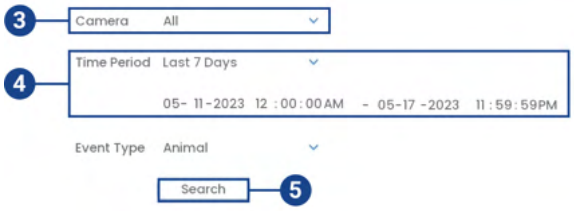
16.3 Searching for Animal Detection (Smart Search)

Smart Search lets you filter recorded video to search for animal detection events.

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

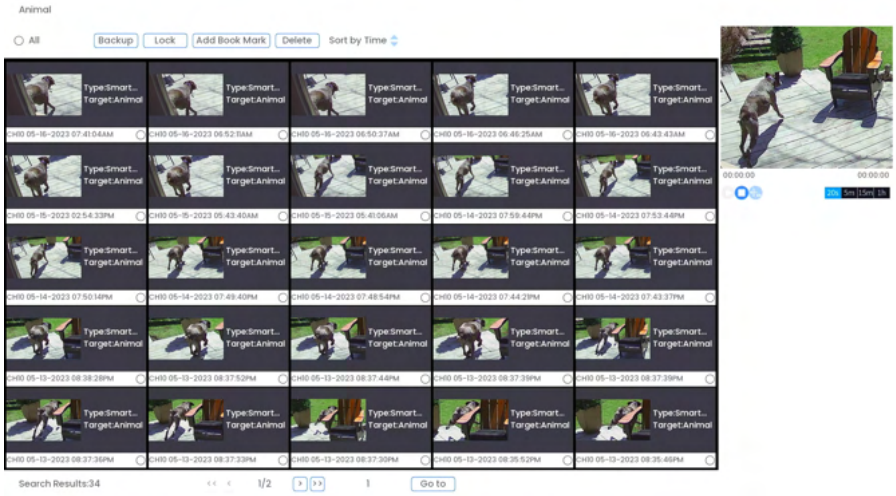
To perform a Smart Search:

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



3. Select a camera to search for detection events from, or select **All**.
4. Select the time period for your search, then enter the start and end time.

5. Click **Search**.



6. 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.
     - **Delete:** Delete events.

16.4 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.

17 Smart Security Lighting

Certain Lorex IP deterrence cameras have a built-in, colorful **Smart Security Lighting** on the front of the camera. This smart security lighting feature can be set to different lighting modes or paired with smart motion detection settings. To learn how to pair **Smart Security Lighting** with smart motion, refer to 13.1.3 *Smart Motion Activated* **Smart Security Lighting**, page 52.

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.

17.1 Configuring Smart Security Lighting

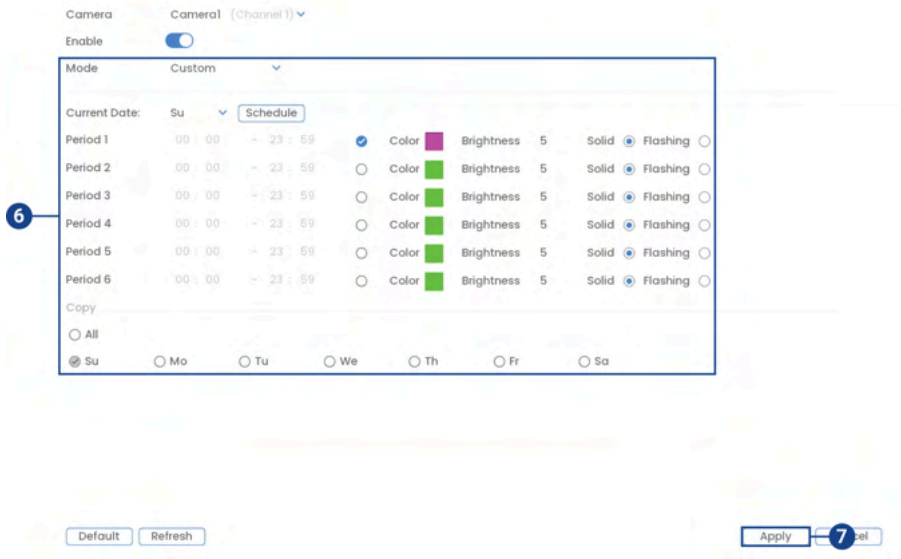
Select a **Smart Security Lighting** mode for your camera.

To configure Smart Security Lighting:

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 camera to configure.
4. Check to **Enable**.
5. Under **Mode**, 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, then click **OK** to select the color.
- **Brightness:** Set the brightness level.
- Select **Normal** for a solid light or **Flashing** for a flashing light.
- **Copy:** Copy your preferences onto other weekdays or **All**.

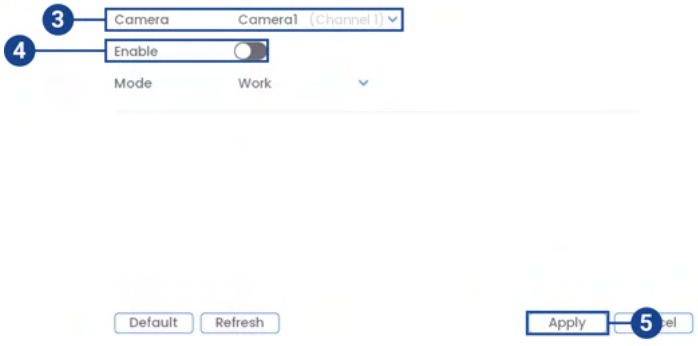
7. Click **Apply** to save changes.

17.2 Turn Smart Security Lighting Off

You can easily turn the **Smart Security Lighting** mode off by disabling it.

To turn Smart Security Lighting off:

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 camera to configure.
4. Uncheck **Enable**.
5. Click **Apply** to save changes.

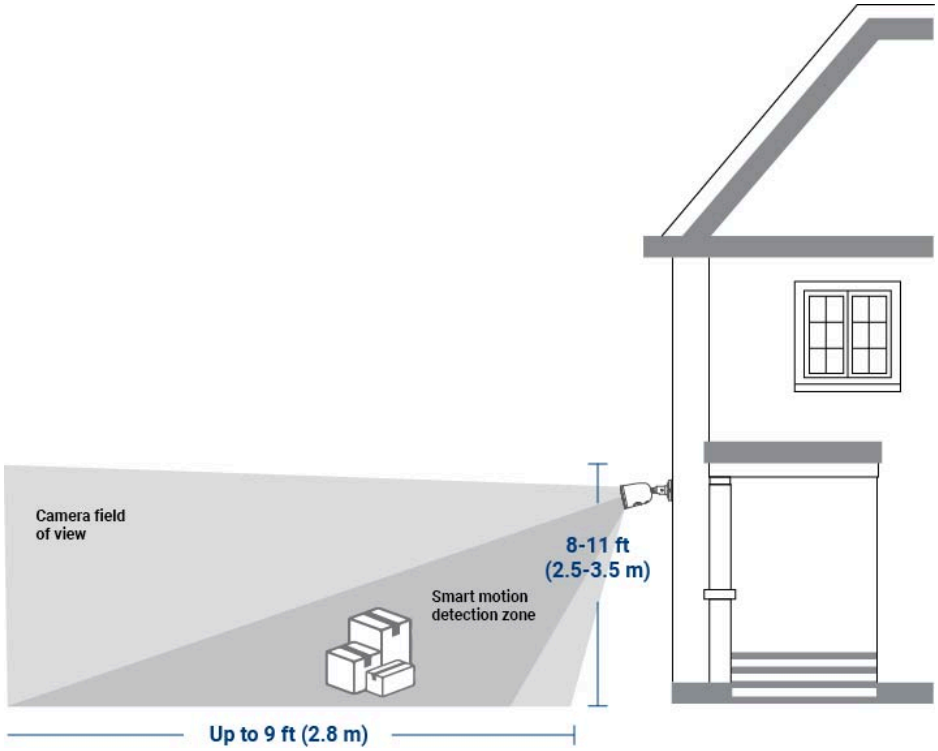
18 Package & Envelope Detection

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.

18.1 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 °	8.2–11.5 ft (2.5 — 3.5 m)	6.8 ft (2.1 m)	9.1 ft (2.8 m)

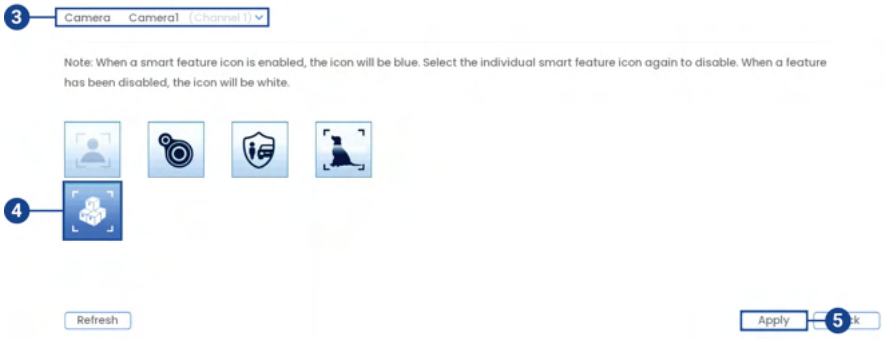
The image below is a good example of camera placement, angle, and height for your camera to detect packages & envelopes. This view captures the path leading up to the door and the door stoop, where packages & envelopes are typically dropped-off. Note that there are no obstructions between the camera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

18.2 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 camera to configure.
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.

18.3 Configuring Package & Envelope Detection

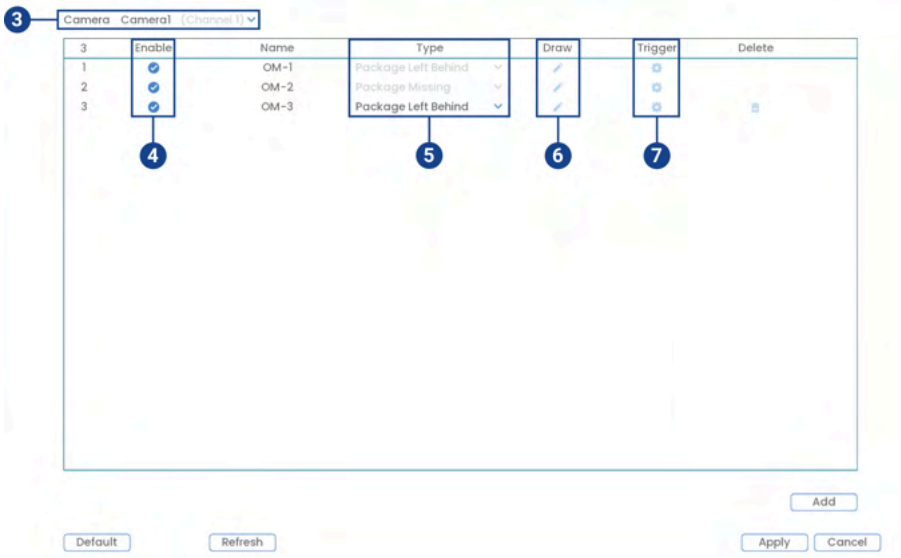
The system allows you to define an area and set a period to detect packages & envelopes that are either left behind or missing. Select channels that you want to enable package & envelope detection on and adjust preferences.

NOTE

The system can support package & envelope detection in up to 6 channels.

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.

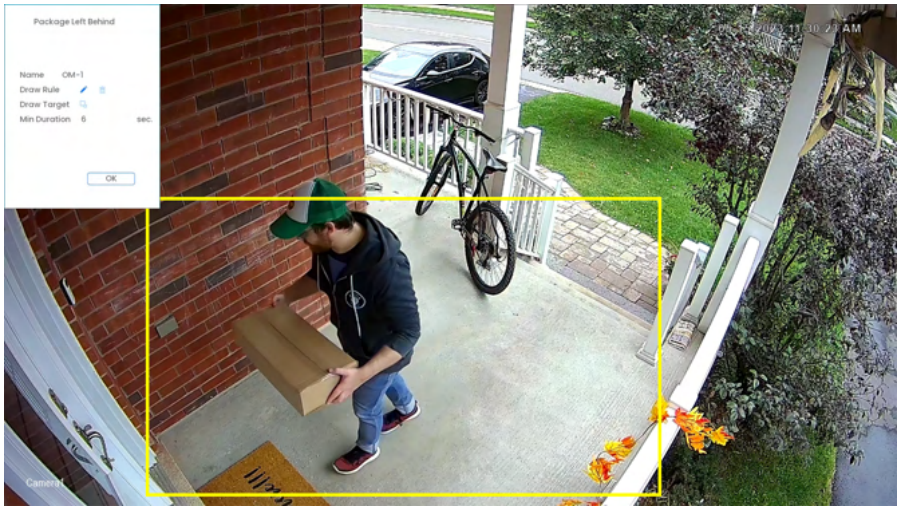


3. Select a camera to configure.
4. Check to enable the package & envelope detection rules that you want to use.
5. Select between **Package Left Behind** or **Package Missing** detection types.

NOTE

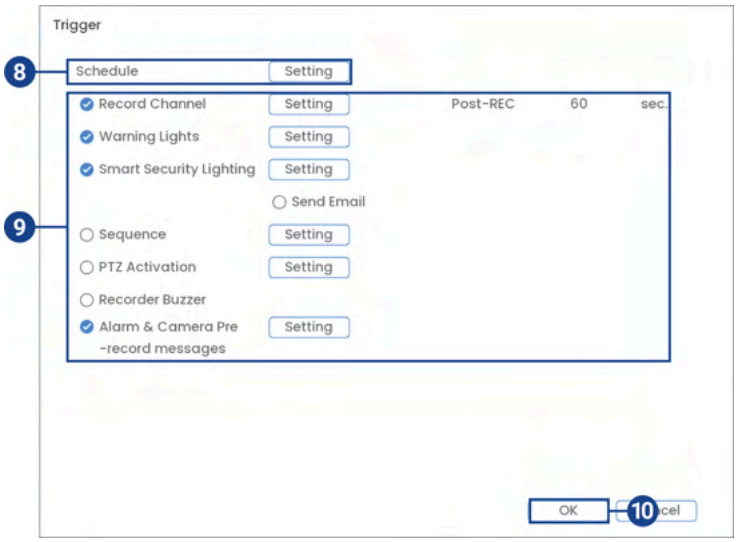
The first two package & envelope detection rules were added by default. The detection type for the two default rules cannot change and the areas can only be enabled or disabled. All details from rules added after can be changed or deleted.

6. Click the **Draw** icon and customize the active area for package & envelope detection:

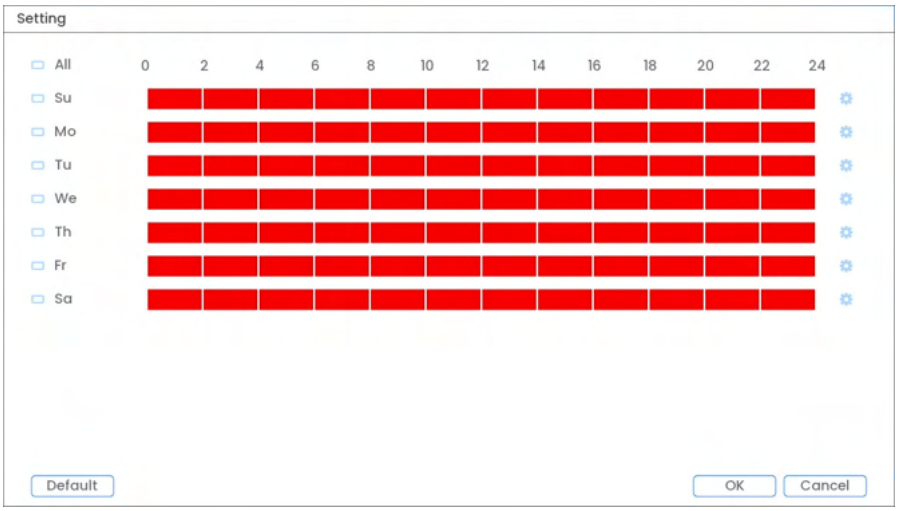


- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.
- **Min Duration:** Select the number of seconds before the device is triggered.
- Click **OK** when finished.

7. Click the trigger modifying icon to adjust how the system will react to package & envelope detection.

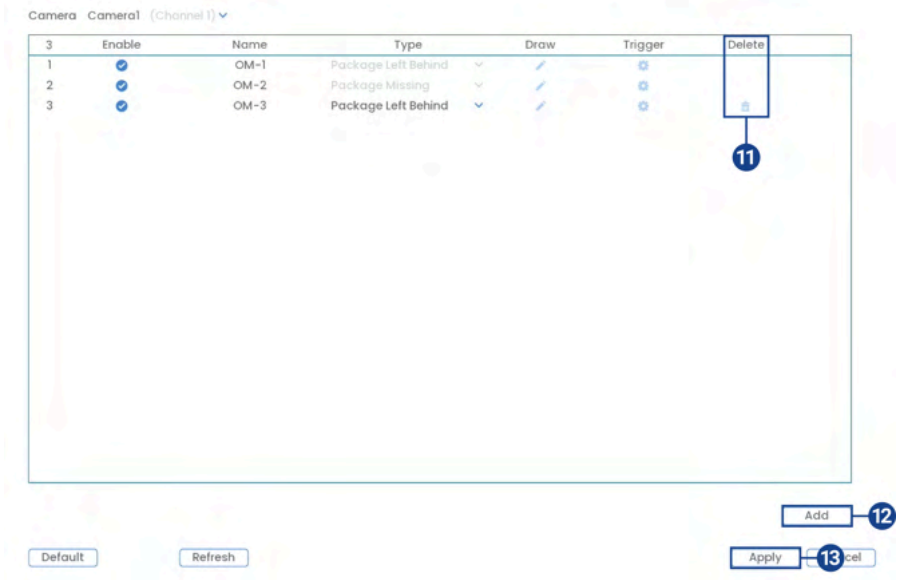


8. Click **Setting** next to **Schedule** to choose which days and times of the week to enable package & envelope detection:



   - 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.
9. Choose how the system will react to package/envelope detection:
   - **Record Channel**: Select the cameras that will record when a package or envelope is left behind or missing. Set the length of recording following a package & envelope detection event in the **Post-REC** field.
   - **Warning Lights**: Check to enable warning lights. Click **Setting** to change the warning lights mode to **Flashing** or choose how long the warning lights will stay on following a package & envelope detection event. To learn more, see 13.1.1 *Smart Motion Activated Warning Lights*, page 46.
   - **Smart Security Lighting**: Check to enable **Smart Security Lighting**. Click **Setting** 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. To learn more, see 13.1.3 *Smart Motion Activated* **Smart Security Lighting**, page 52.
   - **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them, see 25.6.5 *Configuring Email Alerts*, page 127.
   - **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
   - **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
   - **Recorder Buzzer**: Check to enable the system buzzer.
   - **Alarm & Camera Pre-record Messages**: Check to enable alarm & camera pre-record messages. Click **Setting** to select a pre-record voice message or alarm sound. Choose how many times the pre-record message will play following a package & envelope detection event. To learn more, see 13.1.2 *Smart Motion Activated Alarm & Camera Pre-record Messages*, page 49.
10. Click **OK**, and then click **OK** again.

11. Click the **Delete** icon to remove the rule.



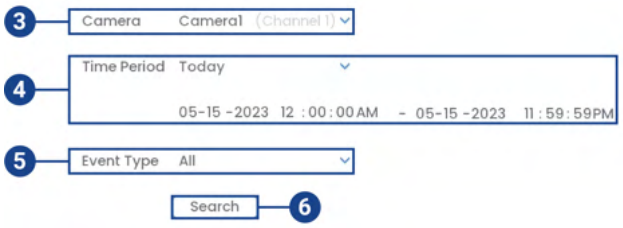
12. Click **Add** to create additional active areas for package & envelope detection.
13. Click **Apply** to save changes.

18.4 Searching for Package & Envelope Detection (Smart Search)

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

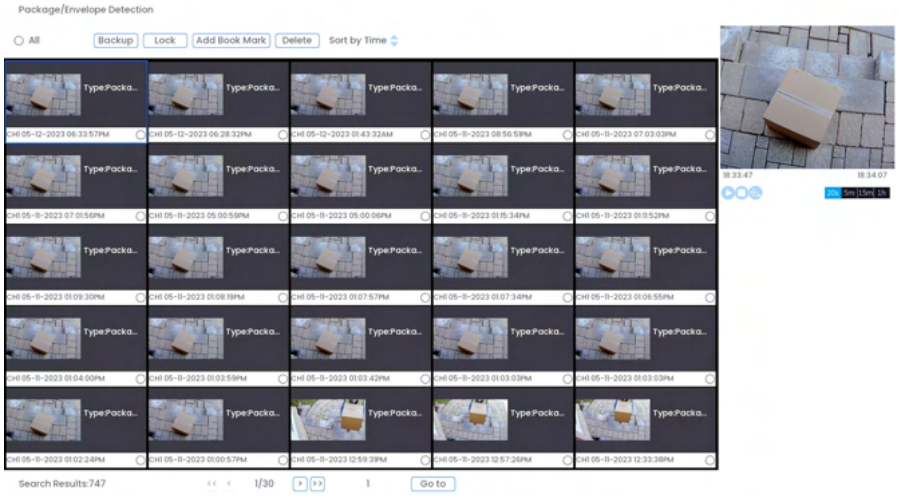
To perform a Smart Search:

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 camera to search for detection events from, or select **All**.
4. Select the time period for your search, then enter the start and end time.
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.
     - **Delete:** Delete events.

19 Face Detection

WARNING

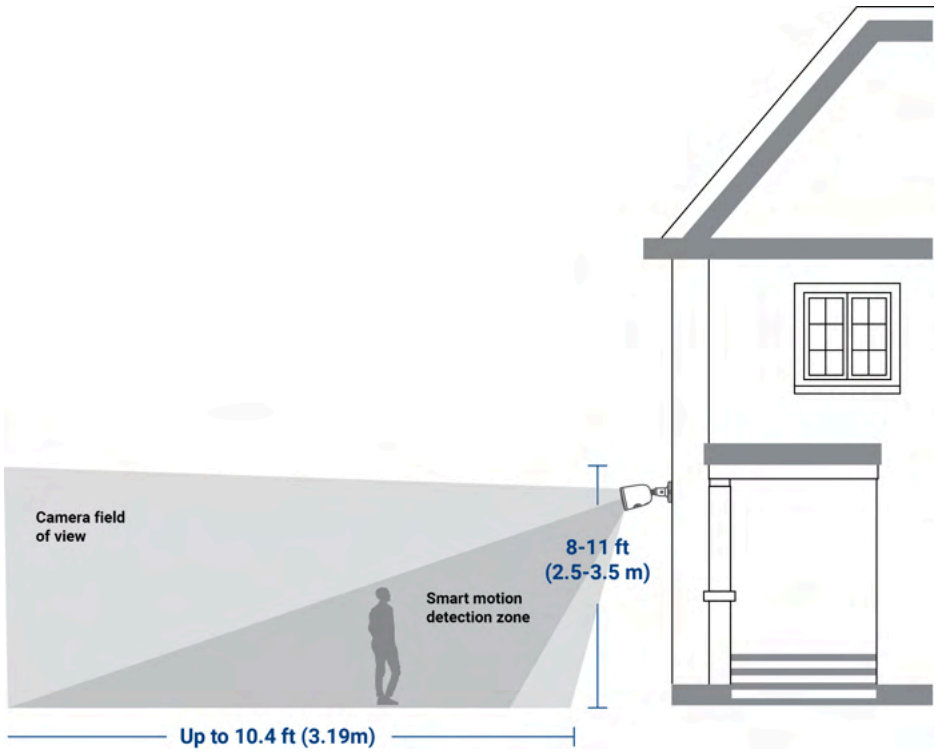
Facial recording without consent is illegal in certain jurisdictions. Lorex Technology does not assume liability for any use of its product that fails to conform with local laws.

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.

19.1 Ensuring Face & Mask Detection Accuracy

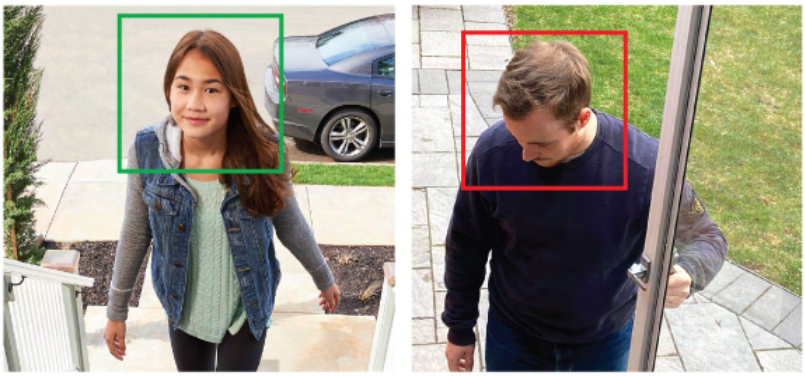
The following are important camera installation notes to ensure accurate Face Detection. For full camera mounting instructions, see your camera's documentation at lorex.com.



