



DIGITAL VIDEO SURVEILLANCE RECORDER

Instruction Manual

English Version 5.0

*8 Channel Model Shown



THE ECONOMICAL SOLUTION TO PROTECT YOUR **HOME** OR **BUSINESS**



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VANTAGE
LH110 ECO SERIES

Thank you for purchasing the LH110 Series Digital Video Surveillance Recorder.

This manual refers to the following models:

- LH114 Series (4-channel model)
- LH118 Series (8-channel model)
- LH116 Series (16-channel model)

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

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CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICABLE 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 products' 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.



NEED HELP?

CONTACT US FIRST

DO NOT RETURN THIS PRODUCT TO THE STORE

Please make sure to register your product at www.lorextechnology.com to receive product updates and technical support.

2 Easy Ways to Contact Us



Online:

Product Support is available 24/7 including product information, user manuals, quick start up guides and FAQ's at **www.lorextechnology.com/support**

For all other matters, visit **www.lorextechnology.com**



By Phone:

North America:

Customer Service (for warranty matters): **1-888-425-6739** (1-888-42-LOREX)

Tech Support (for technical/installation issues): **1-877-755-6739** (1-877-75-LOREX)

Mexico: **001-800-514-6739**

International: **+800-425-6739-0** (Example: From the UK, dial 00 instead of +)



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(Ejemplo: Desde el Reino Unido, marque el 00 en lugar del +)

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(Exemple: À partir du Royaume-Uni, composez 00 au lieu de +)

BEFORE YOU START

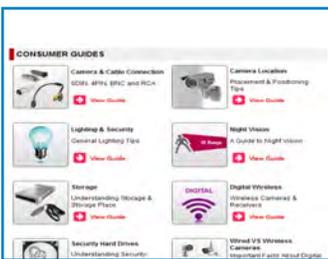
Please make sure to register your product at www.lorextechnology.com to receive product updates and technical support

THIS PRODUCT MAY REQUIRE PROFESSIONAL INSTALLATION

LOREX IS COMMITTED TO FULFILLING YOUR SECURITY NEEDS



- We have developed user friendly products and documentation. Please read the Quick Start Guide and User Manual before you install this product.



- Consumer Guides and Video Tutorials are available on our web site at www.lorextechnology.com/support



- If you require further installation assistance, please visit www.lorextechnology.com/installation or contact a professional installer.



- Please note that once the components of this product have been unsealed, you cannot return this product directly to the store without the original packaging.



AVANT DE COMMENCER

ANTES DE EMPEZAR

Veillez veiller à enregistrer votre produit à www.lorexctv.com/registration pour recevoir des mises à jour et l'information de produit et le support technique

CE PRODUIT POURRAIT EXIGER UNE INSTALLATION PROFESSIONNELLE

LOREX S'ENGAGE À SATISFAIRE VOS BESOINS SÉCURITAIRES

- Veillez lire le guide de démarrage rapide et le mode d'emploi avant d'installer ce produit
- Les guides du consommateur et les séances de tutorat vidéo sont disponibles sur l'Internet en visitant www.lorextechnology.com/support
- Si vous avez besoin de l'aide pour l'installation, veuillez visiter www.lorextechnology.com/installation ou contactez un spécialiste en installation
- Veillez constater qu'une fois que les composantes de ce produit ont été retirées de l'emballage, vous ne pourrez plus retourner ce produit directement au magasin

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- Favor de leer la guía de instalación rápida y la guía del usuario antes de instalar este product.
- Puede conseguir las guías del consumidor y los cursos en enseñanza video sobre el Internet visitando www.lorexctv.com/support
- Si necesita ayuda para la instalación, visite www.lorextechnology.com/installation o contacte un especialista en instalaciones
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VOIR VOTRE MONDE™
VER SUMUNDO™

VANTAGE

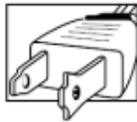
Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacture process of your video 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 assure your enjoyment and proper use of the video product and accessory equipment. Please read them carefully before operating and using your video product.

Installation

1. **Read and Follow Instructions** - All the safety and operating instructions should be read before the video 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 video 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 video 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 supply to your location, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading** - Do not overload wall outlets of 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, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

8. **Ventilation** - Slots and openings in the case are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video equipment on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.

9. **Attachments** - Do not use attachments unless recommended by the video product manufacturer as they may cause a hazard.

10. **Camera Extension Cables** - Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.

11. **Water and Moisture** - Do not use this video 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.

Caution: Maintain electrical safety. Power line operated equipment or accessories connected to this unit should bear the UL listing mark of 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.

12. **Accessories** - Do not place this video equipment on an unstable cart, stand, tripod, or table. The video equipment may fall, causing serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.



Service

13. **Servicing** - Do not attempt to service this video equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
14. **Conditions Requiring Service** - Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - A. When the power supply cord or plug is damaged.
 - B. If liquid has been spilled or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video 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 video product to its normal operation.
 - E. If the video product has been dropped or the cabinet has been damaged.
 - F. When the video product exhibits a distinct change in performance. This indicates a need for service.
15. **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 video product manufacturer can prevent fire, electric shock or other hazards.
16. **Safety Check** - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.
17. **Wall or Ceiling Mounting** - The cameras provided with this system should be mounted to a wall or ceiling only as instructed in this guide, using the provided mounting brackets.
18. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Use

19. **Cleaning** - Unplug the video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
20. **Product and Cart Combination** - Video and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and car combination to overturn.
21. **Object and Liquid Entry** - Never push objects for any kind into this video 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 video product.
22. **Lightning** - For added protection for this video 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 video product due to lightning and power line surges.

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 unit in humid or wet places.
4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge.

FCC CLASS B NOTICE

Note

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for assistance

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows this manual's guideline to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.



Features



8-channel model shown

Digital Video Recorder Features

- H.264 compression video compression¹
- Real time recording @ 360 x 240 resolution
- Pentaplex operation: view, record, playback, backup, remote configuration simultaneously
- 24/7 100% Duty cycle hard drive pre-installed

Connectivity Features

- Exclusive LOREX Easy Connect Internet Set-up Wizard ²
- PC (Microsoft Windows™ 7/Vista/XP) compatible using Internet Explorer®
- Mac (OSX 10.6) compatible using Safari®
- Free LOREX DDNS (Dynamic Domain Name Service) for advanced remote connectivity at all times
- Instant email alerts
- Supports smart phone viewing with: iPhone, Blackberry, Android, Symbian OS, Windows Phone

1. Recording time may vary based on recording resolution & quality, lighting conditions and movement in the scene.
2. Requires a high speed Internet connection and router (not included)

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Getting Started

The system comes with the following components:



DVR (DIGITAL VIDEO RECORDER)



12V DC POWER SUPPLY



REMOTE CONTROL

*4/8 channel model remote shown



USB MOUSE



ETHERNET CABLE



**INSTRUCTION MANUAL
QUICKSTART GUIDE
DOCUMENTATION CD**



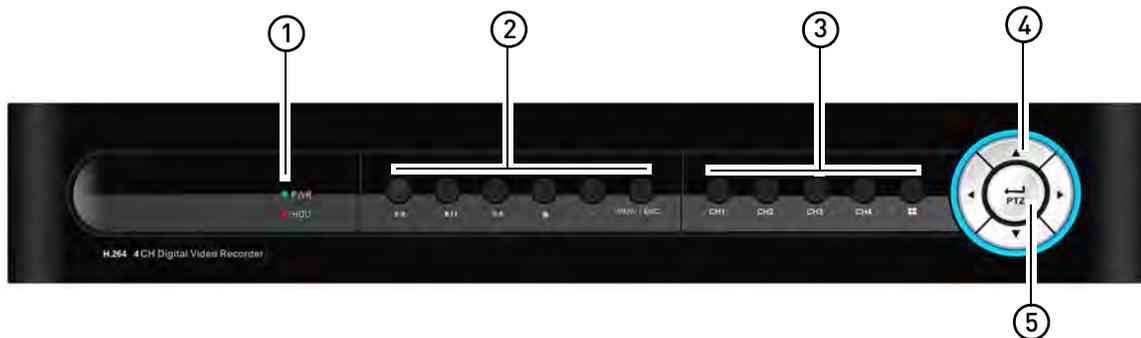
AUDIO HARNESS CABLE

16-Channel models only

HARD DRIVE SIZE, NUMBER OF CHANNELS, AND CAMERA CONFIGURATION MAY VARY BY MODEL. PLEASE REFER TO YOUR PACKAGE FOR SPECIFIC DETAILS.
CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

Front Panel

4-channel



1 IR Sensor: IR receiver for the remote control.

LED Indicators:

- **PWR** : Power LED
- **HDD** : Hard disk activity LED

2 Menu & Playback Controls:

- ◀◀ : In Playback mode, press for reverse playback. Press repeatedly to speed up video.
- ▶ || : In Playback mode, press to Play video. Press again to pause video playback
- ▶▶ : In Playback mode, press to fast forward video. Press repeatedly to speed up video.
- ■ : In Playback mode, press to stop video playback.
 - In main viewing mode, press to stop DVR recording.
- ● : Press to start/ resume recording. When the channel displays a red box with the letter "C", the channel is recording.
- **Menu / Esc**: Opens the system menu / or press to exit a menu selection

3 Channel Controls:

- **Ch1 - Ch4**: Press to switch to full view of the selected channel
- ■■ Press to view video in quad-view (4-channel split)

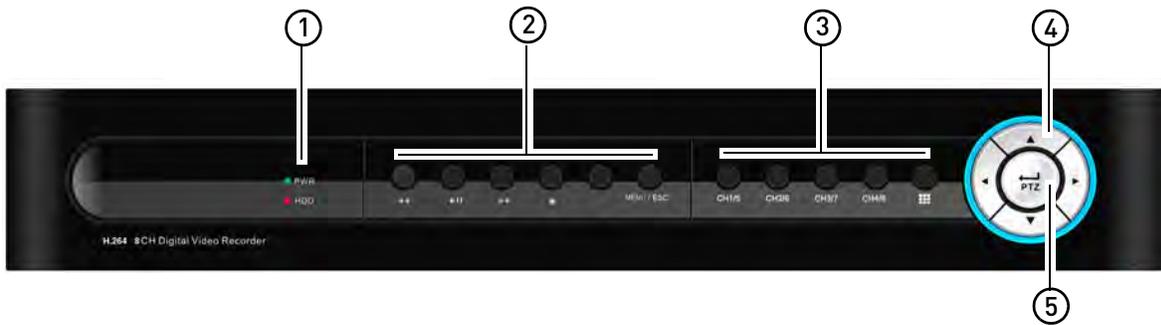
4 Navigation Buttons:

- ▲ : Press to move cursor up
- ▼ : Press to move cursor down
- ◀ : Press to move cursor left
- ▶ : Press to move cursor right

5 **PTZ /** ◀ :

- Within system menus: Press to confirm a selection.
- In the main viewing mode, press to open the System Information window.
- In the main viewing mode, press and hold for 6 seconds to open the PTZ menu.

8- channel



1 IR Sensor: IR receiver for the remote control.

LED Indicators:

- **PWR** : Power LED
- **HDD** : Hard disk activity LED

2 Menu & Playback Controls:

- **◀◀** : In Playback mode, press for reverse playback. Press repeatedly to speed up video.
- **▶▶** : In Playback mode, press to Play video. Press again to pause video playback
- **▶▶▶** : In Playback mode, press to fast forward video. Press repeatedly to speed up video.
- **■** : In Playback mode, press to stop video playback.
 - In main viewing mode, press to stop DVR recording.
- **●** : Press to start/ resume recording. When the channel displays a red box with the letter "C", the channel is recording.
- **Menu / Esc**: Opens the system menu / or press to exit a menu selection

3 Channel Controls for full screen view:

- **Ch1/5**: Press once to display channel 1. Press  twice and press **1/5** to view channel 5.
- **CH 2/6**: Press once to display channel 2. Press  twice and press **2/6** to view channel 6.
- **CH3/7**: Press once to display channel 3. Press  twice and press **3/7** to view channel 7.
- **CH4/8**: Press once to display channel 4. Press  twice and press **4/8** to view channel 8.
-  Press to view video in channels in Quad view (channels 1-4 , 5-8), or split screen mode (channels 1-8), To switch viewing modes, press the button repeatedly.

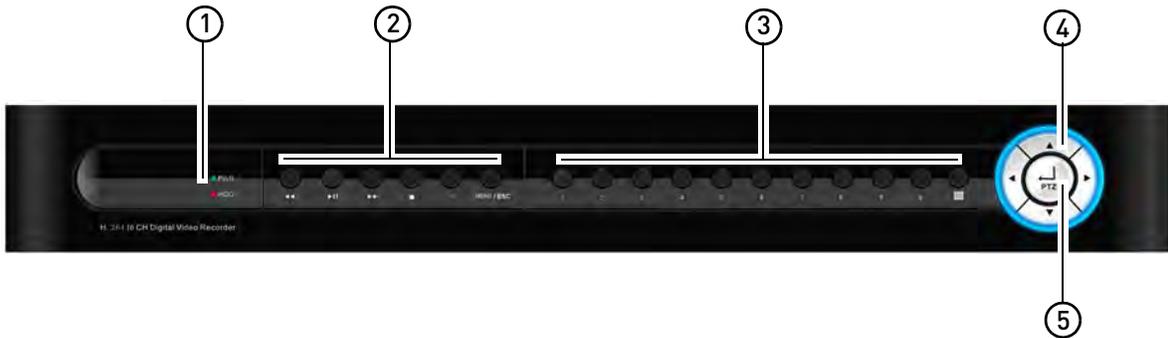
4 Navigation Buttons:

- **▲**: Press to move cursor up
- **▼**: Press to move cursor down
- **◀**: Press to move cursor left
- **▶**: Press to move cursor right

5 PTZ/ :

- Within system menus: Press to confirm a selection.
- In the main viewing mode, press to open the System Information window.
- In the main viewing mode, press and hold for 6 seconds to open the PTZ menu.

16-channel



- 1 IR Sensor:** IR receiver for the remote control.

LED Indicators:

- **PWR** : Power LED
- **HDD** : Hard disk activity LED

- 2 Menu & Playback Controls:**

- **◀◀** : In Playback mode, press for reverse playback. Press repeatedly to speed up video.
- **▶ ||** : In Playback mode, press to Play video. Press again to pause video playback
- **▶▶** : In Playback mode, press to fast forward video. Press repeatedly to speed up video.
- **■** : In Playback mode, press to stop video playback.
 - In main viewing mode, press to stop DVR recording.
- **●** : Press to start/ resume recording. When the channel displays a red box with the letter "C", the channel is recording.
- **Menu / Esc**: Opens the system menu / or press to exit a menu selection

- 3 Channel Controls:**

- **Ch1 ~ Ch9**: Press to view channel in full screen mode.
- To access channels 10 and greater: Press **0** for channel 10 or 1+0 for channel 10, 1+1 for channel 11, 1+2 for channel 12 etc.
- **■ ■ ■ ■** Press to view video in channels in Quad view (channels 1-4 , 5-8, 9-16), or split screen mode (channels 1-16), To switch viewing modes, press the button repeatedly.

- 4 Navigation Buttons:**

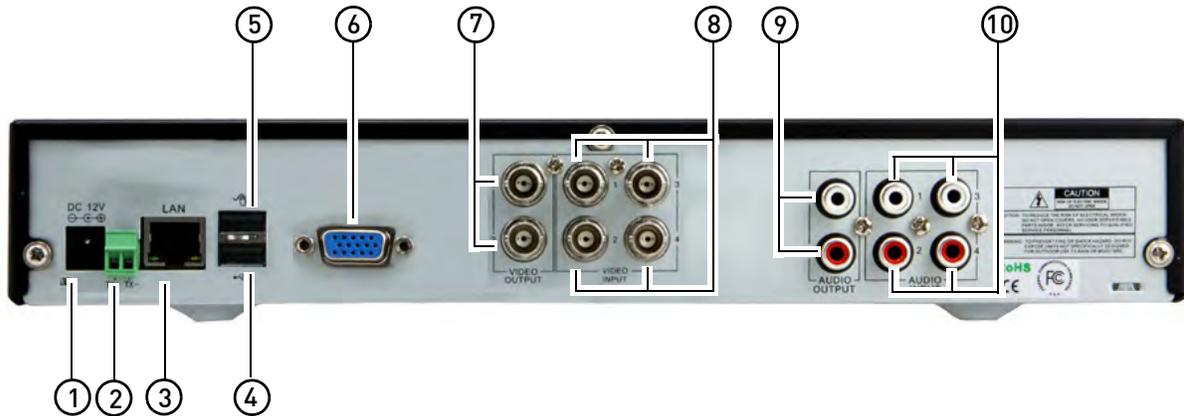
- **▲**: Press to move cursor up
- **▼**: Press to move cursor down
- **◀**: Press to move cursor left
- **▶**: Press to move cursor right

- 5 PTZ/ ** :

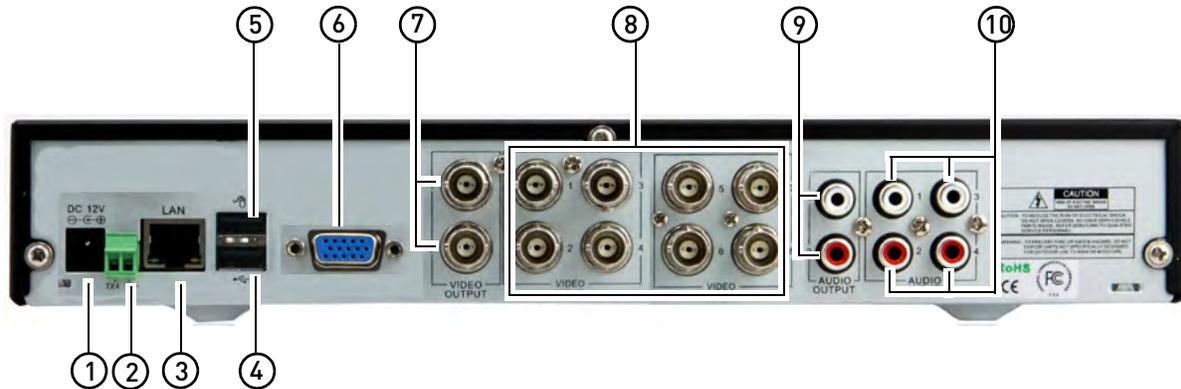
- Within system menus: Press to confirm a selection.
- In the main viewing mode, press to open the System Information window.
- In the main viewing mode, press and hold for 6 seconds to open the PTZ menu.

Rear Panel

4-channel

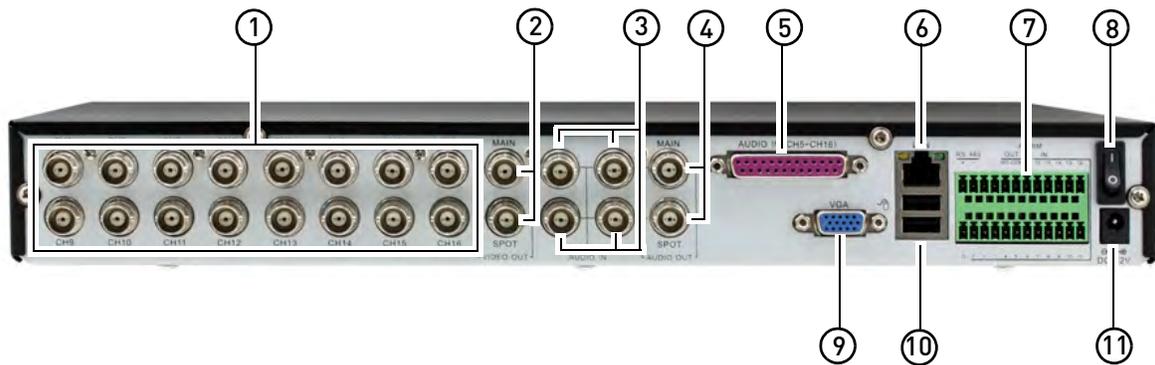


8-channel



- 1 DC12V:** Connect the included AC power adapter to turn on the DVR.
- 2 PTZ Block:** Connect the terminal wires for a PTZ (Pan Tilt Zoom) camera (not included)
- 3 LAN:** Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.
- 4 USB Port (Firmware upgrades):** USB port for firmware upgrades / media backup.
- 5 USB Mouse port:** Connect a USB mouse (included) for local system navigation.
- 6 VGA Output:** Connect a VGA monitor (not included) to view the system interface.
- 7 Video Out:** Outputs the DVR interface to a BNC connection. This allows you to see your mouse cursor, and have full control of the system on a secondary monitor.
- 8 BNC Video IN:** 4 Channel- Connect up to 4 cameras / 8 Channel - Connect up to 8 cameras.
- 9 Audio Out:** Connect up to 2 output devices (i.e speakers).
- 10 Audio In:** Connect up to 4 RCA audio-enabled cameras (not included).

16-channel



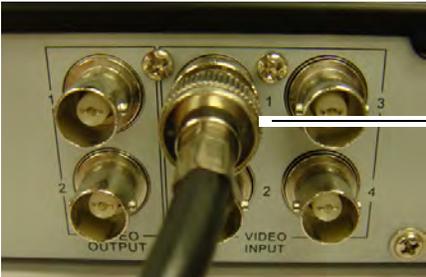
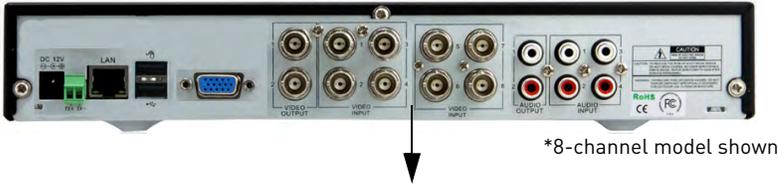
- 1 BNC Video IN:** Connect up to 16 cameras.
- 2 Main & Spot Video Out:**
 - **Main:** Outputs the DVR interface to a BNC connection. This allows you to see your mouse cursor, and have full control of the system on a secondary monitor.
 - **Spot Video Out:** Outputs the DVR interface to a BNC connection. This allows you to see the DVR interface only, with no access to the mouse cursor.
- 3 Audio In:** Connect up to 4 RCA audio-enabled cameras (not included). BNC to RCA connectors required (not included).
- 4 Audio Out:** Connect up to 2 output devices (i.e speakers, not included). BNC to RCA connectors required (not included).
- 5 Audio In (Channels 5-16):** Connect up to 12 RCA audio-enabled cameras (not included) using the audio harness cable (BNC to RCA connectors required, not included). For details, see "Appendix J: Recording Audio" on page 119.
- 6 LAN:** Connect a CAT 5 RJ45 Ethernet cable for local and remote connectivity.
- 7 PTZ / Alarm Block:** Connect a PTZ camera and Alarm Devices (not included)
- 8 On / Off Switch:** Turns the DVR on or off.
- 9 VGA Output:** Connect a VGA monitor (not included) to view the system interface.
- 10 USB Mouse port (top):** Connect a USB mouse (included) for local system navigation.
 - **USB Port (bottom):** Connect a USB flash drive to upgrade the system firmware or as a media device for video backup.
- 11 DC12V:** Connect the included AC power adapter to turn on the DVR.



Basic Setup

Step 1: Connect the BNC cameras.

- Connect the BNC cameras to the BNC ports (labeled **VIDEO INPUT**) on the rear panel of the system.

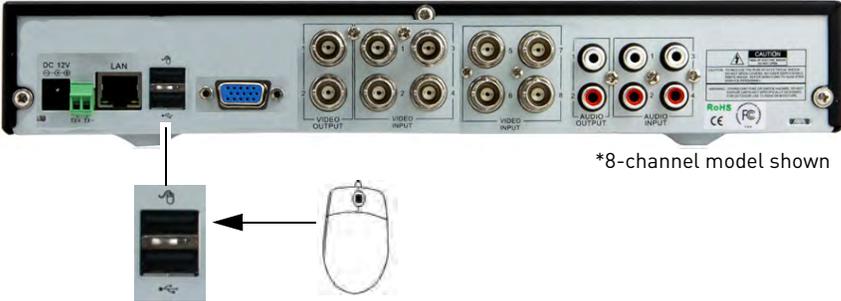


Push and twist the BNC connector clockwise to secure it to the BNC port.

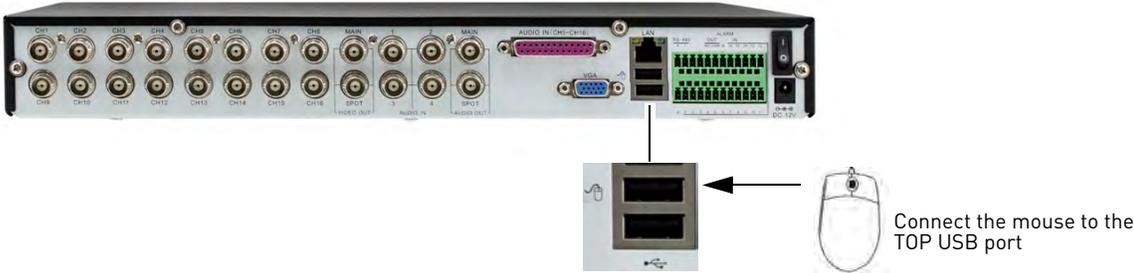
Step 2: Connect the mouse

- Connect a USB mouse to the USB port on the rear panel of the system.

4/8 Channel Model

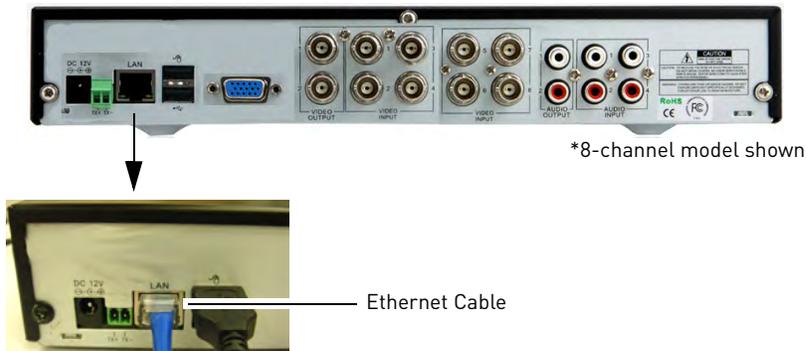


16 Channel Model



Step 3: Connect the Ethernet cable

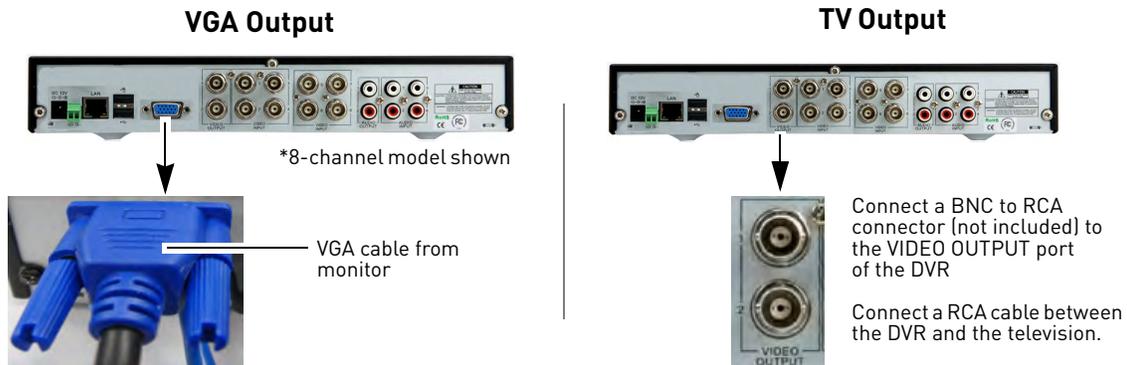
- Connect the ethernet cable to the ethernet port on the rear panel of the system. Connect the other end of the ethernet cable to a router on your network.