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

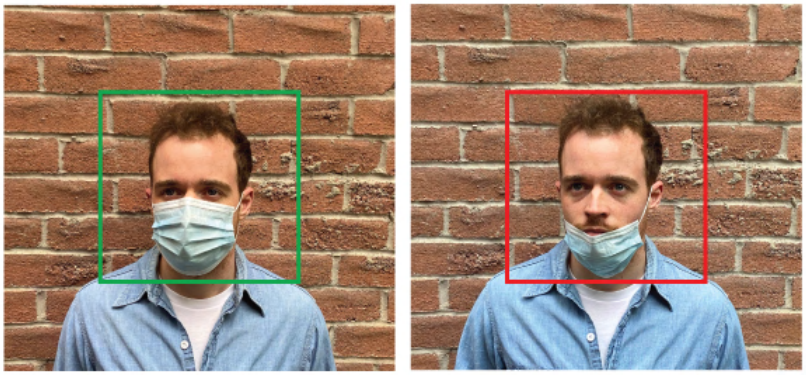
- Install in a bright area and avoid facing direct sunlight with strong backlights and dark shadows.
- Choose a location where objects of interest will be no further than 10.4 ft (3.19 m) from the camera.
- Position the camera about 9.8 ft (3 m) off the ground to detect the full proportion of a face.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

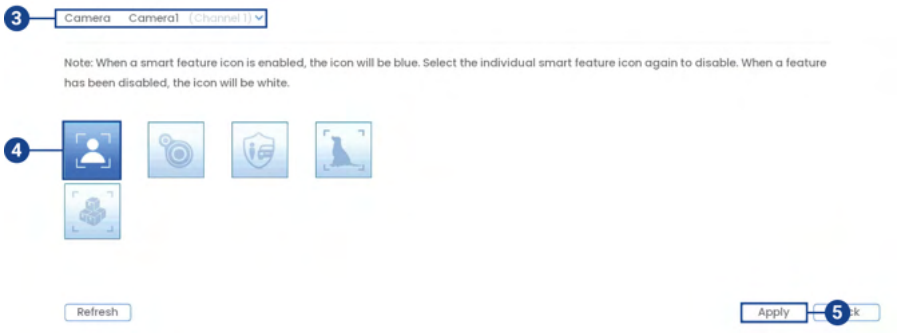
19.2 Enable Face & Mask Detection in Smart Plan

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 camera to configure.
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.

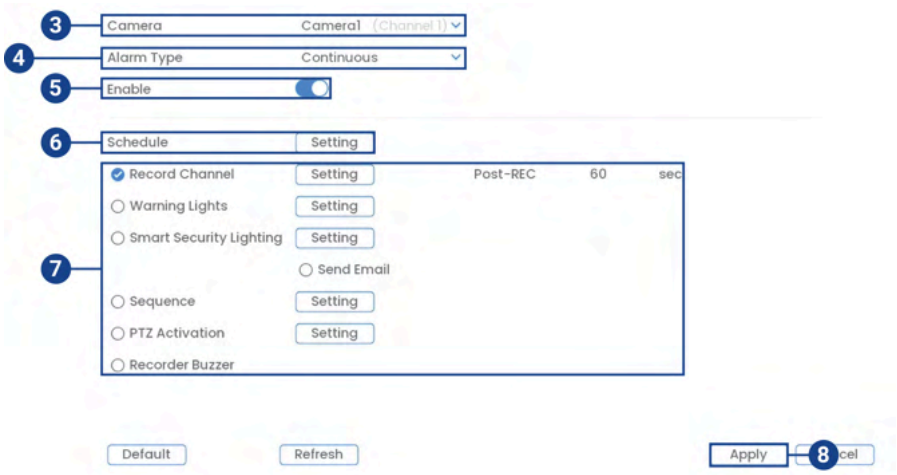
19.3 Configuring Face Detection

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

NOTE
The system can support animal detection in up to 6 channels.

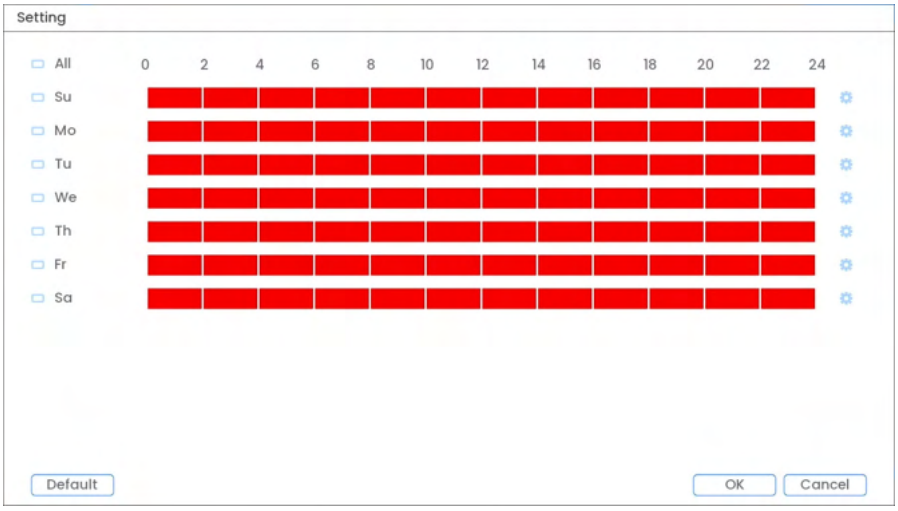
To configure face detection:

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.



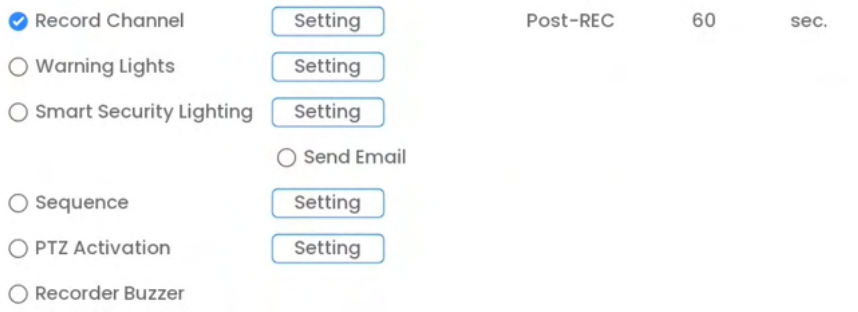
3. Select a camera to configure.
4. Select **Continuous**.
5. Check to enable face detection on the selected channel.

6. Click **Setting** 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 cameras that will record when a face is detected. Set the length of recording following a face detection event in the **Post-REC** field.
- **Warning Lights**: Check to enable warning light. Click **Setting** to change the warning light mode to **Flashing** or choose how long the warning light will stay on following a face detection event. To learn more, see 13.1.1 *Smart Motion Activated Warning Lights*, page 46.
- **Smart Security Lighting**: Check to enable **Smart Security Lighting**. Click **Setting** 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. To learn more, see 13.1.3 *Smart Motion Activated* **Smart Security Lighting**, page 52.
- **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them , see 25.6.5 *Configuring Email Alerts*, page 127.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Recorder Buzzer**: Check to enable the system buzzer.

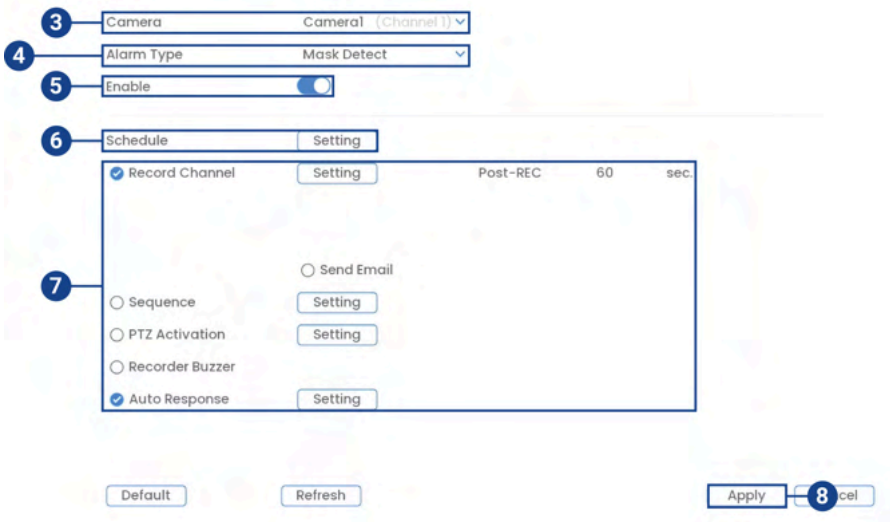
8. Click **Apply** to save changes.
9. *(OPTIONAL)* Click **Copy** to apply the settings to one or more other cameras.

19.4 Configuring Mask Detection

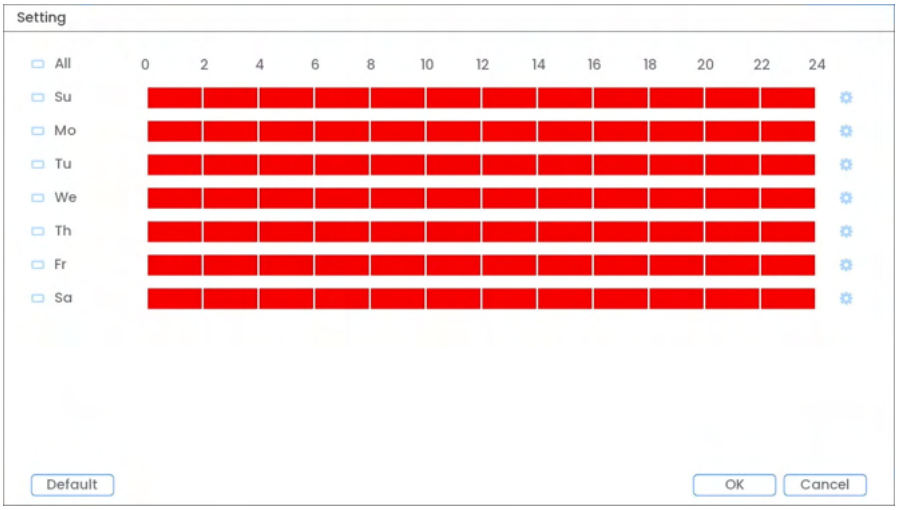
Select channels that you want to enable mask detection on and adjust preferences.

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.

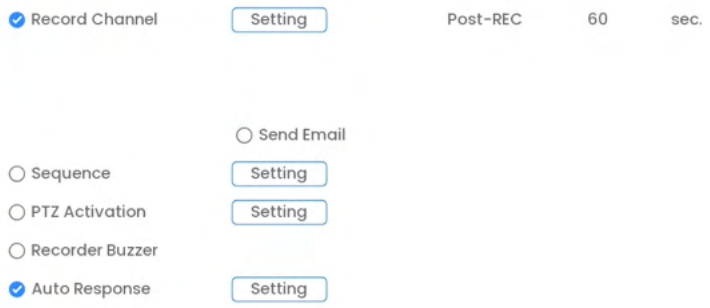


3. Select a camera to configure.
4. Select **Mask Detect**.
5. Check to enable mask detection on the selected camera.
6. Click **Setting** next to **Schedule** to choose which days of the week to enable mask detection:



- 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 cameras that will record when a face is detected. 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 25.6.5 *Configuring Email Alerts*, page 127.
- **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
- **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
- **Recorder Buzzer**: Check to enable the system buzzer.
- **Auto Response**: Check to enable an automatic audio response when a face is detected without a mask. Click **Setting** to create a schedule for auto response.

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

9. *(OPTIONAL)* Click **Copy** to apply the settings to one or more other cameras.

19.5 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:

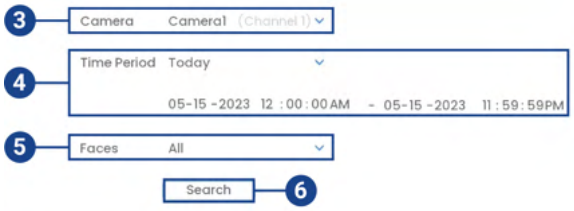
1. From the Live View display, right-click to open the Quick Menu, then click **Face Preview**.
2. Click **Enable** for the face preview panel to appear on the right side of the screen. Click **Disable** for the face preview panel to disappear from live view.

19.6 Searching for Face & Mask Detection (Smart Search)

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

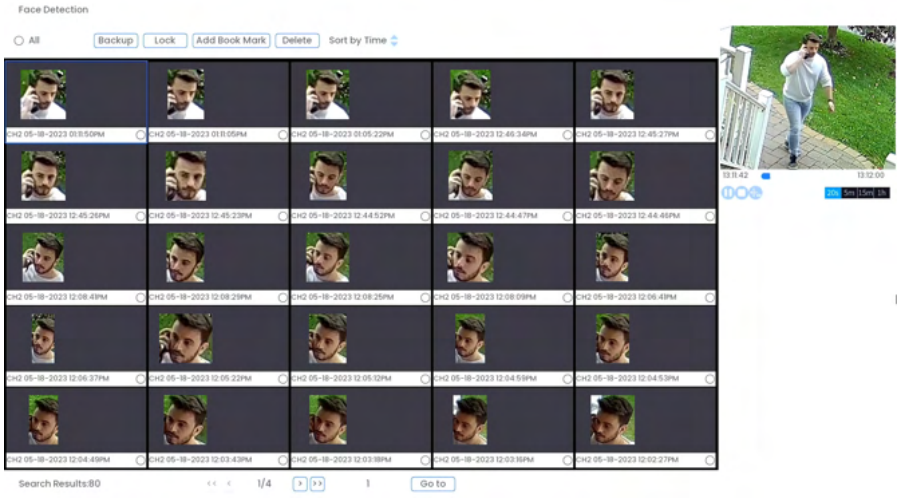
To perform a Smart Search:

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 camera to search for detection events from, or select **All**.
4. Select the time period for your search, then enter the start and end time.
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.
     - **Delete:** Delete events.

20 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.

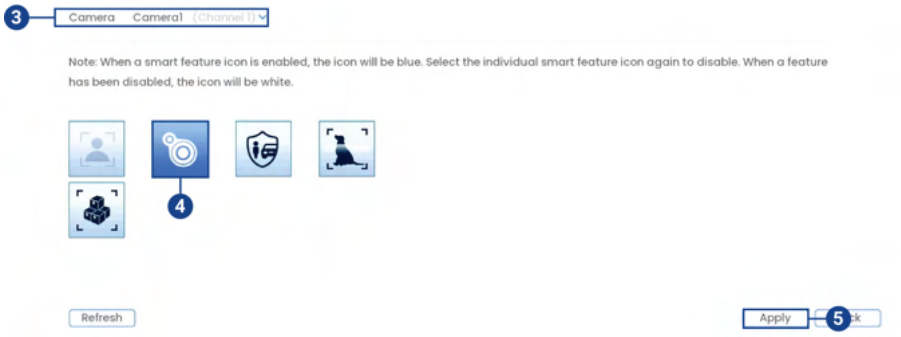
Heat Map is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

20.1 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 camera to configure.
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.

20.2 Configuring Heat Map

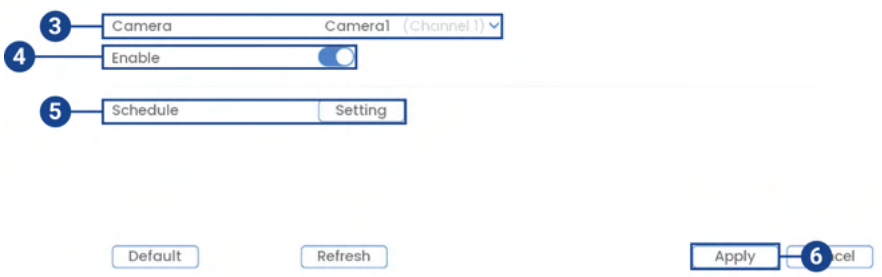
> **NOTE**
>
> The system can support heat map in up to 6 channels.

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.

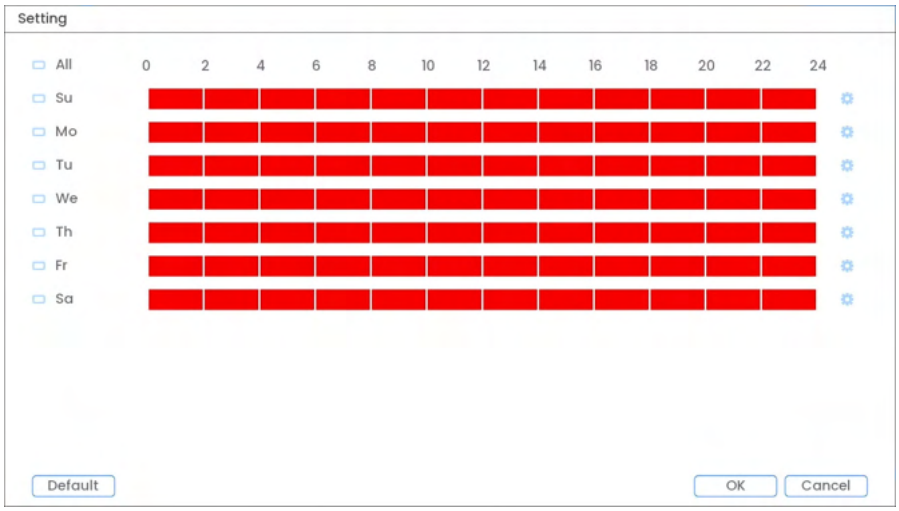
To configure heat map:

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 camera to configure.
4. Check to enable heat map on the selected camera.
5. Click **Setting** 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.

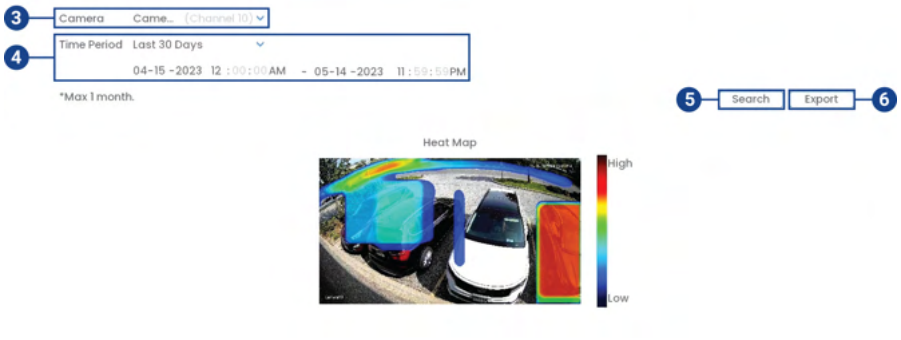
20.3 Searching for Heat Map (Smart Search)

Search for heat mapping on a specific camera 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. Select the time period for your search, then enter the start and end time.
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**.

21 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.

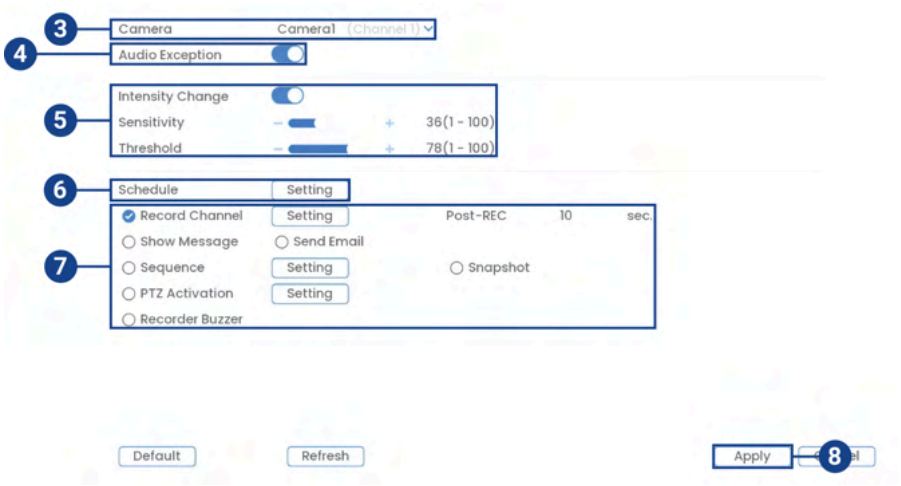
Sound Detection is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

21.1 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 29 *Connecting Audio Devices*, page 154 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.



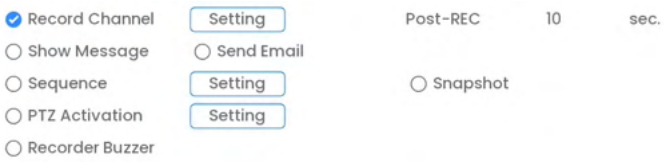
3. Select a camera to configure.
4. Check to enable **Audio Exception** which will trigger the system when the audio input is abnormal.
5. Check to enable **Intensity Change** to trigger the system when the sound intensity exceeds the sensitivity and threshold levels:
   - **Sensitivity**: Adjust the 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 **Setting** 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 cameras that will record when abnormal or intense sounds are detected. Set the length of recording following a sound detection event in the **Post-REC** field.
   - **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 25.6.5 *Configuring Email Alerts*, page 127.
   - **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
   - **Snapshot:** Select the numbered tiles next to this option to save a snapshot of the corresponding cameras.
   - **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
   - **Recorder Buzzer**: Check to enable the system buzzer.

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

22 Safeguard

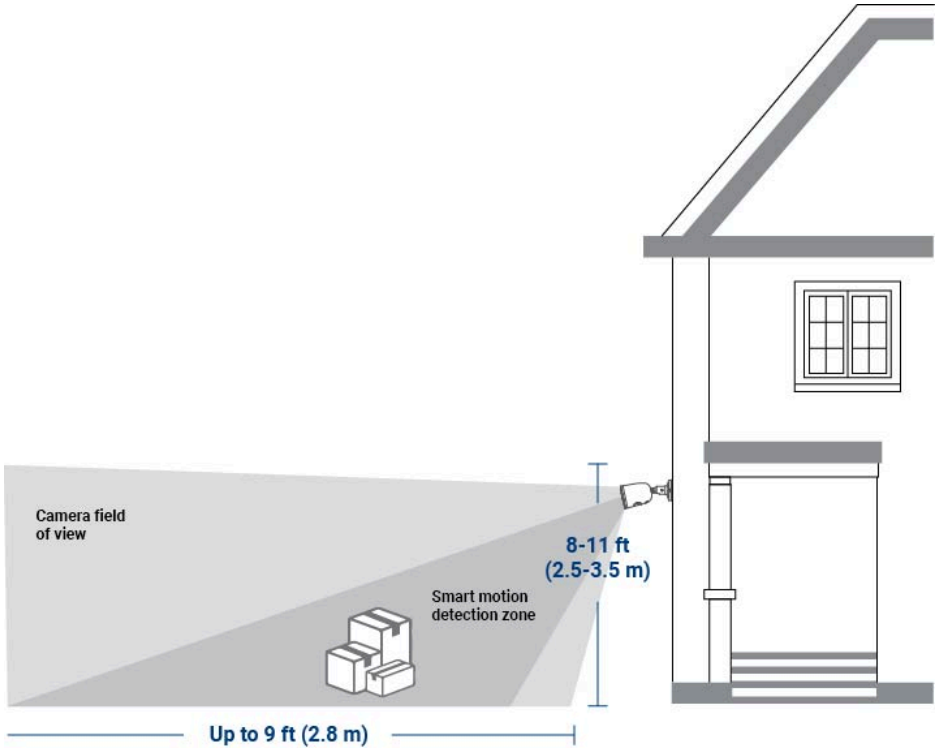
The **Safeguard** feature allows you to create a bounding box within the camera's field-of-view to notify you on whether an object is left behind or missing.

- **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.

22.1 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)

22.2 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.

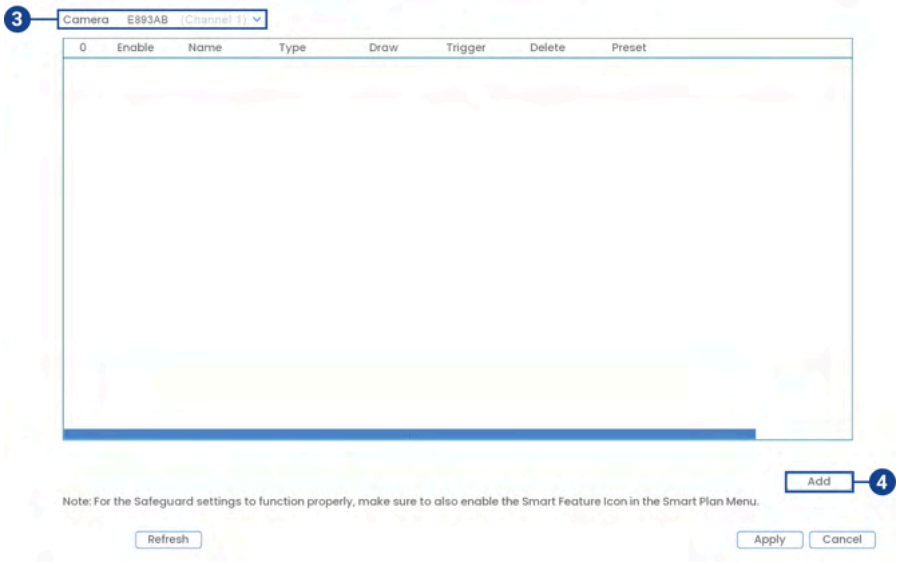
NOTE

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 , page for full instructions.

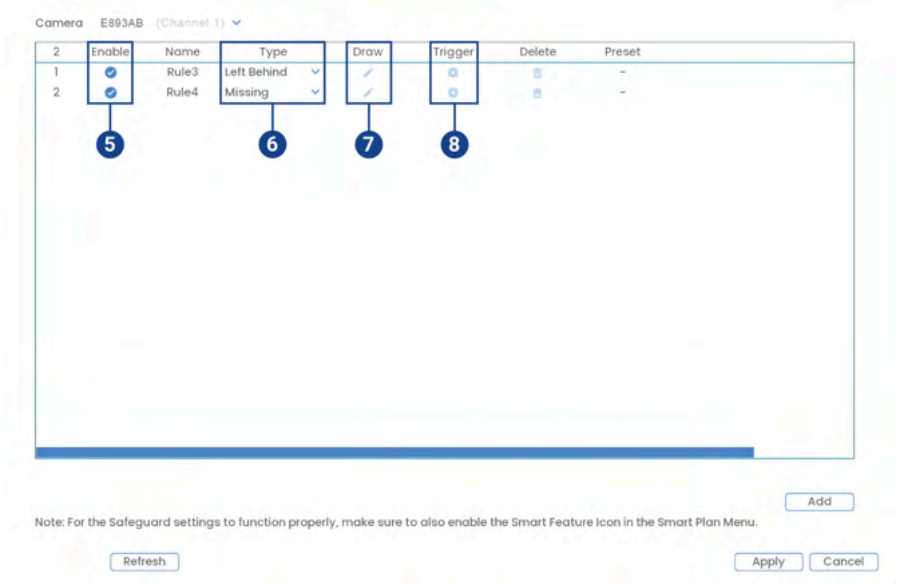
To configure Safeguard:

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.

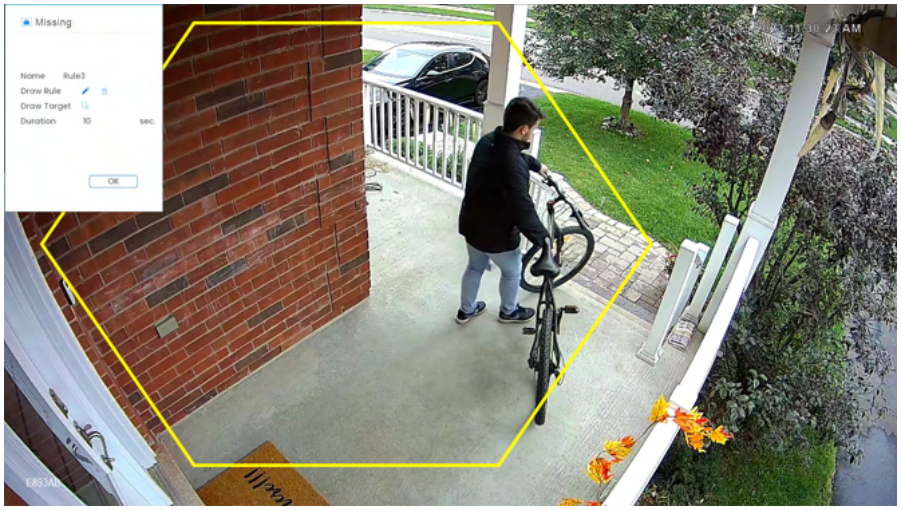


3. Select a camera to configure.
4. Click **Add** to create a **Safeguard** rule.
5. Check to enable the rule.



6. Select between **Left Behind** or **Missing** detection types.

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

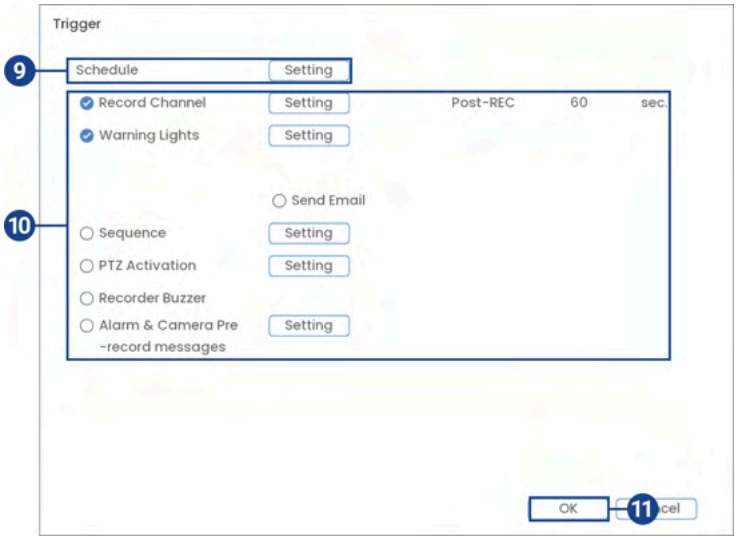


- **Name:** Click to enter a custom name for the detection area.
- **Draw Rule:** Click-and-drag the corners of the yellow box to resize the area. To create a new bounding box, click the delete icon to remove the current one, then click on the camera's live view image and draw a line around the area that you want to monitor. Continue to click to change the direction and then right-click to close the area.

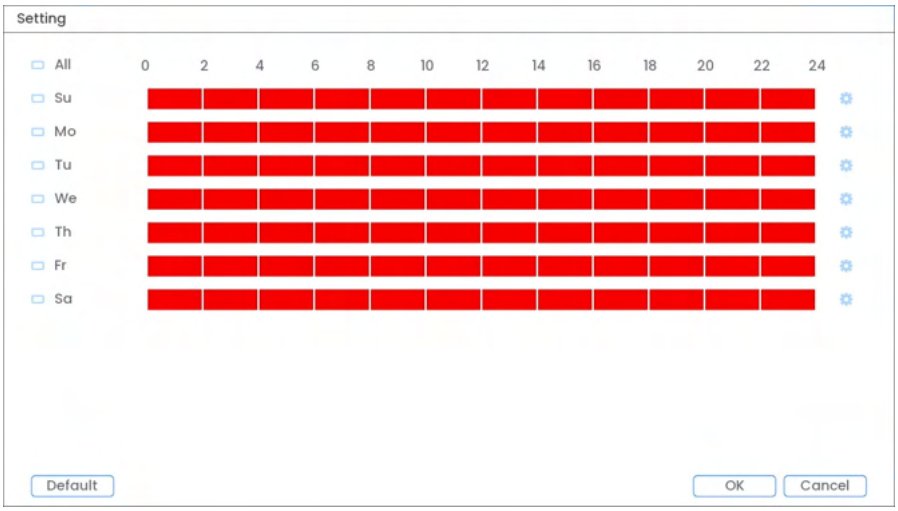
> **NOTE**
>
> For most accurate results, use **Safeguard** in areas that are simple, without frequent or obvious light change, and with low-density traffic. False alarms increase in high-density areas where there are too many people.

- **Duration:** Click to type in the number of seconds before the system is triggered. Increasing the time period before the system is triggered may help to reduce false alerts.
- Click **OK** when finished.

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



9. Click **Setting** next to **Schedule** to choose which days and times of the week to enable **Safeguard**:



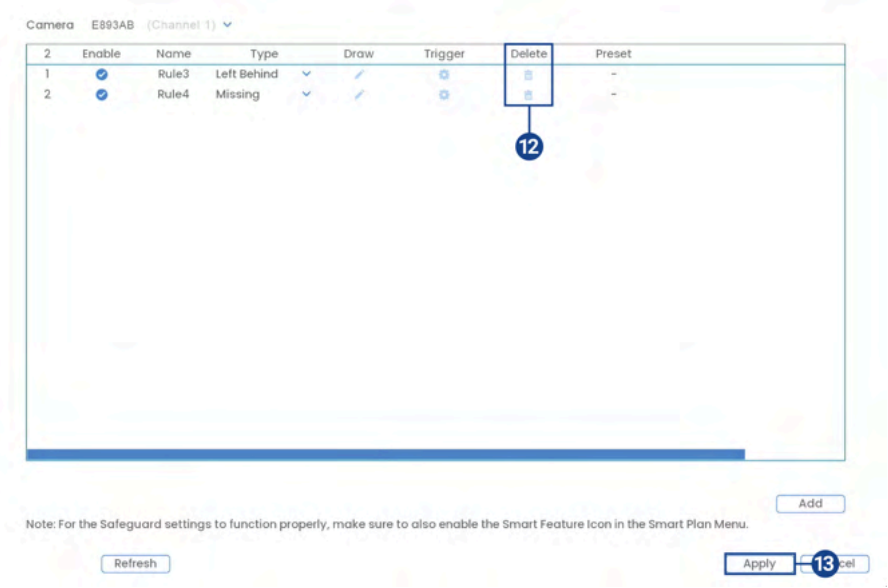
   - Click or click-and-drag along each of the red timelines to quickly add or remove time from each day's schedule in 30–minute segments.
   - Click beside 2 or more days to link schedules ( ). This allows you to quickly change multiple schedules at once.
   - To make fine adjustments to a schedule, click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

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

   - **Record Channel**: Select the cameras that will record when **Safeguard** is triggered. Set the length of recording following a **Safeguard** event in the **Post-REC** field.
   - **Warning Lights**: Check to enable warning lights. Click **Setting** to change the warning light mode to **Flashing** or choose how long the warning lights will stay on following a **Safeguard** event. To learn more, see 13.1.1 *Smart Motion Activated Warning Lights*, page 46.
   - **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them, see 25.6.5 *Configuring Email Alerts*, page 127.
   - **Sequence**: Sequence mode will begin. Select the numbered tiles next to this option to include the corresponding cameras in the sequence.
   - **PTZ Activation**: Set connected PTZ cameras to start a tour, pattern, or go to a preset location.
   - **Recorder Buzzer**: Check to enable the system buzzer.
   - **Alarm & Camera Pre-record Messages**: Check to enable alarm & camera pre-record voice messages. Click **Setting** to select a pre-record voice message or alarm sound. Choose how many times the pre-record message will play following a **Safeguard** event. To learn more, see 13.1.2 *Smart Motion Activated Alarm & Camera Pre-record Messages*, page 49.

11. Click **OK**, then click **OK** again.

12. Click the **Delete** icon to remove the rule.



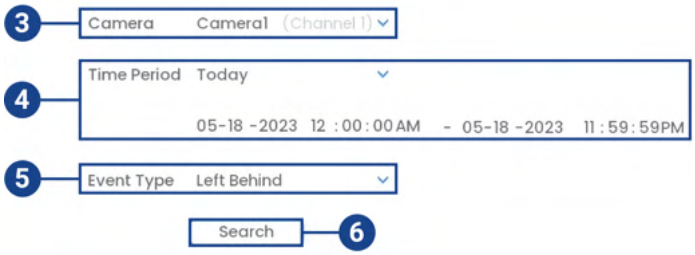
13. Click **Apply** to save changes.

22.3 Searching for Safeguard events (Smart Search)

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

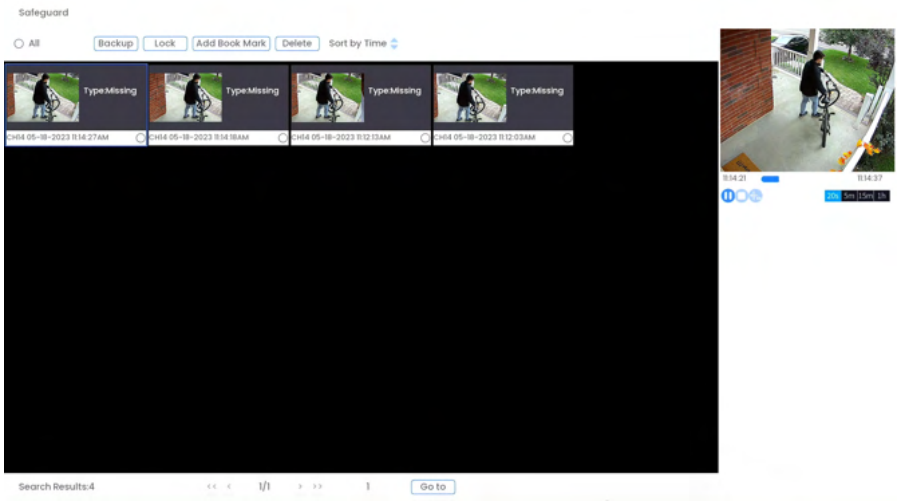
To perform a Smart Search:

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 camera to search for detection events from, or select **All**.
4. Select the time period for your search, then enter the start and end time.
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.
     - **Delete:** Delete events.

23 Siren

Certain Lorex deterrence IP cameras have a built-in speaker that can play different types of alarm sounds to deter intruders. To learn how to manually turn the siren on or off, refer to 13.3 *Manually Activated Deterrence*, page 58.

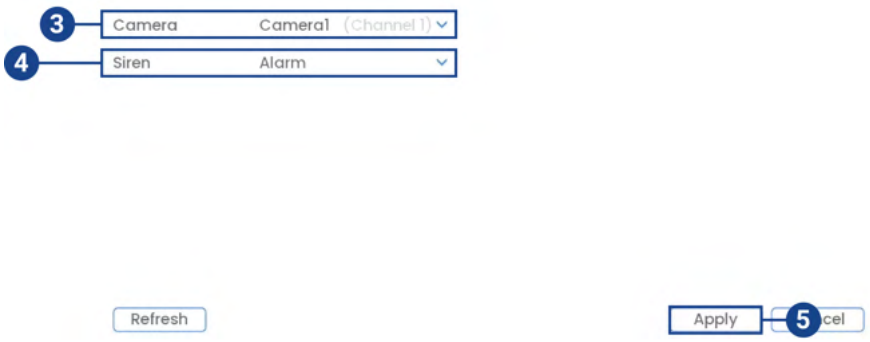
The Siren is compatible with certain Lorex IP cameras. For a complete list of compatible cameras, navigate to your recorder series at lorex.com/compatibility.

23.1 Configuring the Siren

Select between different siren options for your camera.

To configure the siren:

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 camera to configure.
4. Select one of the siren options from the drop-down list.
5. Click **Apply** to save changes.

24 Managing Passwords & 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.

24.1 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.

24.1.1 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 **Modify** 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.

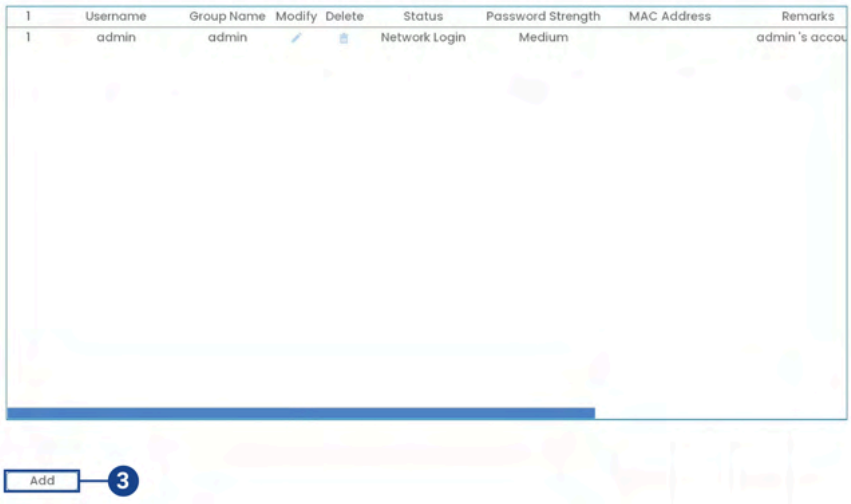
   - **Confirm Password:** Re-enter the new password.
5. Click **OK**.

24.1.2 Adding Users

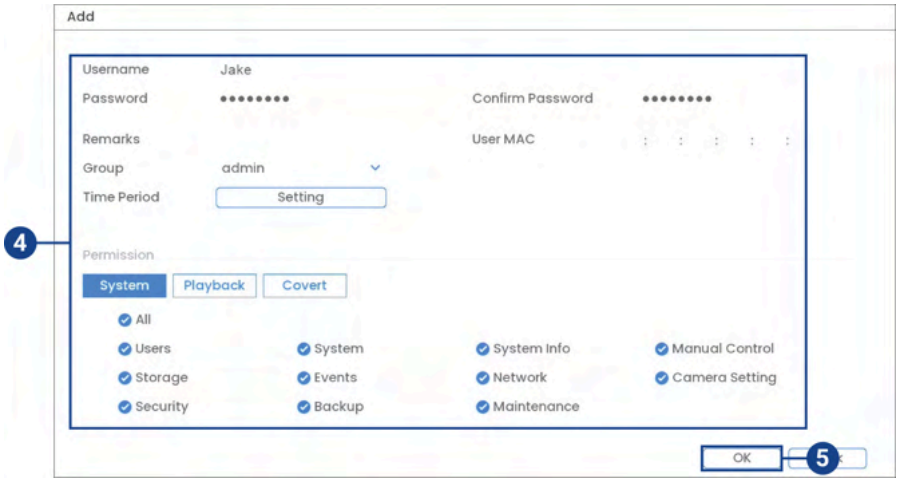
You can allow multiple users to log in to the system. When adding different users, you can assign what menus they have access to. For example, you may want your friend to monitor your system while you are away, while not giving full access to your system.

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**.



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**.
   - **Remarks:** (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**: Click **Setting** to 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.

24.1.3 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 **Modify** icon next to the account you want to modify.
4. Update account details as needed, then click **OK**.

24.1.4 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**.

24.2 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.

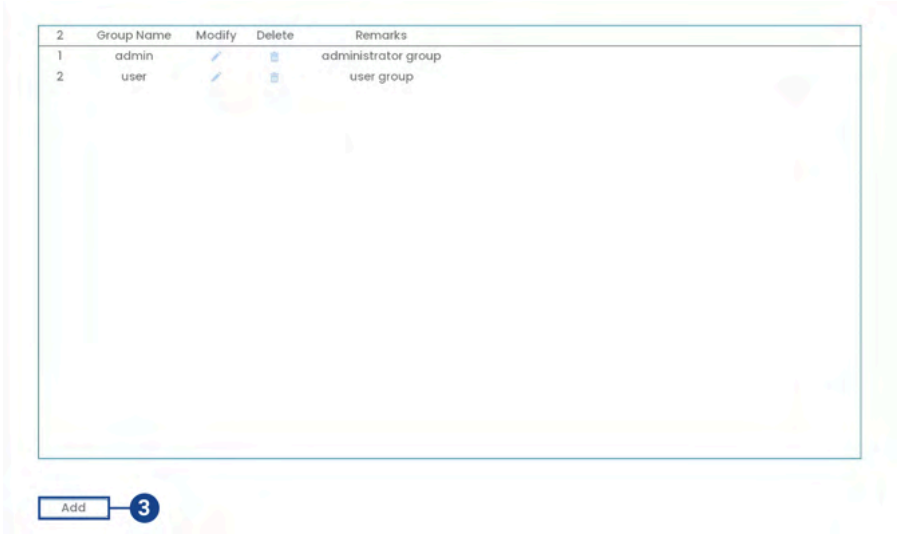
24.2.1 Adding Groups

Add a new group with unique system permissions.

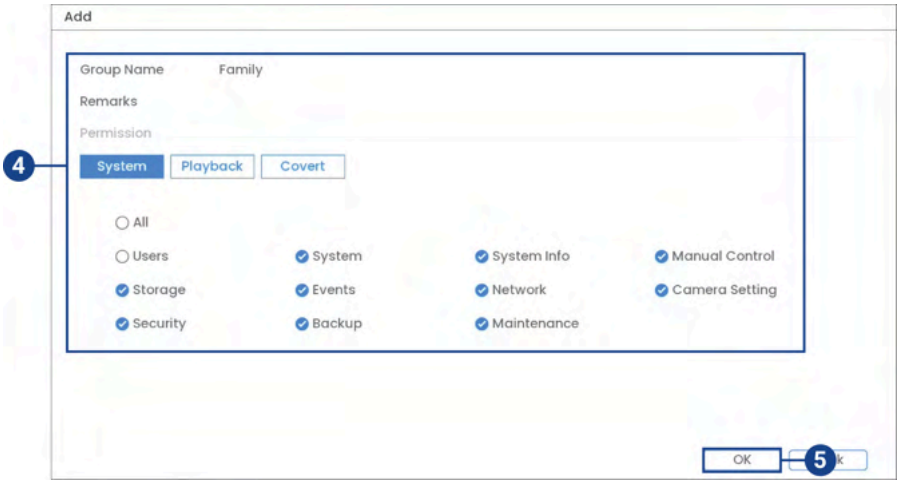
To add a group:

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**.



4. Configure the following:
   - **Group Name:** Enter a name for the group.
   - **Remarks:** (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**.

24.2.2 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 **Modify** icon next to the account you want to modify.
4. Update group details as needed, then click **OK**.

24.2.3 Deleting Groups

Remove a group.

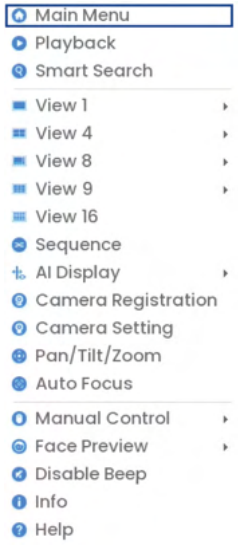
To delete a group:

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**.

25 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**.

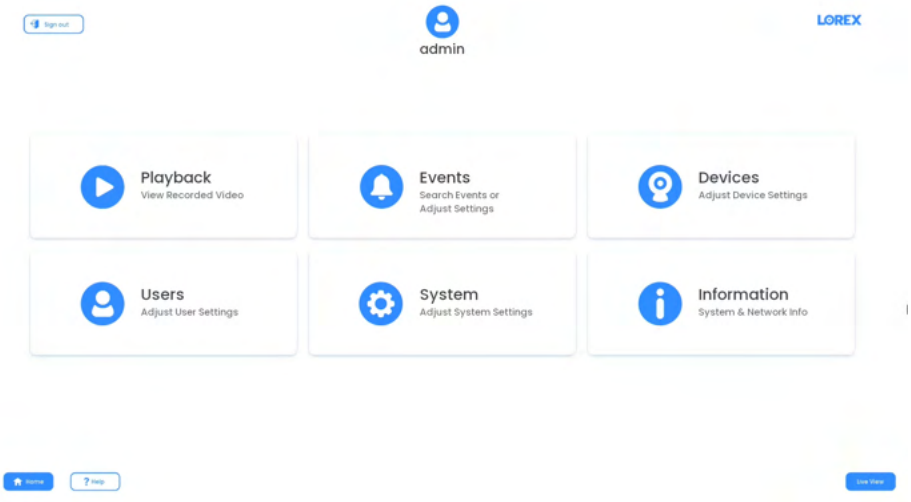


OR

- From the Live View display, hover the mouse near the bottom of the screen, then click 

on the Navigation Bar.

25.1 Main Menu Overview



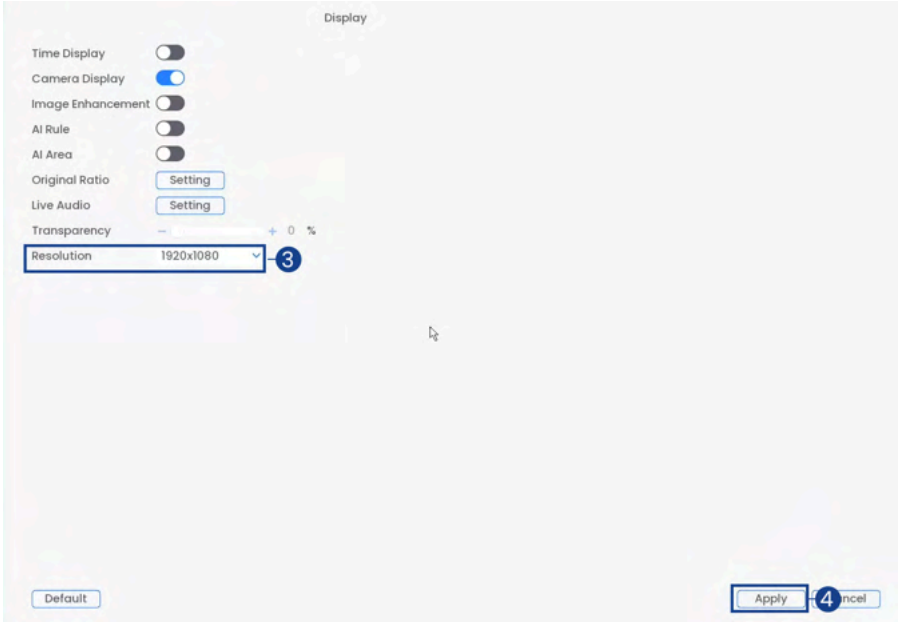
25.2 Setting the Monitor Resolution (Display)

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**.

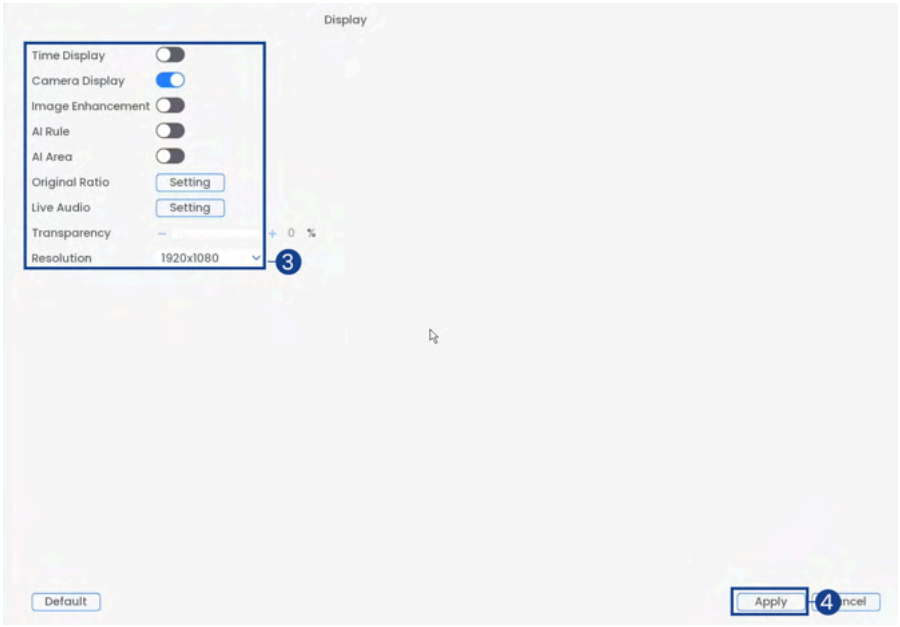
2. Click **Information**, then **Display**. Click the **Display** tab from the side panel.