Step 4: Connect the display

- Connect the VGA cable (not included) from the monitor to the VGA port **OR**;
- Connect a BNC cable to the VIDEO OUTPUT BNC port using a BNC to RCA connector (not included), and a RCA cable.

NOTE: If you have a monitor with DVI & VGA, you must use the VGA port. You cannot use a DVI to VGA adapter.



Step 5: Connect the power adapter

- Connect the DC 12V connector to the system. Connect the end of the power adapter to a wall socket or a surge protector.



Step 6: Verify camera image

- Power on the cameras, and then verify the camera video quality before mounting the cameras to a permanent location.
- Mount the cameras under a sheltered location. Always verify the outdoor rating of your camera before installing it in a permanent location.

Step 7: Set the time

- Set the system time for accurate video time stamps. Videos with inaccurate times may not be valid as surveillance evidence.
- For details on setting the system time, see “Setting the Date and Time” on page 20.



By default, the system password is disabled. It is recommended that you set up password protection. For details, see “Managing Passwords” on page 30.

Default system password & port numbers

- The system requires a user name and password to log in to the system remotely.
- The system port numbers must be port forwarded to your router to log in to your system remotely using a web browser or mobile device.

Local DVR user name and password

- None

Default ports for remote access

- Port **80** (Web port)
- Port **9000** (Net Client/Media port)
- Port **1025** (Mobile Connectivity port)

Remote connectivity (LAN & Internet) to the DVR

- User Name: **admin**
- Password: none (left blank)

Mobile connectivity (i.e iPhone) to the DVR

- User Name: **admin**
- Password: **0000**



Some internet service providers block web port 80. If your provider blocks this port, select a different port for your system (e.g. 90). For details, see “Changing the DVR’s Net Client/Media and Web Port” on page 38.

To change the Mobile Connectivity port on your system, see “Configuring mobile connectivity settings” on page 46.

It is important that these ports are also forwarded in your router and that you include it as the suffix to your web address (e.g. :90).

Quick access to system information

- To quickly open a window that displays vital system information, press the **PTZ** button on the front panel of the system.



PTZ button

Connecting Cameras

Before you mount the cameras, test to ensure the cameras have no problems. Plan where you will route the wiring for the camera, and where you will aim the camera.

Installation Tips

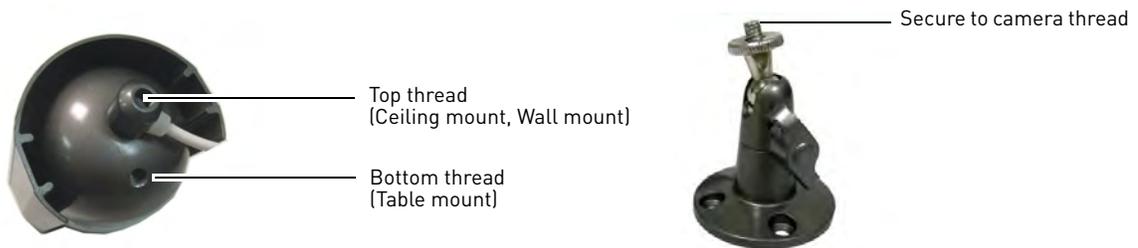
- Mount the camera where the lenses are away from direct and intense sunlight.
- Plan your cable wiring so that it does not interfere with power lines or telephone lines.
- Ensure that the camera wiring is not exposed, or easily cut.
- Adjust the camera angle so that it covers an area with high traffic.
- In "high-risk" locations, have multiple cameras point in the same area. This provides camera redundancy if a camera malfunctions, or if a vandal attempts to damage the camera.
- Mount the camera in an area that is visible, but out of reach.

Camera Stand Installation

- 1 Mount the camera stand to the desired mounting surface. Choose a firm mounting surface.

NOTE: If you wish to mount the camera stand to drywall, it is recommended to use drywall plugs (not included).

- 2 Attach the camera to the stand.



Camera model may not be exactly as shown.

NOTE: There are two connection points for certain cameras. Secure the stand to the top thread for wall-mounts or ceiling mounts. Secure the stand to the bottom thread for table-mounts or wall mounts.

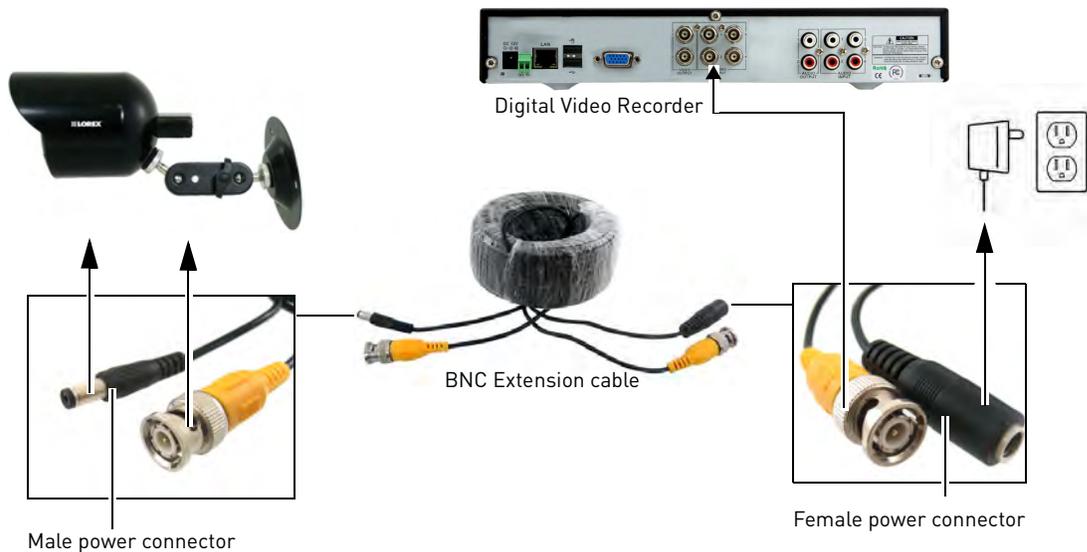


Camera model not be exactly as shown.

Connecting BNC Cameras

To install BNC cameras to your system:

- 1 Connect the male power connector on the BNC extension cable to the female power connector on the camera.
 - Connect the BNC connector to the camera.
- 2 Connect the female power connector on the BNC extension cable to the power adapter.
 - Connect the BNC connector to the BNC port on the system.
- 3 Plug the power adapter to a power outlet.



Connecting and Removing BNC cables

BNC (Bayonet Nut Connector) is a special connector that locks on to the system port, and cannot be accidentally removed.

To connect or remove a BNC connector:

- Push the BNC connector firmly into the BNC port and simultaneously twist the connector clockwise to tighten.
- To remove a BNC connector from a BNC port, push and simultaneously twist the connector counter-clockwise to loosen the BNC connector.

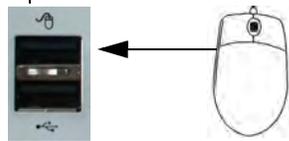
Mouse Control

The system is designed for mouse navigation. To use the mouse, connect the mouse to the rear USB panel on the DVR.

4/8 Channel Model



*8-channel model shown

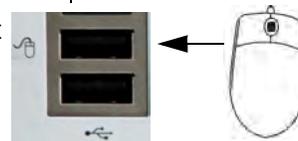


Plug the mouse into the top USB port.

16 Channel Model



Plug the mouse into the top USB port



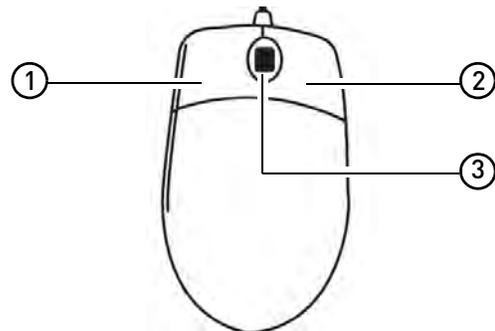
1 Use the mouse buttons to perform the following:

- **Left-Button:** Click to select a menu option; during live viewing in split-screen, double-click on a channel to view the selected channel in full-screen.; double-click the channel again to return to split-screen view

2 Right-Button:

- Click to open the Sub-Menu (see “Using the Sub-Menu” on page 18).
- In menus, use the right-button to exit menus.

3 Scroll-Wheel: No function.

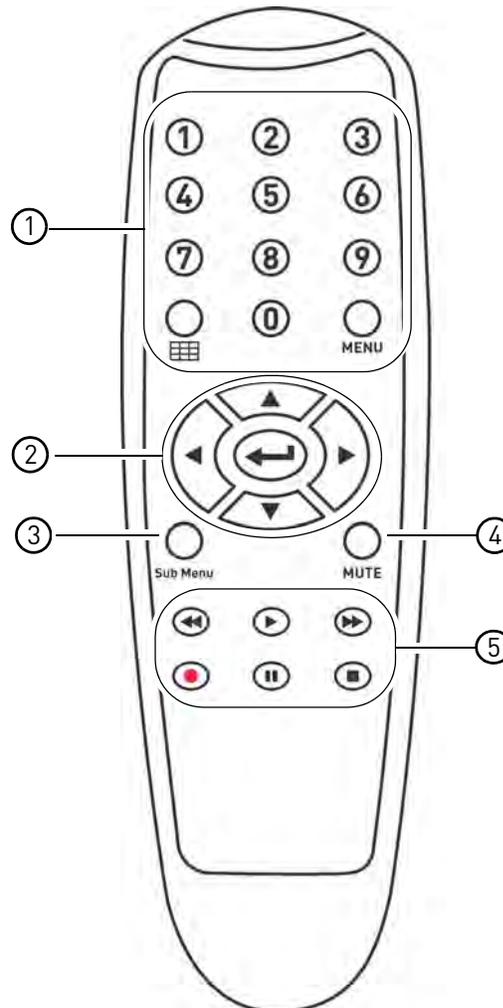


Remote Control (4 & 8 Channel)

The remote control is the secondary input device for navigating the system's interface.

To use the remote control:

- 1 **Number Keys (1 -9):** Selects the desired channel in full screen mode
 - **0:** Press **0** three times to switch between VGA output and BNC Video Out output.
 - : Changes view of system channel (i.e. Channels 1-4, 5-8, split-screen etc.)
 - **MENU:** Opens the Main Menu. Within menus, the MENU button is used to exit the menu.
- 2 **Navigation Cursors:** Use the navigation cursors to navigate the menu.
 - : Confirms the selection in the menu.
 - Press  to access System Information during live view.
- 3 **SUB MENU:** Opens the system sub menu.
- 4 **MUTE:** Mutes audio channel during live view and playback.
- 5 **Playback Controls:**
 - : During playback, press repeatedly to increase playback speed
 - : During playback, press repeatedly to increase reverse playback speed
 - :
 - In live view, press to open the Record Search Menu
 - During playback, press to play video.
 - :
 - In live view, press to start sequence view. During playback, press to pause video
 - : Record: Press to resume recording
 - : Press to stop recording.



*Audio capable cameras (not included) are required for audio recording and listen-in audio functionality.

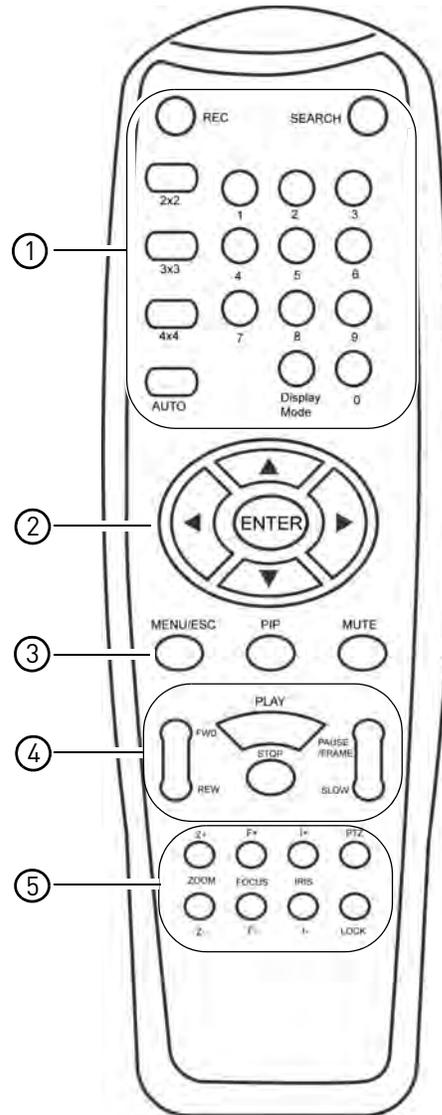
TIP: When using the remote control to enter password and camera titles, select the field using the navigation buttons, press , and then press the number buttons.

Remote Control (16 Channel)

The remote control is the secondary input device for navigating the system's interface.

To use the remote control:

- 1 **REC:** Starts system recording.
 - **SEARCH:** Opens the Search menu.
 - **Number Keys (1 -0):** Opens the desired channel in full screen mode. Press 1+0 for channel 10, 1+1 for channel 11 etc. Press 0 three times to change to BNC or VGA out.
 - **Display Mode:** Press repeatedly to change viewing modes (i.e. press once to switch to quad view (ch 1-4), press twice to view channel 5-8 etc.)
 - **2x2 / 3x3 / 4x4 :** Opens the window in grid mode.
 - **AUTO:** Starts sequence view.
- 2 **Navigation Cursors:** Use the navigation cursors to navigate the menu.
 - **ENTER:** Confirms the selection in the menu.
 - Press to access System Information during live view.
- 3 **MENU/ESC:** Opens the Sub menu. Within menus, the MENU button is used to exit the menu.
 - **PIP:** Opens the picture-in-picture view.
 - **MUTE:** Mutes audio channel during live view and playback.
- 4 **Playback Controls:**
 - **FWD:** During playback, press repeatedly to increase playback speed
 - **REW:** During playback, press repeatedly to increase reverse playback speed
 - **PLAY:**
 - In live view, press to open the Record Search Menu
 - During playback, press to play video.
 - **STOP:** Press to stop recording.
 - **PAUSE/FRAME:**
 - Press to pause video during playback
 - Press repeatedly to play frame by frame during playback



- 5 **PTZ Controls:**
 - **Z+/Z- :** Adjust camera Zoom.
 - **F+/F- :** Adjust camera Focus.
 - **I+/I-:** Adjust camera Iris.
 - **PTZ:** Opens the PTZ menu.
 - **LOCK:** Locks the system screen.

Starting the System

To power the system ON:

- **4/8 Channel:** Connect the power cable to the DC 12V port on the rear panel.
- **16- Channel:** Press **I** on the power switch on the rear panel of the system.



16-Channel model

At startup, the system performs a basic system check and runs an initial loading sequence. After a few moments, the system loads a live display view.



Initial startup screen

To power the system OFF:

- **4/8 Channel:** Unplug the power cord from the rear panel of the system. Unplug the power cord.
- **16 Channel:** Press **O** on the power switch on the rear panel of the system. Unplug the power cord.

Password

ATTENTION: By default, passwords are **disabled** on the system. You do not need to enter a password when accessing any system menus. For security purposes, it is highly recommended to enable passwords on the system using the Password Menu. For details, see "Managing Passwords" on page 30.

 The image shows a screenshot of the USER SETUP menu. The menu is displayed on a dark background with white text. It lists seven users with their respective types, active status, and selection checkboxes.

NO.	USER	TYPE	ACTIVE	SEL.
1	admin	ADMIN	ENABLE	<input checked="" type="checkbox"/>
2	user1	USER1	DISABLE	<input type="checkbox"/>
3	user2	USER2	DISABLE	<input type="checkbox"/>
4	user3	USER3	DISABLE	<input type="checkbox"/>
5	user4	USER4	DISABLE	<input type="checkbox"/>
6	user5	USER5	DISABLE	<input type="checkbox"/>
7	user6	USER6	DISABLE	<input type="checkbox"/>

At the bottom of the screen, there are three buttons: "Edit", "APPLY", and "EXIT".

Password menu

Restoring the system's resolution if you see a blank screen

If you see a blank screen on your monitor after turning on your system, the DVR's output resolution may be higher than what your monitor supports. Follow the steps below to restore the DVR's default resolution to 1024 x 768.

Prerequisite:

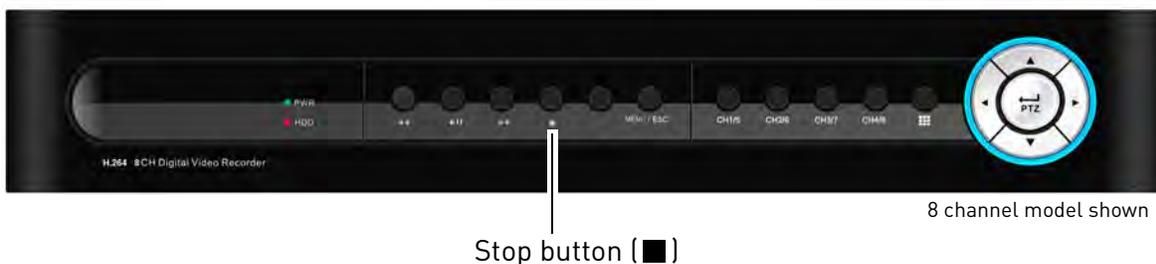
- Ensure video and power connections to the monitor and DVR are properly connected.

To restore the DVR's default resolution:

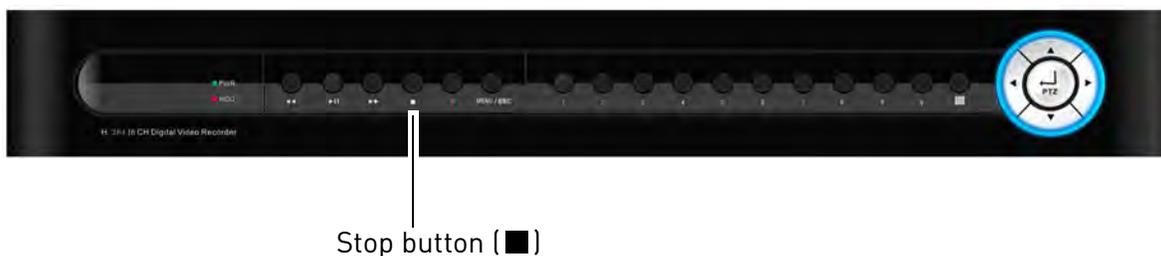
- 1 While the system is on, press and hold the Stop button (■) on the system's front panel until the system restarts. The system will 'beep', then restart with the default resolution of 1024 x 768.

NOTE: If your system resolution is already in 1024 x 768, pressing and holding the Stop button will not restart the system.

4/8 channel



16 channel



Adjusting the DVR's Output Resolution

For details on configuring the DVR's output resolution, see "Configuring System Video and Audio settings" on page 50.

NOTE: When adjusting the DVR's output resolution, ensure your monitor supports the selected resolution. If you select an output resolution greater than what your monitor supports, you may have to restart the DVR using the steps above.

Using the Onscreen Display

Use the system's graphical onscreen display to navigate menus and configure options and settings.



- 1 **Date & Time:** Displays the date and time on the system
- 2 **Record Status:** Displays the current recording status of the system: **C**=continuous (normal recording); **M**=motion recording
- 3 **Channel number / Channel title:** Displays channel number or channel title. To rename the channel number to a title, see "Changing the channel name" on page 35.

Tip: If you can't see your mouse cursor on screen:

You may have switched output modes from VGA to BNC. By default, the DVR outputs to VGA mode at 1024 x 768 resolution.

How To Change Video Outputs

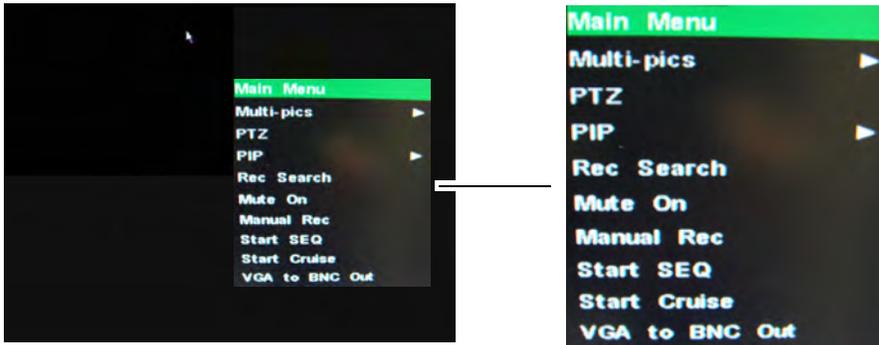
	Front Panel	Remote
4/8 Channel	Press and hold the Rewind button for 6 seconds.	Press 0 three times.
16 Channel	Press and hold 0 for 6 seconds.	Press 0 three times.

Using the Sub-Menu

When using the mouse, use the Sub-Menu to access several system options, including the Main Menu and PTZ control.

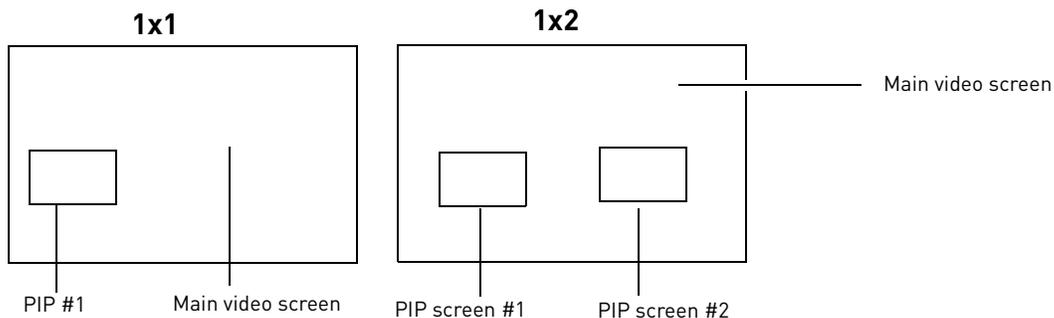
To open the Sub-Menu:

- 1 Right-click anywhere onscreen OR press the **Sub Menu** button (4/8 ch.) / **MENU** button (16ch.) on the remote.



- 2 Select one of the following options:

- **MAIN MENU:** Opens the main system menu.
- **Multi-Pics:** Displays the option to view channels in split screen mode.
- **PTZ:** Opens the PTZ (Pan Tilt Zoom) camera menu.
- **PIP:** Displays video images within a secondary picture frame (Picture in Picture). Select from 1x1 or 1x2 PIP viewing modes. Click the PIP or Main video screen repeatedly to switch different channels.



- **Rec Search:** Opens the Record Search menu that allows you to search for videos.
- **Mute On:** Mutes the selected channel from outputting audio
- **Manual Rec:** Starts system recording. A "C" symbol appears in the channel to indicate recording.
- **Start Seq:** Displays each channel on a rotational "sequence". For example, the system will display channel 1 in full screen mode, then channel 2 etc.
- **Start Cruise:** Starts camera cruise (PTZ cameras only, not included)
- **VGA to BNC Out:** Outputs the display and mouse cursor to the BNC OUT port in the rear panel.

- 3 To close the Sub-Menu, click anywhere onscreen.

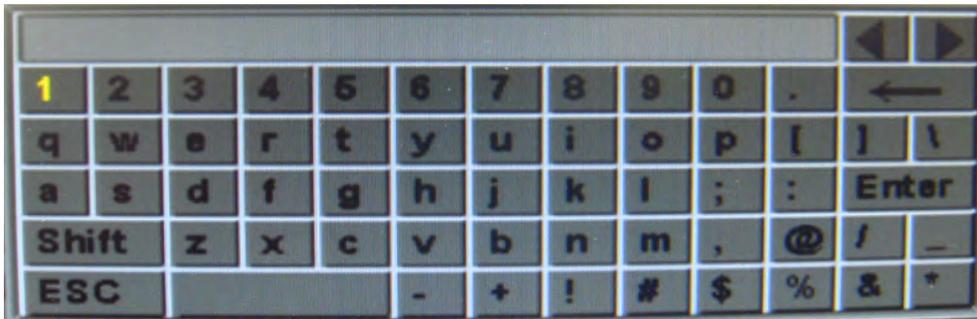
Using the Virtual Keyboard

You can input certain values using the on-screen Virtual Keyboard.

You will need to use the Virtual Keyboard when entering your User ID and Password.

To use the Virtual Keyboard:

- 1 Click on an option or field, such as the User ID and Password fields. The Virtual Keyboard opens.



Virtual Keyboard

- Click **Shift** to switch between upper and lowercase letters.
- Click ◀ ▶ to move the cursor between letters.
- Click ← to Backspace/Delete.
- Click **Enter** to enter your selection.
- Click **ESC** to close the virtual keyboard.

Setting the Date and Time

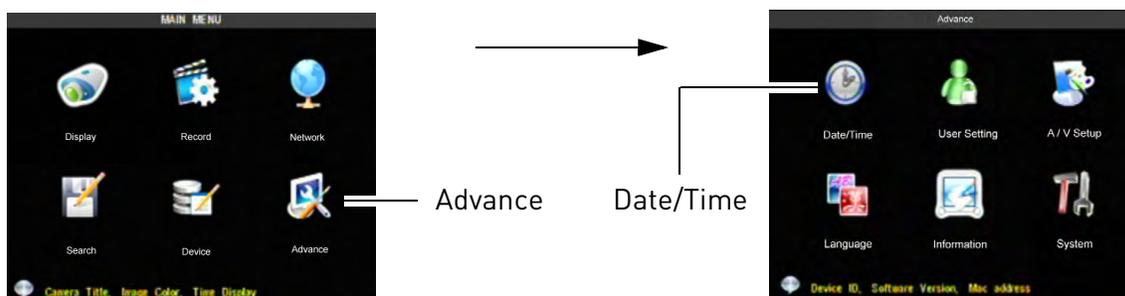


It is highly recommended to set the date and time when first setting up your system.

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

To set the date and time:

- 1 Right-click anywhere on the screen to open the Sub-Menu and select **MAIN MENU**.
 - The Main Menu opens.
- 2 Click **Advance**→**Date/Time**.



- 3 Configure the following:
 - **Date:** Enter the month, date and year
 - **Date Format:** Select **MM/DD/YY** or, **DD/MM/YY**, or **YY/MM/DD**
 - **Time:** Enter the time, select **AM** or **PM**
 - **Time Format:** Use the drop-down menu and select **12HOURS** or **24HOURS**
 - **NTP:** Select **ON** to enable automatic DST (Daylight Saving Time)
 - **Time Zone:** Select your local time zone
 - **NTP SERVER:** Select the time server that will keep track of DST settings. A constant internet connection is required for the NTP server feature to function



If the system will not have access to the internet, you must manually configure DST by clicking the **DST Setting** button. For details, see “Adjusting the system time and DST (Daylight Saving Time) Settings” on page 48.

- 4 Click **APPLY** and then click **UPDATE NOW** to save your settings.

Recording

By default, the system is set to immediately record video from connected cameras in Continuous Recording Mode.

- **C Recording—Continuous:** Normal, continuous recording

You can set the system to stop recording once the hard drive is full, or to continually record by overwriting previously recorded data. For more details, see “Configuring Hard Drive settings” on page 42.

Event Recording

The system also includes motion recording:

- **M Recording—Motion:** The system records when motion is detected by the camera

Recording Audio

The system can also record audio for each channel (4 audio channels for 4-channel and 8-channel; 16 audio channels for 16-channel).

ATTENTION: Audio capable cameras (not included) or self-powered microphones are required in order to record audio on the system.

To enable audio recording:

- 1 Connect the BNC video cable from the camera to one of the BNC ports on the rear panel of the system. For example, connect the camera to BNC port 1.
- 2 Connect the RCA audio cable from the camera to the corresponding audio channel. Following the example in step 1, you would connect the cable to audio port 1.
- 3 Open the Main Menu and click **RECORD**.
- 4 Under AUDIO, select **ENABLE**.
- 5 Click **APPLY**.
- 6 Click **EXIT** in all menus until all windows are closed.



*8-channel model shown

Connect an RCA audio cable into the AUDIO INPUT ports.



NOTE: 16-channel models require an audio-harness. For details, see “Appendix J: Recording Audio” on page 119.

Playback

View recorded video on the system through the Search Menu.

To begin playback:

- 1 Right-click anywhere onscreen and select **Rec Search**.

NOTE: When you first open the Search Menu, it displays the current month and date.



- 2 Click **Playback** to playback the last minute of recorded video (Quick Search).
or

- 3 In the **CH** drop-down menu, select a specific channel or select **ALL**.

- 4 In the Date field, enter the month and date using the Virtual Keyboard.

- 5 Click **Search**. Recorded events on the system appear in red (alarm events—include motion events) and green (normal recording).

- 6 Click in the Day Grid to select a day.

- 7 Click in the Time Grid to select a time.

- 8 Select the channel or channels that you wish to play back.

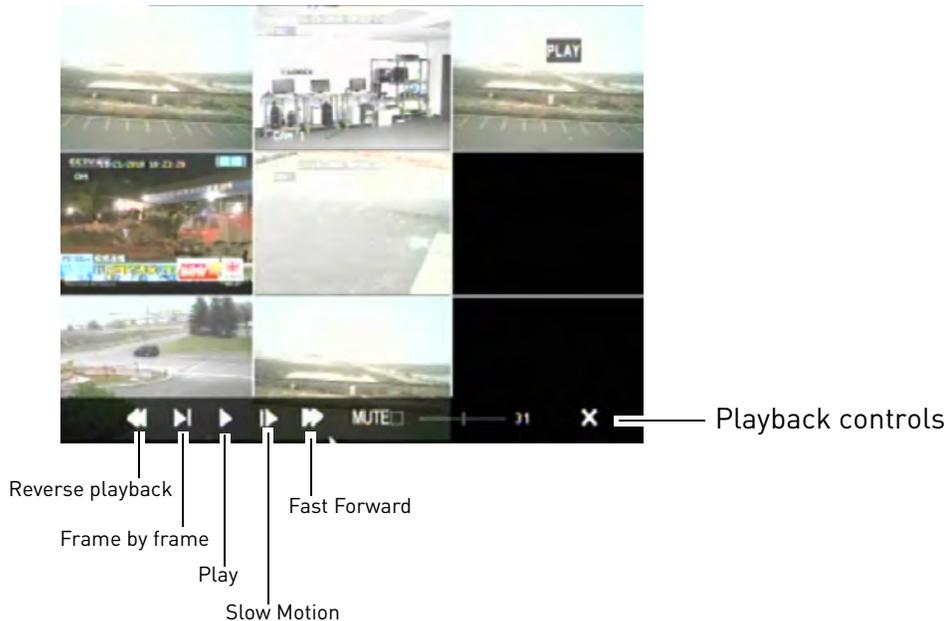


- 9 Click **Play** to begin viewing video.

Onscreen Playback Controls

To use the onscreen playback controls:

- 1 Move the mouse slightly to display the onscreen playback controls. You can also use the playback control buttons on the remote control or front panel of the system.



- 2 Click the VCR-like controls to play, pause, fast forward, rewind, and slow down playback.
- 3 Drag the slider to adjust the volume (audio capable camera required, not included). Select the box to mute the audio.
- 4 Click **X** to quit playback and return to the Search menu.

Finding Events Using Log Search

Log Search allows you to search through system logs. System Logs are created for alarm events, such as motion events, and system events, such as settings changes.

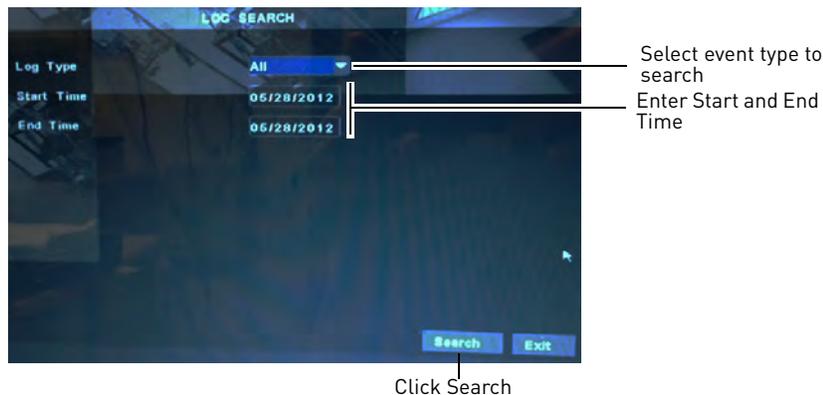
Log Search is a useful way to quickly find motion events saved on the system.

To perform a Log Search:

- 1 Right-click anywhere onscreen and select **Rec Search**.
- 2 Click **Log** to open the Log Search menu.



- Under Log Type, select **All** for all log entries, **Alarm** for alarm events (includes motion events), or **Operation** for system events.



- Under Start Time, enter the start time for your search.
- Under End Time, enter the end time for your search.
- Click **Search**. A list of log entries appears.
- Perform one of the following:

Click log entries to playback video from the time of the log. Record column says Yes if video is available.

Type	Content	Time Point	Record
ALARM MD	12-05-28	00:00:00	YES
ALARM MD	12-05-28	00:00:00	YES
ALARM MD	12-05-28	00:23:00	NO
ALARM MD	12-05-28	00:51:00	NO
ALARM MD	12-05-28	01:17:00	NO
ALARM MD	12-05-28	01:32:00	NO

- If the Record column says Yes, there is video available for a log entry, and you can click the log entry to play it back.
- Click **Next** to view the next page of log entries; click **Prev** to view the previous page of entries.
- Click **Last** to view the last available page of log entries; click **First** to view the first page.
- Click **Export** to export the log search results to a USB flash drive (not included). USB flash drive must be connected to a USB port on the rear panel of the system. Wait for the export to complete and click **Ok**.

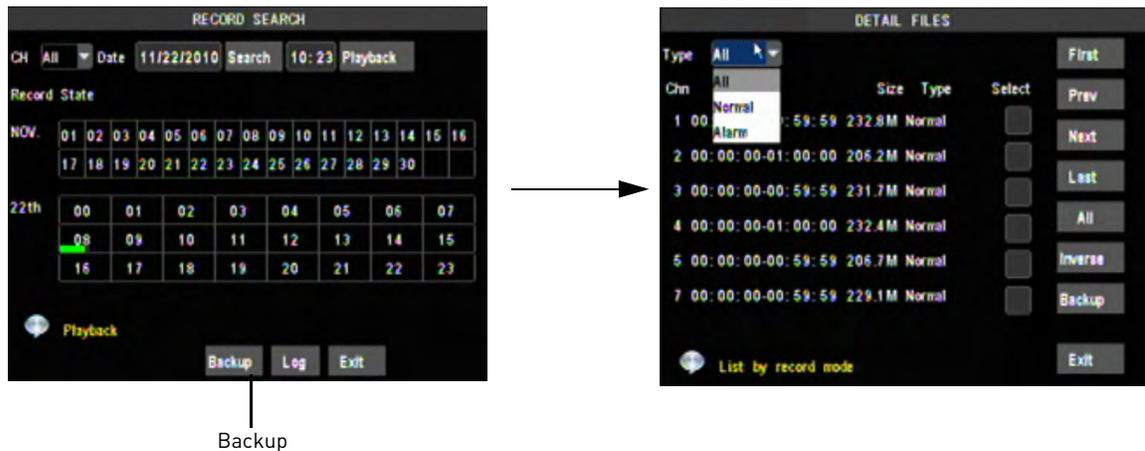
Backing Up Video

After you have searched for the desired video clip, you can back up a segment of the video.

To back up video:

- Right-click anywhere onscreen and select **Rec Search**.
- In the CH drop-down menu, select a specific channel or select ALL.
- In the Date field, enter the month and date using the Virtual Keyboard (mouse only).
- Click Search. Recorded events on the system appear in red (alarm events—include motion events) and green (normal recording).

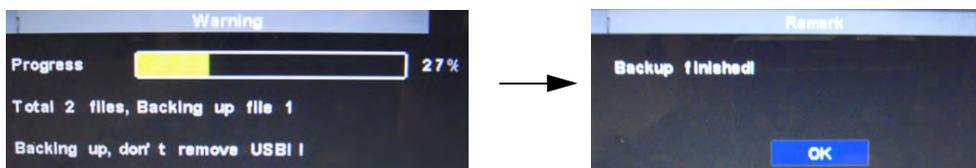
- 5 Select a date that you wish to back up in the Date field.
- 6 Click the **Backup** button.



- 7 In the Type drop-down menu, select the type of recording you wish to back up. Select from Normal or Alarm recordings.



- 8 Click **Prev** or **Next** to scroll through the list of videos. The videos are named by time. Videos are "packed" into 15 minute - 60 minute increments.
- 9 Click the checkbox beside the video you wish to back up.
- 10 Insert a blank USB memory drive into the USB port in the rear panel of the system.
- 11 Click **Backup**. Wait for the backup to finish before removing the USB memory drive.



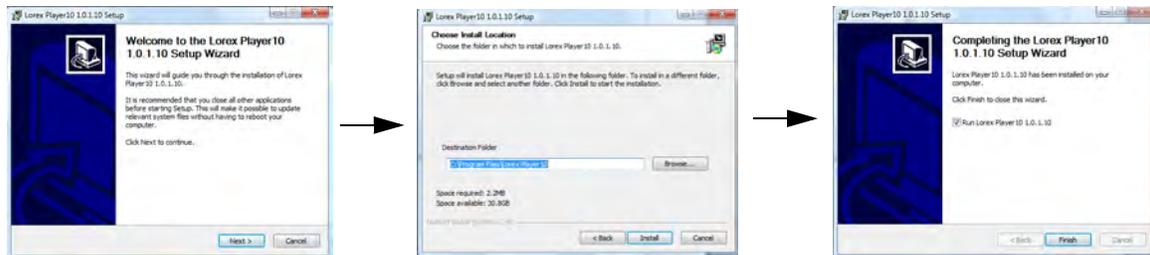
NOTE: To change the duration of how often a file is "packaged", see "Configuring Backup File Duration (Pack Duration)" on page 37.

Viewing Backed Up Video

To view the downloaded video, you must install the Lorex Player 10 software.

To install the playback software:

- 1 Insert the software disc in your computer's CD/DVD rom drive.
- 2 Locate the **Lorex Player 10** software from the CD installation wizard.
- 3 Follow the on-screen instructions to install Lorex Player 10.

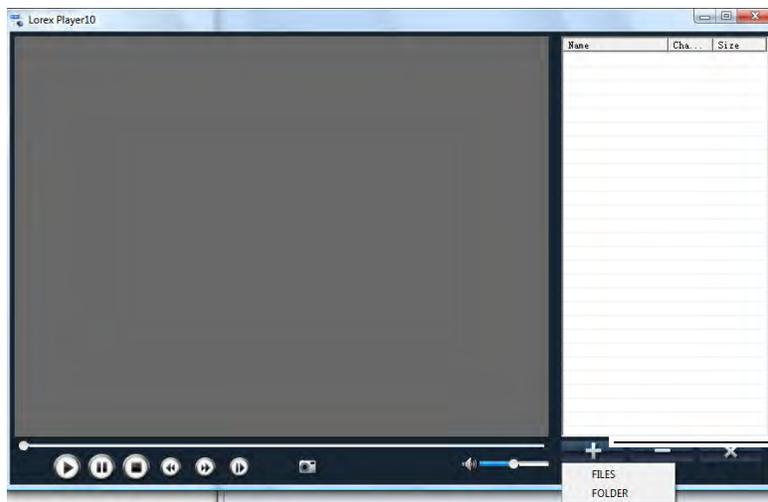


- 4 When installation finishes, double-click the Lorex Player icon on your desktop to open the program.

To load a video with Lorex Player 10:

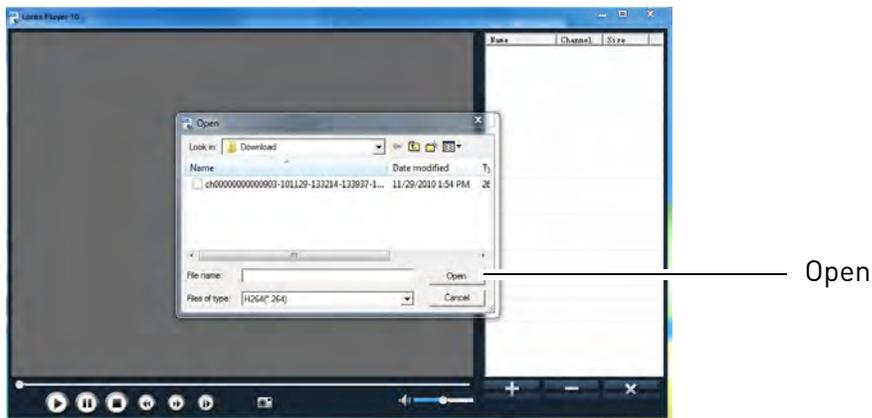
- 1 Click the **+** button, and then click **FILES**.

NOTE: Click **FOLDER** to load an entire folder with video files.

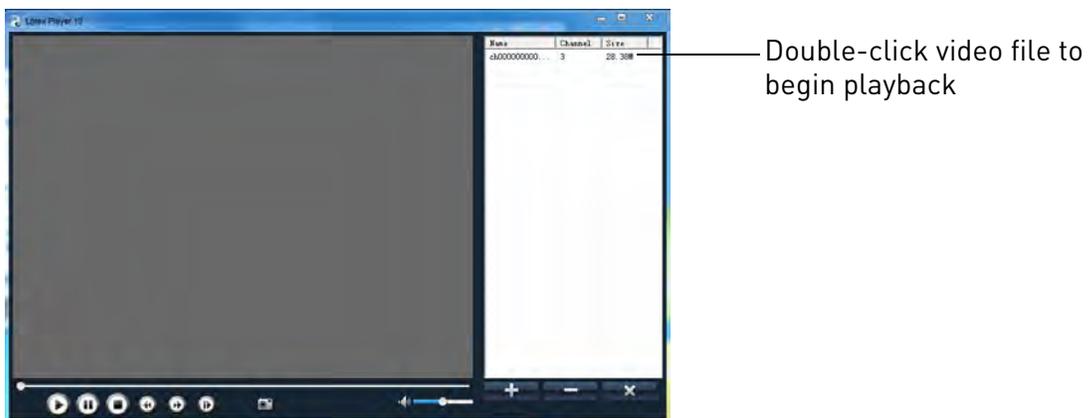


Click **+** and then click **Files**.

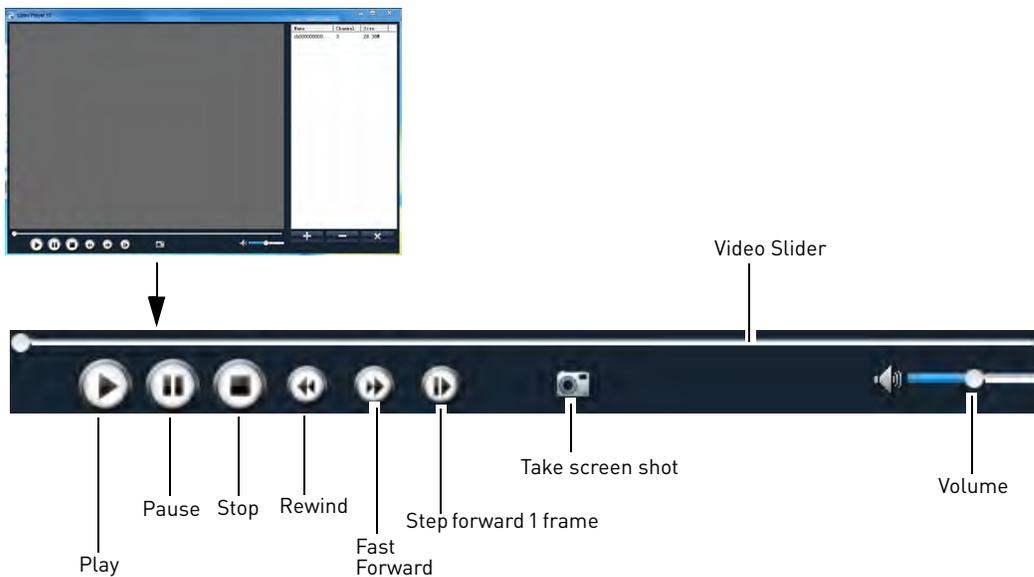
- 2 Locate the directory of the video file. Select the file and then click **Open**.



- 3 Double-click the video file in the file column on the right to watch the video.



Playback Navigation

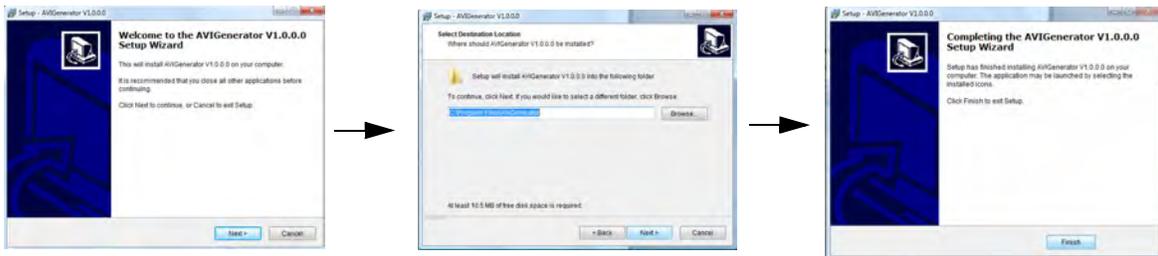


Converting Backed Up Video to AVI Files

The DVR saves its backup files as proprietary video files. To share these files, you must convert them into AVI files. Note that the AVI generator can also back up audio in audio-enabled cameras.

To install the AVI converter:

- 1 Insert the software disc in your computer's CD/DVD rom drive.
- 2 Locate the **AVI Generator** software from the CD installation wizard.
- 3 Follow the on-screen instructions to install AVI Generator.

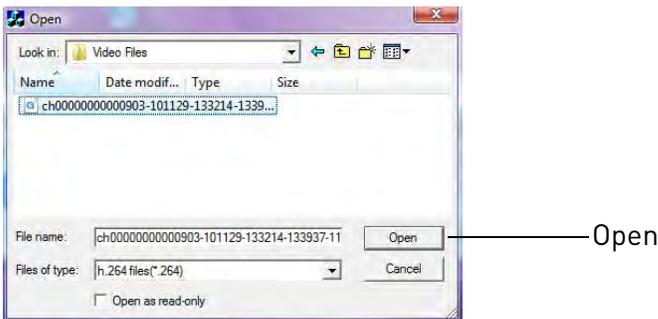


To start the AVI Generator:

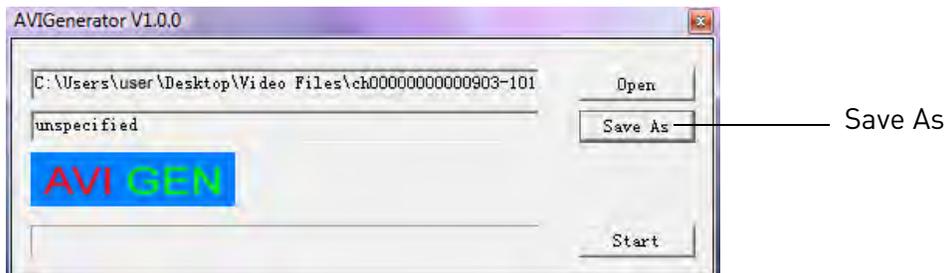
- 1 Double-click the **AVI Generator** shortcut on the desktop ().
- 2 Click **Open** and then locate the backed up video file on your hard drive.



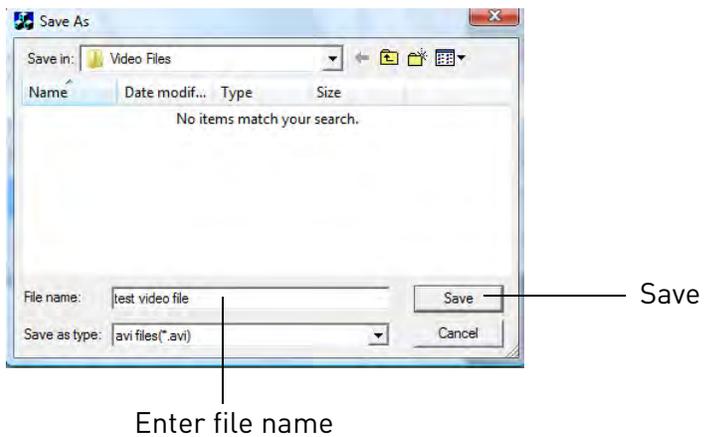
- 3 Select the desired file and then click **Open**.



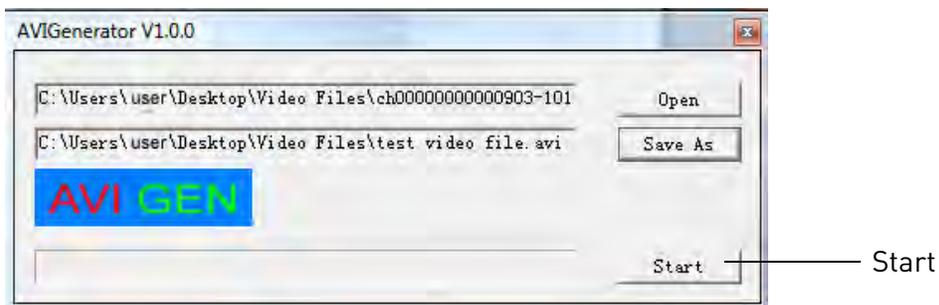
- 4 Click **Save As**.



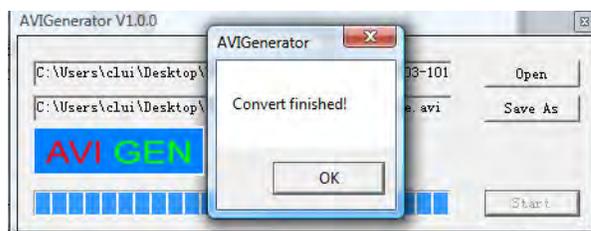
- 5 Select the video directory of where you want the AVI file to output. In the filename field, enter a desired file name. Click **Save**.



- 6 Click **Start** to begin the file conversion.



- 7 Click **OK** once the file conversion is complete.



Managing Passwords

ATTENTION: By default, passwords are disabled on the system. You will not need a password to log in or access menus. You will not need a password to access your system using the browser-based remote software.

When you first startup your system, you are technically logged in as the ADMIN. The system employs two user authorities connected to the system---ADMIN and USER.

- **ADMIN**—administrator: Has full control of the system, and can change both administrator and user passwords and enable/disable password checking
- **USER**—normal user: only has access to live viewing, search, playback, and other limited authorities

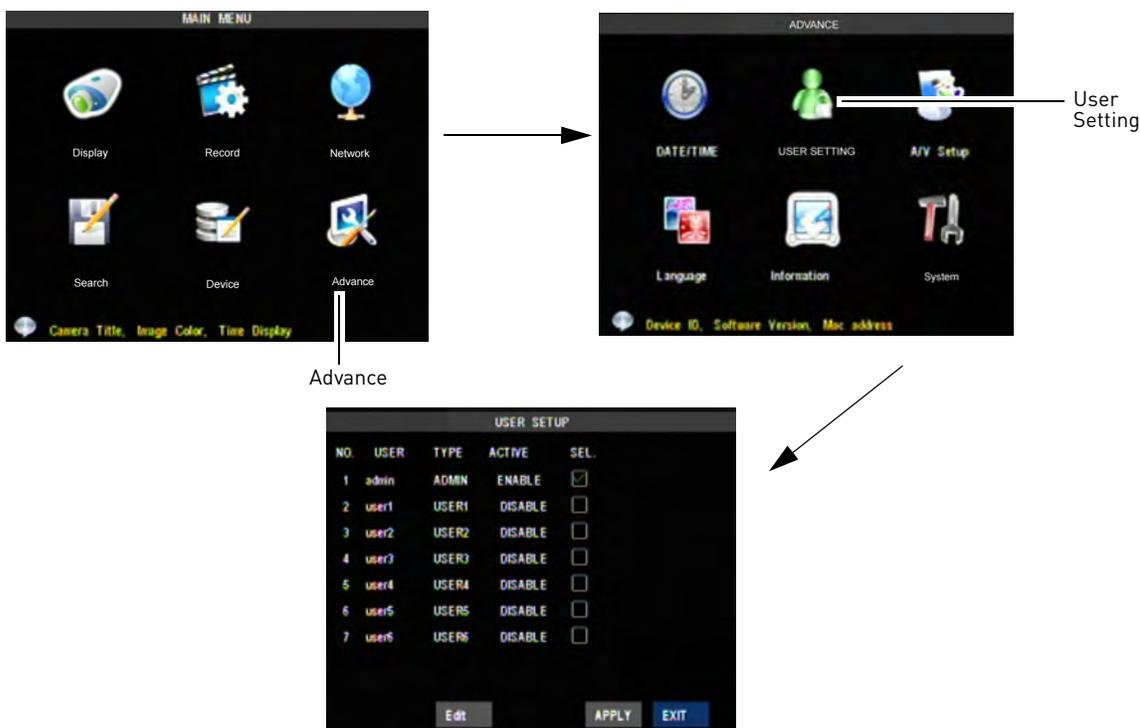
For security reasons, it is highly recommended to enable passwords on your system. If you enable passwords, you must select a 6-digit USER password *and* a 6-digit ADMIN password. **By default, the system password is disabled.**

Changing The System Password

You can change the system password of the ADMIN and the USER from the User/Setting menu.