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.



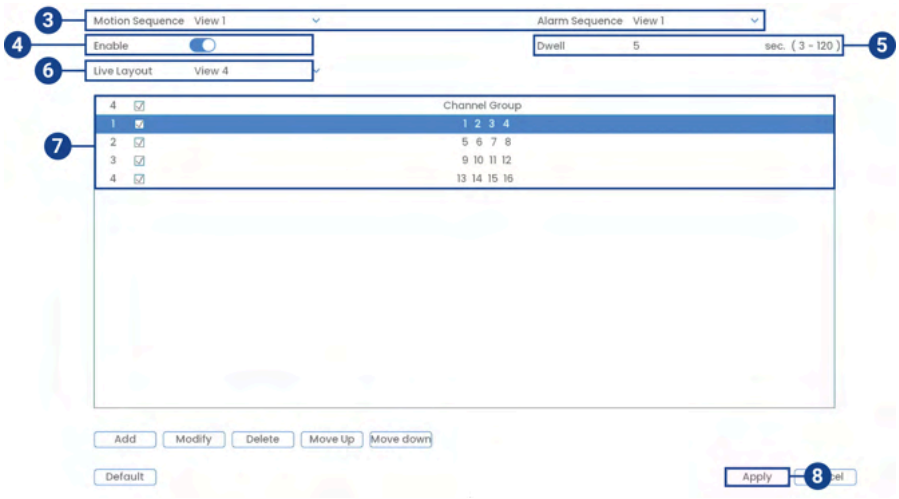
3. Configure the following:
   - **Time Display:** Check to show the time on the monitor.
   - **Camera Display:** Check to show the channel names on the monitor.
   - **Image Enhancement:** Check for the system to digitally improve the video quality on the live display. This setting does not affect recordings.
   - **AI Rule / AI Area:** Check to display the smart detection rules & areas drawn for each camera.
   - **Original Ratio:** 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.
   - **Live Audio:** Configure live camera audio.
   - **Transparency:** Select the menu transparency.
4. Click **Apply** to save changes.

25.3 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:

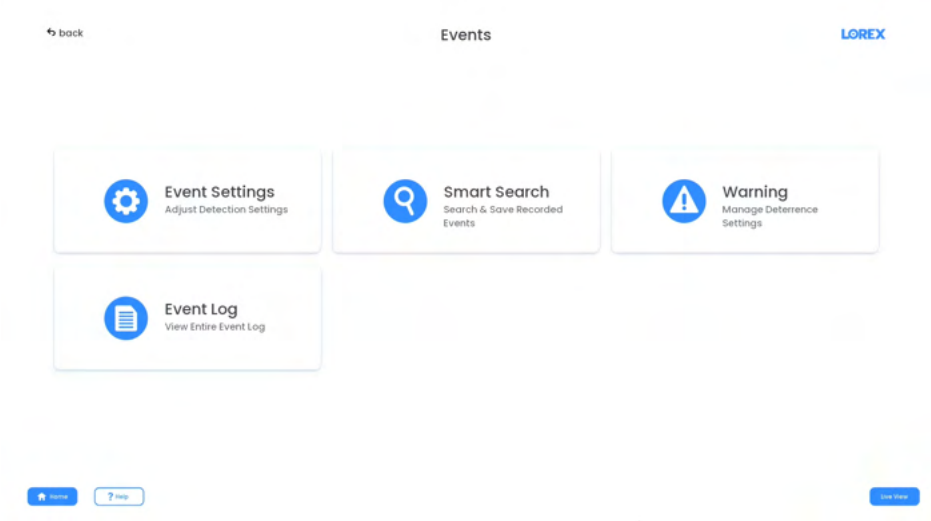
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Information**, then **Display**. Click the **Sequence** tab from the side panel.



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 14 *Motion Detection*, page 60 for 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.

25.4 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.

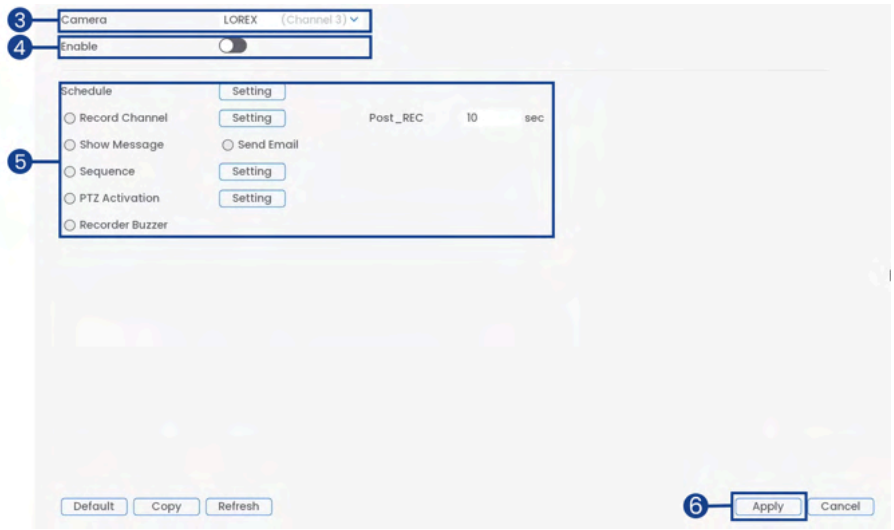


25.4.1 Configuring Video Loss Settings

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**. Click the **Motion** tab from the side panel, then the **Video Loss** tab from the top panel.



3. Select the camera you would like to configure.
4. Check to enable video loss events for the selected channel.

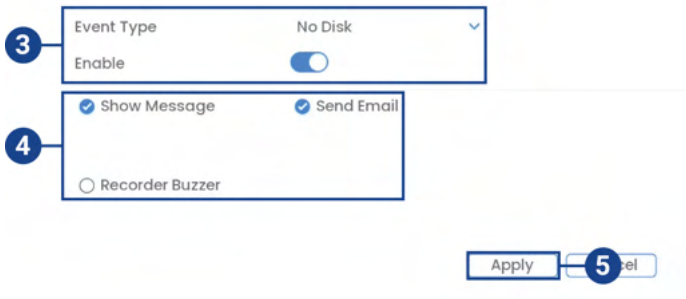
5. Choose how the system will react to video loss events:
   - **Schedule:** Click **Setting** to configure a schedule for video loss events. It is recommended to leave this on the default setting, so you can be alerted at any time one of your cameras loses video.
   - **Record Channel:** Click the checkbox to enable video recording when video loss occurs. Click **Setting** to select which channels the system will record when video loss occurs on the currently selected channel.
   - **Post-REC:** Enter the number of seconds the system will record after video loss occurs.
   - **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 25.6.5 *Configuring Email Alerts*, page 127.
   - **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.
   - **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.
   - **Recorder Buzzer:** Check to enable the system buzzer when video loss occurs on the currently selected channel.
6. Click **Apply** to save changes.

25.4.2 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 25.6.5 *Configuring Email Alerts*, page 127.
   - **Recorder Buzzer:** Check to activate the system buzzer.
5. Click **Apply** to save changes.

25.4.3 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.

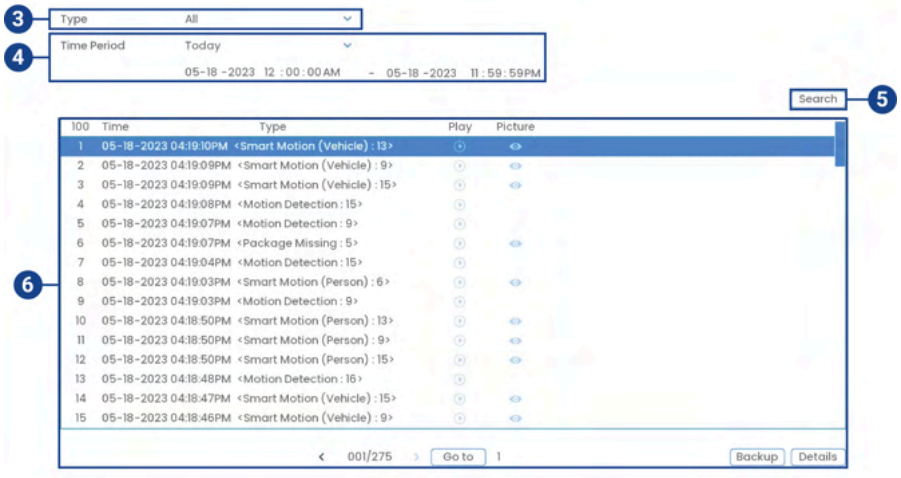
3. Under **Event Type**, select the event type you would like to configure. Check **Enable** to activate the selected warning.
   - **Offline:** The system is offline and not connected to the network.
   - **IP Conflict:** More than one device on your network has the same IP address.
   - **MAC Conflict:** 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 25.6.5 *Configuring Email Alerts*, page 127.
   - **Recorder Buzzer:** Check to activate the system buzzer.
5. Click **Apply** to save changes.

25.4.4 Searching Event Logs

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

To access the log menu:

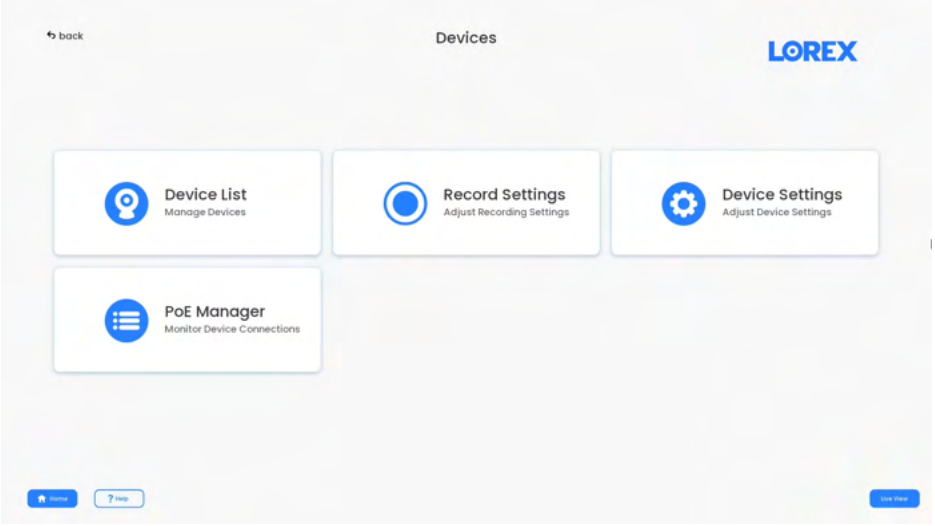
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Events**, then **Event Log**.



3. Select an event type to search for.
4. Select the time period for your search, then enter the start and end time.
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**.
   - Click the **Picture** icon in the column to view the captured image, then right-click to exit.

25.5 Device Menu

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



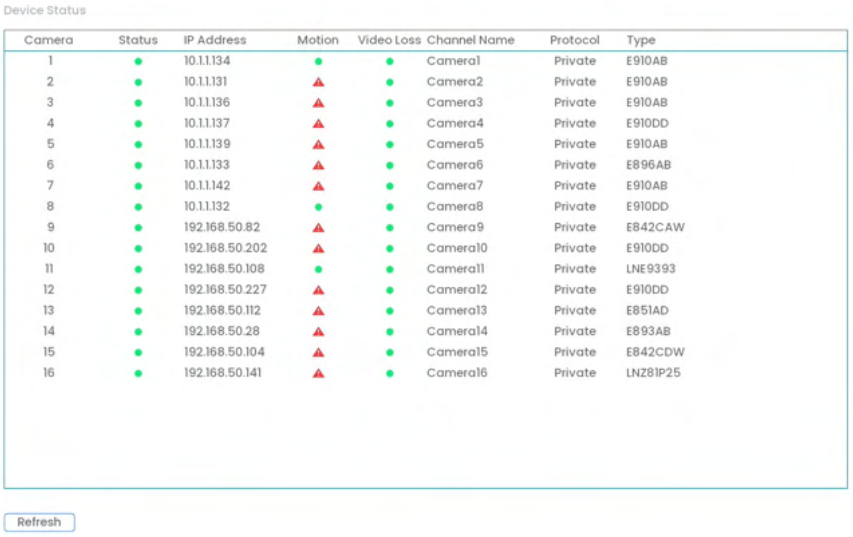
25.5.1 Viewing Camera Status

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 **Device Status** tab from the side panel.

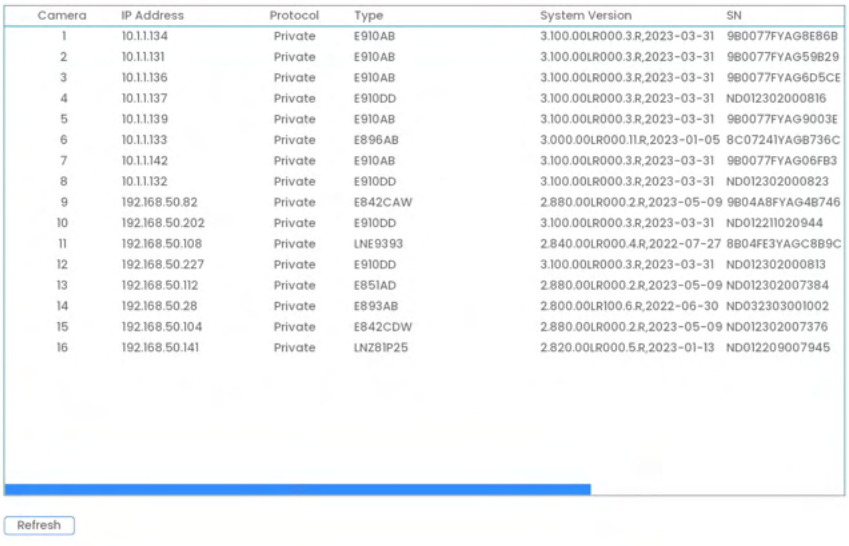


25.5.2 Camera Firmware Versions

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.



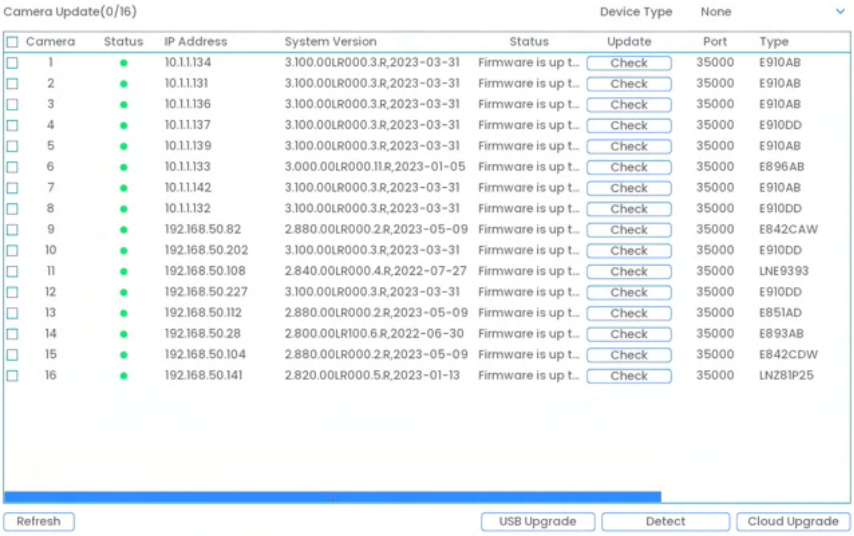
25.5.3 Upgrading Camera Firmware

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. Contact the **Technical Support** team to download the latest firmware version.
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 **Update** tab from the side panel.



6. 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.

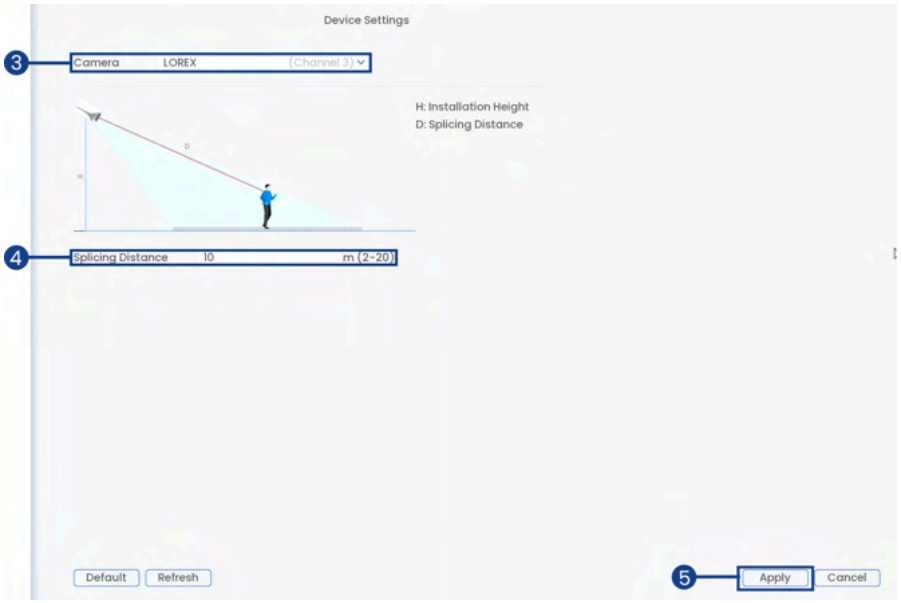
25.5.4 Configuring Splicing Settings

In order for your camera to achieve the wide 180° field-of-view (FoV), the two connected views are stitched together using image Stitching Technology. This may result in a slight misalignment of the image. The Splicing distance is important for dual lens cameras and refers to the distance at which two video feeds from a dual-lens camera are merged to create a single, seamless image. Splicing settings allow you to align your camera's dual-lens images and improve the wide-angle perspective.

To configure Splicing 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 **Splicing** tab from the side panel.



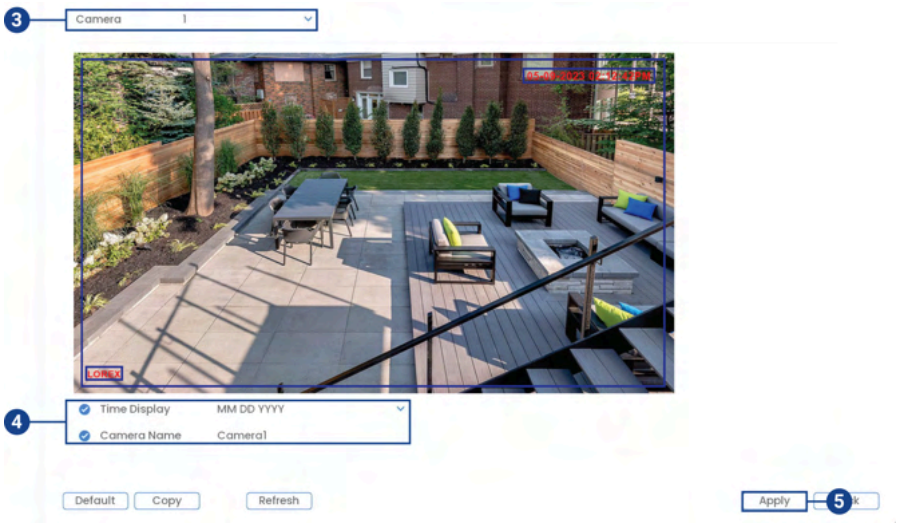
3. Select the camera you would like to configure.
4. Select the **Splicing Distance.**
5. Click **Apply** to save changes.

25.5.5 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, then click the **Overlay** tab from the top panel.



3. 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.

25.5.6 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:

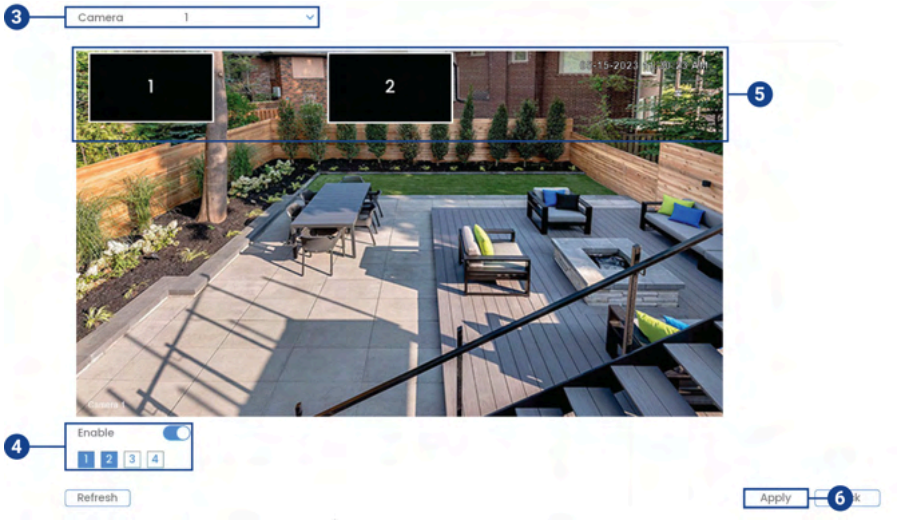
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **Devices**, then **Device Settings**. Click the **Overlay** tab from the side panel, then click the **Privacy Masking** tab from the top panel.

3. Select the camera you would like to configure.
4. Check to enable privacy masking.
5. Click **Add**.
6. Click to set a custom name for the rule.
7. Select the privacy masking type, then draw the area:
   - **Color Lump:** This option will black out the camera's image in the defined privacy masking area.
   - **Mosaic:** This option will blur the camera's image in the defined privacy masking area.
8. To draw a privacy masking box, click around the designated area in the camera's live view screen, then right-click to close the box.
9. To delete a rule, click the **Operation** icon for that rule or click **Clear** to delete all.
10. Click **Apply** to save changes.

To configure privacy masking settings (alternate version):

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.



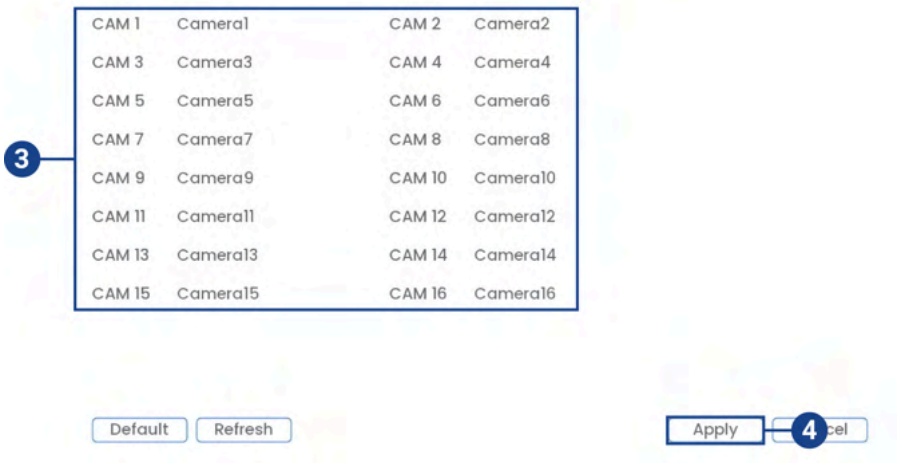
3. Select the camera you would like to configure.
4. Check to enable privacy masking, then select 1–4 privacy masking boxes per channel.
5. Click the privacy masking box to remove it. You can also click-and-drag the outer white line around the privacy masking box to resize it.
6. Click to set a custom name for the rule.
7. Click **Apply** to save changes.

25.5.7 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 camera to enter a custom name.
4. Click **Apply** to save changes.

25.5.8 Configuring Snapshot Recording Settings

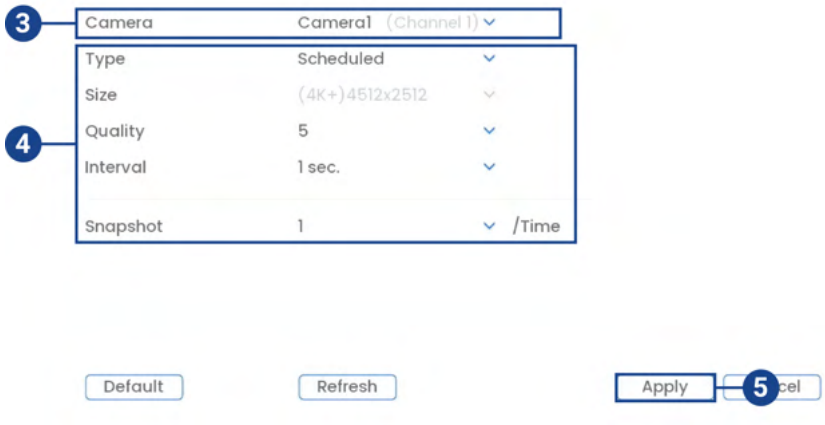
The system can be set to record snapshot images when a camera detects motion. These snapshots can be viewed through the Playback menu or can be attached to email alerts and push notifications. Use the following procedure to set the snapshot parameters for each camera.