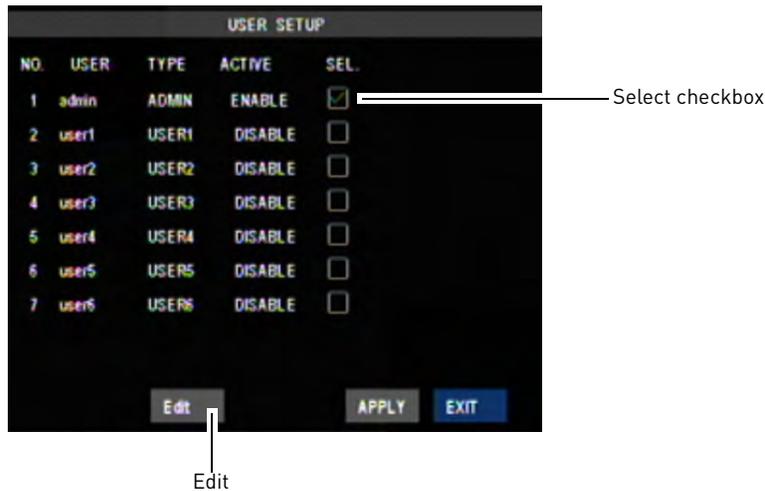
To open the USER/SETTING menu:

- 1 Right-click anywhere onscreen to open the Sub-Menu and select **MAIN MENU**.
- 2 Click **Advance**→**USER SETTING**.



To change the ADMIN password:

- 1 Beside **admin**, select the checkbox under **SEL.**



- 2 Click the **Edit** button. The User Password Setup window opens.



- 3 Configure the following:
 - Beside the PASSWORD ENABLE drop-down menu, select **ENABLE**.
 - Beside PASSWORD, enter your desired 6-digit password using the mouse.
 - Beside CONFIRM, re-enter the 6-digit password.
- 4 Click **APPLY** to save your settings and then click **EXIT**.
- 5 Click **EXIT** in each menu until all windows are closed.
Use your new password to log in to the system and access system menus.

Changing User Settings and Authority

You can add multiple users to the system. Each user can have different privileges in the system.

To add a user to the system, and edit user preferences:

- 1 Right-click anywhere onscreen to open the Sub-Menu and select **MAIN MENU**.
- 2 Click **System→User Setting**.
- 3 In the User Setup window, select the SEL checkbox beside the user name of your choice.



Select "SEL" checkbox beside desired user.

- 4 Click **Edit**. The user password window opens.



- 5 Configure the following:
 - In the USER ENABLE drop-down menu, select **ENABLE**.
 - Beside USER NAME, enter the desired user name.
 - In the PASSWORD ENABLE drop-down menu, select **ENABLE**.
 - Beside the PASSWORD field, enter the desired 6-digit numeric password.
 - Beside CONFIRM, re-enter the 6-digit numeric password.
 - Click **APPLY** to save your settings.
- 6 Click **EXIT** to return to the Use Setup window.

- 7 Select the SEL checkbox beside the user you recently added, and then click **AUTHORITY**.



Select the checkbox beside the user you wish to configure

Authority

- 8 Select the menu items you want the user to have access to.



- 9 Click **APPLY** and then **EXIT** to save your settings.

Using the Main Menu

To open the Main Menu:

- Right-click anywhere onscreen to open the Sub-Menu and select **MAIN MENU** (mouse only), or press the **MENU** button on the remote control or front panel of the system.

NOTE: If passwords are enabled on the system, you need to enter the 6-digit numerical password to open the Main Menu.



- 1 Display:** Configure system display options (i.e Color saturation, Camera title)
- 2 Record:** Configure recording parameters (quality, resolution), set record modes, and enable/disable audio recording. *Audio recording requires audio-enabled cameras (not included).
- 3 Network:** Configure system network settings (i.e. DDNS)
- 4 Search:** Search for recorded video and log files on the system.
- 5 Device:** Configure mobile device connectivity, hard drive, ptz and motion settings.
- 6 Advance:** Configure date/time, system password, system information and language.



Display

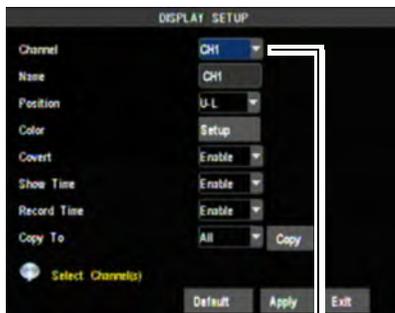
The display menu allows you to configure DVR image settings, and general settings on how your DVR displays names and titles on screen.

To open the Display menu:
Right-click→Main Menu→Display

Tip: When you want to apply the setting to multiple channels, click the "Copy To" drop-down menu, and select **All**. Click the **Copy** button to copy the setting across all channels.

Changing the channel name

- 1 In the Channel drop-down menu, select the channel that you wish to re-name.



Channel drop-down menu

- 2 Double-click the field beside Name. Use the mouse to enter in the new channel name.
- 3 Click **Apply** to save your settings.

Changing the position of the channel name

- 1 In the Position drop-down menu, select one of the following:
 - U-L : Upper left hand corner
 - D-L: Lower right hand corner
 - U-R: Upper right hand corner
 - D-R: Lower right hand corner
- 2 Click **Apply** to save your settings.

Adjusting the image color

- 1 Click the **Setup** button. The Color Setup window opens.



- 2 Drag the slider to adjust the color values for the following: Hue, Brightness, Contrast, Saturation.
- 3 Click **Apply** to save your settings.

Enabling Covert Recording

Covert Recording blanks out the screen so that it seems as if the system is not recording.

To enable covert recording:

- 1 In the Channel drop-down menu, select the channel you wish to apply covert recording to.
- 2 In the Covert drop-down menu, select **Enable**.
- 3 Click **Apply** to save your settings.

Configuring the Time and Recording Time display

To add/remove the time stamp in the system display:

- 1 In the Show Time drop-down menu, select enable or disable.
- 2 In the Record Time drop-down menu, select enable or disable.
- 3 Click **Apply** to save your settings.



Record

The Record menu allows you to configure scheduled recording, recording resolution, and image quality settings.

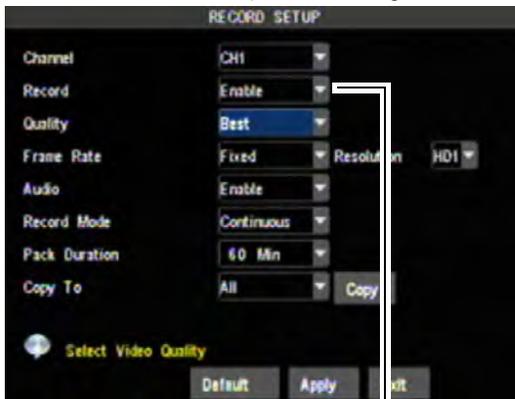
To open the Record menu:
Right-click→Main Menu→Record

Tip: When you want to apply the setting to multiple channels, click the "Copy To" drop-down menu, and select **All**. Click the **Copy** button to copy the setting across all channels.

Enabling / disabling channels from recording

To enable/disable channels from recording:

- 1 In the Channel drop-down menu, select the channel you wish to enable / disable recording.
- 2 Click Record drop-down menu, and select **Enable** or **Disable**.
- 3 Click **Apply** to save your settings.



Record drop-down menu

When you disable recording, the recording symbol () disappears from channel view.

Adjusting Recording Quality

Adjusting recording quality allows you to customize which cameras will record in more detail. This allows you to conserve storage space.

To configure recording quality:

- 1 Click the Quality drop-down menu. Select from **Best**, **Better**, or **Good**.
- 2 Click **Apply** to save your settings.

To configure recording frame rates:

- 1 Click the Frame Rate drop-down menu, and select **Fixed** or **Manual**.
 - If you select Fixed, beside the Resolution drop-down menu, select from **D1**, **HD1** or **CIF**.
 - Click **Apply** to save your settings.

OR

- If you select Manual, click the **Frame Rate** button that appears. A Set FPS window will appear.



- a. In the CIF drop-down menu, select the resolution (choose from **D1**, **HD1** or **CIF**).
- b. In the frame-rate drop-down menu, select the desired frame rate (choose from 1 ~ 30 frames).
- c. The FPS counter near the top of the window indicates how many frames you have left to allocate additional frames to channels.
- d. Click **Apply** to save your settings.

Enabling / Disabling audio recording

Audio recording requires audio-enabled cameras (not included). Depending on your DVR model, you will have a different number of Audio-In ports.

To enable / disable audio recording:

- 1 Beside the Channel drop-down menu, select the channel that you wish to enable/disable audio recording.
- 2 Beside the Audio drop-down menu, select **Enable** or **Disable**.
- 3 Click **Apply** to save your settings.

Adjusting Recording Modes (Continuous/Schedule/ Alarm Recording)

To adjust recording modes:

- 1 In the Channel drop-down menu, select the channel you wish to configure.
- 2 Beside the Record Mode drop-down menu, select **Continuous** or **Schedule**.
 - If you select Scheduled recording, click the **Schedule** button that appears. A Record Schedule Setup window opens.



Select recording type: Alarm, Continuous or No Record

- a. In the CH drop-down menu, select the channel that you wish to apply the setting to.
- b. Select the type of recording you wish to apply: **Alarm**, **Continuous**, or **No Record**.
- c. Drag your mouse cursor to select the time and day you wish to apply the settings to. The grid changes colors as you apply the setting.

Optional: Under the **Copy** and **To** drop-down menu, select the day that you wish to apply the setting to, and then click **Copy**. For example, you may want to copy the setting to Mondays through Thursdays only.

- d. Click **Apply** to save your changes.

Configuring Backup File Duration (Pack Duration)

The "Pack Duration" refers to the duration of a backed up file in the system. By default, a recording is "packaged" into 15 minute video files.

To change the file "Pack Time":

- 1 In the Pack Duration drop-down menu, select the desired "Pack Time" duration (15~60 minutes).
- 2 Click **Apply** to save your settings.



Pack Duration



Network

The Network menu allows you to configure the system's DDNS and network settings.

To open the Network menu:
Right-click→Main Menu→Network

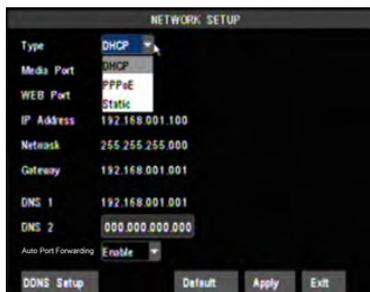
Configuring Network type : DHCP & Static IP

The system has the ability to operate in DHCP mode and Static IP mode.

DHCP allows the router to assign an IP to the DVR. Static IP mode fixes the IP of the DVR. Fixing an IP of the DVR ensures that the IP will not change.

To configure DHCP and Static IP settings:

- In the TYPE drop-down menu, select **DHCP** or **Static**. If you select DHCP, the router automatically assigns an IP to your DVR.
 - If you select Static, click the field beside IP Address, and enter in the IP address of your choice.
 - Enter your custom NetMask, Gateway, DNS1 and DNS2 using the mouse.
 - You must assign the IP in your router that you wish to make static. For example, if you assign 192.168.2.89 as the static IP in the DVR, you must assign 192.168.2.89 in your router as a static IP as well. Consult your router's user's manual for details.
- Click **Apply** to save your settings.



Changing the DVR's Net Client/Media and Web Port

The DVR's Default Net Client/Media port is **9000**. The default Web port is **80**. You must port forward the Net Client/Media port and Web port to your router for remote access.

To change the default Media port and Web port:

- Click the field beside Media Port (**default port 9000**). Enter the desired Net Client/Media port..



Enter the desired Net Client/Media Port

- Click the field beside WEB Port (**default port 80**). Enter the desired web port.
- Click **Apply** to save your settings.

Remote Control Navigation Tips

To navigate to the lower portion of the Network Setup menu using a remote control, press the up cursor repeatedly until you select the desired menu selection.

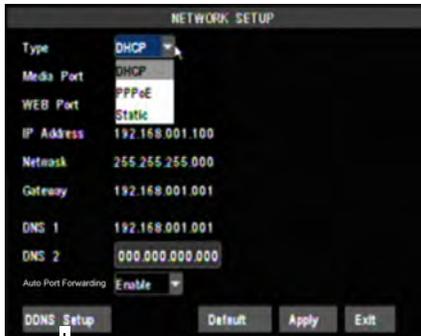
Configuring DDNS settings

DDNS allows you to remotely connect to your system remotely. You must create a DDNS account, and enter your DDNS settings into the system before you can remotely view your system.

For details on creating a DDNS account, see “Remote Connectivity” on page 54.

To configure the system DDNS settings:

- 1 Click the **DDNS Setup** button near the bottom of the Network Setup window.



DDNS Setup button

- 2 Configure the following:
 - **DDNS:** Select **Enable**
 - **Server:** Select **LOREXDDNS** (default).
 - **Host Name:** Enter the Domain name/URL Request from the email you received after DDNS registration.

NOTE: If the Domain name/URL request is *tomsmith*, the address to access your video will be *http://tomsmith.lorexddns.net*

- **User Name:** Enter the DDNS User Name that was emailed to you after DDNS registration.
- **Password:** Enter the DDNS Device password that was emailed to you after DDNS registration.

- 3 Click **Apply** to save your settings.



Auto Port Forwarding

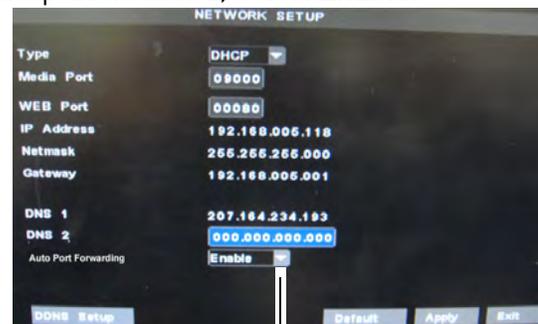
The Auto Port Forwarding feature opens the required ports in your router without configuring your router.

NOTE: The Auto Port Forwarding feature may not work for all routers. If the Auto Port Forwarding feature does not work, you must manually open the ports in your router.

NOTE: For a complete list of routers compatible with the Auto Port Forwarding feature, see “Appendix F: Assigning A Static IP To Your DVR” on page 112.

To port forward using the Auto Port Forward feature:

- 1 From the Network Setup menu, enter the desired ports in the Media Port and Web port field.
- 2 Beside the Auto Port Forwarding drop-down menu, select **Enable**.



Select Enable

- 3 Click **Apply** to open the ports in your router.



Search

The Search menu allows you to search for archived video on your system.

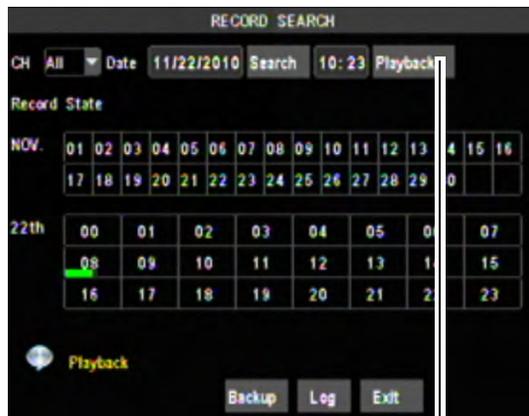
To open the Search menu:
Right-click→Main Menu→Search

Video Playback

You can quickly view events that occurred 1 minute ago using the Search menu. This can be useful if an event just occurred, and you want quick access to video footage that was recorded a minute earlier.

To playback video 1 minute ago:

- 1 Right-click in the main menu, and then click **REC Search**.



Playback

- 2 Click **Playback**.
NOTE: Alarm recordings appear as RED in the search calendar.
- 3 Select the channel that you wish to playback, and then press **Play**.



Video Playback Controls

Move the mouse slightly to display the onscreen playback controls. You can also use the playback control buttons on the remote control or front panel of the system.



Use the video control buttons to manipulate video playback.

- Drag the slider to adjust the volume (audio capable camera required, not included). Select the box to mute the audio.
- Click **X** to quit playback and return to the Search menu.

To search for video:

- 1 In the CH drop-down menu, select a specific channel or select **ALL**.
- 2 In the Date field, enter the month and date using the Virtual Keyboard (mouse only).
- 3 Click **Search**. Recorded events on the system appear in red (alarm events—include motion events) and green (normal recording).
- 4 Select a date in the Date field.
- 5 Select the time in the time block.

- 6 Select the channel that you wish to play back and then press **Play** to begin playback.



Play button

Backing Up Video

After you find the event using the Search menu, write down the time so that you can archive the video into a USB flash drive.

To back up video:

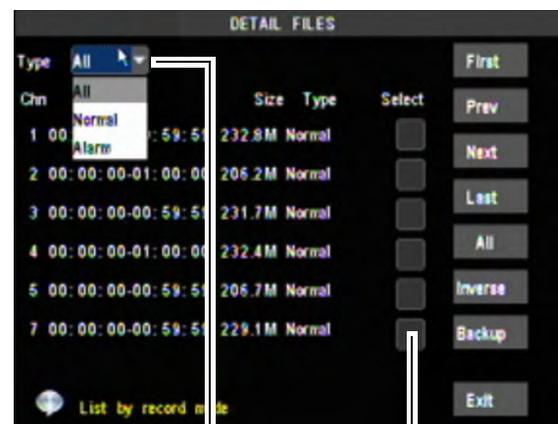
- 1 Right-click anywhere onscreen and select **Rec Search**.
- 2 In the CH drop-down menu, select a specific channel or select ALL.
- 3 In the Date field, enter the month and date using the Virtual Keyboard (mouse only).
- 4 Click **Search**. Recorded events on the system appear in red (alarm events—include motion events) and green (normal recording).
- 5 Select a date that you wish to back up in the Date field.

- 6 Click the **Backup** button.



Backup

- 7 In the Type drop-down menu, select the type of recording you wish to back up. Select from Normal or Alarm recordings.

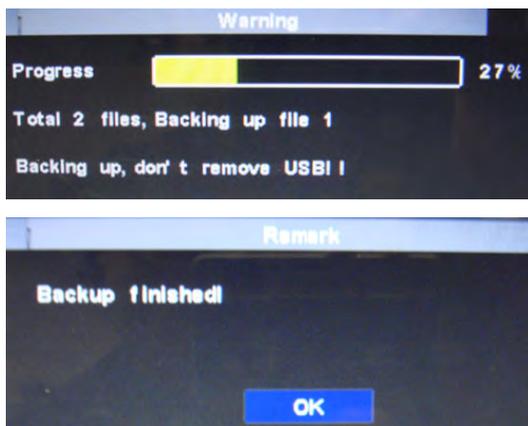


Type drop-down menu

Select file you wish to back up

- 8 Click **Prev** or **Next** to scroll through the list of videos. The videos are named by time. Videos are "packed" into 15 minute - 60 minute increments.
- 9 Click the checkbox beside the video you wish to back up.
- 10 Insert a blank USB memory drive into the USB port in the rear panel of the system.

- 11 Click **Backup**. Wait for the backup to finish before removing the USB memory drive.



Viewing Archived Video

For details on viewing archived video, see “Viewing Backed Up Video” on page 26.

Device



The Device menu allows you to configure hard drive, alarm, PTZ, Mobile and Motion settings.

To open the Device menu:
Right-click→Main Menu→Device

The Device menu contain the following sub-menus:

- HDD
- Alarm
- PTZ
- Mobile
- Motion



HDD

Configuring Hard Drive settings

To format the hard drive:

- 1 From the Device menu, click **HDD**.
- 2 Click the checkbox under Select to choose the drive you wish to reformat.
- 3 Click **Format HDD**.
- 4 When the warning window appears, click **OK**. Wait for the system to format the hard drive.

To set the hard drive recording mode (loop or linear):

- 1 Click **HDD**.
- 2 Click the checkbox under Select to choose the drive you wish to configure.
- 3 In the Overwrite drop-menu, select **AUTO** for the system to continually loop the recording (recommended).
 - If desired, select the duration you want the hard drive to store the content for "linear" recording. Select from 1hr ~ 90 days.



- 4 Click **Apply** to save your settings.

To format a USB memory stick:

- 1 Insert a USB memory stick into the rear panel of the system.
- 2 Click **HDD**.
- 3 Under the Select checkbox, select the USB memory drive.
- 4 Click **Format USB**.

Configuring Alarm Settings

The Alarm settings menu allows you to configure how the system behaves when it detects motion, video loss, or a full hard drive.

Prerequisites: Enable Alarm recording in your recording schedule. For details, see "Adjusting Recording Modes (Continuous/Schedule/ Alarm Recording)" on page 37.

To enable/disable the system buzzer:

- 1 From the Device menu, click Alarm.



- 2 In the Buzzer drop-down menu, select ON/OFF to enable or disable the system "buzzer" (beep).



- If you enable the buzzer, select the type of events you want to trigger the DVR from sending out an event:
 - HDD Loss : System beeps when the hard drive error occurs
 - HDD Space : System beeps when the hard drive space is low
 - Video Loss: System beeps when the system does not detect video from a camera

Adjusting Post recording Duration:

- 1 In the Post Record drop-down menu, select **ON**.
- 2 In the Post Recording drop-down menu, select the duration of the post recording (30 seconds, 1 minute, 2 minutes, 5 minutes).

Post recording is the time the DVR continues to record after an event has occurred. For example, if the system detects a motion event, it will continue to record, and mark the video as an alarm event, 1 minute after the event has occurred.

To enable Motion Detection notifications:

- 1 Beside MD Alarm, select the check box to enable a motion detection alarm.



Select this checkbox to enable Motion Detection alarms.

- 2 Select the **Email** check box to receive email notifications when the system detects motion.

NOTE: Email notification setup is required.

- Select the **Full Screen** check box so that the system goes into full screen mode when motion is detected.

Setting up Email Notification

The system can send email notifications when it detects motion, or when an alarm parameter triggers. The 16 channel model sends email notifications if an alarm block device triggers (i.e. motion sensor detects movement).

To set up email notification:

- 1 Click the **Email Setup** button.



Email Setup

- 2 From the drop-down menu, select from:
 - **Enable:** Uses custom email server settings.
 - **Disable:** Disables email notification.
 - **Default:** Uses the Lorex email server to send out alarm notifications. This is the recommended selection.

If you select "Enable", and want to use your own email server, configure the following:

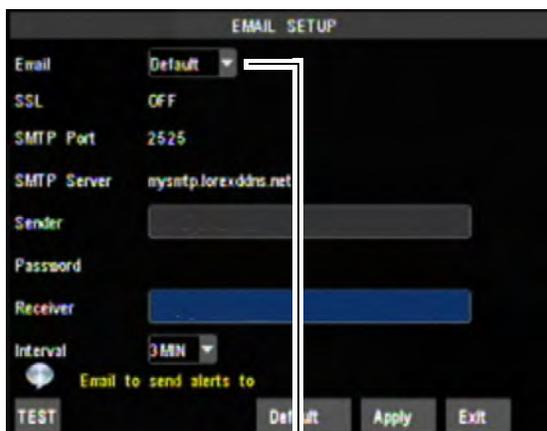
- **SSL:** Select **ON/OFF** to enable/disable Secure Socket Layer protocol
- **SMTP Port:** Enter your SMTP address
- **SMTP Server:** Enter your SMTP Server
- **Sender:** Enter the sender email address. This can be any address of your choice
- **Password:** Enter your email server's password
- **Receiver:** Enter the recipient's email address
- **Interval:** Enter the interval the DVR waits before sending a new email notification.

For example, if you select a 3 minute interval, the DVR will send out email notifications every 3 minutes until the DVR stops detecting motion / alarm. The DVR will only send out notifications when it detects motion/alarm triggers.

- 3 Click **Apply** to save your settings.

If you want to use Lorex's email server:

- 1 In the Email drop-down menu, select **Default**.



Default

- 2 In the Sender field, enter the email address of the sender. This can be any email address of your choice.
- 3 In the Receiver field, enter the email address you want the DVR to send alarm notifications to.
- 4 In the Interval drop-down menu, enter the Duration the DVR must wait before sending out a new notification.
- 5 Click **Apply** to save your settings.
- 6 Click the **TEST** button to send out a test email.

To configure PTZ settings:

- 1 From the Device menu, click **PTZ**.



PTZ

- 2 Configure the following according to your PTZ camera's specifications:
 - **Channel:** Select the channel the PTZ camera is connected to.
 - **Protocol:** Select from **Pelco-D** or **Pelco-P**
 - **Bauder rate:** Select the PTZ camera's baud rate
 - **Data Bits:** Select from **5~8** data bits.
 - **Stop Bits:** Select from **1** or **2** stop bits.
 - **Parity:** Select from **None, Odd, Even, Mark** or **Space**.
 - **Cruise:** Select **On** to enable PTZ cruise.
 - **Address:** Enter the PTZ camera's address



Use the Copy To drop-down menu to copy the PTZ settings to multiple channels.

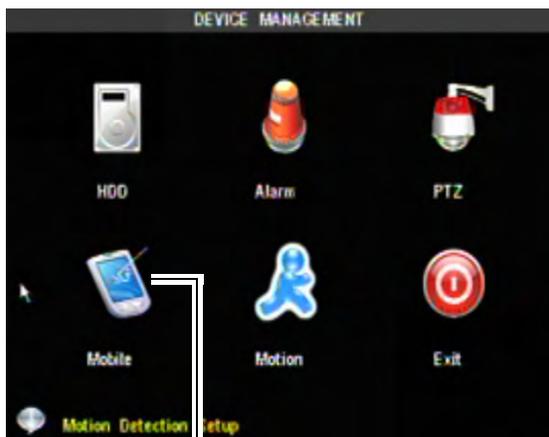
- 3 Click **Apply** to save your settings.

Configuring mobile connectivity settings

To remotely view your DVR using a mobile device, you must port forward the mobile port (by default port **1025**) to your router, and enter the mobile port number in the DVR.

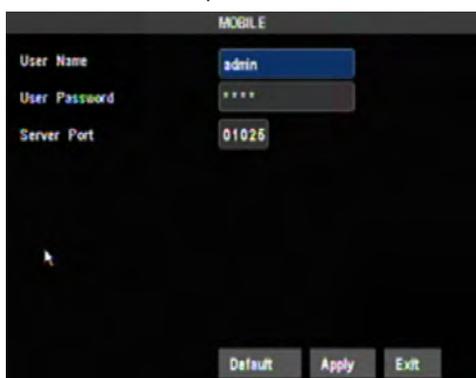
To configure mobile connectivity settings:

- 1 From the Device menu, click **Mobile**.



Mobile

- 2 Enter a new user name and password if you want to change your mobile login password. By default, the user name is **admin**, and the password is **0000**.

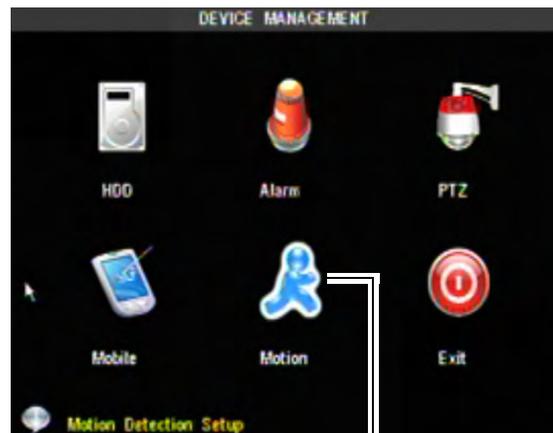


- The default Mobile port is **1025**. This must be port forwarded on your router to enable remote access.

- 3 To change the Mobile port, click the field beside Server Port to enter a new port.

To configure Motion settings:

- 1 From the Device menu, click **Motion**.



Motion

- 2 Configure the following:

- **Channel:** Select the channel you wish to apply the settings to.
- **Motion Detect:** Select **Enable** to activate motion detection.
- **Sensitivity:** Select the sensitivity of the motion detection trigger. The greater the number, the greater the sensitivity.
- **Area:** Click **Setup** to open a motion detection grid. The motion detection grid allows you to select the area of where you want the system to monitor motion.

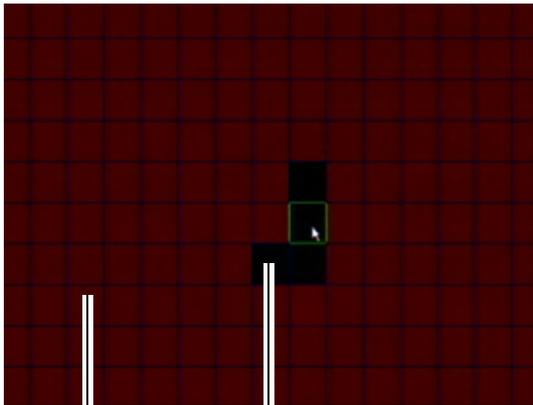


To configure the Motion Area grid:

- 1 Drag the mouse cursor over the area where you want to disable motion detection.

NOTE: By default, the entire screen has motion activation selected.

- Areas marked with red boxes indicate motion detection is activated.
- Areas marked with black boxes indicate motion detection is de-activated.



Activated (Red)

De-activated (Black)

- 2 Right-click to exit the window.
- 3 Click **Apply** to save your settings.

When you search for a video, the system will mark the search calendar with red boxes to indicate that motion occurred

on that particular day.



Red box indicates an alarm / motion event



Advance

The Advance menu allows you to configure system date/time, password, screen resolution, language, and system maintenance schedules.

To open the Advance menu:
Right-click→ Main Menu→Advance

The Advance menu contains the following sub-menus:

- **Date/Time:** Configure the system date and time
- **User Setting:** Add and edit users who can access the system, and user and system passwords
- **A/V Setup:** Configure system resolution and channel privacy settings.
- **Language:** Change the system language
- **Information:** Display system hardware and network information
- **System:** Configure system maintenance schedules, and perform firmware upgrades



Adjusting the system time and DST (Daylight Saving Time) Settings

To change the system time :

- 1 From the Advance menu, click **Date / Time**.



- 2 Configure the following:

- **Date:** Enter the month, date and year
- **Date Format:** Select **MM/DD/YY** or **, DD/MM/YY**, or **YY/MM/DD**
- **Time:** Enter the time, select **AM** or **PM**
- **Time Format:** Use the drop-down menu and select **12HOURS** or **24HOURS**
- **Time Zone:** Select your local time zone
- **NTP:** Select **ON** to enable automatic DST (Daylight Saving Time)
- **NTP Server:** Select the desired NTP server to keep track of your system time.

- 3 Click **APPLY** and then click **UPDATE NOW** to save your settings.

If your system does not have access to the internet, but you require to set DST for the system:

- 1 Click the **DST Setting** button.



- Configure the following:
 - **Daylight Saving Time:** Select Enable
 - **Time Offset:** Select how many hours the time should move forward or backward
 - **Daylight Saving Time Mode:**
 - **Start Time:** Select the Month, day, and time DST begins.
 - **End Time:** Select the Month, day, and time DST ends.
- Click **Apply** to save your settings.

Configuring User Settings

The User Settings menu allows you to add users, and edit user and admin passwords for the system.

To create a new user:

- Click **User Setting** from the Advance menu.
- Click the check box under "SEL" beside the user that you wish to add.



Select checkbox

- Click **Edit** to open the user settings window.



- Configure the following:
 - **User Enable:** Select **ENABLE** to add the user.
 - **User name:** Click the blank field to enter a desired user name.
 - **Password Enable:** Select **ENABLE** to enable a login password for the user.
 - **Password:** Enter your password.
 - **Confirm:** Re-enter the same password to confirm your password selection.
- Click **Apply** to save your settings.

Editing User Menu Authority:

- Click **User Setting** from the Advance menu.
- Click the check box under "SEL" beside the user that you wish to edit.
- Click **AUTHORITY**. Select the menus that you want the user to have access to.



- Click **Apply** to save your settings.

To edit a User or Admin password:

- Click **User Setting** from the Advance menu.
- Click the check box under "SEL" beside the user or admin account you wish to change the password for.
- In the Password Enable drop-down menu, select **ENABLE**.
- In the Password and Confirm fields, enter the new password of your choice.
- Click **Apply** to save your settings.

Configuring System Video and Audio settings

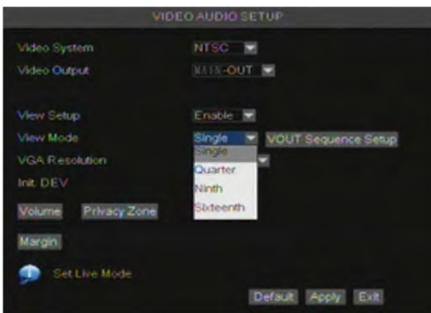
The A/V Setup menu allows you to configure the system's video output settings, and system volume.

To adjust the system's audio output volume:

- 1 From the Advance menu, click **A/V Setup**.
- 2 Click the **Volume** button.



4/8 channel A/V menu.



16 channel A/V menu.

- 3 Drag the audio slider to adjust the output volume of the system. The greater the number, the higher the volume.
- 4 Right-click to exit the menu.
- 5 Click **Apply** to save your settings.

Configuring Video Output Settings:

- 1 From the Advance menu, click **A/V Setup**.
- 2 Configure the following:

- **Video System:** Select **PAL** or **NTSC**.
- **Video Output (16 ch. only):** Select the port the video will output from. Select from the **MAIN-OUT** port or the **SPOT OUT** port.
- **View Setup (16 ch. only):** For details, see "Appendix M: Assigning camera channels (16 Ch. only)" on page 124.
- **Init. DEV (16 ch. only):** Select the output device that the mouse cursor appears on. Select from **V OUT** for the mouse cursor to appear in the BNC Output, **VGA** for the mouse cursor to appear in VGA output.
- **VGA Resolution:** Select the VGA output resolution. By default, the resolution is set to **1024 x 768**.
 - You may change the VGA output resolution to the following:
800 x 600, 1024 x 768, 1280 x 1024, 1440 x 900
- **Output Device:**
 - Select **VGA** if you are using a VGA monitor (default) to connect to the system (4/8 channel only).
 - Select **V OUT** to output video from the system's Video Out port (4/8 channel only).
- **SEQ Dwell Time:** Adjust the Sequence Dwell time of the DVR. Enter the desired number of seconds you want the each channel to display in sequence mode, before switching to the next channel.

Adding "Privacy Zones" to channels

Defining a privacy zone in the channel allows you to block out a portion of the channel with a black box.

To add a privacy zone to a channel:

- 1 From the Advance menu, click **A/V Setup**.
- 2 Click **Privacy Zone**.

- 3 Configure the following:
 - **Channel:** Select the channel you wish to assign a privacy area to.
 - **Privacy Zone:** Select **ENABLE** to enable a privacy zone.
- 4 Beside Area Setup click on the "Area 1" checkbox. You can block out up to 4 areas.
- 5 Beside Mask Area Setup, click the **Setup** button.



Setup button

- 6 In the channel window, drag the box to the desired area of the channel you wish to block out.



Drag privacy zone box to desired area

- 7 Right-click to exit the menu, and then click **Apply**. The privacy area blacks out the selected area.



Privacy Area

- 8 Repeat steps 3-7 as required, selecting a different channel.

Adjusting System Language

The system supports multiple languages.

To change the system language:

- 1 From the Advance menu, click **Language**.
- 2 In the Language drop-down menu, select



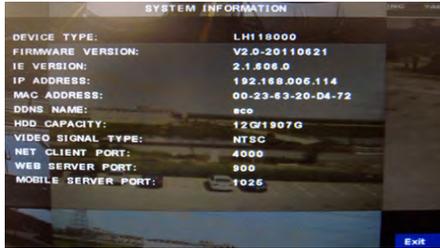
the desired language.

- 3 Click **Apply** to save your settings.
- 4 Right-click to exit the menu. The system will confirm if you want to reboot. Allow the system to reboot to save your settings.

Viewing System Information

To view system information:

- From the Advance menu, click **Information**.



- The system information window displays the following:
 - Device Type
 - Firmware Version
 - IE Version
 - IP Address
 - MAC Address
 - DDNS Name
 - HDD Capacity
 - Video Signal Type
 - Net Client Port
 - Web Server Port

Configuring The System Menu

The system menu allows you to update the system firmware, load system defaults, and enable the "Auto Maintain" feature.

The Auto Maintain feature reboots the DVR on a scheduled day and time of your choosing, to ensure the DVR performance is optimal.

To enable "Auto Maintain" :

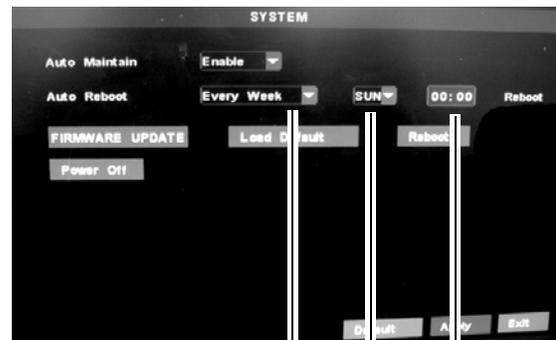
- 1 From the Advance menu, click **System**.

- 2 In the Auto Maintain drop-down menu, select **Enable**.



Select Enable

- 3 In the Auto Reboot drop-down menu, select the frequency of how often the system should reboot.
- 4 In the frequency drop-down menu, select from Every Week, Everyday, Every Month. This will determine how often the system reboots.
- 5 In the Day drop-down menu, select the day the system should reboot.
- 6 In the time field, enter the time the system should reboot.



Frequency drop-down menu
Day
Time field

- 7 Click **Apply** to save your settings.

To turn the system off:

- 1 Click the **Reboot** button.
- 2 At the prompt, click **OK** to restart the system.

To reboot the system:

- 1 Click the **Power Off** button to halt all system processes.
- 2 Unplug the system to turn it off.

Loading System Defaults

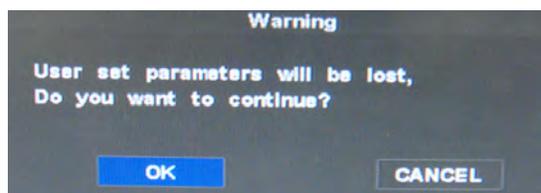
Loading the system defaults restores the system's configuration to the factory settings.

To load system defaults:

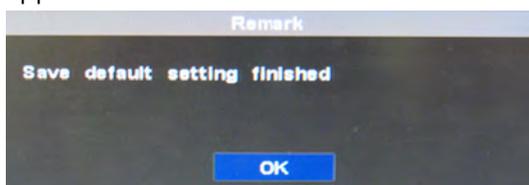
- 1 From the Advance Menu, click **System**.
- 2 Click **Load Default**.
- 3 Select the menus that you wish to restore to default settings.



- 4 Click **Apply**.
- 5 When the warning window appears, click **OK** to restore your settings.



- 6 Click **OK** when the confirmation window appears.



- 7 Click **Apply** to save your settings.

Upgrading The System Firmware

The latest firmware version can be found at www.lorextechnology.com.

Navigate to the appropriate product page, and locate your system's firmware.

Firmware updates improve system reliability, and may include new features for the system.

NOTE: Upgrading the firmware restores the system to factory default settings.

To upgrade the system firmware:

- 1 Download and extract the firmware into a blank USB flash drive. The firmware should be in a folder named **dvupgrade**. Ensure that this is the only folder in the USB drive.
- 2 Insert the flash drive into the rear panel of your system. Ensure the USB flash drive is plugged into the appropriate USB port, and not the USB mouse port.
- 3 Right-click and from the sub-menu click **Main Menu**→**Advance**→**System**.
- 4 Click **Firmware Update**.



Firmware Update

- 5 Follow the on-screen instructions to update the firmware. **Do not remove the USB flash drive during the firmware update.** Wait for the system to reboot.

Remote Connectivity

The system features a built-in browser-based software that allows you to access your system remotely over your local area network (LAN) or over the Internet using Internet Explorer® (PC) or Safari® (Mac).



PC remote viewing

For details on navigating the PC remote viewing interface, see “Remote Viewing” on page 63.



Mac remote viewing

For details on navigating the Mac remote viewing interface, see “Appendix O: Remote Viewing (Mac)” on page 127.

System Requirements

Prior to using Lorex Web Client, make sure your system meets or exceeds the following system requirements:

Description	Requirement
CPU	Pentium® 4 or above
Operating System	Windows XP/Vista/7 Mac OSX 10.6 and above (Intel processors only)
Memory	256 MB RAM or greater
Video	16 MB of video memory
Network (LAN)	10/100 BaseT Network
Network (WAN)	384 Kbps upstream* *High-speed Internet service is recommended when using DVR Netviewer.
Browser	Internet Explorer 6 or later (PC) / Safari 5 or later (Mac)

Accessing your DVR within a local network (LAN)

You can connect to your DVR through Internet Explorer through the local area network (LAN).

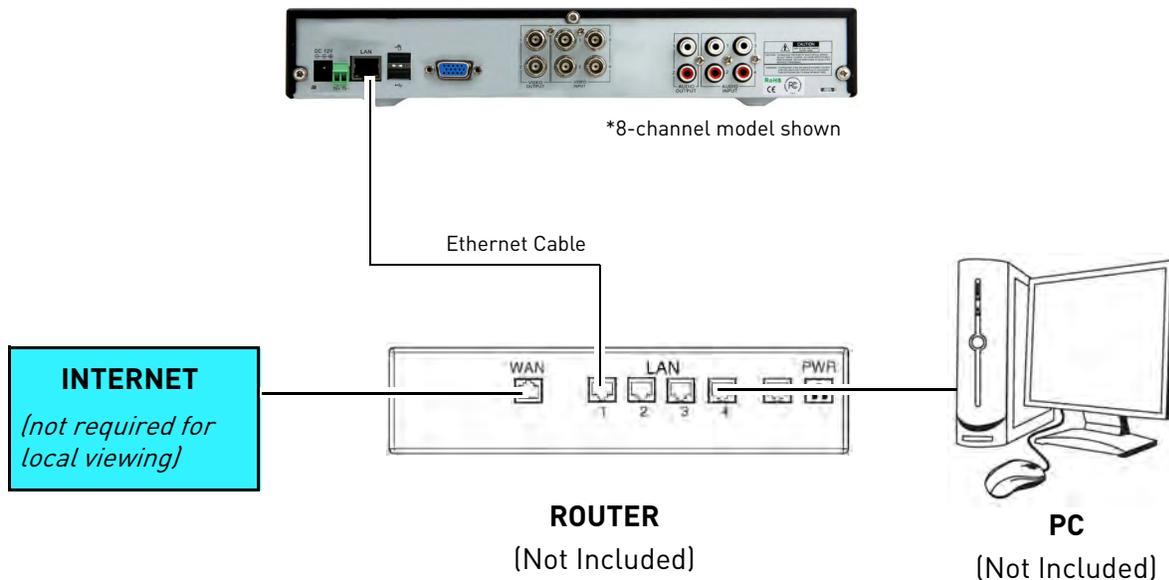
NOTE: This method only works if your computer is on the same network as the DVR.

Prerequisites

- Connect the ethernet cable from your router to the DVR
- DVR must be in the same network as the computer connecting to the DVR

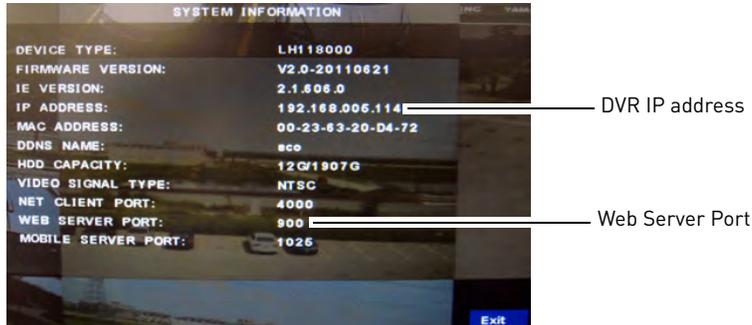
To connect your DVR to the Local Area Network (LAN):

- 1 Power off your system by disconnecting the power cable from the rear panel.
- 2 Connect an Ethernet cable (included) to the LAN port on the rear panel of the system. Connect the other end of the Ethernet cable to an empty LAN port (usually numbered 1~4) on your router.
- 3 Reconnect the power cable to power the system back on.



Step 1 of 2 : Obtain the DVR's local IP address and Web Port

- 1 Press the **PTZ** button on the front panel of the system to open the System Information window.

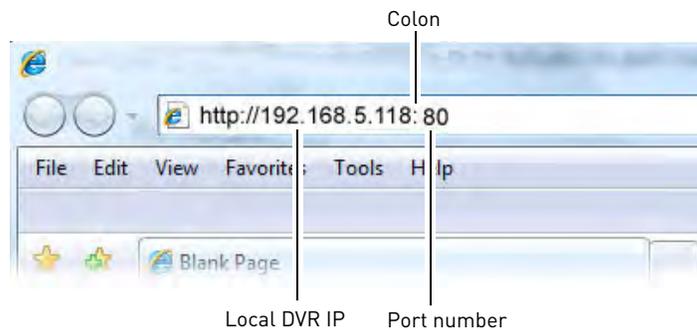


- 2 Write down the IP address and Web Server Port number of the DVR.
 - A local IP looks something like this: 192.168.5.118. Note that single digit numbers appear as three digits. For example, "005" means "5".
 - Write down the port number beside the "Web Server Port" field

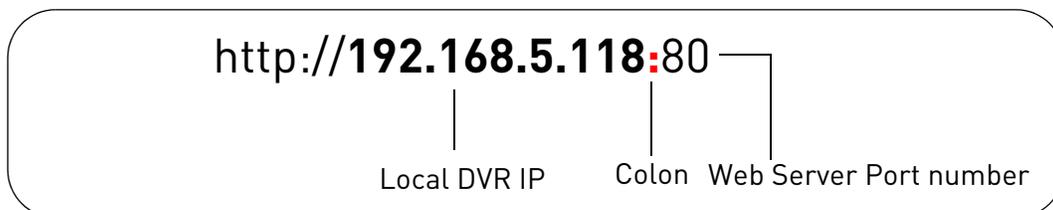
Step 2 of 2: Enter the DVR's local IP address into the browser

- 1 Open Internet Explorer (PC) or Safari (Mac).
- 2 Enter **http://**, the **IP address of the DVR**, **colon** and **Web Server Port number of the DVR** into the address bar. You must include the Web Server port number of the DVR after the address (i.e. 192.168.5.118:80)

For example:



Example of a LAN address



- 3 Enter the DVR username and password to log in to the system. By default, the username is **admin**, and the password is left blank.

Accessing your DVR Remotely

Setting up remote connectivity allows you to view your DVR from any computer with internet access, and your mobile device.

To set up remote connectivity with your DVR, you must:

- 1 Port Forward ports **80, 9000, and 1025** on your router to your DVR's IP address
- 2 Create a DDNS account
- 3 Enable DDNS on the DVR
- 4 Enter the DDNS information into the DVR

Step 1 of 4: Port Forwarding

You **must** port forward ports **80, 9000, and 1025** on your router before you can remotely connect to your system. There are several methods to port forward your router:

- Use the **Loxex Auto Port Forwarding Wizard** (PC only) to port forward the required ports (see CD for details). For instructions on how to use the Auto Port Forwarding Wizard, see "Appendix E: Internet Setup Wizard (PC only)" on page 105.
- Manually port forward the required ports on your router to your DVR's IP address by following your router manufacturer's instructions.

NOTE: If the above ports are not forwarded on your router, you will not be able to access your system remotely.

Step 2 of 4: Create a DDNS Account

Loxex offers a free DDNS service for use with your system. A DDNS account allows you to set up a web site address that points back to your local network. This allows you to connect to your system remotely. **You must create a DDNS account in the same network as your DVR.**

To setup your free Loxex DDNS account:

- 1 In your browser, go to <http://www.loxexddns.net> and click **Step 1**.

Loxex DDNS - Remote Viewing Setup

A Loxex DDNS account allows you to connect to your Loxex system from anywhere in the world using an easy-to-remember web site address that is available 24/7. This is perfect whether you have a Static or Dynamic IP address - no matter how often your Internet Service Provider changes your IP address, Loxex's exclusive DDNS service will keep you connected to the things that matter to you most.

To set up Loxex DDNS:

Click Step 1

Step 1

Create an account

Step 2

Activate your warranty

Step 3

Setup Remote Viewing

- 2 The My Lorex account login screen opens (if you are already logged in, go to Step 4). Create a new account or log into an existing account. To create a new account, fill in the required fields on the right and click **Create Account**.

Log in to your Account

If you have an account with Lorex already, please sign in. If you don't, please create a new account.

* Required information

Email Address *

Password *

[Password Reset](#)

Benefits of a Lorex account:

- ✓ Easy and quick checkout
- ✓ Products and support information tailored to you
- ✓ Enhanced Online Support for products
- ✓ Free Technical Support
- ✓ Full One Year Warranty
- ✓ Online ticketing system

Remember me

Log In

Create an Account

Enjoy the benefits of having a Lorex online account. Our goal is to make your online shopping experience simple and more efficient.

* Required information

First Name *

Last Name *

Email / Log in *

Password *

Confirm Password *

Yes, I would like to receive information from Lorex Technologies on products, services and special offers that may be of interest to me.

Create Account

Enter your account information and click Create Account

Click Create Account

- 3 Click **Warranties** to register your product for warranty.

My Lorex

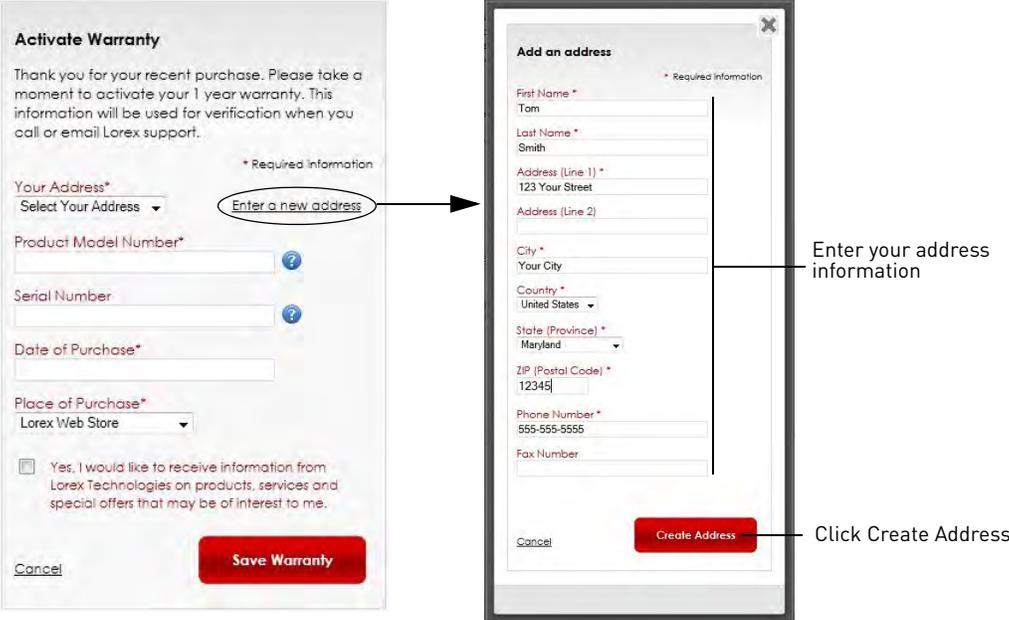
- ▶ Account Info.
- ▶ Address Book
- ▶ **Warranties**
- ▶ DDNS
- ▶ My Orders
- ▶ My Tickets
- ▶ My Reviews

Warranties

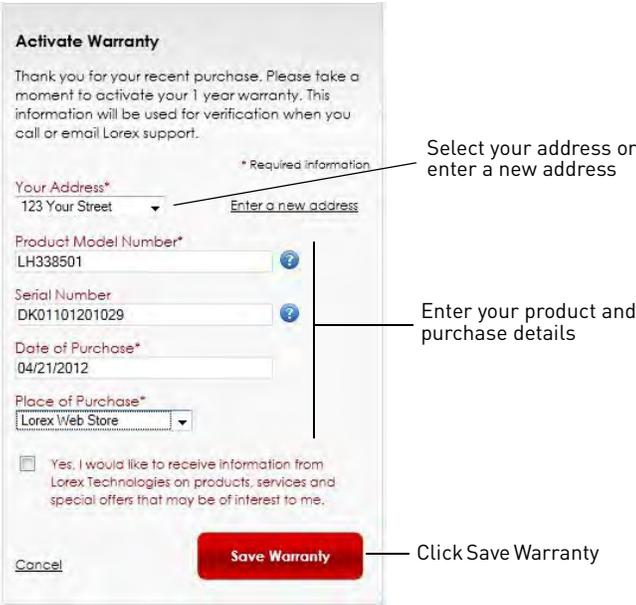
NOTE: Warranty registration is required to register for DDNS.

- 4 The Warranty page opens. Click **Activate Warranty** to register your product for warranty.

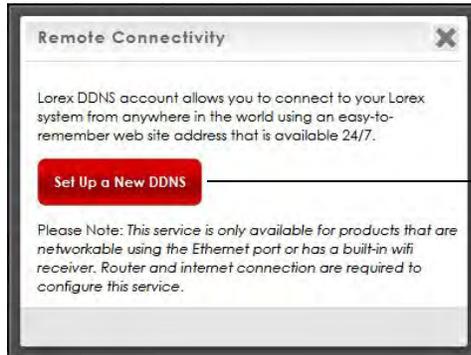
- 5 Under Your Address, select an address or click **Enter a New Address** to create a new address. Fill in your address information and click **Create Address**.



- 6 Fill in the warranty registration form with your product and purchase details. Check the sticker underneath your DVR for the Product Model Number and Serial Number. Click **Save Warranty**.



- 7 A page pops up to prompt you to register your product for Lorex DDNS. Click **Set Up a New DDNS**.



Click Set Up a New DDNS

- 8 Configure the following:



Select your product warranty

Enter a Device Name of your choice

Enter the product's MAC address

Enter the web site address that will be used to connect

Click Save

- **Product Warranty:** Select the product warranty you created in the previous steps.
- **Device Name:** Enter a name for your device. You can enter your name, business name, or anything of your choice. This is used to identify this device in your list of activated DDNS accounts that appears anytime you visit the DDNS page.
- **MAC Address:** Enter the MAC address of your Lorex product. Press the **PTZ** button on the front panel to find your MAC address. A MAC address is a permanent, unique 12-digit address used to identify a device on a network.



MAC Address

- **URL Request:** Enter the web site address that will be used to connect to your Lorex product.