NOTE

Snapshot recording must be enabled for motion detection in the Events menu. See 14 *Motion Detection*, page 60 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. Select the camera you would like to configure.
4. Configure the following settings for snapshots saved automatically from motion detection or the snapshot schedule:
   - **Type:** Select **Scheduled** for the system to take snapshots at fixed intervals throughout the day, or select **Event** for the system to take snapshots only when triggered by motion detection (snapshot recording must be enabled in the motion detection menu - see 14 *Motion Detection*, page 60 for details).
   - **Size:** The image size is the same as the Main Stream resolution of the camera.
   - **Quality:** Select the snapshot image quality between **1** (lowest) and **6** (highest)
   - **Interval:** Enter the time between snapshots in seconds.
   - **Snapshot:** Select the number of snapshots the system will take when the snapshot button is pressed.
5. Click **Apply** to save changes.

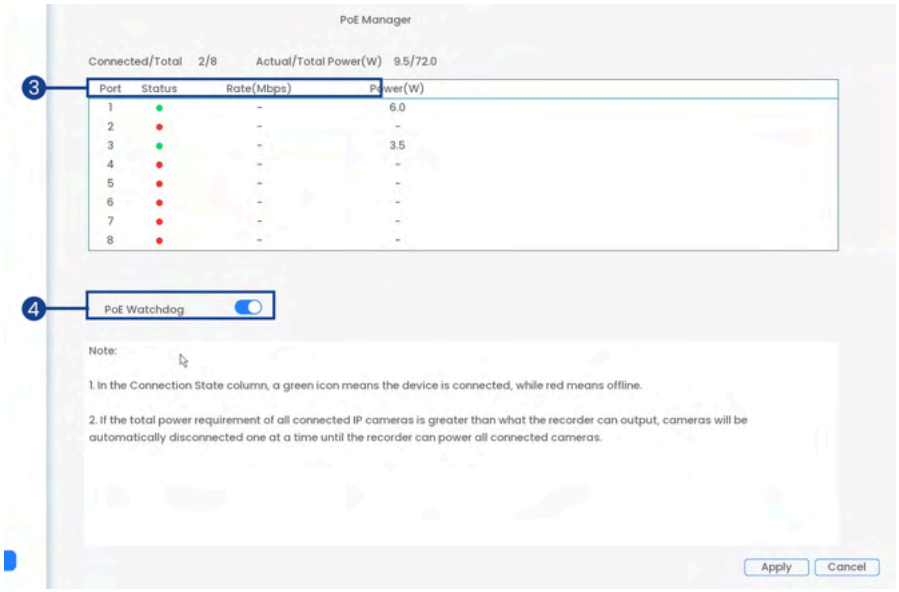
25.5.9 Navigating the PoE Manager

You can use the PoE manager to monitor the current status of connected cameras and devices.

To access the PoE Manager:

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

2. Click **Devices**, then **PoE Manager**.

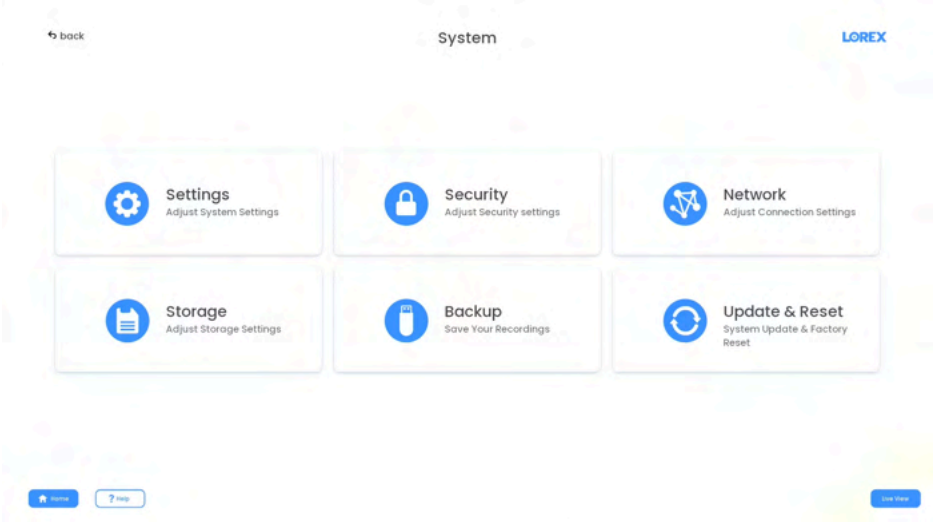


3. The following are descriptions of the status elements:
   - **Port:** Shows the port number.
   - **Status:** Shows the current port status. Statuses may be: green (connected) or red (disconnected).
   - **Rate (Mbps):** The network speed used by the connected camera in megabits per second.
   - **Power (W):** Current power consumption in watt.
4. Tap the slider to enable **PoE Watchdog**.

> **NOTE**
>
> A maximum of all the power in watt used by the connected devices / the total amount of power in watt that the NVR or switch can deliver is shown at the top of the screen. Once the system detects the connected total power consumption has exceeded the threshold, it begins disconnecting the devices one by one according to the port number (1~N). The system stops disconnecting when the total power consumption is within the power range.

25.6 System Menu

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

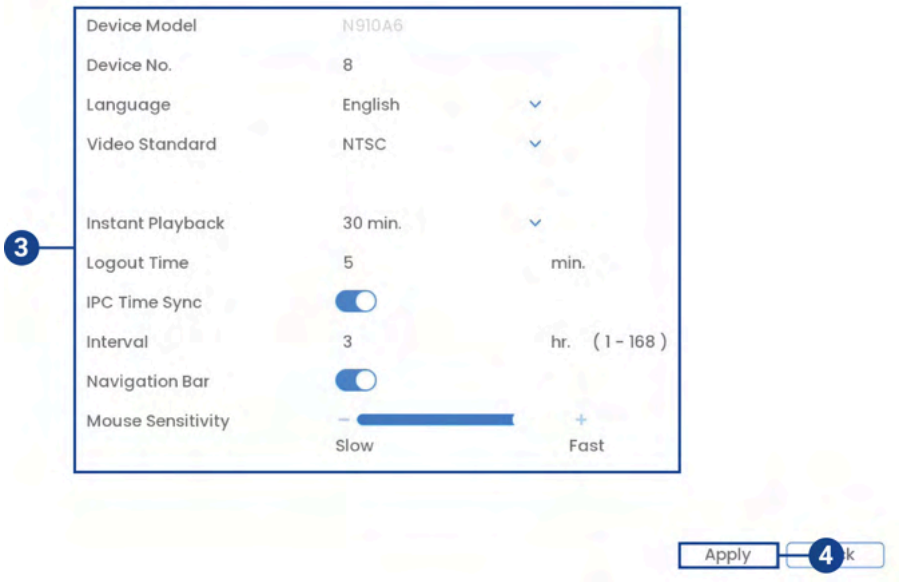


25.6.1 Configuring General System Settings

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.
   - **Logout Time:** Select the idle time (in minutes) before the system will logout the current user.
   - **IPC Time Sync:** Check to enable.
   - **Interval:** 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.

25.6.2 Configuring Holidays

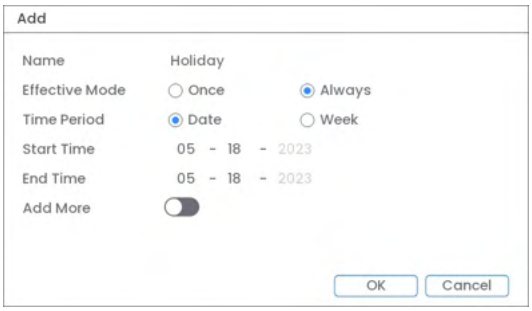
You can set certain days as holidays. Holidays have a special recording schedule.

To configure holidays:

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

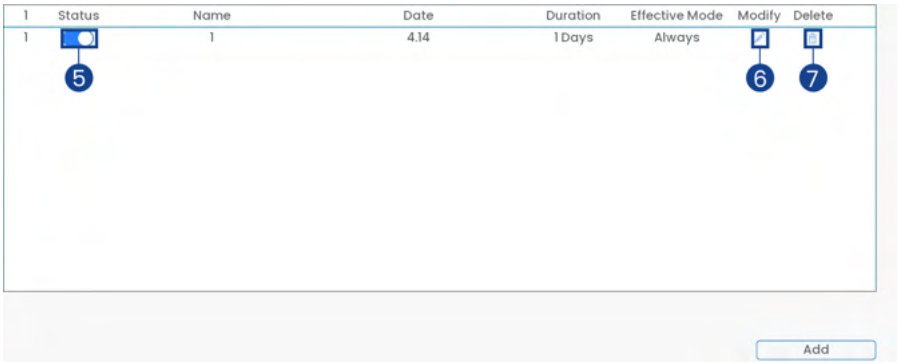
2. Click **System**, then **Settings**. Click the **General** tab from the side panel, then the **Holiday** tab from the top panel.

3. Click **Add**.
4. Configure the following:



- **Name:** Enter a name for this holiday.
- **Effective Mode:** Select **Once** for the holiday to occur only this year or **Always** for the holiday to be repeated each year.
- **Time Period:** 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.

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



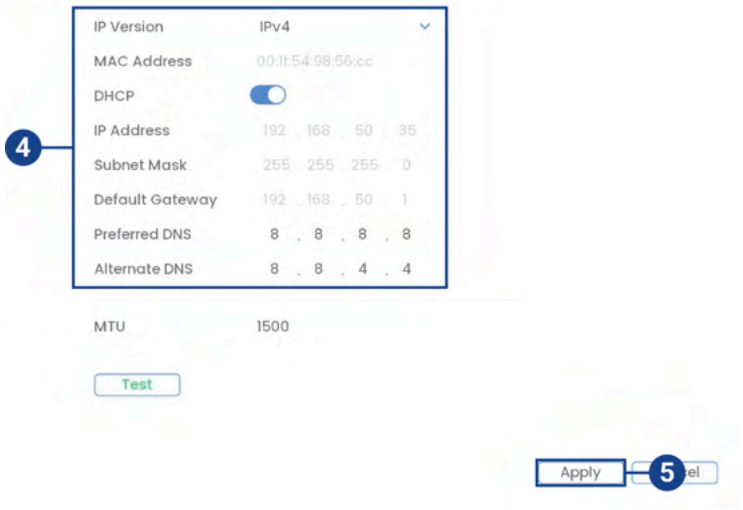
6. Click the **Operation** icon  next to the holiday you want to modify.
7. Click the **Operation** icon  next to the holiday you want to delete.

25.6.3 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.

25.6.4 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.

25.6.5 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 14 *Motion Detection*, page 60.

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. Click to enable Lorex's email server.
2. Under **Mail Select**, select **Lorex Mail** to use the Lorex email server to send out alarm notifications. This is the recommended setting.
3. 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.

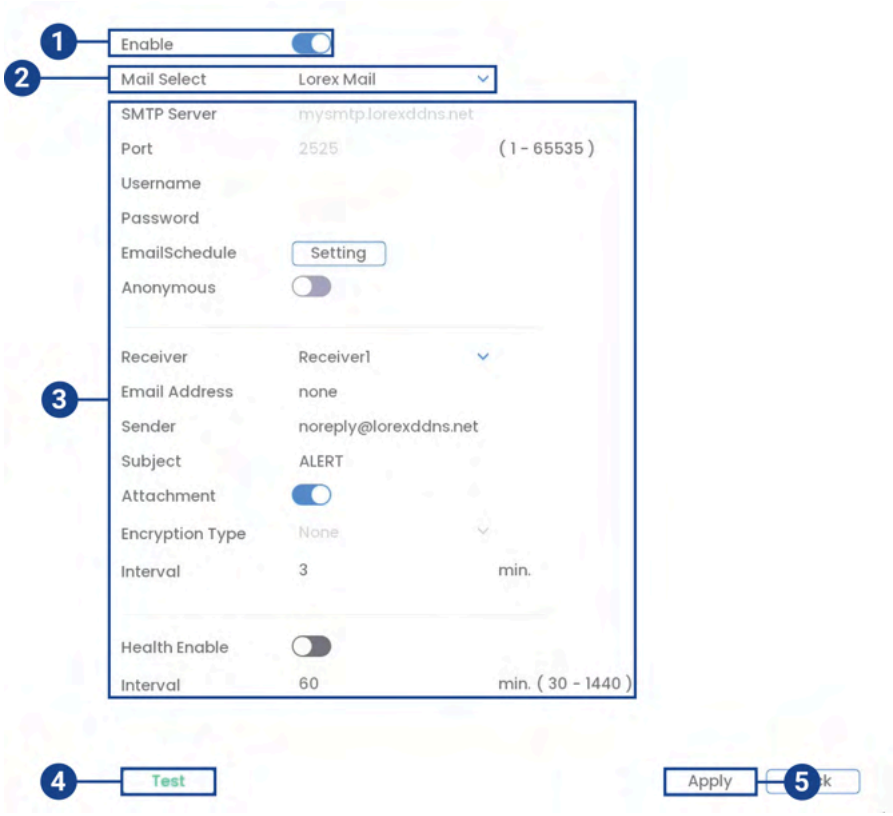
     NOTE

     You must enable the Snapshot option for motion detection on each camera you would to receive attachments. For details, see 14 *Motion Detection*, page 60.

   - **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.

4. Click **Test** to send a test email.
5. 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 14 *Motion Detection*, page 60.

   - **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.

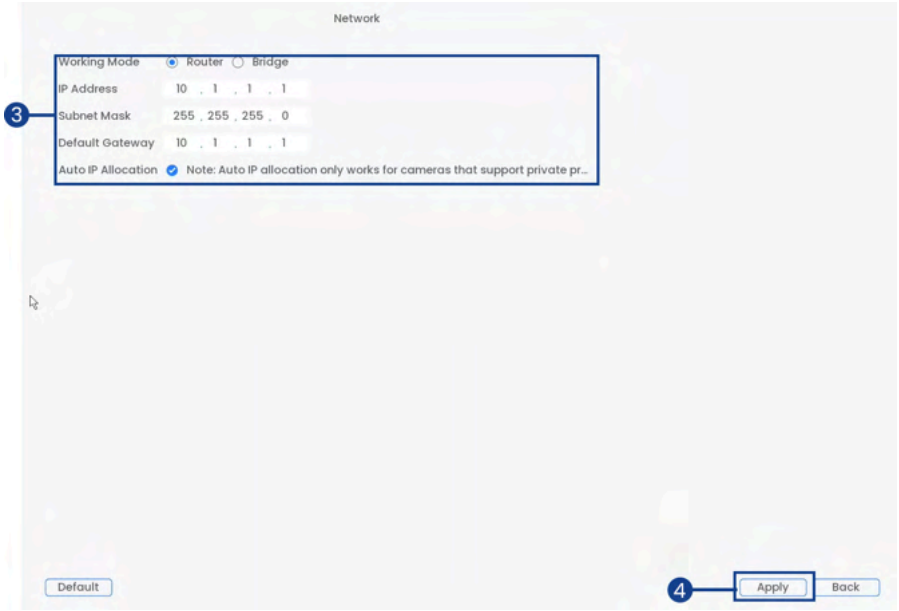
25.6.6 Configuring Switch Settings (Advanced)

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

25.6.7 P2P Setting

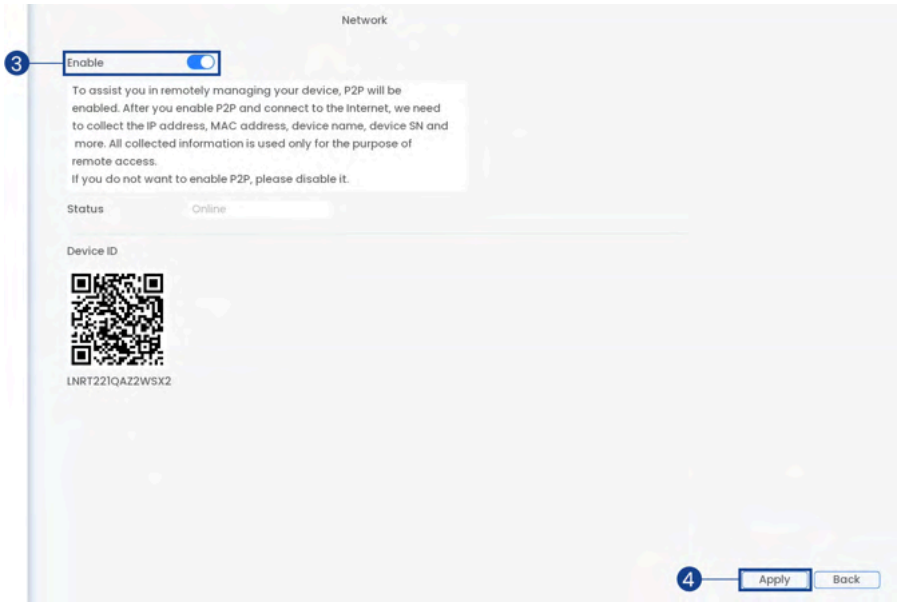
The P2P Setting menu is used only to enable / disable remote access to the system using a P2P connection.

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. See 31 *DDNS Setup (Advanced)*, page 165 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.

25.6.8 Configuring Basic Settings

To configure Basic Settings:

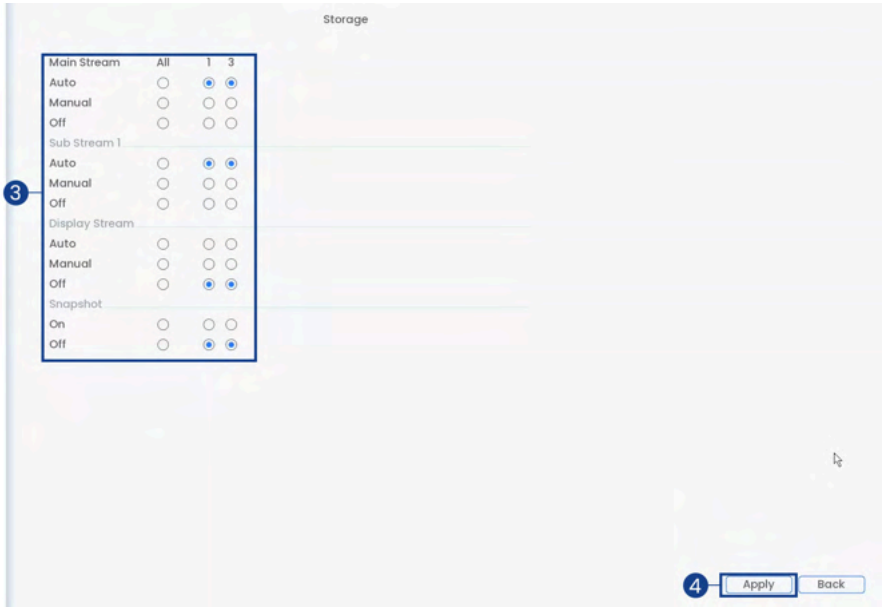
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Storage**. Click the **Basic** tab from the side panel.

3. Under **HDD Full**, select if your recorder should overwrite or stop recording when your HDD is Full
4. Under **Package Mode**, select either Time Length and amount of minutes, or File Size and amount of megabytes.
5. Click **Apply** to save changes.

25.6.9 Configuring Record Settings

To configure Basic 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 **Record** tab from the side panel.



3. Configure Main Stream settings, Sub Stream settings, Display Stream settings, and Snapshot settings.
4. Click **Apply** to save changes.

25.6.10 Configuring Pre-Recording

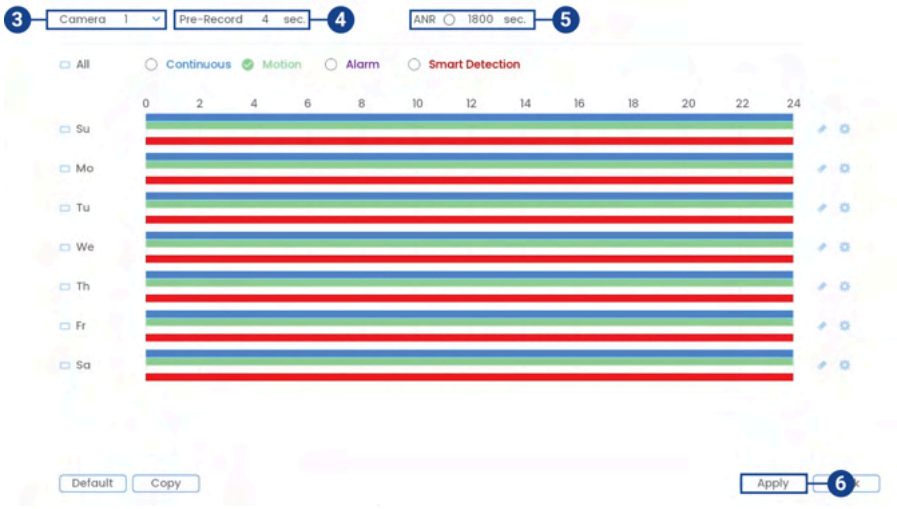
The system can pre-record video when motion detection events occur. This will ensure that the system records the entire event when motion is detected. By default, the system pre-records 4 seconds of video every time motion is detected.

NOTE
Ensure you have set your preferences for motion detection (see 14 *Motion Detection*, page 60 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**. Click the **Schedule** tab from the side panel, then the **Record** tab from the top panel.



3. Select the camera you would like to configure or select **All**.
4. Under **Pre-Record**, select the duration for pre-recording.
5. *(Optional)* Check to enable **ANR** (Auto Network Replenishment). This function allows the system to download recorded files from your camera if the connection is interrupted.
6. Click **Apply** to save changes.

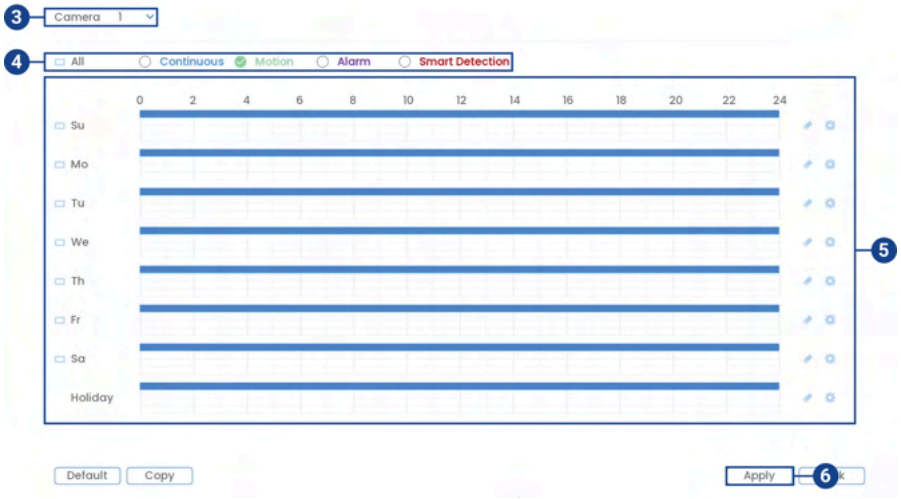
25.6.11 Configuring Snapshot Schedule

The system can be set to take snapshots when motion detection events occur based on the schedule.

NOTE
Ensure you have set your preferences for motion detection (see 14 *Motion Detection*, page 60 for details).

To configure the snapshot 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 **Snapshot** tab from the top panel.



3. Select the camera you would like to configure or select **All**.

4. Check the snapshot type you would like to configure, or check **All**:
   - **Continuous**: The video will take snapshots automatically according to the time on the schedule.
   - **Motion**: The video will take a snapahotwhen motion is detected.
   - **Alarm**: Not supported.
   - **Smart Detection**: The video will take a snapshot when smart motion is detected.
5. Configure the schedule as needed:
   - Click-and-drag on each day to customize the snapshot 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.

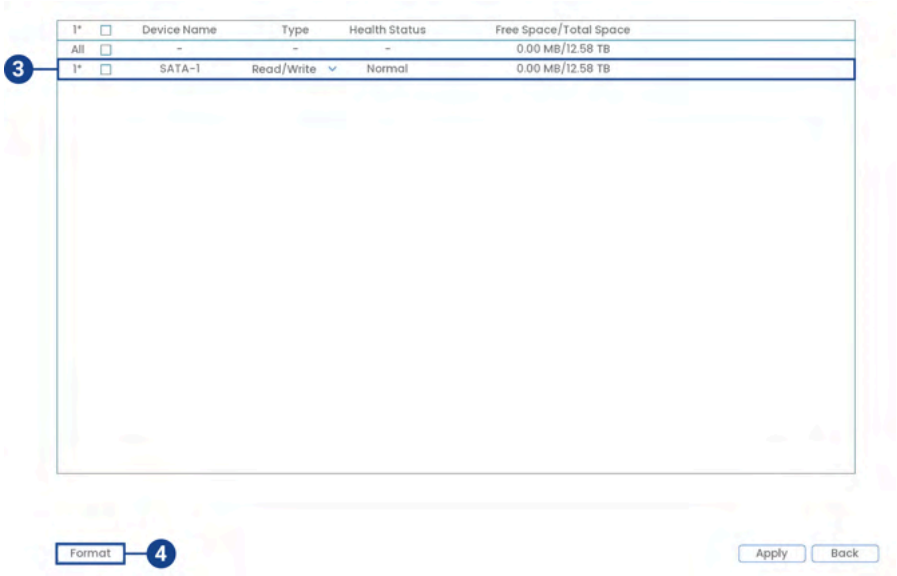
25.6.12 Formatting the Hard Disk Drive

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.

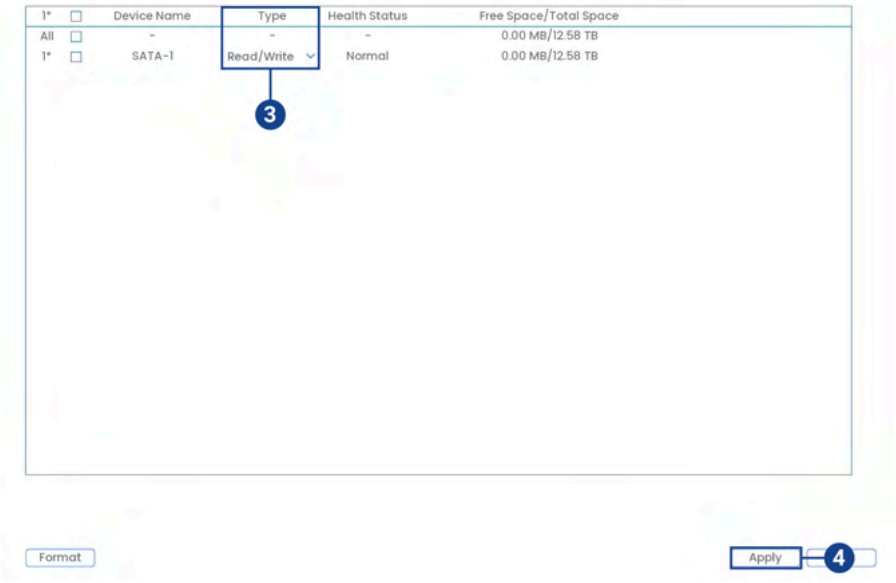
25.6.13 Configuring Hard Disk Drive Type

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.

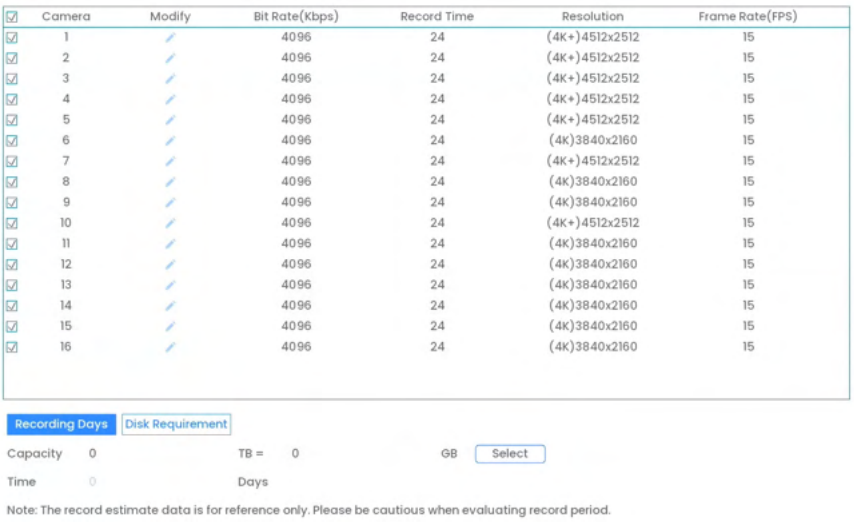
25.6.14 Configuring Record Estimate (Recording Calculator)

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.



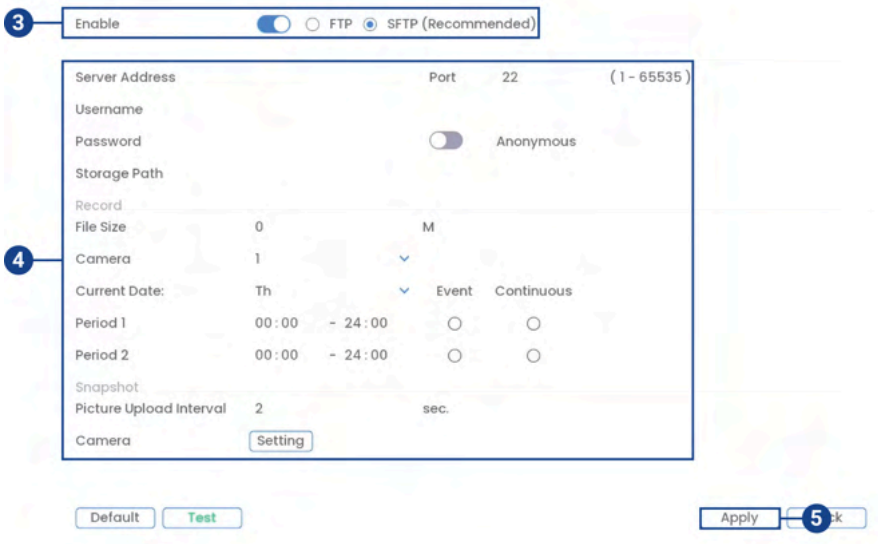
3. Select **Recording Days** for the total number of days worth of recordings your hard disk drive can store, or select **Disk Requirement** for the total storage needed to record for a specific number of days
4. For **Recording Days** mode, click **Select** to choose your hard disk drive from a list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

25.6.15 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.



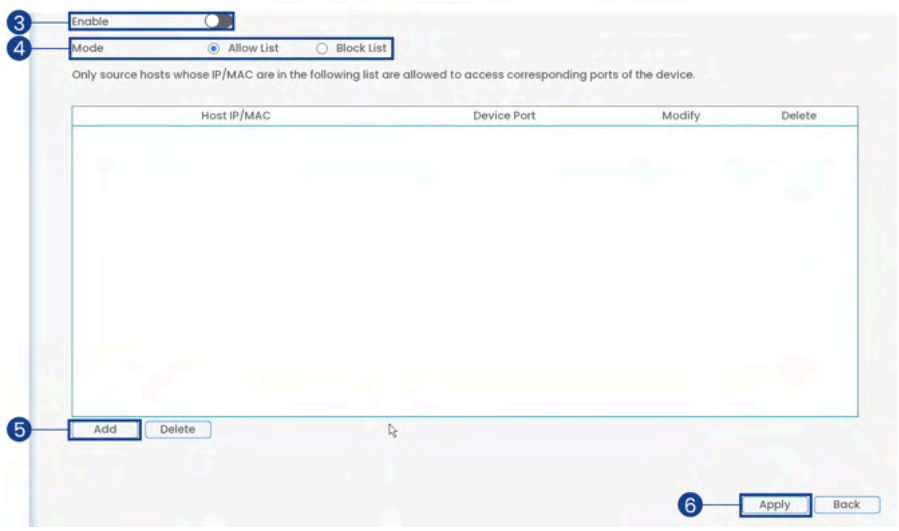
3. Check **Enable** to allow FTP connection, and select either **FTP** or **SFTP** depending on your configuration.

4. Configure the following:
   - **Server Address:** 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.
   - **Storage Path:** Enter the storage path to save recordings and/or snapshots to.
   - **File Size:** Enter the recording file length in minutes.
   - **Camera:** Select a channel to set FTP recording preferences for.
   - **Current Date:** Select a day of the week to configure FTP recording settings for, or select **All** to apply to all days of the week.
   - **Picture Upload Interval:** Enter the interval between snapshots in seconds.
   - **Camera:** Select a channel to set the snapshot preference for.
5. Click **Apply** to save changes.

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



   Check **Enable**.
3. 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.
4. Click **Add** to enter an IP address or range.
5. Click **Apply** when finished.

25.6.17 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.

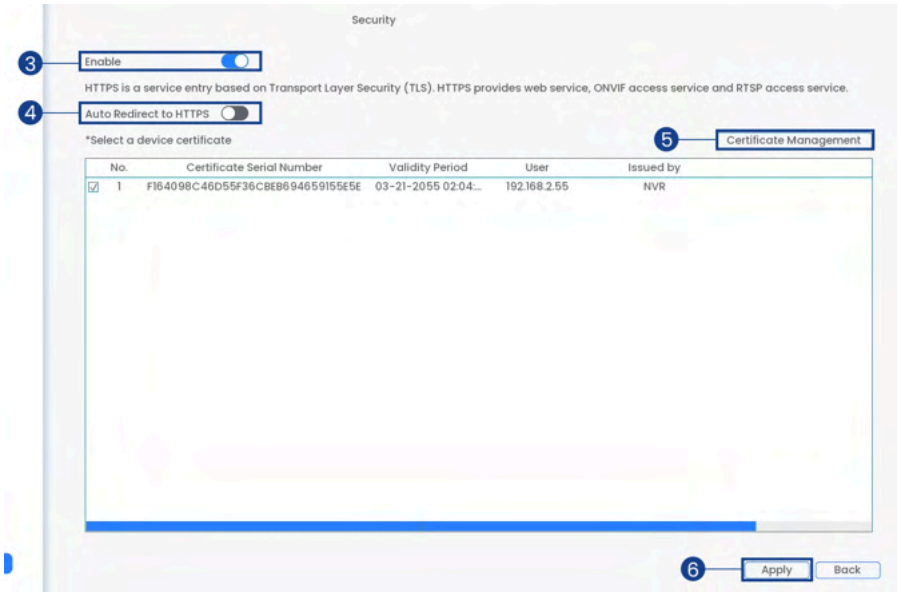
3. Check **Enable**.
4. Click **Add**, then configure the following:
   - **Type**: Select the address type.
   - **IP Address**: Enter a single IP address.
   - Click **OK**.
5. Click **Apply** when finished.

25.6.18 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. Check to enable Auto Redirect to HTTPS

5. Click **Certificate Management** to create a certificate or import a third-party certificate.
6. Click **Apply** to save changes.

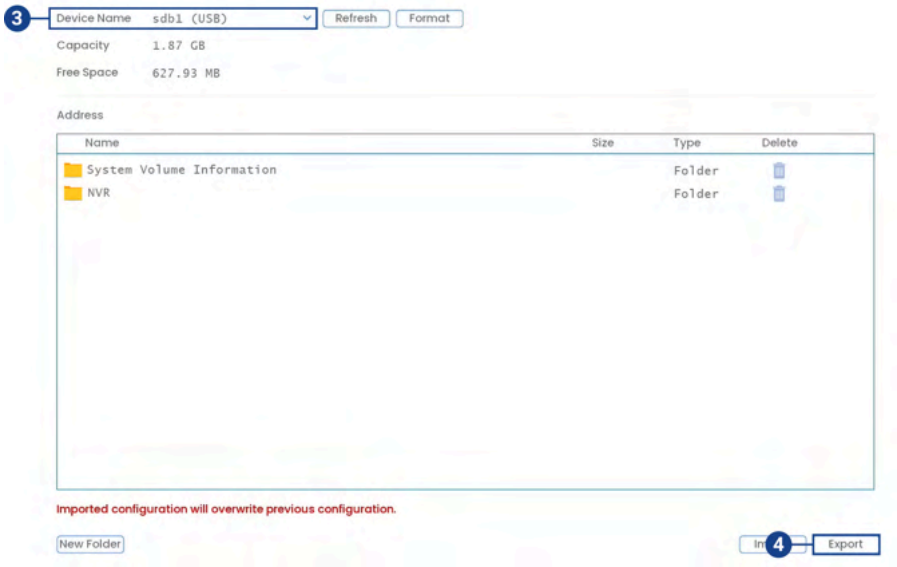
25.6.19 Saving Your System Configuration to a USB Thumb Drive

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.

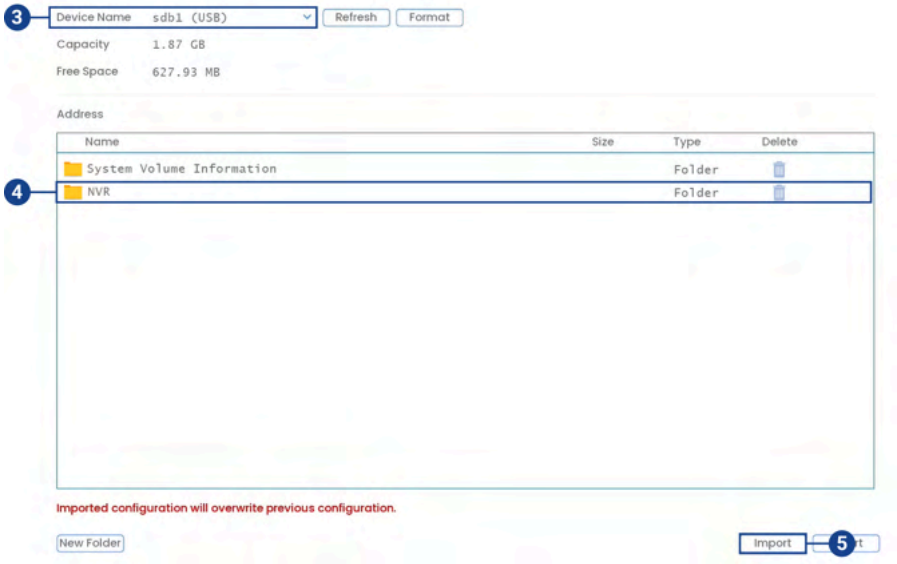


3. Under **Device Name**, select the USB device where you would like to save the configuration.
4. Click **Export** to save your current system configuration.

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.



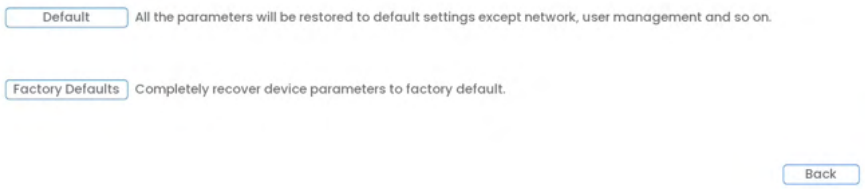
3. Under **Device Name**, select the USB device where the system configuration is saved.
4. Click the folder with the configuration file you would like to restore. Configuration file folders are labeled “Config” and then the time and date the configuration was saved (e.g., *Config_20220425103727*).
5.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

25.6.20 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. Click either **Default** to restore all settings except for network and user management or **Factory Default** to completely restore all system settings.
4. Click **Apply** to begin restoring to default settings.

25.6.21 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).

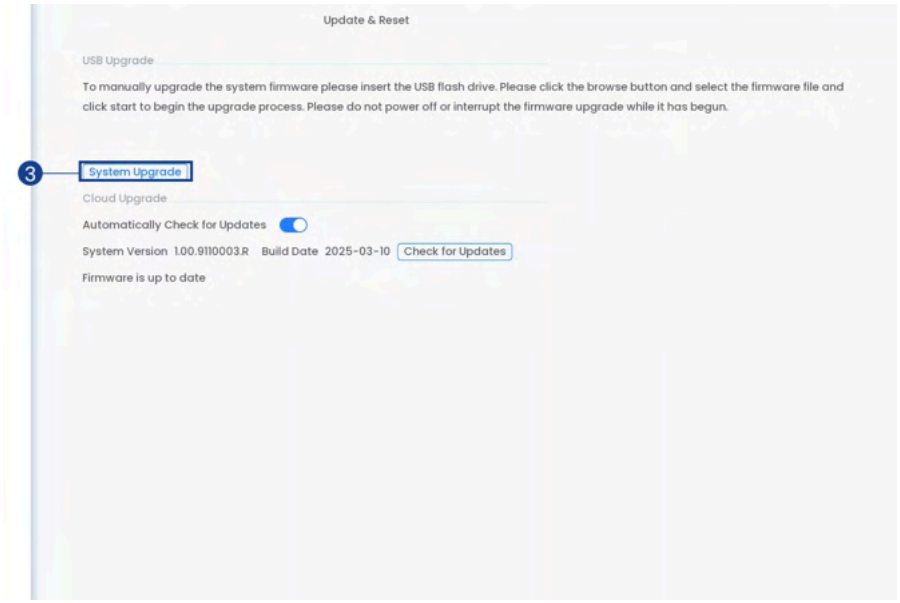
Prerequisite:

- 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.



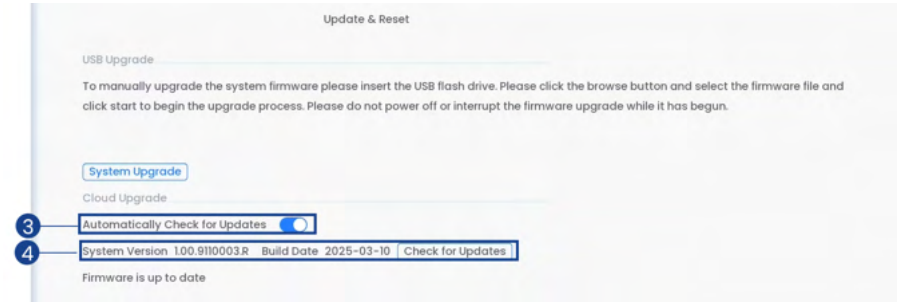
3. Click **System Upgrade**.
4. Click on the **.bin** firmware file for your recorder.
5. Click **Start**.

25.6.22 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:

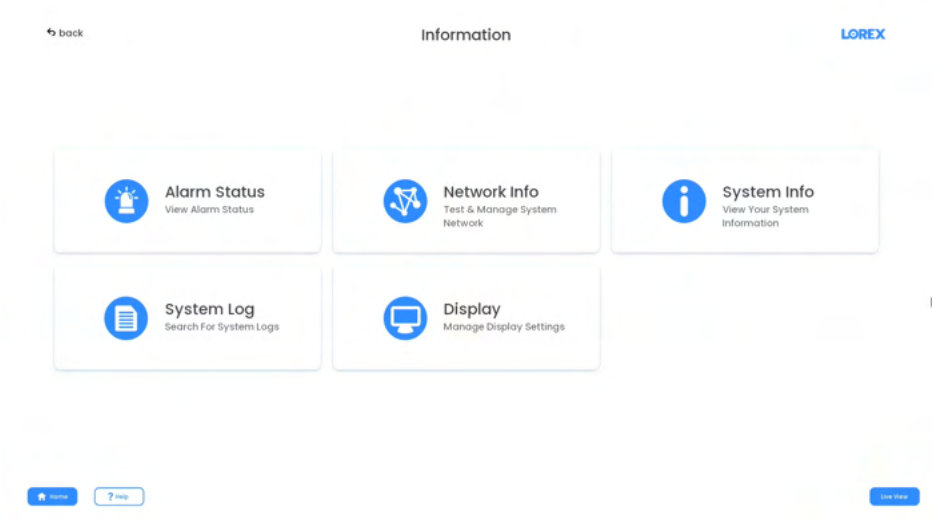
1. From the Live View display, right-click to open the Quick Menu, then click **Main Menu**.
2. Click **System**, then **Update & Reset**. Click the **Upgrade** tab from the side panel.



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.

25.7 Information Menu

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



25.7.1 Version Information

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

To access the Version Info menu:

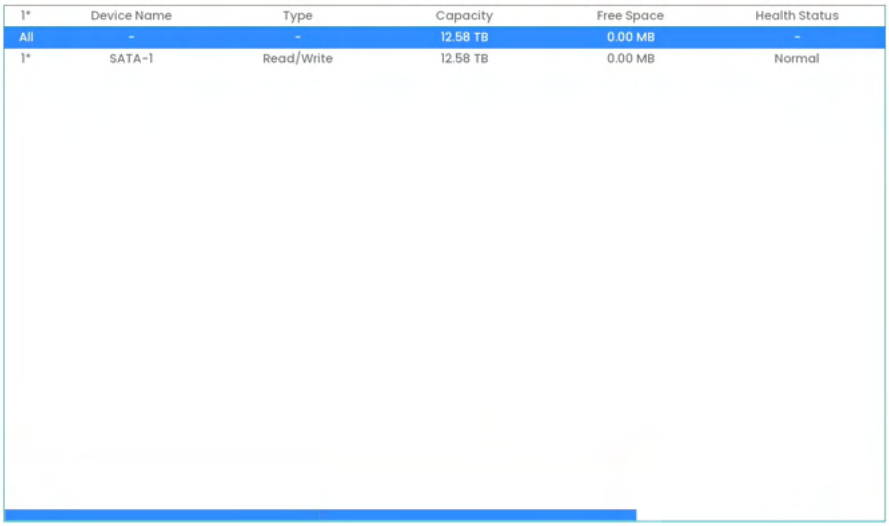
1. From the Live View display, right-click to open the Quick Menu, then click **Info**.

25.7.2 Intelligent Algorithm

The License Status is attributed to Color Search & Number Search. The status is set to **Normal** when in use. If the status is set to **Abnormal**, return to factory for processing.

25.7.3 Hard Disk Drive Information

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

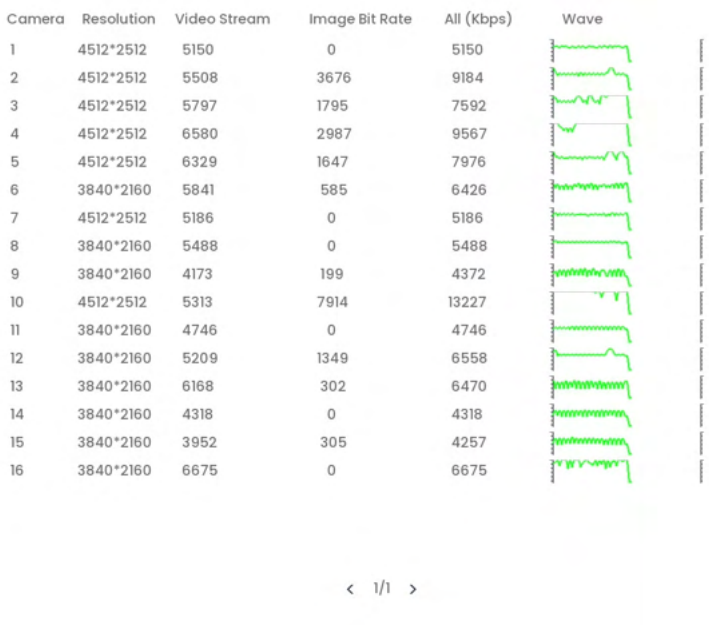


To access HDD Info:

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.

25.7.4 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.

25.7.5 System Log

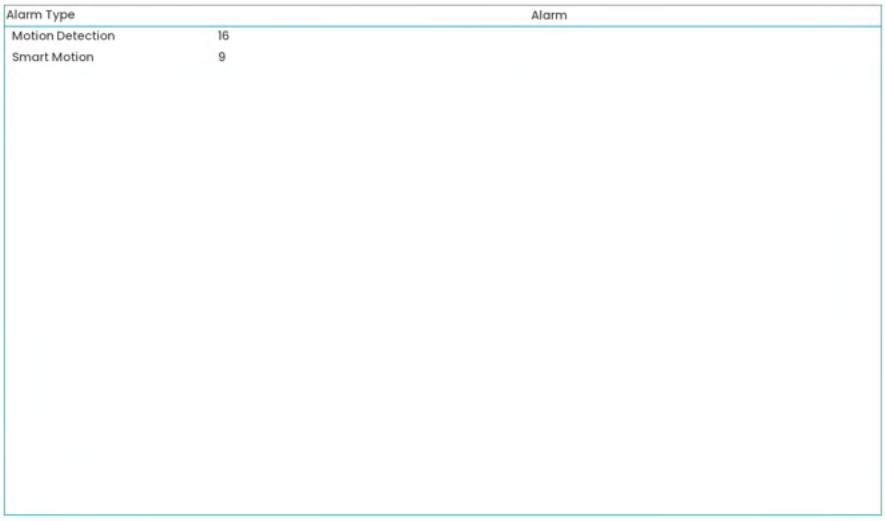
Search for system logs in a certain time range.

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**.

25.7.6 Alarm Status

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:

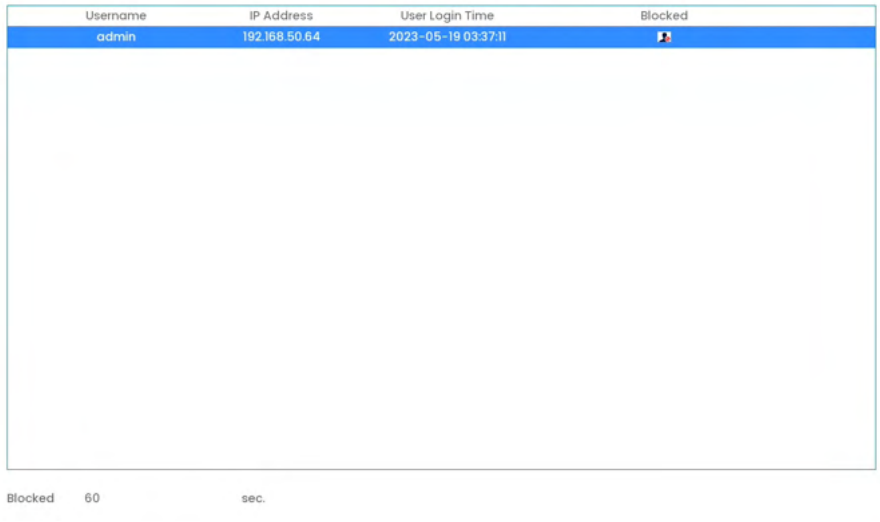
- **Motion Detection:** Shows channels with active motion alarms.
- **Smart Motion:** Shows channels with active smart motion alarms.
- **Sound Detection:** Shows channels with active sound detection alarms.
- **Video Loss:** Shows channels with active video loss alarms.

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**.