NOTE: For example, if you enter *tomsmith*, the address to access your video will be *http://tomsmith.lorexddns.net*

- 9 Click **Save** to register your product for DDNS. A confirmation email will be sent to the email address used to register for My Lorex.

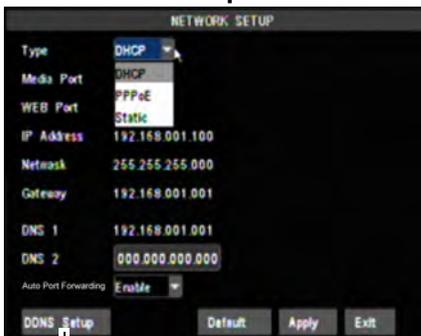
You will need this information for remote access to your system. Record your information below:

Domain name/URL Request: _____
 DDNS User Name: _____
 DDNS Device password: _____

Step 3 of 4: Enable DDNS on the DVR

To enable DDNS in your DVR:

- 1 Right-click in the main viewing window, and then click **Main Menu**→**Network**.
- 2 Click **DDNS Setup**.



DDNS Setup

- 3 In the DDNS drop-down menu, select **Enable**. Beside Server, select **LOREXDDNS** (default).
- 4 Enter the following into the DDNS Setup menu:
 - **Host Name:** Enter the Domain name/URL Request that was emailed to you after DDNS registration.
 - **User Name:** Enter your DDNS User Name that was emailed to you after DDNS registration.
 - **Password:** Enter your DDNS Device password that was emailed to you after DDNS registration.



Select **Enable**

Host Name: Enter Domain name/URL Request

User Name: Enter DDNS User Name

Password: Enter DDNS Device password

Example of entering DDNS information in the DDNS setup menu.

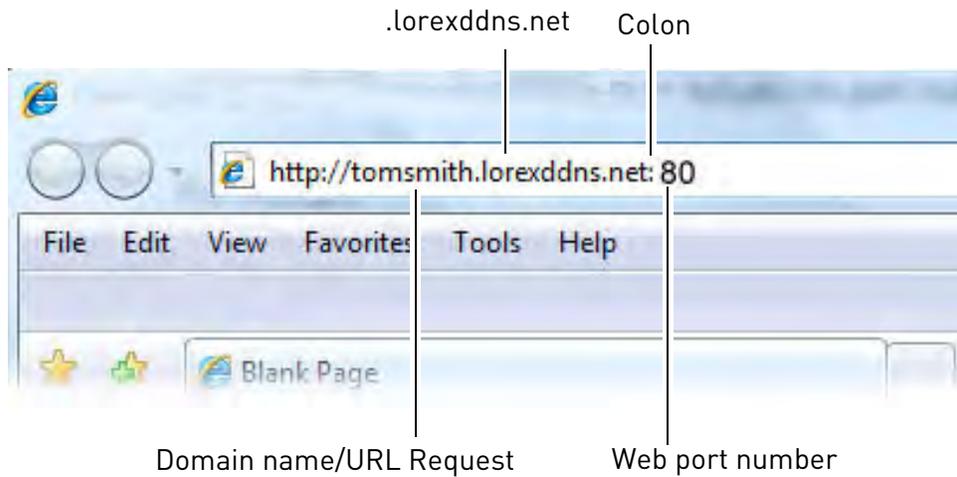
- 5 Click **Apply** to save your settings. Click **Ok** then right-click until you have exited all menus.

Step 4 of 4: Enter the DDNS Address into the browser

NOTE: Please allow 10~15 minutes for the DDNS servers to update with your new DDNS address before attempting to connect.

To access your DVR remotely, enter the DDNS address that you created earlier into Internet Explorer. The DDNS address must include **http://** , the Domain name/URL Request you created, followed by **.lorexddns.net**, a **colon**, and then the **Web port number of your DVR**.

For example:



Example of a DDNS address

http://tomsmith.lorexddns.net:80

Labels and their corresponding parts of the address:

- Domain name/ URL Request created by you (points to 'tomsmith')
- Colon (points to ':')
- Web Server Port number (points to '80')

Once you have entered your DDNS address into Internet Explorer, enter your DVR user name and password at the login screen and click **Login**.

NOTE: To log in remotely, the default user name is **admin**. The password is left blank.

Remote Viewing

Remote Viewing on the Mac

- For details, see “Appendix O: Remote Viewing (Mac)” on page 127.

Remote Viewing on the PC

Upon login, the Remote Surveillance main screen opens in your browser.



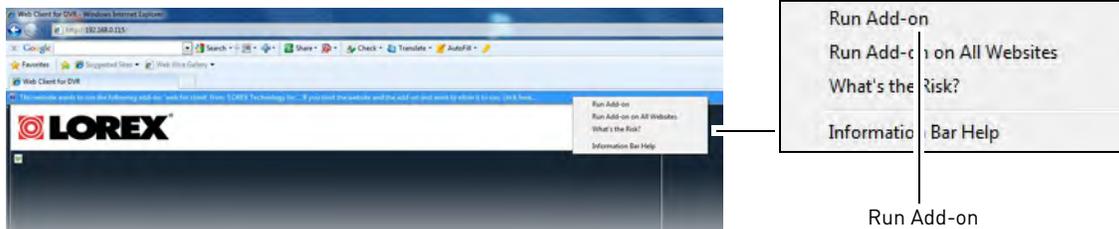
- 1 Navigation Tabs:** Allows you to access the following tabs:
 - **Live:** Live view of video
 - **Playback:** Revisit archived video footage
 - **Local Setting:** Configure system and networking options
 - **Logout:** Exits remote viewing
- 2 Active Channel List:** Displays channels that are currently live. Green play buttons indicate viewing is active.
- 3 Main Screen:** Main display screen for live viewing and playback.
- 4 Play Control options:** Control video playback and viewing options with the following tabs:
 - View All : Click to view all the connected cameras on the system.
 - Snapshot : Click take a screen capture of the selected channel.
 - Record : Click to record video to the local hard drive.
 - Channel View : Click to select the desired channel viewing mode (i.e. quad view, full screen etc.)
 - Volume : Control video audio levels. Audio is available on audio-enabled cameras only (not included).
- 5 PTZ Controls:** PTZ (Pan, Tilt, Zoom) control for connected PTZ cameras (not included).

Viewing your DVR remotely for the first time

When connecting to your system the first time, you will have to install an ActiveX plug-in for Internet Explorer.

To install ActiveX plugins on Internet Explorer:

- 1 Log in to your system using Internet Explorer.
- 2 Click the ActiveX banner near the top of the browser, and then click **Run Add-on**.



- 3 Once the ActiveX plugin installation finishes, log in to your system to begin remote connectivity.

Logging into the system

Log in to your system to begin remotely monitoring the system.



To log in to the DVR:

- 1 In the User Name field, enter **admin**
- 2 In the Password field, leave the entry blank (default)

NOTE: By default, the user name is admin. The password is left blank.

- 3 Click **Login** to connect to the system.

Changing Viewing Modes

You can change the number of channels that the system displays simultaneously (i.e. split screen mode, single channel mode etc.)

To change the DVR's viewing mode:

- Click one of the following: 

Taking Screen Shots

The system can take screen shots of a selected channel during live playback.

To take a screen shot of a channel:

- 1 Select the channel that you wish to take an image of.
- 2 Click  to capture an image.
- 3 Click **OK** when the confirmation window appears.

To change the save directory of the image:

- 1 Click the **Local Setting** tab.
- 2 Beside Snapshot Save Path, click  to browse for a save directory.



- 3 Select the desired save directory, and then click **OK**.

Recording Video

You can record video footage directly onto your local hard drive. Once the video is in your hard drive, you can back up the video footage onto recordable media such as USB memory keys and blank CD/DVD media.

To record video:

- 1 Click on the channel that you wish to capture video from.
- 2 Click  to record video. The video will record to the default save directory (C:/DVR/Capture/)
- 3 Click  to stop video recording.

Recording video using the Active Channel List

You can also use the Active Channel List to record video. Click the record button beside the channel that you wish to record. The record button turns red to indicate the system is recording. Click the record button again to stop recording.



Showing & Hiding Channels

The Active Channel List is a convenient way to show / hide the cameras that display in the main viewing window.

To show or hide video in the main video window:

- 1 Click  beside the channel number to show a channel. Click  again to hide the channel.



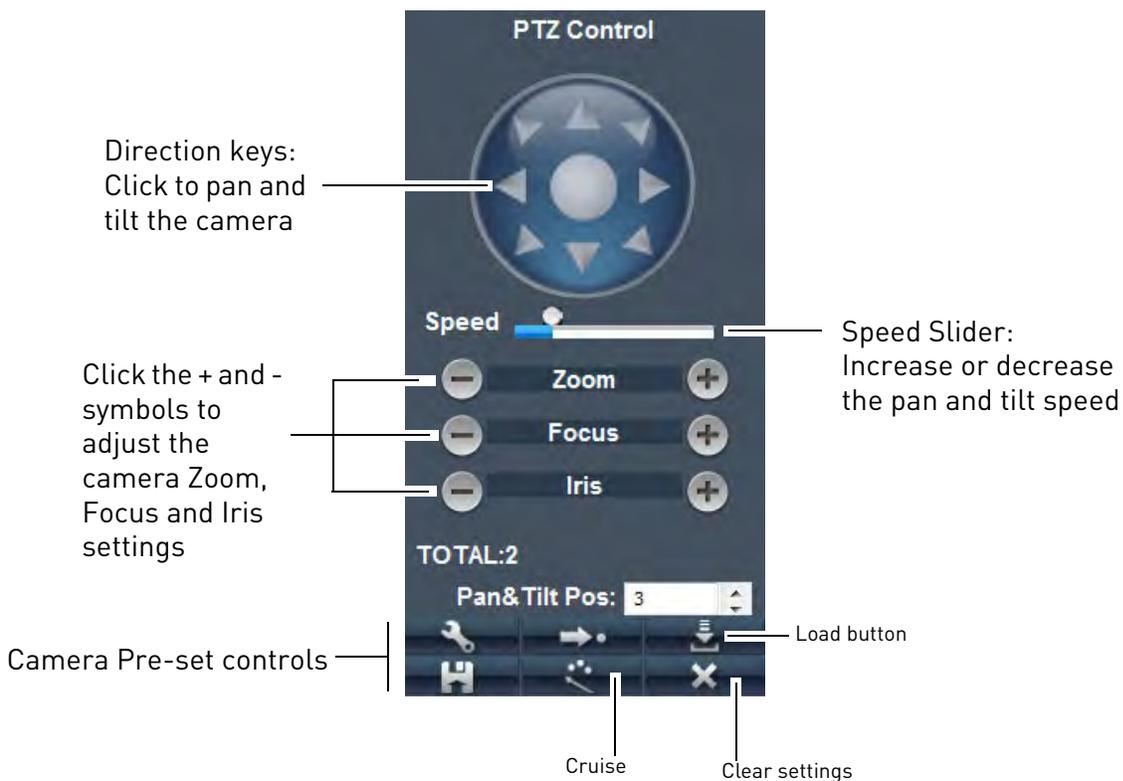
Configuring PTZ settings

The system supports PTZ (Pan, Tilt, Zoom cameras. PTZ cameras are sold separately.

- For details on connecting PTZ cameras to your system, see “Appendix H: Connecting a PTZ Camera” on page 116.

To control the PTZ settings on the DVR:

- 1 Select the channel the PTZ camera is connected to.
- 2 Use the PTZ control panel to control the pan, tilt, zoom, focus and iris control of the camera.



To assign a camera pre-set:

- 1 Adjust the camera to the desired pre-set location using the direction keys.
- 2 In the **Pan&Tilt Pos** drop-down menu, enter a pre-set number.
- 3 Click the Set () button.
- 4 Click **Save** () to save your settings.

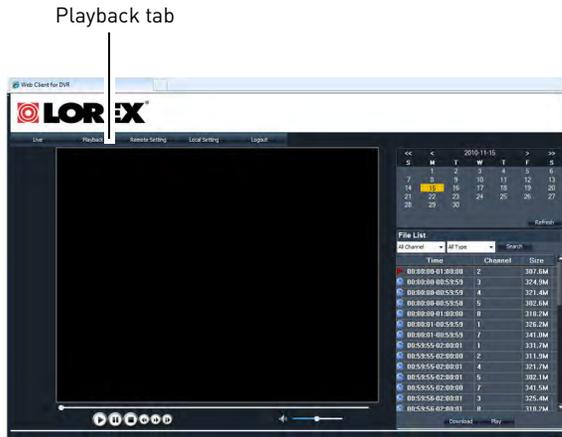
To open a pre-set, enter the desired Pan&Tilt Pos number. Click the **Go To** button ().

Video Playback

Video playback allows you to watch video that has been archived in the DVR's hard drive.

To playback video:

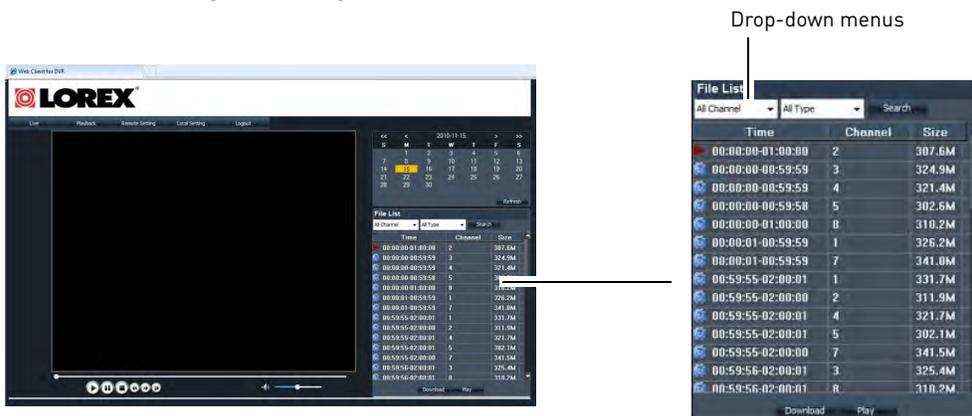
- 1 Click the **Playback** tab.



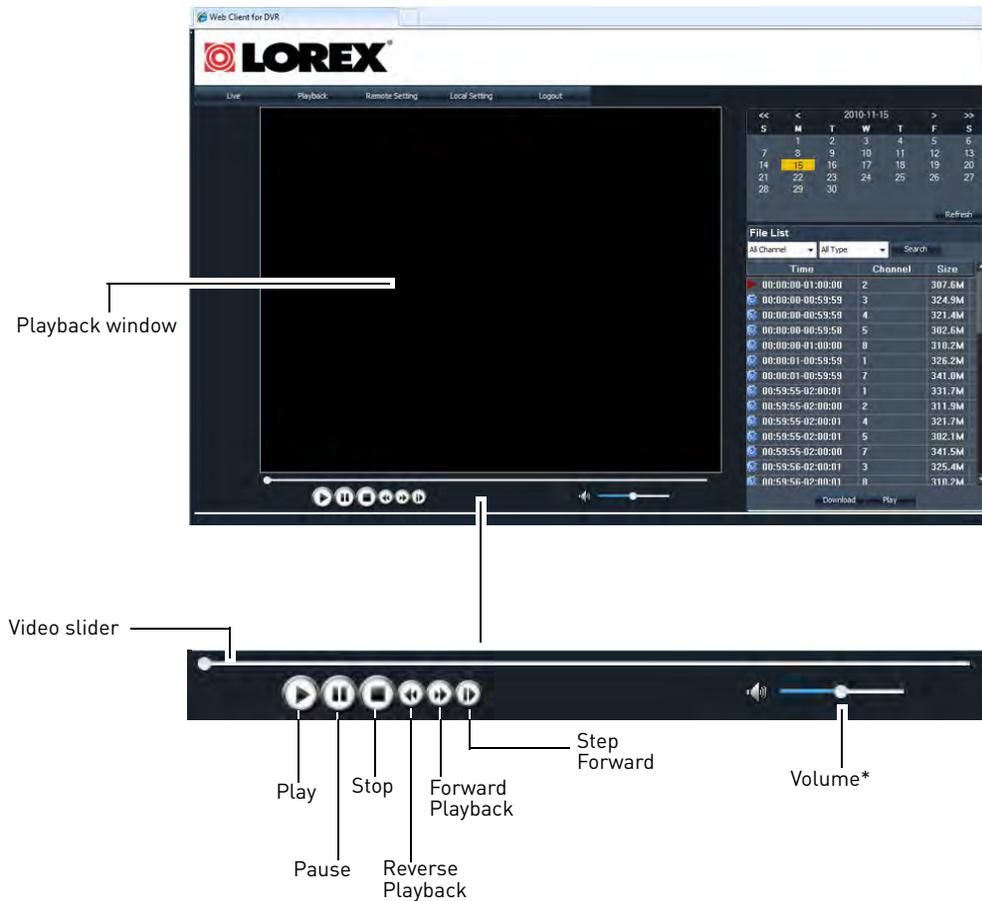
- 2 In the calendar window, click << or >> to select the desired year and click < or > to select the desired month.
- 3 Select the desired date.



- 4 Under the file list, click the desired file you wish to play back. Use the drop-down menus to filter your search by channel and event type. Click **Search** to begin the filtered search. Click **Play** to begin viewing.



Video playback Controls



- **Forward and Reverse Playback:** Click repeatedly to increase playback speed
- **Step Forward:** Plays video frame by frame. Click the Step Forward button to advance the video by 1 frame.
- **Volume:** Drag the volume slider to adjust video volume. Audio enabled cameras required (not included).
- **Video Slider:** Drag the slider to view different parts of the video. You must wait for the content to download before jumping ahead of the video.

To download the video:

- 1 Click the file you wish to download.
- 2 Click the **Download** button. The video downloads into the default save directory.

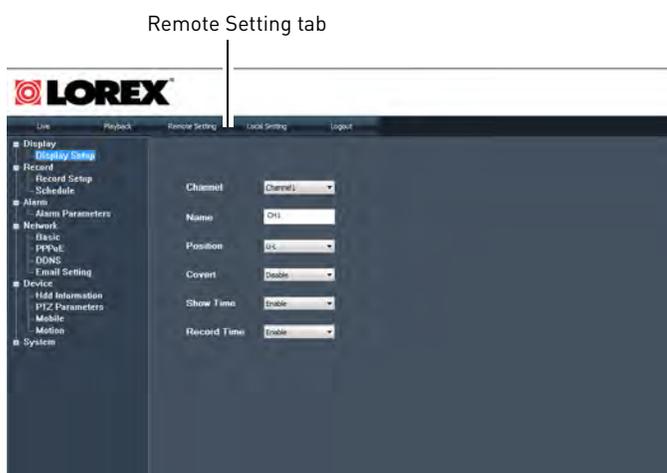
To change the save directory:

- 1 Click the **Local Setting** tab.
- 2 Beside Record Save Path, click  to browse for a save directory.
- 3 Select the desired save directory, and then click **OK**.

Configuring Display Settings

To configure channel display settings:

- 1 Click the **Remote Setting** tab.

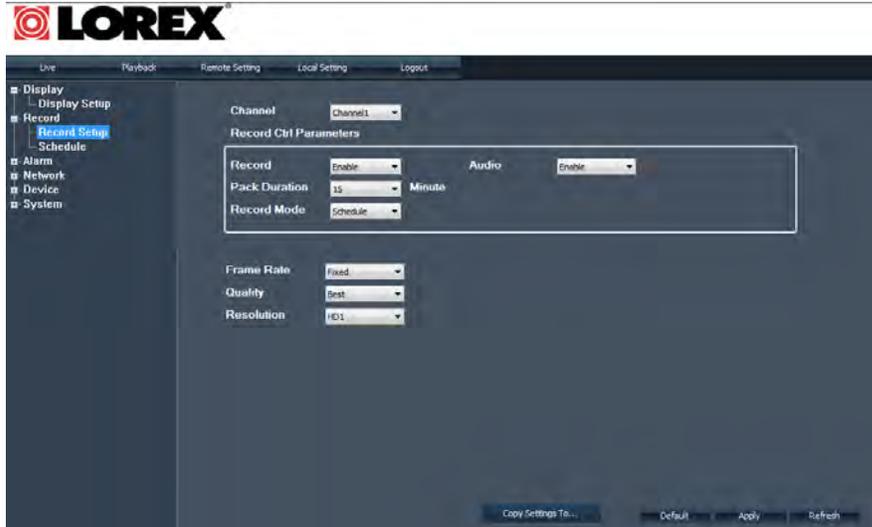


- 2 Configure the following:
 - **Channel:** Select the channel you want to apply the settings to
 - **Name:** Enter the name you wish to re-name the channel
 - **Position:** Select the position of where the text appears in the channel.
 - U-L : Upper left hand corner
 - D-L: Lower right hand corner
 - U-R: Upper right hand corner
 - D-R: Lower right hand corner
 - **Covert:** **Enable** or **Disable** covert recording.
 - **Show Time:** Select **Enable** or **Disable** to show or hide the time in the channel
 - **Record Time:** Select **Enable** or **Disable** to show or hide the record time.

Configuring Recording Settings

To configure the system's recording settings:

- 1 Click the **Remote Setting Tab**→**Record**.



- 2 Configure the following:
 - **Channel:** Select the channel you wish to apply the settings to.
 - **Record:** Select **Enable** or **Disable** to start or stop recording.
 - **Pack Duration:** Select the file pack time.
 - **Record Mode:** Select from **Schedule** or **Continuous** recording
 - **Audio:** Select **Enable** or **Disable** to start or stop audio recording
 - **Frame Rate:** Select from **Fixed** or **Manual** recording rate.
 - **Quality:** Select from **Best, Better** or **Good**.
 - **Resolution:** Select from **CIF, HDI** or **DI**

If you selected Manual Frame rate, configure the following:

- **Frame Rate:** Enter the desired frame rate. The Frame counter on the right indicates how many frames you have remaining.
- **Quality:** Select from Best, Better, Good
- **Resolution:** Select from CIF, HDI, DI



- 3 Click **Apply** to save your settings.

Configuring Scheduled Recording

To configure scheduled recording:

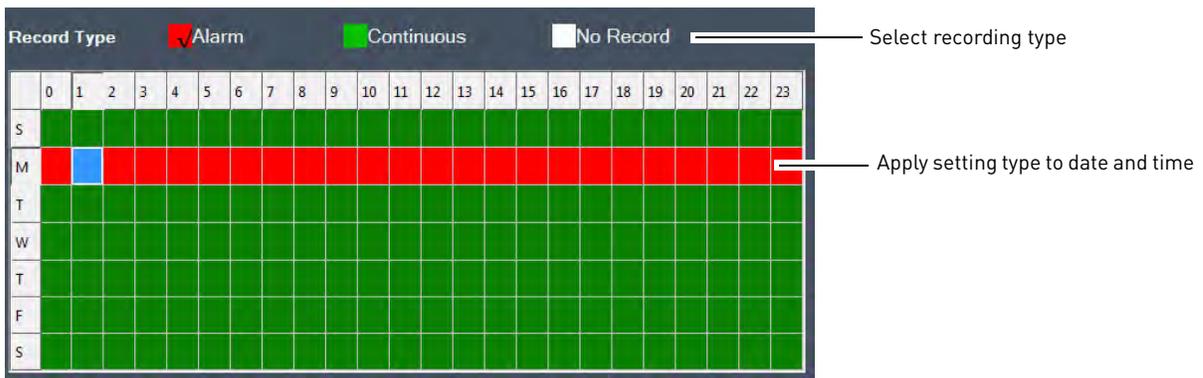
- 1 Click the **Remote Setting Tab**→**Record**→**Schedule**.



- 2 Configure the following:

- **Channel:** Select the channel that you want to configure
- **Record Type:** Select **Alarm** (red), **Continuous** (green), or **No Record** (white)

- 3 In the recording calendar, select the time and day you wish to apply the particular recording setting to.

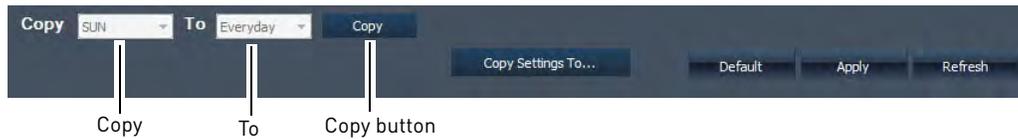


- Use the **Copy** and **To** drop-down menus to copy the setting to multiple days, or all days. Click the **Copy** button to apply your changes.
- Click the **Copy Settings To** button to apply the changes to multiple channels

- 4 Click **Apply** to save your settings.

Optional: Copying settings to different days

You can copy the recording settings and apply them to different days. To copy the settings to different days, select the day you wish to copy the settings from in the "Copy" drop-down menu. In the "To" drop-down menu, select the day you wish to apply the setting to. Click the Copy button and then Apply to save your settings.



Optional: Copying settings to different Channels

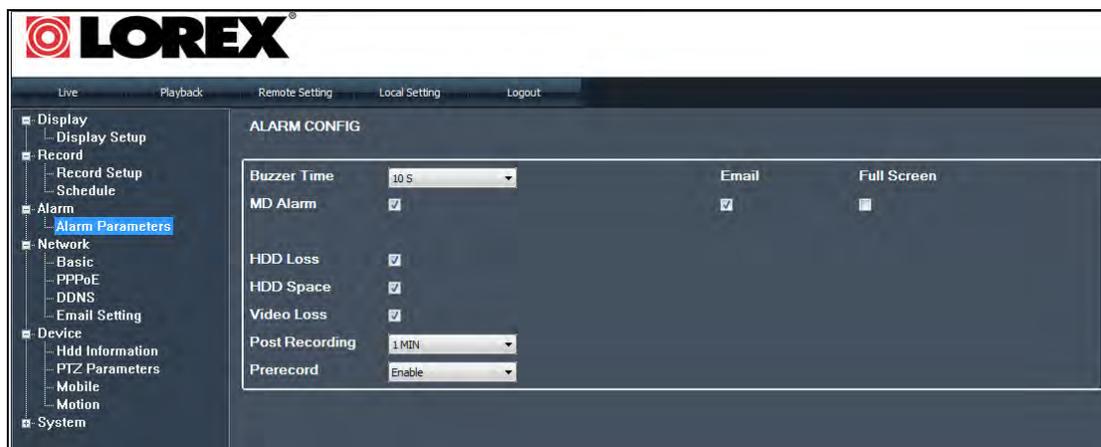
Once you have configured your recording schedule, you can copy the settings to multiple channels. To copy the schedule settings to multiple channels, click the **Copy Settings to** button.

Configuring Alarm Parameters

The Alarm parameters menu allows you to select the type of events that will trigger the system to "beep" during an alarm event.

To configure alarm parameters:

- 1 Click **Remote Setting**→**Alarm**→**Alarm Parameters**.



- 2 Configure the following:

- **Buzzer Time:** Select the duration the system beeps if the DVR detects an alarm event. Choose from 10 - 60 seconds.
- Select the type of events that will trigger an alarm:
 - **MD Alarm** (motion detection)
 - **HDD Loss: Hard Drive loss**
 - **HDD Space: Low Hard Drive Space**
 - **Video Loss**
- Select the **Email** check box if you want the system to send email notifications if the system detects alarm events.
- Select the **Full Screen** check box if you want the system to go into full screen mode when the system detects alarm events.
- **Post Recording:** Select the post recording time after an alarm event triggers the an alarm.
- **Pre Record:** Select the pre recording time when the system detects an alarm trigger.