25.7.7 Online Users

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

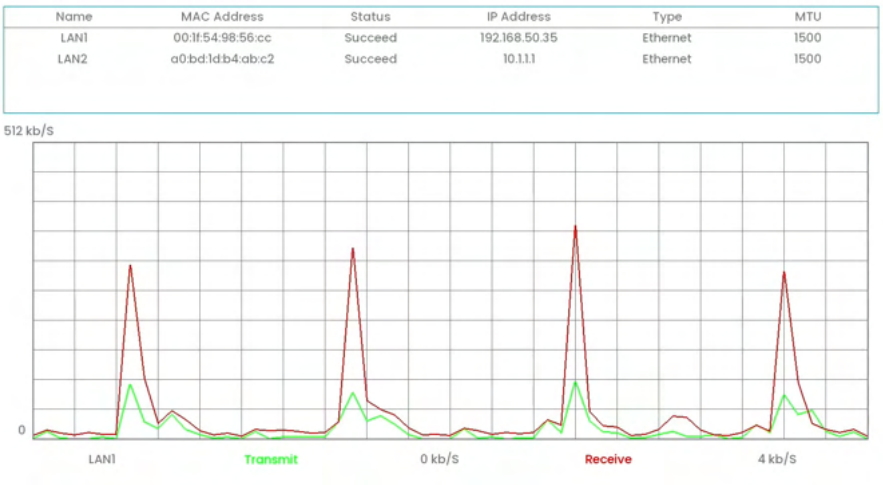


To access the online users menu:

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.

25.7.8 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.

25.7.9 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 **Test** tab from the side panel.

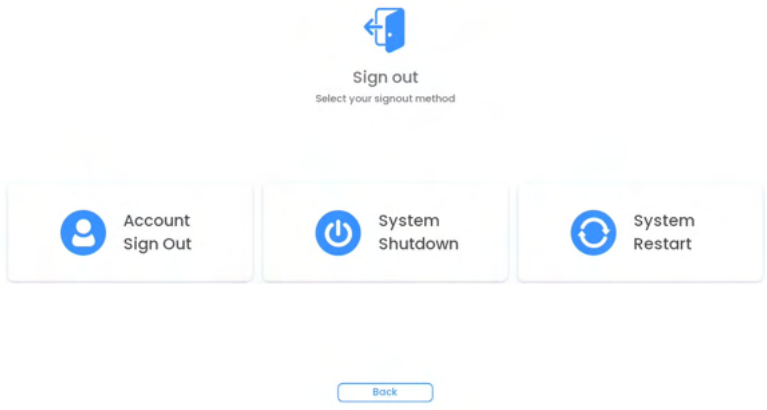
25.8 Sign Out Menu

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.

26 Connecting Remotely Using the *Lorex* App

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

The Lorex app allows you to:

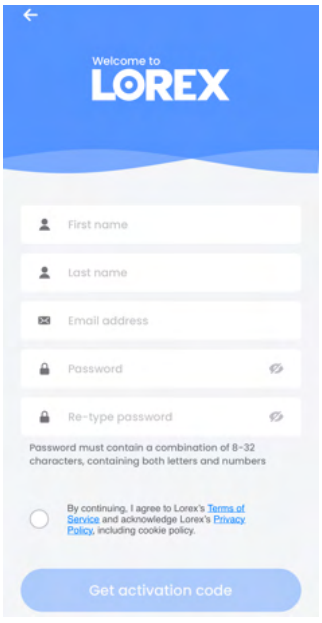
- View live video from cameras
- Play back recorded video from the hard disk drive
- Manually record video clips or take a snapshot of live video
- Activate deterrence features including warning lights, sirens, quick responses, color night vision booster, and **Smart Security Lighting™***
- Set preferences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

* On supporting devices.

To create your Lorex app account:

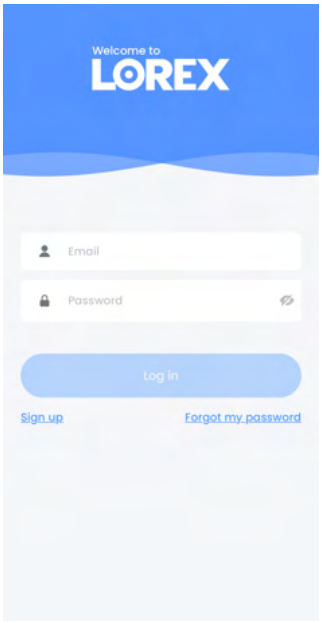
1. Download the **Lorex** app from the App Store® or Google Play™ store.

2. Open the **Lorex** app.
3. Tap **Sign up**.



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

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

For advanced support for the app, go to your recorder's product support page. Visit Lorex App — Home Tab, Lorex App — Settings Tab, Lorex App — Events Tab, and Lorex App — Troubleshooting.

27 Smart Home & Voice Assistance

The recorder is compatible with third-party smart home solutions, including 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 29 *Connecting Audio Devices*, page 154.

Google and Google Home are trademarks of Google LLC.

27.1 Link With Google Assistant®

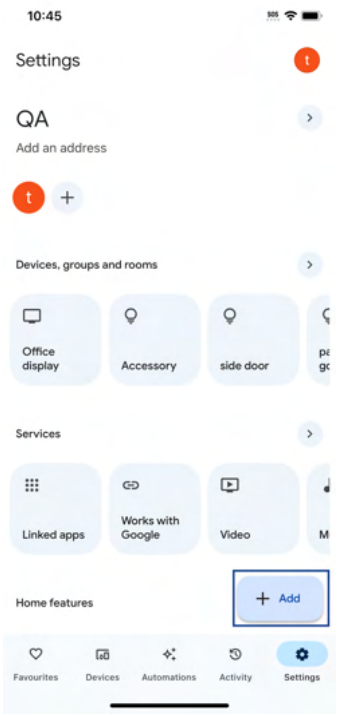
Link your Lorex system connected to the **Lorex** app to your Google Assistant® device.

NOTE

To link accounts, you must first download the **Lorex** app, create an account, and connect your Lorex system to the app. For detailed instructions, refer to 26 *Connecting Remotely Using the* **Lorex** *App*, page 147.

To link your Lorex 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 bottom right corner.



3. Navigate to **Service**.
4. Under **Works with Google** Tap **Search** and enter **Lorex**, then tap the **Lorex Home** app.
5. Enter your username and password and click **Authorize**.
6. Tap **Check for new devices**.
7. Choose which cameras you would like to add.

Your **Lorex** 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 29.2 *Enable Audio for Google Assistant*®, page 155.

28 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.

28.1 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.

28.2 Basic PTZ Controls

Controlling PTZ cameras.

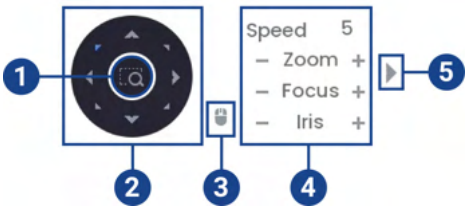
NOTE

Ensure you have completed initial setup of your PTZ camera in order to control the camera using the recorder. See 28.1 *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. **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.
4. **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.
5. **Advanced:** Expand to show advanced options. For a full overview, see 28.3 *Advanced PTZ Controls*, page 151.

28.3 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 28.1 *Connecting PTZ Cameras to the Recorder* for more details.

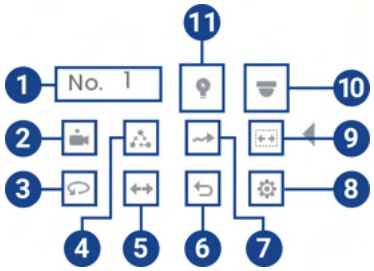
To access the advanced PTZ controls:

- 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 28.4 *Presets*, page 152.
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 28.5 *Tours*, page 152.
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 28.6 *Patterns*, page 153.
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 28.7 *AutoScan*, page 153.
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.

28.4 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  .

28.5 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  .

28.6 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  .

28.7 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 **Scan** tab.
4. Move the camera into the desired left position and click **Left Limit**.
5. Move the camera into the desired left position and click **Left**.
6. Move the camera into the desired right position and click **Right**.

To run autoscan:

- Click  .

29 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).

29.1 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 **Motion** recording.
5. Click on **More** to configure the following:

- **Audio:** Check box to enable/disable.
- **Compression:** Select an audio codec (**G711A** recommended).
- **Sampling Frequency:** Select an audio sampling rate (**8K** recommended).
- Click **OK** to save.

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

29.2 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 27.1 *Link With Google Assistant*®, page 149.

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** and configure the following:

- **Audio**: Click to enable.
- **Compression**: 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**.

30 Replacing the Hard Disk Drive

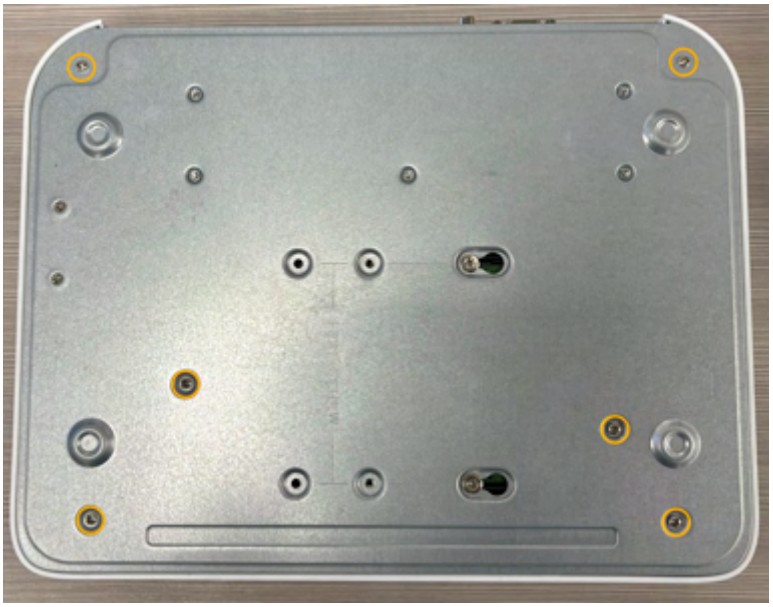
The system comes with a pre-installed 3.5" SATA hard disk drive. You can replace the hard disk drive with one up to a maximum size of .

30.1 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:

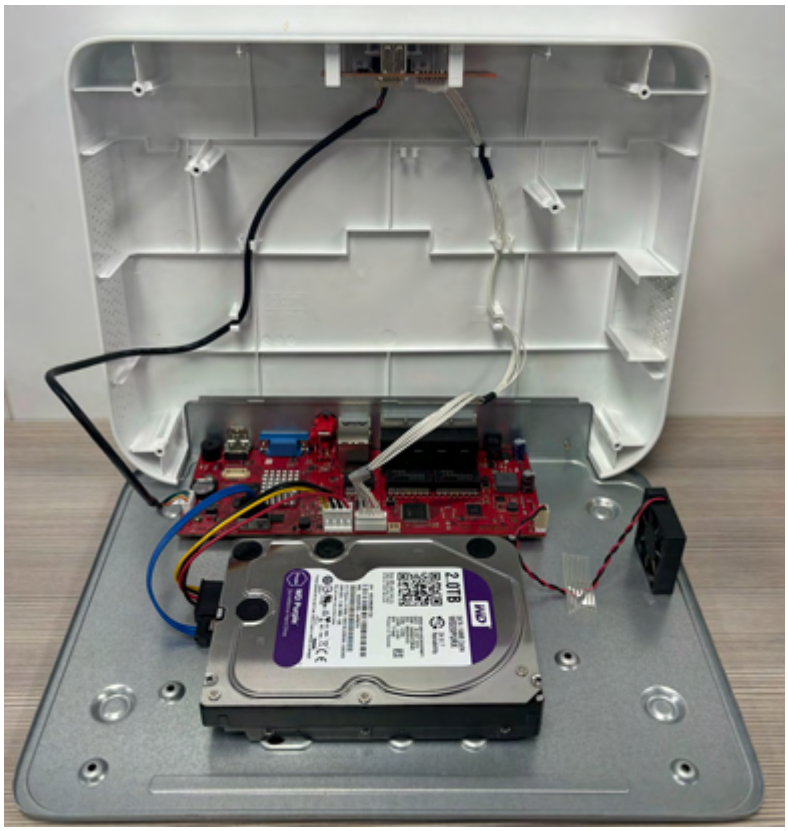
1. Power off the system, and unplug all cabling from the system.
2. Turn the recorder over. Remove the bottom panel screws (6×).



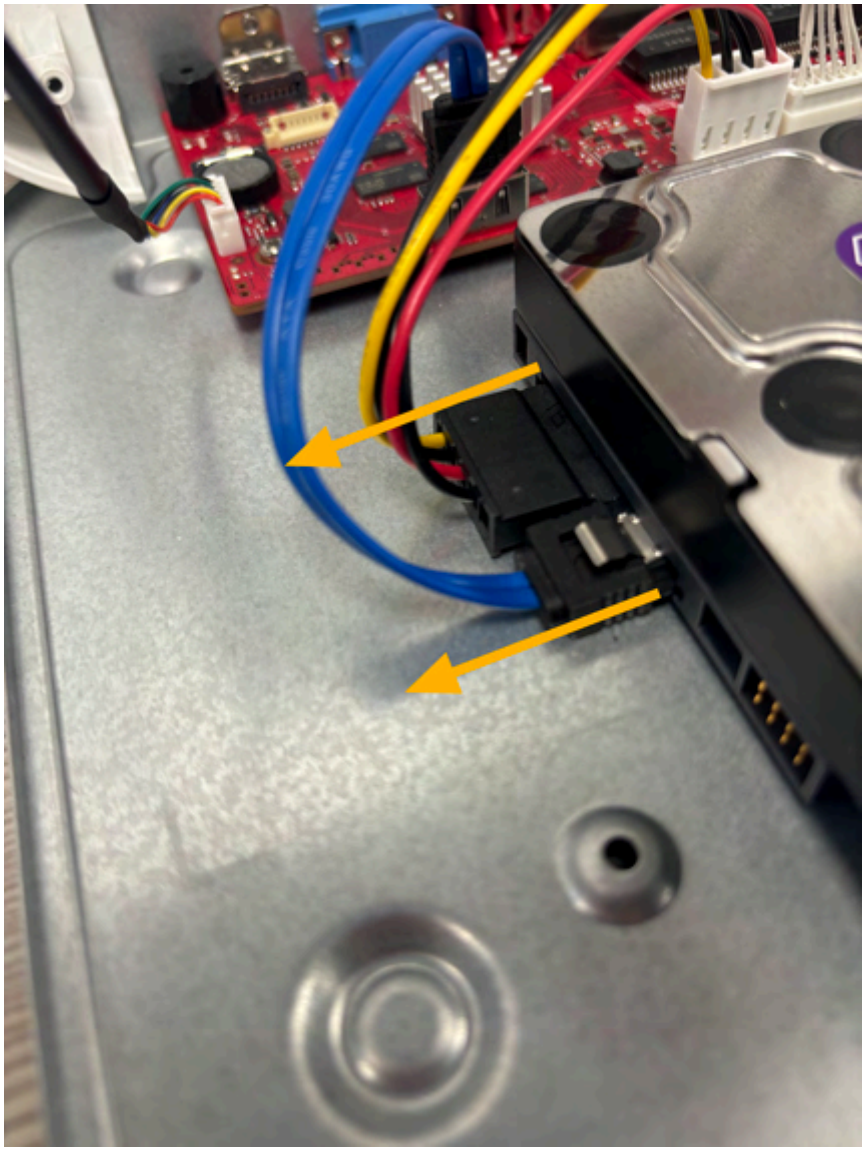
3. Turn the recorder over carefully, then remove the top panel.

CAUTION

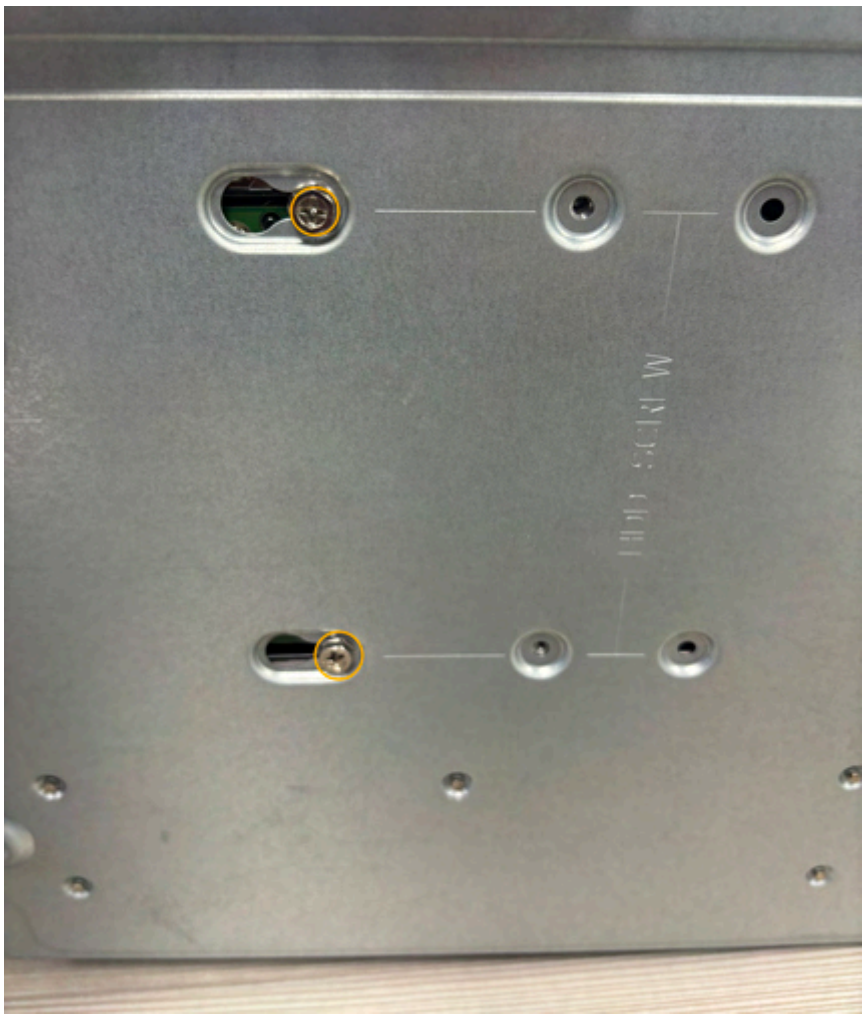
The wiring to the front panel button and USB port runs along the top panel of the recorder. When separating the top panel, rest it carefully beside the bottom panel as shown below.



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 (2×) from the bottom panel. Hold onto the hard disk drive so it remains in place when all screws have been removed.



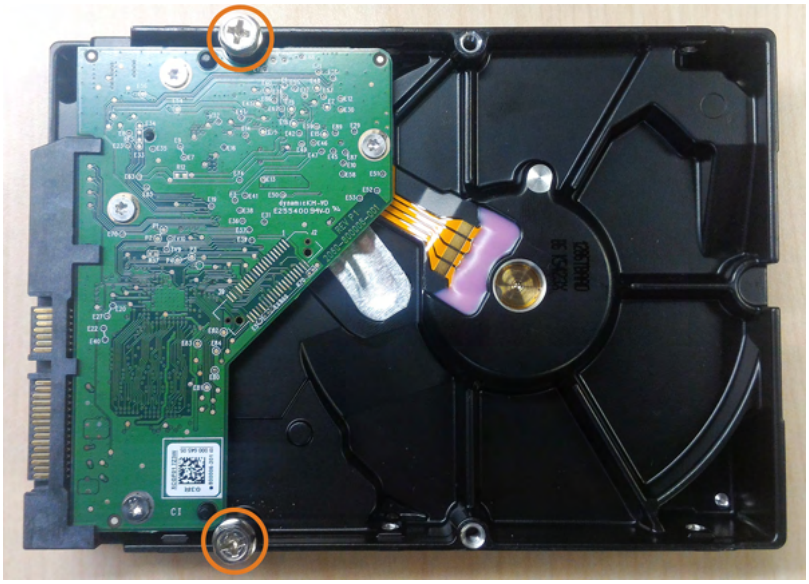
6. If you are not immediately going to install a new hard disk drive, replace the top panel and the 6 bottom panel screws.

30.2 Installing a New Hard Disk Drive

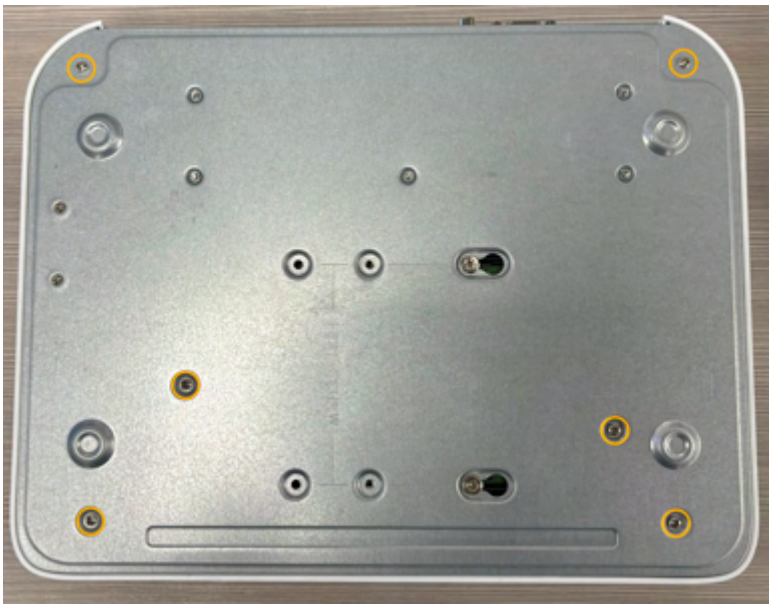
⚠ CAUTION
Make sure that the system is OFF and the power adapter is disconnected before removing/installing a hard disk drive.

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.



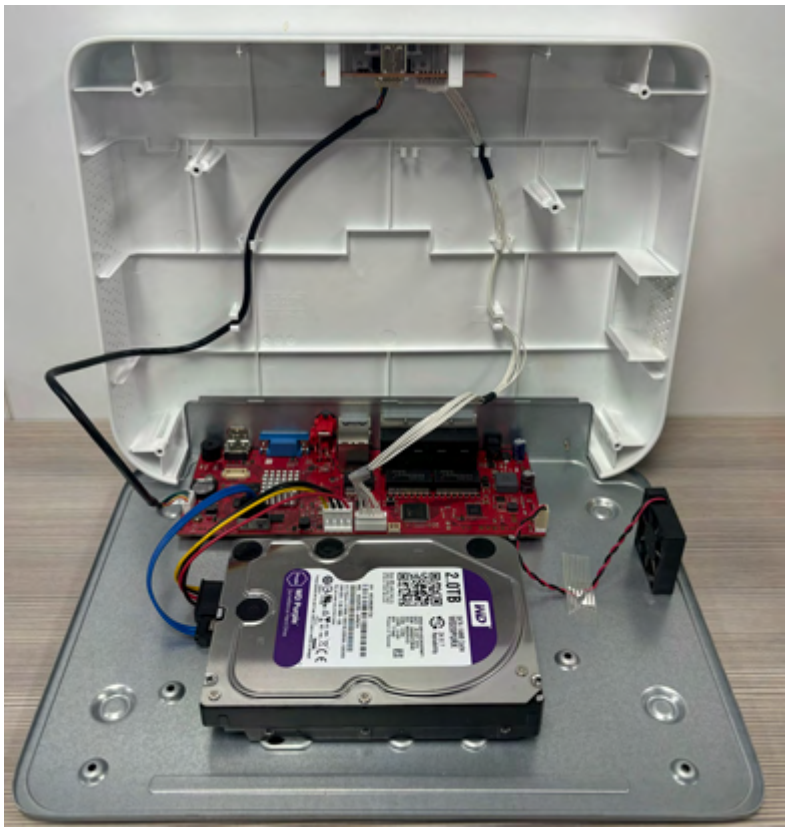
2. Power off the system, and unplug all cabling from the system.
3. Turn the recorder over. Remove the bottom panel screws (6×).



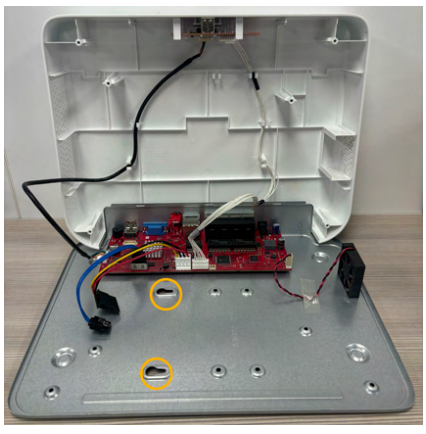
4. Turn the recorder over carefully, then remove the top panel.

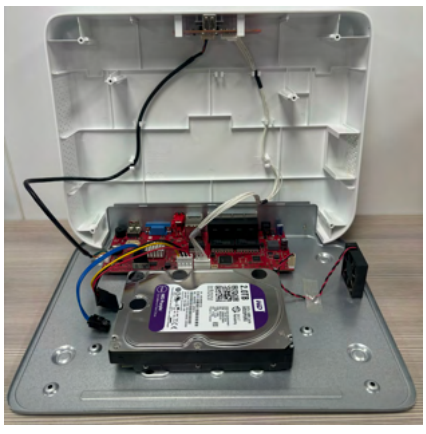
CAUTION

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.