- 3 Click **Apply** to save your settings.

Configuring Network Settings

The Network settings menu allows you to configure the system DDNS, Email notification, and port settings.

To configure network settings:

- 1 Click **Remote Setting**→**Network**→**Basic**.



- 2 Configure the following:

- **Type:** Select **DHCP** or **Static**. DHCP allows the router to assign the DVR an IP address. Static fixes the IP address of the DVR.
- If you select Static, fill in the IP Address, Netmask, DNS 1 and Gateway fields. Remember to assign the static IP address in your router as well.
- **Bandwidth:** Select the bandwidth the DVR can consume. Set a lower bandwidth if you are on a network with heavy traffic. For smoother playback, select a higher bandwidth.
- **Auto Port Forwarding:** Select **Enable** or **Disable** to turn auto port forwarding on or off. Note that you must restart the DVR locally before changes take effect.

NOTE: You cannot remotely change the Net Client/Media port, Web port or Mobile port. To change the Media, Web, or Mobile port, you must change the ports locally on the DVR for changes to take effect.

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

About Static IPs

A static IP is useful if you wish to lock the local IP address of the DVR. This is used when accessing the DVR over a local area network (LAN), and prevents the DHCP server from assigning a random IP address for the DVR. You must set the static IP address within your router before the changes take effect.

Configuring DDNS Settings

You must create a DDNS account, and port forward the Web Port (default **port 80**) and Net Client Port (default **port 9000**) in your router before you can view your DVR using DDNS.

For details on creating a DDNS account, see “Step 2 of 4: Create a DDNS Account” on page 57.

To configure DDNS settings:

- 1 Click Remote **Setting**→**Network**→**DDNS**.



- 2 Configure the following:
 - **DDNS Enable:** Select **Enable** to turn on DDNS.
 - **Service:** By default, the service is fixed to LOREXDDNS.
 - **Host Name:** Enter the Domain name/URL Request that was emailed to you after DDNS registration.

NOTE: For example, if the Domain name/URL Request is *tomsmith*, the address to access your video will be *http://tomsmith.lorexddns.net*

 - **User Name:** Enter the DDNS User Name that was emailed to you after DDNS registration.
 - **Password:** Enter the DDNS Device password that was emailed to you after DDNS registration.
- 3 Click **Apply** to save your settings.

Configuring Email Notification Settings

The DVR is capable of sending email notifications when an event occurs. For example, you can configure the system to send you an email notification if the system detects motion in one of the channels.

To configure email notifications:

- 1 Click **Remote Setting**→**Network**→**Email Setting**.



- 2 Configure the following:

- **Email Enable:** Select from **Disable**, **Enable** or **Default**. Select Default to enable the Lorex Email client.
- **Interval:** Select the interval that you want the DVR to send out an email alert once an alarm has triggered. For example, if the interval is set to 60, the DVR will only send out email notifications every 60 seconds when an event occurs.
- **SSL:** Select **On** or **Off**. SSL (Secure Socket Layer) may be required for certain email servers.
- **SMTP Server:** Enter your SMTP server name if you decide to use your own.
- **SMTP Port:** Enter the SMTP port of your email server.
- **Sender:** Enter the email that you want the receiver to see.
- **Receiver:** Enter the email that you want to send alerts to.
- **Password:** Enter the password of your email server.

- 3 Click **Apply** to save your settings.

Enabling email notifications using the Lorex email server

Lorex provides an email notification service free of charge.

To enable email notifications using the Lorex email server:

- 1 Click **Remote Setting**→**Network**→**Email Setting**
- 2 Configure the following:
 - **Email Enable:** Select **Default** to enable the Lorex email server.
 - Enter the Sender and Receiver email address.
 - Select the Send Interval duration.

NOTE: A password is not required.

- 3 Click **Apply** to save your settings.

Configuring Device Settings

The device settings tab allows you to configure hard drive, PTZ parameters, Mobile, and Motion settings.

Configuring Hard Drive Settings

To configure hard drive settings:

- 1 Click **Remote Setting**→**Device**→**HDD information**.



- 2 Configure the following:
 - **Overwrite**
 - Select **Auto** if you want the hard drive to overwrite itself once it is full.
OR
 - Select a desired number of hours or days that you want the hard drive to store the video files (select from 1 hr - 90 days).
- 3 Click **Apply** to save your settings.

Configuring PTZ Parameters

The system is capable of manipulating PTZ cameras (not included) that are connected to the system. Please note that you will need PTZ information from the PTZ manufacturer's users guide.

To configure PTZ settings:

- 1 Click **Remote Setting**→**Device**→**PTZ Parameters**.



- 2 Configure the following:
 - **Channel:** Select the channel that the PTZ camera connects to
 - **Protocol:** Select the protocol of the PTZ camera*
 - **Address:** Select the address of the PTZ camera*
 - **Baud Rate:** Select the baud rate of the PTZ camera*
 - **Data Bit:** Select the data bit rate of the PTZ camera*
 - **Stop Bit:** Select the stop bit rate of the PTZ camera*
 - **Verify:** Select from Odd, Even, Mark, or Space.*

*Consult the PTZ camera's instruction manual for protocol and configuration details

Optional: Click the **Copy Settings To** button to copy the PTZ settings to different channels.

- 3 Click **Apply** to save your settings.

For details on connecting a PTZ camera to your system, see "Appendix H: Connecting a PTZ Camera" on page 116.

Configuring Mobile Device Settings

You can change the user name, password and port number required to log in to the system using a mobile device (i.e. iPhone, Blackberry etc.)

You must port forward the Mobile service port to your router before you can access your DVR using a mobile device.

To configure mobile device settings:

- 1 Click **Remote Setting**→**Device**→**Mobile**.



- 2 Configure the following:

- **User Name:** Enter the desired user name
- **Password:** Enter the desired password
- **Service Port:** Shows the current mobile port (default port **1025**).

NOTE: You cannot change the mobile port remotely through the internet or local area network. You can only change the port locally through the DVR.

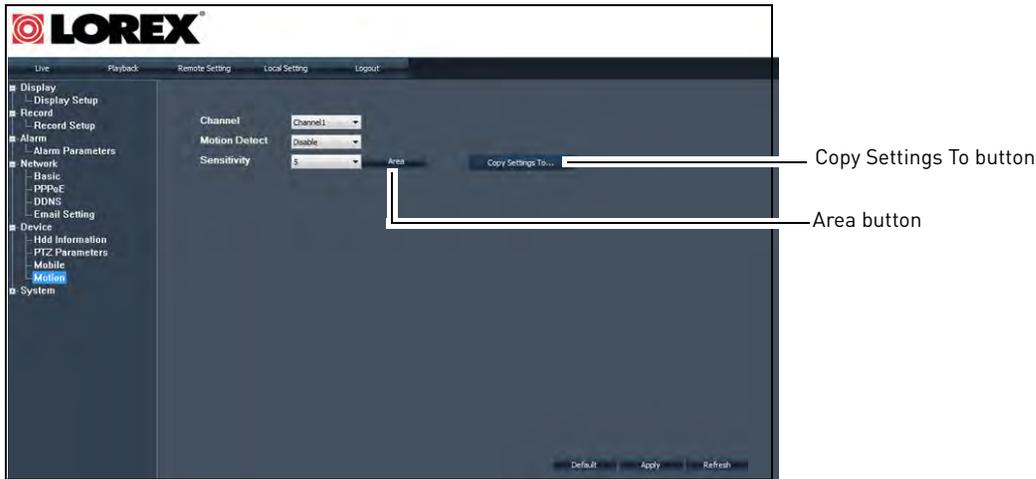
- 3 Click **Apply** to save your settings.

Configuring Motion Detection Settings

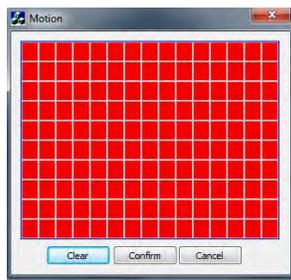
Use the Motion Recording settings to set the DVR's motion sensitivity, and the portion of the screen to monitor for motion.

To configure motion settings:

- 1 Click **Remote Setting**→**Device**→**Motion**.



- 2 Configure the following:
 - **Channel:** Select the channel you wish to configure motion detection.
 - **Motion Detect:** Select **Enable** or **Disable**.
 - **Sensitivity:** Select the desired sensitivity. The greater the number, the greater the motion detection sensitivity.
 - Click the **Copy Settings To** button to copy the setting to multiple channels.
- 3 Click the **Area** button. A motion window grid appears.



Red = Motion enabled
Black = Motion disabled

Motion Detection window

- 4 Select the area of the screen that you wish to disable motion detection. The square turns black to indicate the motion detection is disabled.
- 5 Click **Confirm** to exit and then click **Apply** to save your settings.

Changing The System Time Zone

To change the system's time zone:

- 1 Click **Remote Setting**→**System**→**System Setting**.



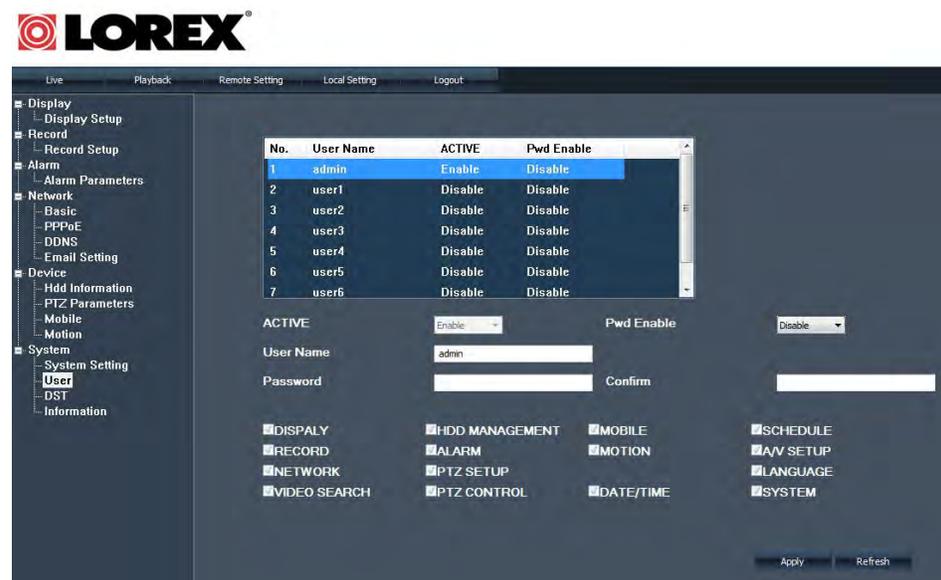
- 2 In the Time Zone drop-down menu, select your area's time zone.
- 3 Click **Apply** to save your settings.

Adding and Configuring User Settings

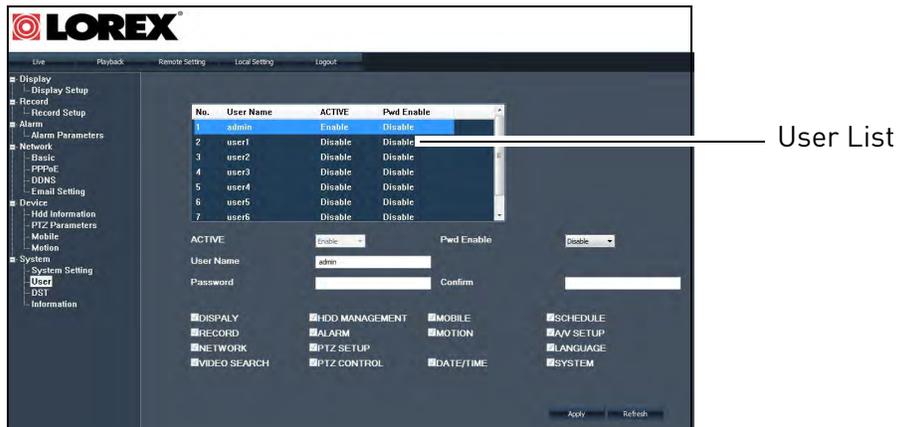
You can add new users to the system, and customize the type of menus they have access to.

To configure user settings:

- 1 Click **Remote Setting**→**System**→**User**.



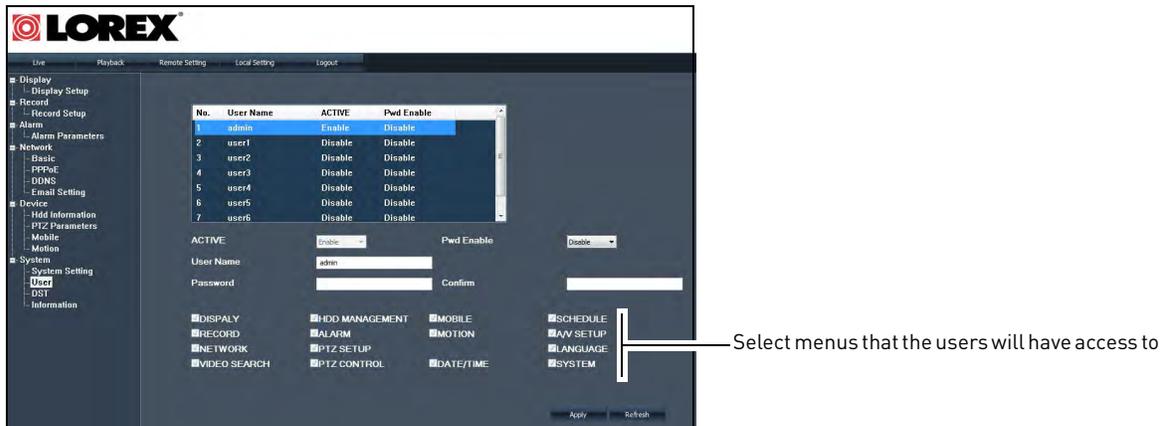
- 2 Select a user from the User List that you wish to configure.



- 3 Configure the following:

- **Active:** Select **Enable** to add the user. Select **Disable** to remove the user.
- **Pwd Enable:** Select Enable to enable a user password.
- **User Name:** Enter the desired user name.
- **Password:** Enter the desired user password.
- **Confirm:** Re-enter the password.

- 4 Select the check boxes to enable the menus the user will have access to.



- 5 Click **Apply** to save your settings.

To change the Admin Password:

- 1 Click **Remote Setting**→**System**→**User**.
- 2 Select **admin** in the user list.
- 3 In the **Pwd Enable** drop-down menu, select **Enable**.
- 4 In the Password field, enter a new password.
- 5 Click **Apply** to save your settings.

Configuring DST (Daylight Saving Time) Settings

If your region observes DST, use the DST menu to configure when the system changes its time.

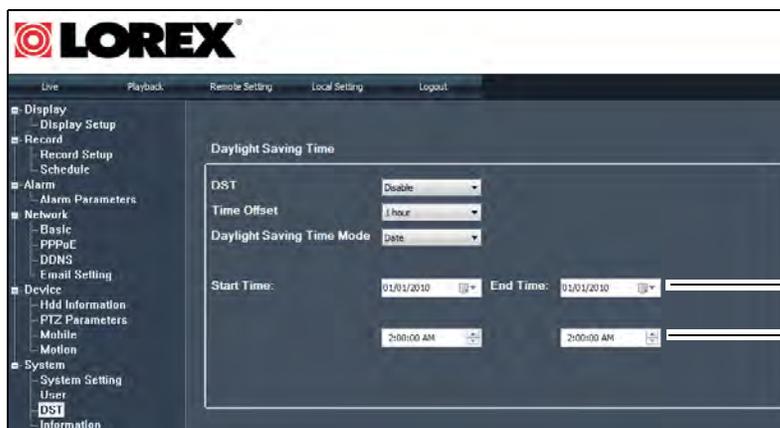
To configure DST settings:

- 1 Click **Remote Setting**→**System**→**DST**.



- 2 Configure the following:

- **DST**: Select Enable or Disable.
 - **Time Offset**: Select 1hr or 2hr time offsets.
 - **Daylight Saving Time Mode**: Select **Week** or **Date**.
 - **Start Time**: Select the starting month, date and time DST should begin.
 - **End Time**: Select the ending month, date and time DST should end.
- If you select **Date** in the Daylight Saving Time Mode drop-down menu, select the desired date and start time DST should begin.



Click the Date drop down menu

Enter the DST start and end time

- 3 Click **Apply** to save your settings.

Viewing System Information

The system information window displays key system information such as DDNS address, Web and Net Client port numbers and system mac address.

To view system information:

- Click **Remote Setting**→**System**→**Information**.



- The System information window displays the following:
 - Device Name
 - Firmware
 - IE Version
 - IP Address
 - Mac Address
 - DDNS Name
 - HDD (hard drive capacity)
 - Video (Video output type)
 - Net Client (Media) port
 - Web port

Configuring DVR Save Directories

You can change the directory where the DVR files are saved to on your computer's hard drive.

To configure the DVR save directory:

- 1 Click **Local Setting** near the top of the window.
- 2 Configure the following save directories by clicking the  button:
 - **Record Save Path:** This directory saves your recorded video footage
 - **Snapshot Save Path:** This directory saves images taken from video footage
 - **File Save Path:**



Lorex Client 10

Lorex Client 10 is a software that allows you to connect to your DVR without using Internet Explorer. Accessing your DVR using Lorex Client 10 is identical to accessing your DVR through Internet Explorer.

Minimum System Requirements

- Intel Pentium 4 or above
- Microsoft Windows XP/ Vista / 7
- 256 MB Ram
- 16 MB video memory

Prerequisites

- You must port forward the default Web Port (**port 80**) and Media Port (**port 9000**) to your router
- Create a DDNS account, and enter the DDNS information into the DVR
- Enable DDNS in your DVR
- DVR must be connected to a router with an internet connection

To install Lorex Client 10:

- 1 Insert the software CD that comes included with the system.
- 2 Locate the Lorex Client 10 software. Follow the onscreen instructions to install Lorex Client 10.

NOTE: A Microsoft Visual C++ Install window may appear. Click the **"I have read and accept the license terms."** checkbox, and then click **Install** to proceed.



Select checkbox

Running Lorex Client 10

- 1 Double-click on the Lorex Client 10 icon on your desktop. The login window appears.
- 2 Enter your DDNS/LAN IP, user name and password, Media Port (default 9000) and then click **Login**.



Lorex Player 10

Lorex Player 10 allows you to view your downloaded video files from your DVR on your computer.

Minimum System Requirements

- Intel Pentium 4 or above
- Microsoft Windows XP/ Vista / 7
- 256 MB Ram
- 16 MB video memory

Prerequisites

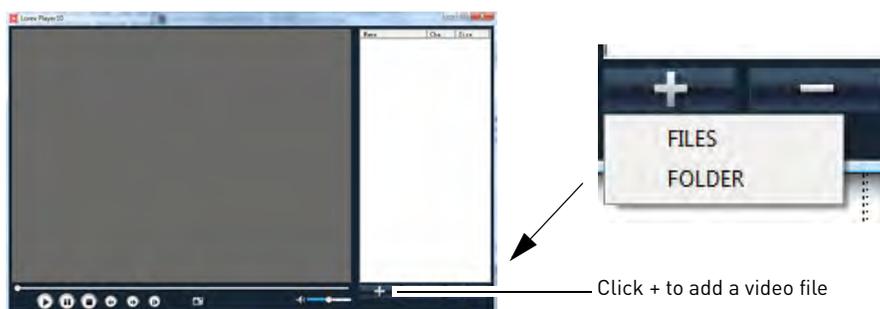
- Back up video files from the DVR to your local hard drive.

To install Lorex Player 10:

- 1 Insert the software CD that comes included with the system.
- 2 Locate the Lorex Player 10 software. Follow the onscreen instructions to install Lorex Client 10.

Running Lorex Player 10:

- 1 Double-click the Lorex Player 10 icon on the desktop.
- 2 Click the + symbol.
- 3 Click **FILES** to load an individual file. Click **FOLDER** to load a folder with backed up videos.



NOTE: The functionality is identical to the remote player. For details, see “Video playback Controls” on page 69.

Mobile Apps

Mobile applications allow you to connect and view your system remotely using a smartphone.

Prerequisites:

- Port forward port **1025** (default mobile port) in your router
- Create a DDNS account, and enable DDNS in your DVR

Login Name and Password

For mobile access:

- The default user name is: **admin**
- The default password is: **0000**

iPhone

System requirements

- OS version 4.0 and above.

Prerequisites

- An iTunes account (requires valid credit card number).

NOTE: Your credit card will not be billed when downloading the Lorex Mobile Eco App.

Step 1 of 3: Downloading the App

- 1 In the iTunes store, search for **Lorex Mobile Eco**
- 2 Download and install the app on your iPhone.

NOTE: For support on downloading or installing iPhone apps, consult your iPhone user's manual, or www.apple.com for support.

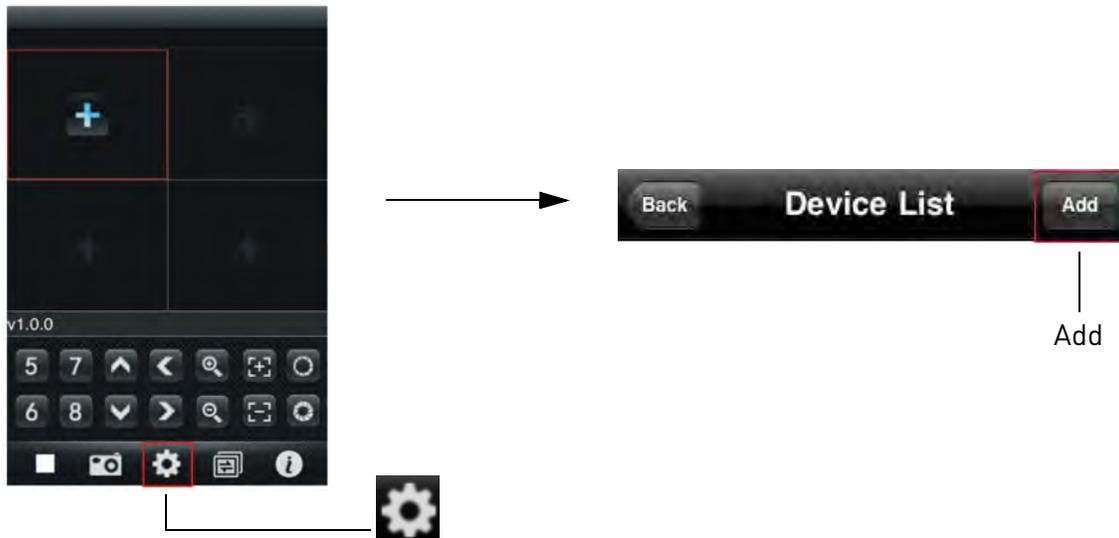


You must port forward the mobile port (default: 1025) on your router before you can connect to your system using a mobile device

Step 2 of 3: Configuring Lorex Mobile Eco

1 From your iPhone, touch the Lorex Mobile Eco icon ().

2 Touch  to open the Device List menu and then touch **Add**.



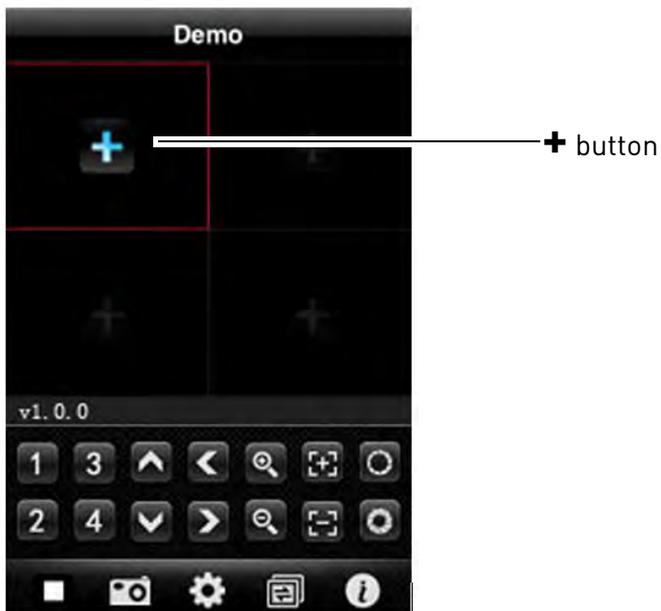
3 Enter the following:

- **Device Name:** Enter the name of your system. This can be any name of your choice.
- **Address:** Enter the local IP of the DVR OR enter the DDNS address of the DVR (i.e tomsmith.lorexddns.net).
- **Port:** Enter the Mobile Port number of the DVR (by default, port **1025**).
- **User ID:** Enter the user ID of the DVR (by default: **admin**).
- **Password:** Enter the DVR's mobile access password (by default: **0000**)
- **Max Channel:** Enter the number of channels of the DVR (4, 8 or 16).

4 Touch the **OK** button and then touch the **Back** button.

Step 3 of 3: Connecting to your DVR

- 1 In Quad View, touch the plus button (+).



- 2 Touch the name of your DVR. Select the channel that you want to display in the channel.
 - The selected channel appears in the quad screen menu.



Touch the name of your DVR.

Select the desired channel.

The channel appears in quad view.

TIP: Double-tap the channel to view video in full screen.

- 3 Repeat steps 1~2 as required for the remaining channels.

Deleting Accounts

- From the Device List, swipe your finger on  beside your device name. The Delete button appears. Touch the **Delete** button to remove the device.

Taking Snapshots

You can take a picture of the selected channel. The images save into your Photos directory.

To take images:

- Touch the camera button ().



Camera button

Changing channels in Quad View

- Touch the  button repeatedly to display channel 1~4, 5~8, 9~12, 13~16.



Touch here to change quad view channels



Channel 5~8

Interface Overview

- 1 Add Device:** Touch to add a DVR channel.
- 2 Channel List:** Touch to view channel in full screen.
- 3 Pan & Tilt camera** (PTZ only).
- 4 Zoom in/out** (PTZ only).
- 5 Focus** (PTZ only).
- 6 Iris** (PTZ only).
- 7 Disconnect:** Disconnects channel.
- 8 Snapshot:** Takes an image of the channel.
- 9 Setup:** Touch to enter the setup menu.
- 10 Channel button:** Touch to change the quad channel numbers (Ch 1~4, 5~8, 9~16).
- 11 System info:** Display system information.



BlackBerry

System requirements

- 3G models only (model 9000 and up)
- 9800 Touch Screen models only, running Blackberry 6 OS (6.0.0.448 and up)

! You must port forward the mobile port (default: 1025) on your router before you can connect to your system using a mobile device

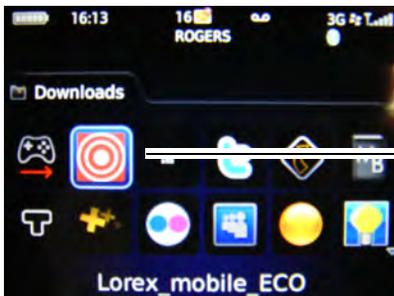
Step 1 of 2: Downloading the App

- 1 Go to www.lorextechnology.com, and go to the Eco's product page.
- 2 Under the Downloads tab, download the appropriate app for the BlackBerry.
- 3 Download and install the app on your Blackberry.