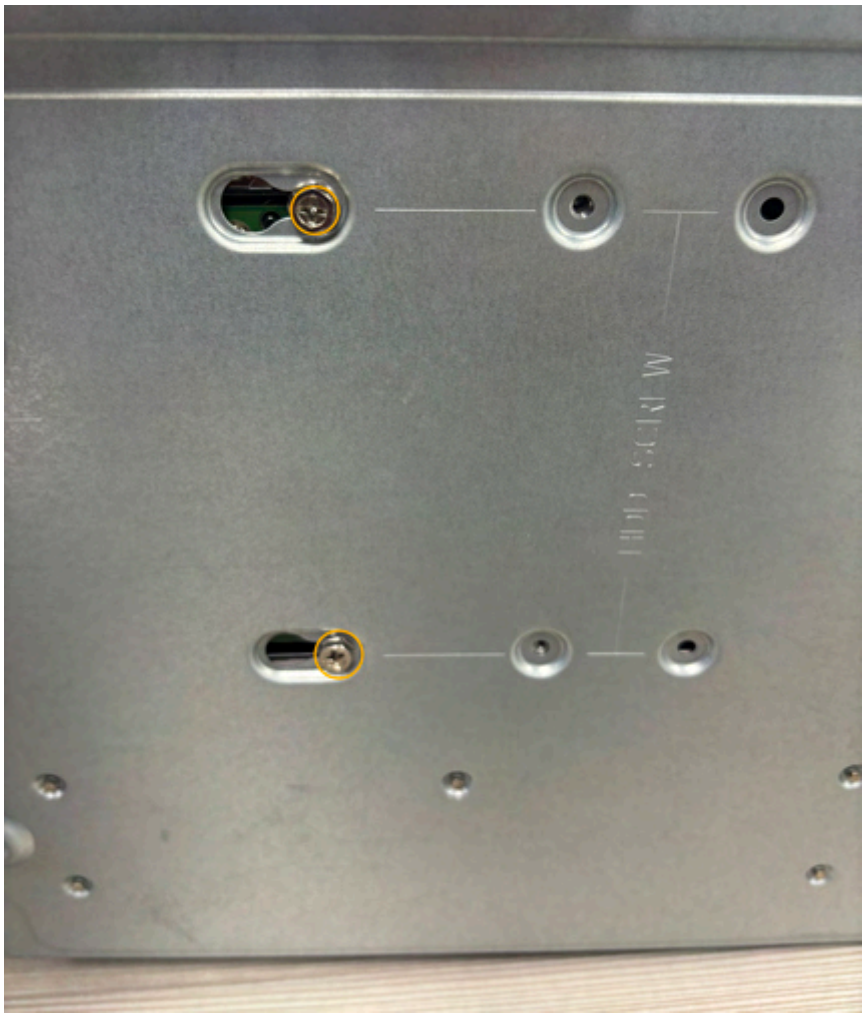


5. Line the 2 half-inserted hard disk drive screws with the 2 holes shown below.

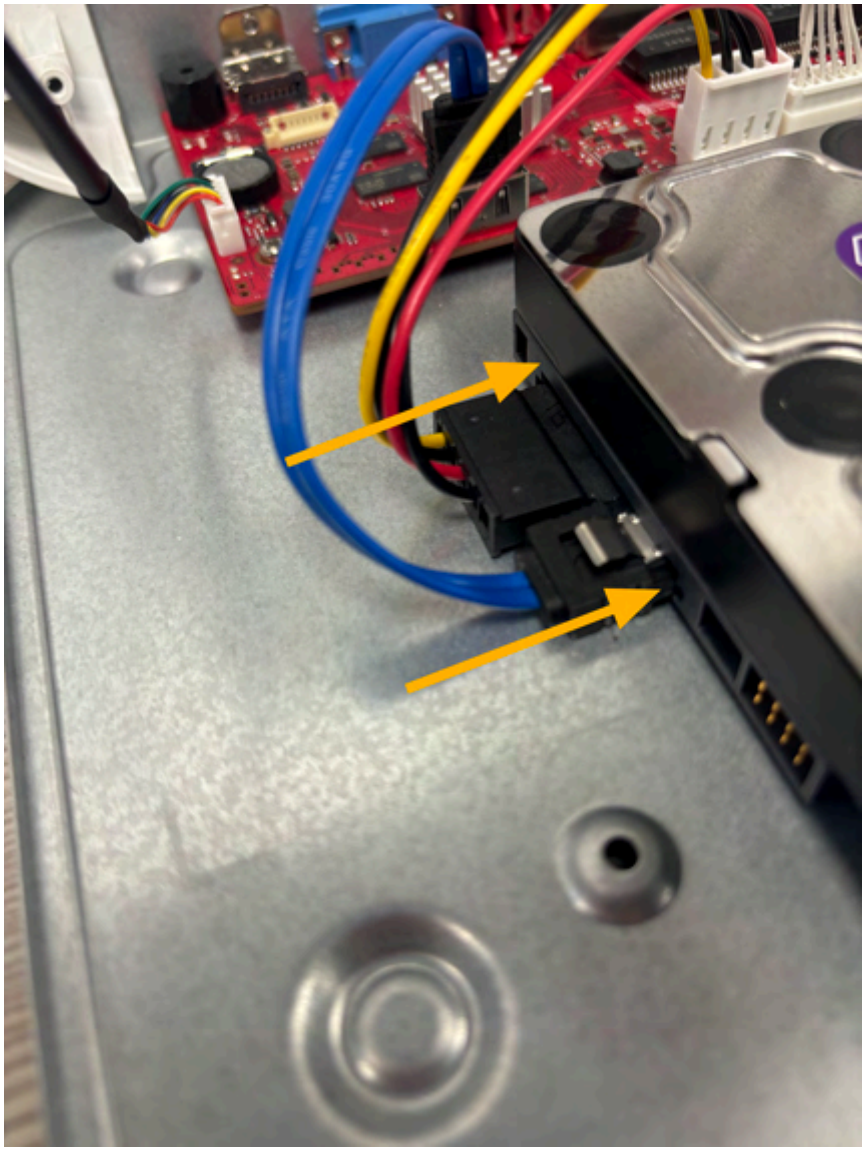




6. Carefully pick up the bottom panel with the hard disk drive, being mindful of the sharp edges of the bottom panel. Slide the 2 pre-inserted screws into the locked position, then tighten the screws.



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



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

31 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 26 *Connecting Remotely Using the* **Lorex** *App*, page 147.

31.1 STEP 1: Port Forwarding

If you are using DDNS, you will need to port forward the **HTTP** and **Client** ports on your router to your NVR's IP address.

- Default HTTP Port: **80**
- Default Client Port: **35000**

Follow your router manufacturer's instructions to manually port forward these ports.

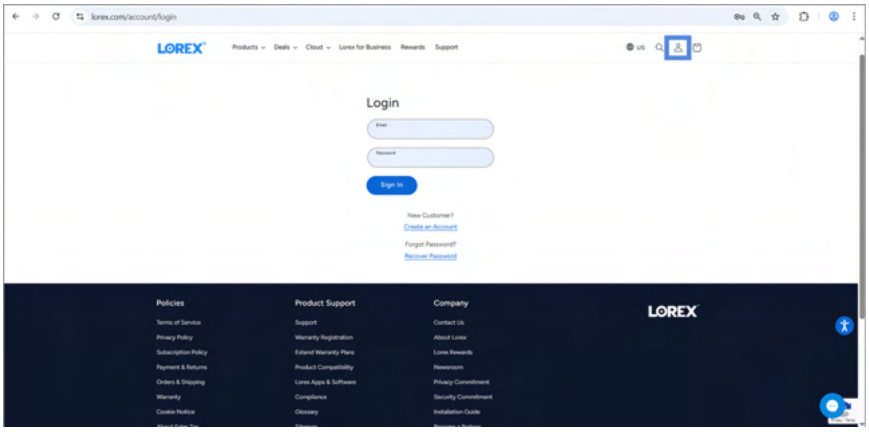
31.2 STEP 2: Create a Lorex Account

You can create an account from either a computer or mobile browser.

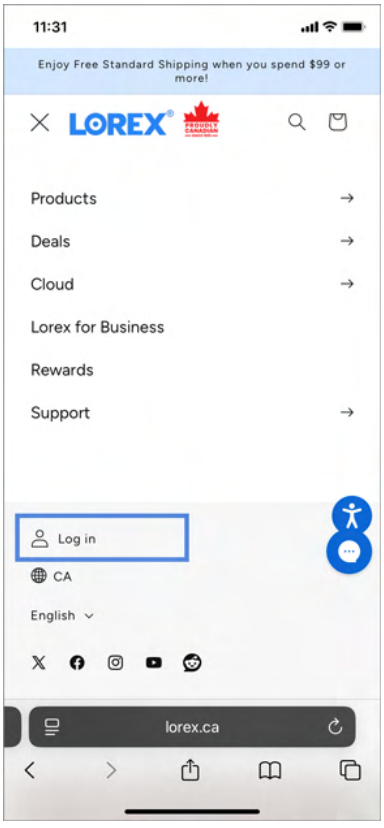
1. Go to lorex.com.

2. **Log in** or tap **Create An Account** to register.

   - On computer: Click the **(My Account)** button in the top-right corner.



   - On mobile: Tap the **(Menu)**, then tap **Login**.

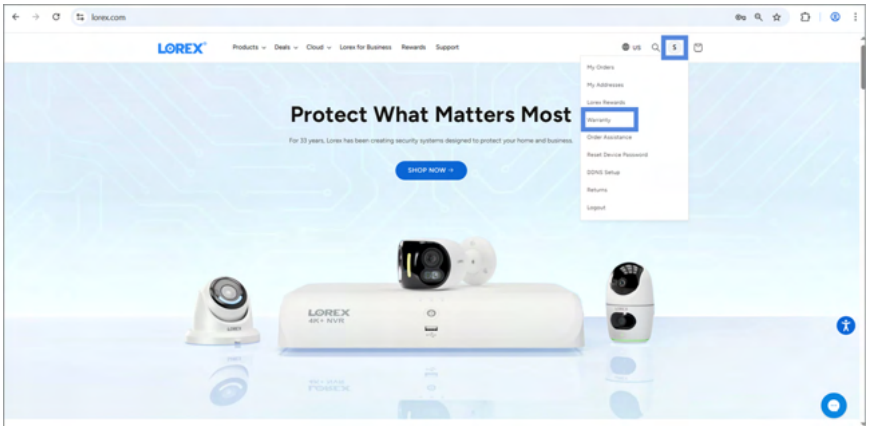


31.3 STEP 3: Activate Your Warranty

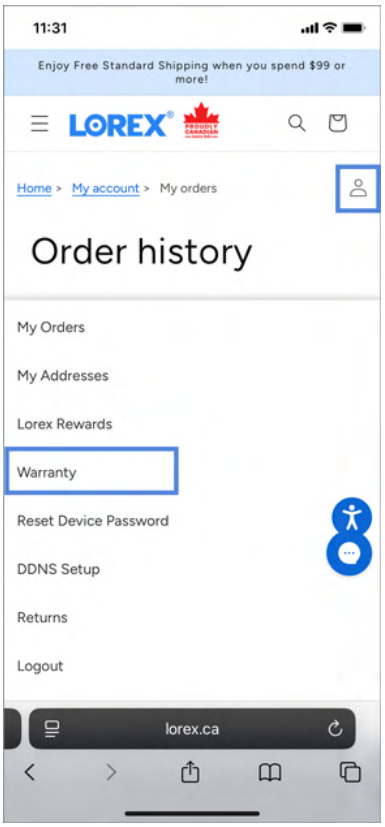
Before setting up DDNS, you must activate your NVR's warranty.

1. After logging in, access **My Account**.

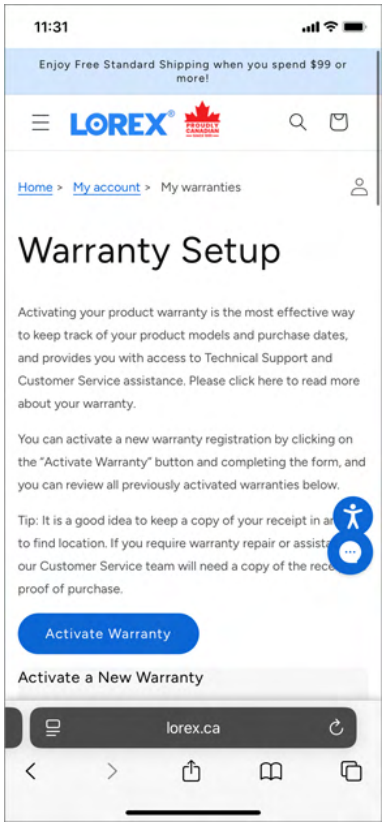
   - **On computer:** Click the **(My Account)** button, then choose **Warranty** from the menu.



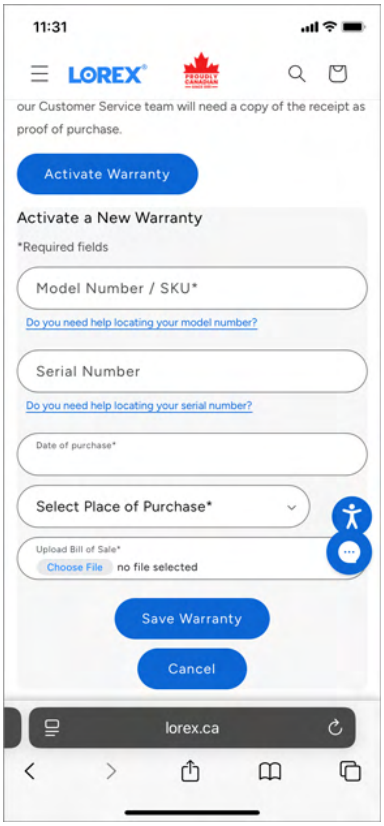
   - **On mobile:** Tap the **(Menu)**, then **My Account**, then tap **Warranty**.



2. Click **Activate Warranty**.



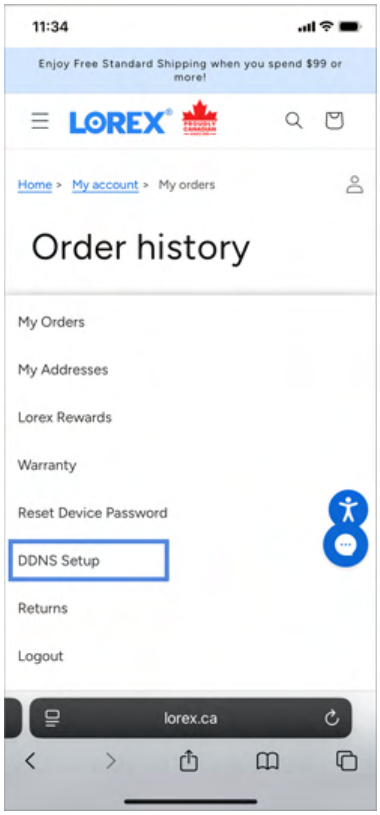
3. Fill in your NVR's product details and click **Save Warranty**.



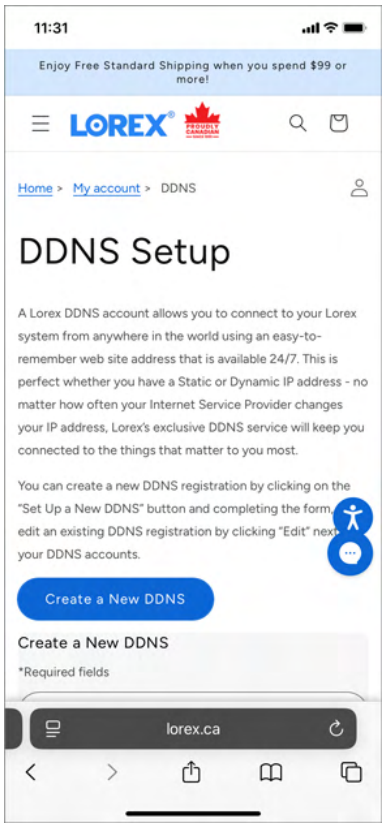
Your device will now be listed under **Existing Warranties**.

31.4 STEP 4: Create a DDNS Entry

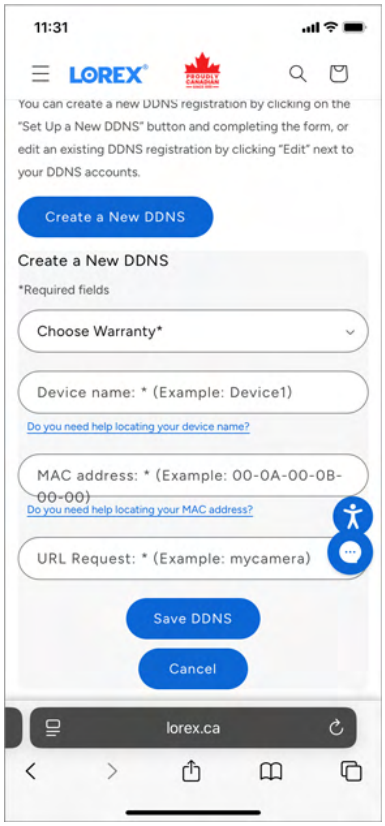
1. In your **My Account** dashboard, click **DDNS Setup**.



2. Click **Create a New DDNS**.



3. Fill in your product details:



- **Choose Warranty:** Select your NVR from the **Warranty** dropdown.
- **Device Name:** Enter a name for your system (For example, *HomeNVR*).
- **MAC Address:** Enter your DVR's **MAC Address**, found under **Navigation Bar > Device Info** on the NVR, refer to , page .
- **URL Request:** Choose a unique name for your DDNS address (for example, *myhome*). Your full Host URL will be automatically generated as: myhome.lorexddns.net.

4. Click **Save DDNS**.
   Once saved, your new DDNS settings will appear under **My DDNS Devices**. Make note of your **Host URL**, **username**, and **password** — you'll need them when configuring remote access on your NVR or app.

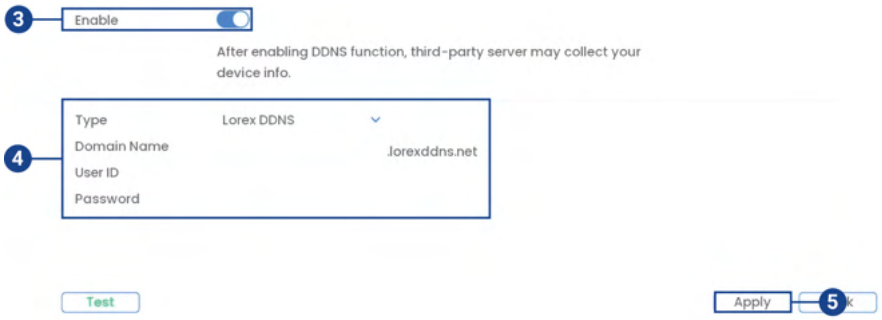
31.5 STEP 5: Enable DDNS on the Recorder

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:
   - **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** to save changes.

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)

32 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. • 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). • 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. • Confirm that there is power at the outlet: ◦ Connect the power cable to another outlet. ◦ 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 30 *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 33 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 **N920 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. 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. • Disconnect and reconnect the cable at the system and at the camera. • 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 **N920 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 28 *Pan/Tilt/Zoom (PTZ) Cameras*, page 150 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. • Disconnect and reconnect the cable at the system and at the camera. • 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 **N920 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 28 *Pan/Tilt/Zoom (PTZ) Cameras*, page 150 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. • 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. • Ensure both your Fusion Wi-Fi camera and recorder are connected to the same Lorex Home app account. • 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 **N920 Series** for a list of all compatible cameras.
• The system beeps at startup.		• The beep at startup is normal.
• Recorder is not connecting to the Matter-compatible app.	Recorder and phone are not connected to the same 2.4GHz Wi-Fi network.	• Ensure that your phone and recorder are connected to the same 2.4GHz Wi-Fi network.
	Recorder and third party app are not updated to the latest versions.	• Update your third party app to the latest version. Check the Apple Store or Google Play Store for the latest updates. • Update your recorder to the latest firmware version. See 25.6.22 *Automatic Firmware Upgrades*, page 141 for full instructions.
	Smart Home Hub is not compatible with the recorder.	• Ensure your smart home hub is compatible with the recorder. Visit your recorder's product support page at help.lorex.com for a list of compatible Matter-compatible smart home systems.
• The system beeps during motion detection.	• Motion detection is enabled and the alarm buzzer is activated.	• See 14 *Motion Detection*, page 60 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 25.6.5 *Configuring Email Alerts*, page 127.
	• **Send Email** setting not enabled in Event menu.	• Make sure that **Send Email** is checked for any events you want to be notified of.

32.1 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.

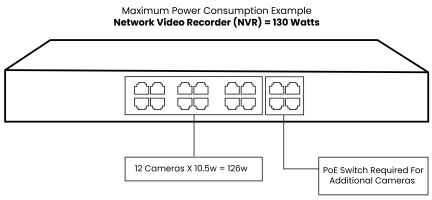
32.1.1 Going over PoE budget will result in video loss

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.



32.1.2 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.

32.1.3 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.

32.1.4 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.

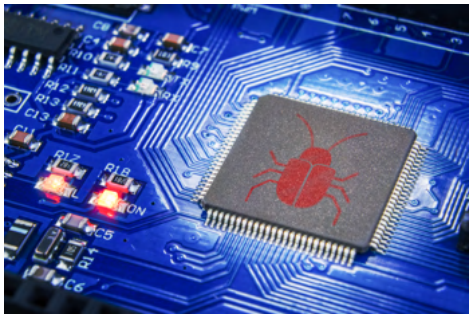
32.1.5 Not supported display output

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.

32.1.6 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.

32.1.7 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.

32.1.8 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.

32.1.9 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.

33 Technical Specifications

33.1 General

Video Transmission Technology	IP
Channels	16 Channels / Lorex Fusion

33.2 Inputs/Outputs

Video Input	16 ch: 8 x PoE, 8 x Wi-Fi Fusion (Wi-Fi Router Required)
Video Outputs[1]	1 × VGA/1 × HDMI
Audio Input	1 ch: RCA type
Audio Output	1 ch: RCA type

33.3 Display

Display Output Resolution	Up to 4K UHD
Live Display	1, 4, 8, 9, 16
OSD	On/Off
System Navigation	USB Mouse

33.4 Recording

Recording Resolution	4K+ (12MP), 4K (8MP)/5MP/4MP/3MP/1080p/720p
Recording Frame Rate	4K+ (12MP), 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/AVI/MP4
Video Compression	Smart H.265+/H.264+, H.265, H.264

33.5 Playback

Simultaneous Playback	Up to 4 channels, synchronized
Playback Speed	Variable Max x2, x4, x8, x16,
Search	By Time/Date, All Motion Events or Smart Search (Person, Vehicle and Animal)

33.6 Storage

Hard Disk Drive Bays	1 Bay
Hard Disk Drive Capacity	Up to 16TB (SATA)
Backup Media	USB Flash Drive, USB HDD, and Network

33.7 Special Features

Smart Motion Detection Support	Support for Vehicle, Person, Face, Animal, and Package (Depends on Camera)
Wired/Wireless Fusion Support	Yes (Wi-Fi Router Required)
Lorex Sensor (only) Compatible	Yes
Face Detection Support	Yes
Package Detection (Missing Package and Left Behind Package)	Yes
Active Deterrence Support	Yes
Active View Support	Yes

Selectable Siren Support	Yes
Panic Button	Yes
Smart Search	Yes

33.8 Smart Home

Voice Control	Google Assistant™
Streaming Options	Chromecast™, Amazon Echo Show™, Google Home Hub™

33.9 Connectivity

Mobile Viewing[4]	Android, iOS
Compatible App	Lorex App
PC/MAC Remote Viewing	Yes/Lorex Cloud™ client
Email Notification	Text and Snapshot
Network Interface	10/100 Base-TX, RJ45
DDNS	Yes (Optional)
USB Interface	USB 2.0 × 2

33.10 Additional Specifications

FW Upgrade	USB/Network
Watchdog Function	Yes
Power Consumption	Less than 10 W (no HDD included)
Supply Voltage	100VAC-240VAC, 50/60Hz
Total PoE Power Output	PoE: Max 25.5W for single port, 72W total
Unit Dimensions (W × D × H)	12.6 × 9.7 × 2.3" (320 x 247 x 58 mm)
Unit Weight	2.43 lbs (1.1kg) (without HDD)
Operating Temperature	14° ~ 131°F / -10° ~ 45°C
Humidity	10 ~ 90% RH

Disclaimers:

1. 4K+ (11.3MP) 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, visit 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 visit lorex.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.

8. Pre-recording is available only when using Motion Detection and can be viewed exclusively during local playback. This feature is not supported for Smart Motion Detection (SMD), continuous recording, or through the Lorex app or cloud services. The duration of the pre-recorded footage may vary based on the recorder available cache memory at the time the event was detected, up to a maximum time set by the user.
9. Smart detection is limited to a maximum of 6 channels.

* Detection types need to be supported by the camera.

34 Notices

This product has been certified and found to comply with the limits regulated by FCC and ICES-003. 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, or fire hazard injury.

34.1 FCC/ICES

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules and Canadian standard ICES-003. These limits are designed to provide reasonable protection against harmful interference in a residential or commercial installation.

This equipment does not contain any wireless transmitters. All data communication is performed via wired connections (e.g., Ethernet).

This device generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. If this equipment does cause harmful interference, the user is encouraged to try to correct it by:

- Reorienting or relocating the receiving antenna.
- Increasing the distance between the equipment and the receiver.
- Connecting the equipment to an outlet on a different circuit.
- Consulting the dealer or an experienced radio/TV technician.

34.2 ICES-003 (Canada)

This device meets CAN ICES-3 (B) / NMB-3 (B) requirements for Class B digital apparatus.

Note: Cet appareil est conforme à la norme canadienne NMB-3 (B). Cet équipement ne comprend pas de modules sans fil. Toutes les communications s’effectuent par connexions câblées.

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www.lorextechnology.com

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