NOTE: For support on downloading or installing BlackBerry apps, consult your BlackBerry's user's manual, or www.blackberry.com for support.

Step 2 of 2: Configuring Lorex Mobile Eco

- 1 Locate the app in your BlackBerry and open Lorex Mobile.



Lorex Mobile Eco

- 2 In the Setting window, enter the following:
 - **Title:** The name of your system. This can be any name of your choice.
 - **Address:** Enter the local IP of the DVR OR enter the DDNS address of the DVR (i.e. tomsmith.lorexddns.net).
 - **Port:** Enter the Mobile Port number of the DVR (by default, port **1025**).
 - **No. of CHs:** Select the number of channels of your DVR.
 - **User ID:** Enter the user ID of the DVR (by default: **admin**).
 - **Password:** Enter the DVR's mobile access password (by default: **0000**):



Select number of channels

Select 3G or WiFi

- 3 Click the **Login** button to log in to the DVR.

Connecting to the DVR through the Device List

- 1 In the Device List, select and open the name of the account you created.



Controls



Adjust channel view:

Click repeatedly to view channel 9 or greater.
Click repeatedly to view the PTZ controls.

Windows Mobile

System requirements

- Version 6.0 and above, touch screen models only

Step 1 of 2: Downloading the App

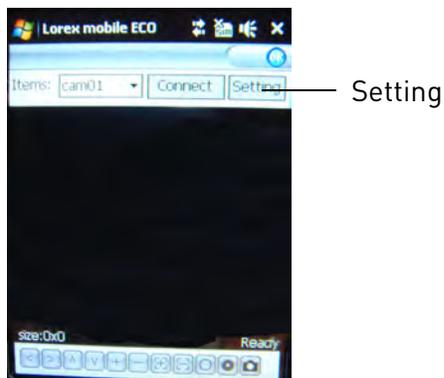
- 1 Go to www.lorextechnology.com, and go to the Eco's product page.
- 2 Under the Downloads tab, download the appropriate app for Windows Mobile devices.
- 3 Download and install the app on your Windows Mobile phone.

For support on downloading or installing Windows Mobile apps, consult your Windows Mobile's user's manual, or www.microsoft.com/windowsphone for support.

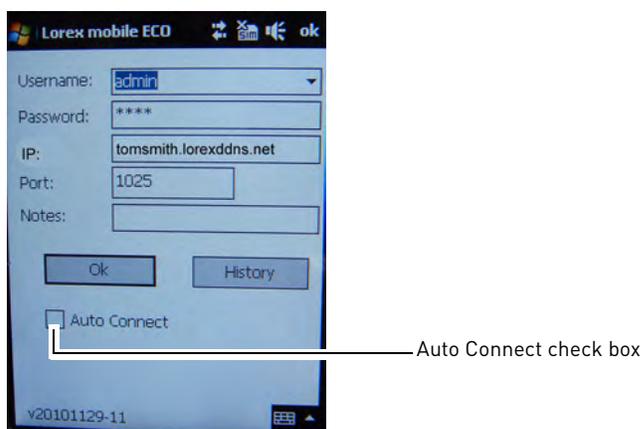
! You must port forward the mobile port (default: 1025) on your router before you can connect to your system using a mobile device

Step 2 of 2: Configuring and Connecting to Lorex Mobile

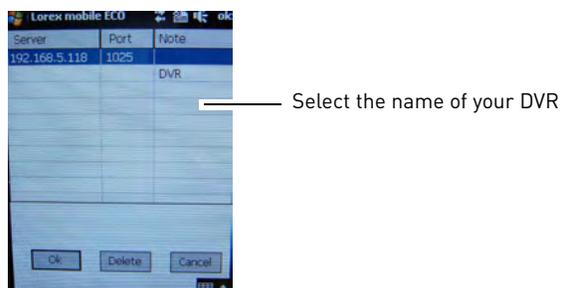
- 1 Open the Lorex Mobile app on your phone.
- 2 Click the **Setting** button.



- 3 Configure the following:
 - **User Name:** Enter the user name of the DVR (default: **admin**).
 - **Password:** Enter the DVR password (by default: **0000**)
 - **IP:** Enter the local IP of the DVR OR enter the DDNS address of the DVR (i.e tomsmith.lorexddns.net).
 - **Port:** Enter the DVR's Mobile Port number (by default, port **1025**).



- 4 Select the **Auto Connect** checkbox and then click **Ok**.
- 5 From the Server window, select the DVR account you created. Click **OK** to connect to the DVR.



Android

Use the **Lorex Mobile Eco** application to connect to your DVR on an Android smartphone or tablet.

NOTE: The instructions below may differ depending on the model of your Android device.

System requirements

- Android v. 1.5 and above.

NOTE: For the latest device compatibility list, visit www.lorextechnology.com

! You must port forward the mobile port (default: 1025) on your router before you can connect to your system using a mobile device

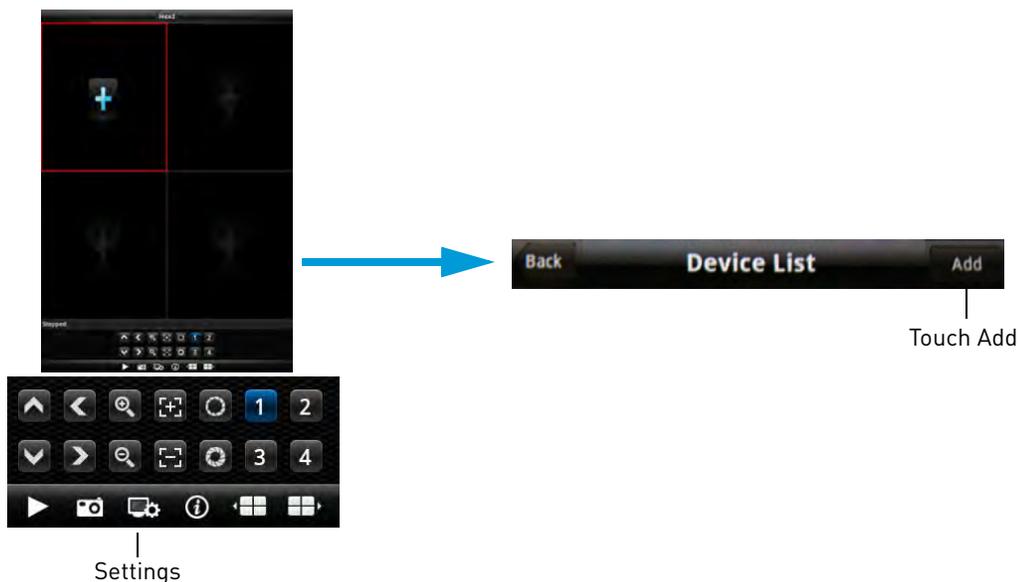
Step 1 of 2: Downloading the App

NOTE: For support on downloading or installing Android apps, consult your Android device's user's manual or the manufacturer's support site.

- 1 Touch the Google Play Store icon () in your Applications list.
- 2 Press the search button ().
- 3 Enter **Lorex Mobile Eco** and then press the search button again ().
- 4 Touch **Lorex Mobile Eco**. Then touch **Install** to download and install the app. Wait for the app to install.

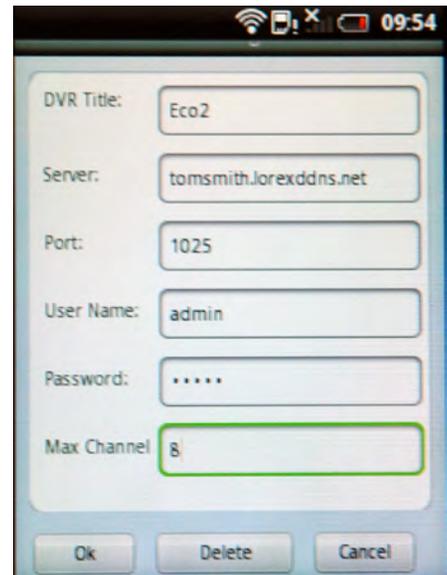
Step 2 of 2: Configuring and Connecting to Lorex Mobile Eco

- 1 Open the **Lorex Mobile Eco** () app from the applications list.
- 2 Touch the Settings button () to open the Device List and touch **Add**.



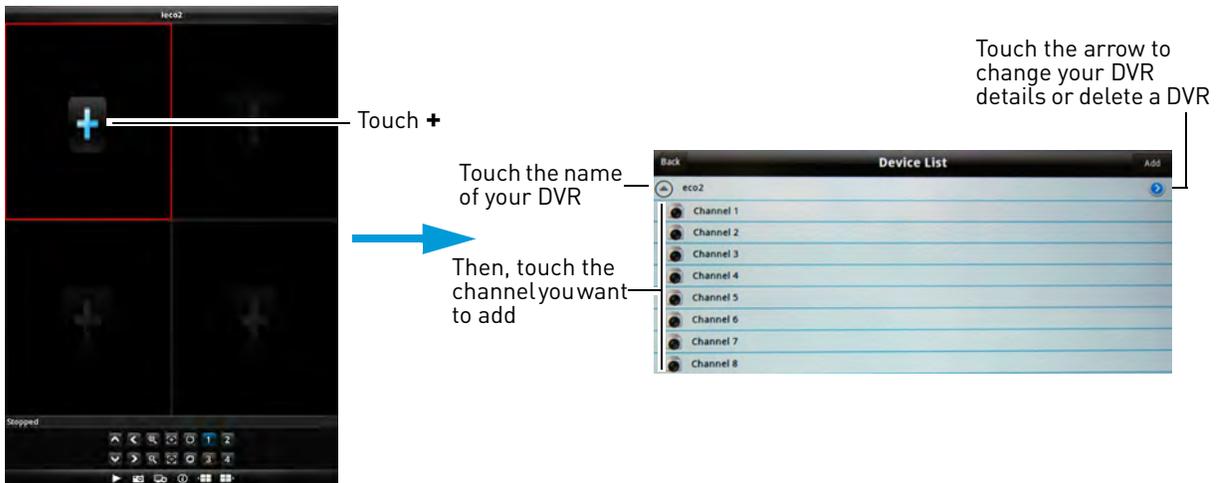
3 Configure the following:

- **DVR Title:** Enter a name for your DVR of your choice.
- **Server:** Enter the DDNS address of the DVR (e.g. *tomsmith.lorexddns.net*).
- **Port:** Enter the DVR's Mobile Port number (default: **1025**).
- **User Name:** Enter the mobile access ID (default: **admin**).
- **Password:** Enter the DVR password (by default: **0000**).
- **Max Channel:** Enter the number of total channels your DVR can support (e.g. **4, 8, or 16**).

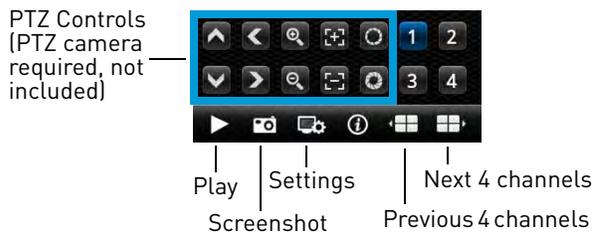


4 Touch **OK**. Touch the **Back** button.

In Quad View, touch **+**. Touch the name of your DVR and select the channel you would like to display in the space in Quad view.



Viewing Controls



Symbian OS

System requirements

- 3rd and 5th generation models

Step 1 of 2: Downloading the App

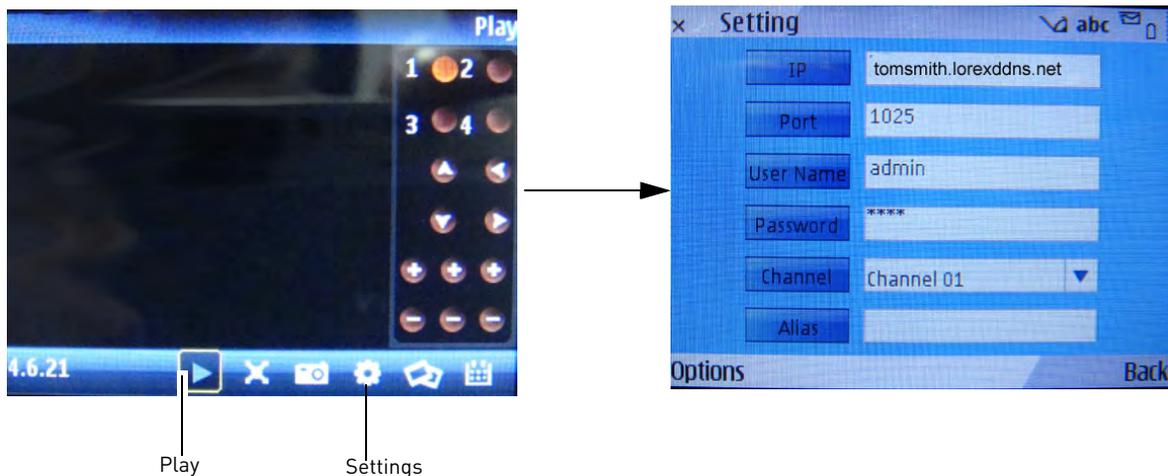
- 1 Go to www.lorextechnology.com, and go to the Eco's product page.
- 2 Under the Product Updates tab, download the appropriate app for Symbian devices.
- 3 Download and install the app on your Symbian-based phone.
 - For support on downloading or installing Symbian OS apps, consult your Symbian device's user's manual or the manufacturer's support site.

! You must port forward the mobile port (default: 1025) on your router before you can connect to your system using a mobile device

Step 2 of 2: Configuring and Connecting to Lorex Mobile Eco

- 1 Open the Lorex Mobile Eco app on your phone.

- 2 Click the Settings button ().



- 3 Configure the following:
 - **IP:** Enter the local IP of the DVR OR enter the DDNS address of the DVR (i.e. tomsmith.lorexddns.net).
 - **Port:** Enter the DVR's Mobile Port number (by default, port **1025**).
 - **User Name:** Enter the DVR's user name (by default: **admin**)
 - **Password:** Enter the DVR password (by default: **0000**)
 - **Alias:** Enter a DVR name of your choice
- 4 Save your settings. From the main viewing window, press the play button to connect to the DVR.

Appendix A: System Specifications

DVR:

SYSTEM

Operating System	Linux (embedded)
Pentaplex	Simultaneous View, Record, Playback, Backup & Remote Monitoring
Number of Channels	4/8/16 Channel
Inputs/Outputs	
Video IN	4/8/16 x 1Vpp, CVBS, 75ohms, BNC/DIN
Video OUT	2 x BNC
VGA OUT	Yes
Audio IN	4 line in(RCA), ADPCM(4&8 ch), 16 line in(BNC), ADPCM(16 ch)
Audio Out	2 line out(RCA), ADPCM(4&8 ch), 2 line out(BNC), ADPCM(16 ch)
USB Port	2 at the back
Alarm IN	16 ch IN (available in 16 ch only)
Alarm Out	16 ch OUT (available in 16 ch only)
PTZ control	RS-485 Pelco D & P Protocol
Display	
Live Display	4 ch: 1, 4 8 ch: 1, 4, 8 16 ch: 1, 4, 8, 16
Live Display Speed	120 (4 ch)/ 240 (8 ch)/ 240 (16 ch) NTSC 100 (4 ch)/ 200 (8 ch)/ 200 (16 ch) PAL
OSD	ON/OFF
System Navigation	USB Mouse, IR Remote Controller, Front Panel
Motion Area Setting	Adjustable grid (10 x 15) NTSC Adjustable grid (12 x 15) PAL
Sensitivity levels	8
Firmware Upgrade	Via USB device
User Authority	By user group
Time Synchronization	Auto time sync by NTP server
RECORDING	
Video Compression	H.264
Audio Compression	ADPCM
Recording Resolution	NTSC: 360x240 (CIF), 720x240 (HD1), 720x480 (D1) PAL: 360x288 (CIF), 720x288 (HD1), 720x576 (D1)
Recording Speed:	4 ch: 120/100 (NTSC/PAL) @ CIF, 60/50(NTSC/PAL) @ HD1, 30/25 (NTSC/PAL) @ D1 8 ch: 240/200 (NTSC/PAL) @ CIF, 120/100(NTSC/PAL) @ HD1, 60/50 (NTSC/PAL) @ D1 16 ch: 480/400 (NTSC/PAL) @ CIF, 240/120(NTSC/PAL) @ HD1, 120/100 (NTSC/PAL) @ D1
Recording Resolution Setting	Per camera for different resolutions (CIF/2CIF/D1)
Recording Quality Control	3 levels
Image Size	768-1536 Kbyte (D1), 512-768 Kbyte (HD1), 384-512 Kbyte (CIF)
Recording Schedule	By hour, by day, by recording mode, by alarm, by ch
Pre Recording	Max: 10 seconds
Post Recording	Max: 5 Minutes
Reliability	Watch-Dog, Autorecovery after power failure
Covert Video	Yes

PLAYBACK

Playback Channel	1, 4 (4 ch), 1, 4, 8 (8 ch), 1, 4, 8, 16 (16 ch)
Playback Speed	Variable Max: 16x
Playback Players	Backup Player
Search	By time & event
Log Search	Up to 10,000 lines for user login/out, configuration changes, remote access, connects/disconnects
Audio Play	Yes

STORAGE & ARCHIVE

Storage	4 & 8 ch: Up to 1 HDD's (SATA) 16 ch: Up to 2 HDD's (SATA)
Maximum Capacity	4 & 8 ch: Up to 2TB 16 ch: Up to 2 x 2 TB
Backup Media	USB Flash Drive & HDD
Backup File Format	H.264 file (AVI generator included)

CONNECTIVITY

Easy Connect	Lorex Auto Port Forward Wizard
Supported Operating Systems	Windows™ XP, Vista, 7
Browsers	Internet Explorer
Email notification	Text with snapshot
Mobile connectivity†	iPhone™ - 3.1.2 and above, Blackberry™ - 3G enabled models, Symbian, Android, (version 1.5 & above), Windows Mobile™ smart phones - 6.0 and above touch screen smart phones

DDNS	Free Lorex DDNS
System Configuration	Full setup configuration over network
Ports	Programmable by User
Network Protocol	LAN, DHCP, Dynamic IP, DDNS
Network Interface	10/100-Base-TX, RJ45
Network Speed Control	48Kb - 8MB/sec.

GENERAL

Power Consumption	4 & 8 ch: Approx. 10 watts 16 ch: Approx. 15 watts
Supply Voltage	4 & 8 ch: 100VAC/240VAC, 12VDC, 3A, 50/60Hz 16 ch: 100VAC/240VAC, 12VDC, 5A, 50/60Hz
Unit Dimensions (W x D x H)	4 & 8 ch: 11.81"/300mm x 8.66"/220mm x 1.97"/50mm 16 ch: 14.96"/380mm x 13.39"/340mm x 1.97"/50mm
Unit Weight (KGs)	4 & 8 ch: 1.7 kg/3.75 lbs 16 ch: 3 kg/6.6 lbs
Operating temperature	32° ~ 104° F / 0° ~ 40° C
Humidity	10 ~ 90% NC

As our products are subject to continuous improvement, Lorex Technology Inc. and its subsidiaries reserve the right to modify product design, specifications, and prices without notice and without incurring any obligation. *E&OE*

Appendix B: Networking Checklist

Use this checklist to confirm you have completed all the steps of the Network Setup.

I have the following:

- High-Speed Internet
- Router
- Ethernet cable (included with the system)
- Computer with Internet Explorer 6 or later

I have turned off the system and performed the following:

- Connected the Ethernet cable to the LAN (RJ45) port on the rear panel of the system
- Connected the other end of the Ethernet cable to my router

NOTE: Network Setup will not work if you do not have a router.

I have found my System Information:

- Press the **PTZ** button on the front panel of your system

My IP Address is: _____

My MAC Address is: _____

I have enabled Port Forwarding on my router:

- **Port 80**
- **Port 9000**
- **Port 1025**

NOTE: For added security, we strongly recommend changing HTTP port 80 on the system to *any desired port*—the port must not be blocked by your Internet service provider (ISP).

NOTE: Each router is different, so port forwarding settings vary by model. If your router is not listed, please refer to your router's manual or contact your router's manufacturer for assistance.

I have created a DDNS account for remote access to my system:

Go to www.lorexddns.net and click on **Step 1**. See “Step 2 of 4: Create a DDNS Account” on page 57. Record your information below:

Domain name/URL Request: _____
DDNS User Name (Device Name): _____
Device DDNS password: _____

I have configured my system to connect to the DDNS server:

ATTENTION: You *MUST* enter your DDNS information *LOCALLY* before attempting remote access.

To enable DDNS on your system:

- 1 Right-click in the main viewing window, and then click **Main Menu**→**Network**.
- 2 Click **DDNS Setup**.
- 3 In the DDNS drop-down menu, select **Enable**.
- 4 Enter the following into the DDNS Setup menu:
 - **Host Name:** Enter the Domain Name/URL Request that was emailed to you after DDNS registration.

NOTE: For example, the Domain Name/URL Request is *tomsmith*, the address to access your video will be <http://tomsmith.lorexddns.net>

 - **User Name:** Enter your DDNS User Name that was emailed to you after DDNS registration.
 - **Password:** Enter your Device DDNS Password that was emailed to you after DDNS registration.
- 5 Click **Apply** to save your settings.
- 6 Click **OK** in the confirmation window.

NOTE: Please allow 10-15 minutes for the DDNS servers to update with your new DDNS address. This is normal for the DDNS system.

I can access my system from a remote PC:

To access your system remotely:

- 1 Open Internet Explorer and enter your **DDNS address** from the confirmation email. For example, *tomsmith.lorexddns.net*
- 2 Log in using your ADMIN **password**. If you have not enabled passwords on the system, leave the password field **blank**.

NOTE: By default, the login name is **admin** and the password field is left blank.

Appendix C: How do I find my IP & MAC address?

The IP and MAC address of your system are necessary for DDNS setup. DDNS allows you to view and control your system from a remote location.

NOTE: Make sure you have connected the DVR to your local or wide area network via the LAN port on the rear panel of the system.

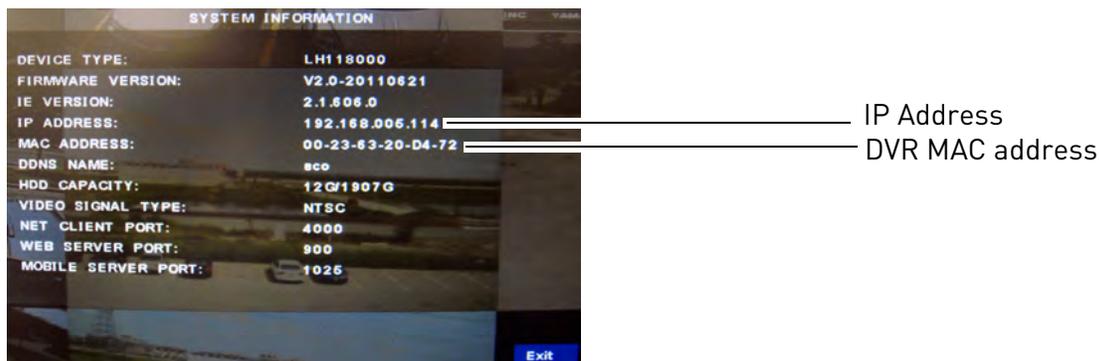
To find your IP address and MAC address:

- 1 Press the **PTZ** button on the front panel of the system.



OR

From the main viewing window, **Right-click**→ **Main Menu**→**Advance**→**Information**



- 2 Press the **Exit** button to close the menu.

Finding Your External IP Address

If you wish to find your external IP address, you can use a third-party website such as www.showmyip.com. Your external IP address can also be found within your Router settings. Refer to your router user guide for further details.

Appendix D: What is Port Forwarding?

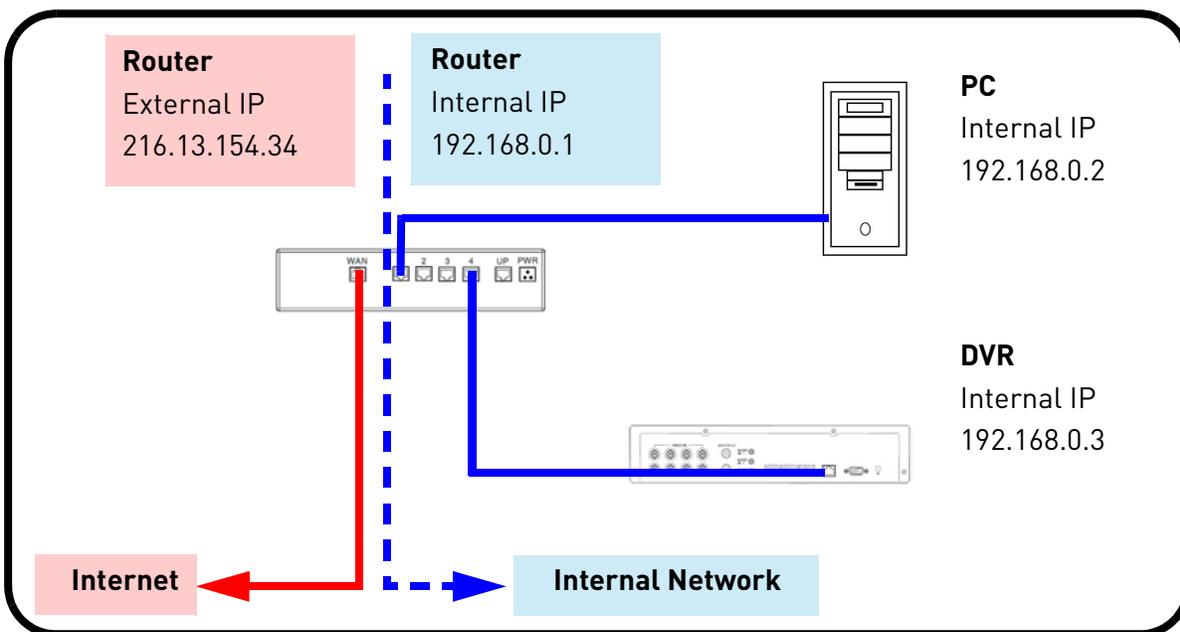
You need to enable port forwarding on your router to allow for external communications with your system for **all** of the ports below. Ports must be forwarded to your DVR's IP address.

- **80** (Web port)
- **9000** (Net Client/Media Port)
- **1025** (Mobile Connectivity Port)

NOTE: For added security, we strongly recommend changing Web port 80 on the system to *any desired port*—the port must not be blocked by your Internet service provider (ISP).

Computers, DVRs, and other devices inside your network can only communicate directly with each other within the internal network. Computers and systems outside your network cannot directly communicate with these devices. When a system on the internal network needs to send or receive information from a system outside the network (i.e. from the Internet), the information is sent to the router.

NETWORK EXAMPLE



When a computer on the Internet needs to send data to your internal network, it sends this data to the external IP address of the router. The router then needs to decide where this data is to be sent to. This is where setting up Port Forwarding becomes important.

Port Forwarding tells the router which device on the internal network to send the data to. When you set up port forwarding on your router, it takes the data from the "**external IP address:port number**" and sends that data to an "**internal IP address:port number**" (i.e. Router External IP 216.13.154.34 to DVR Internal IP **192.168.0.3:80**).

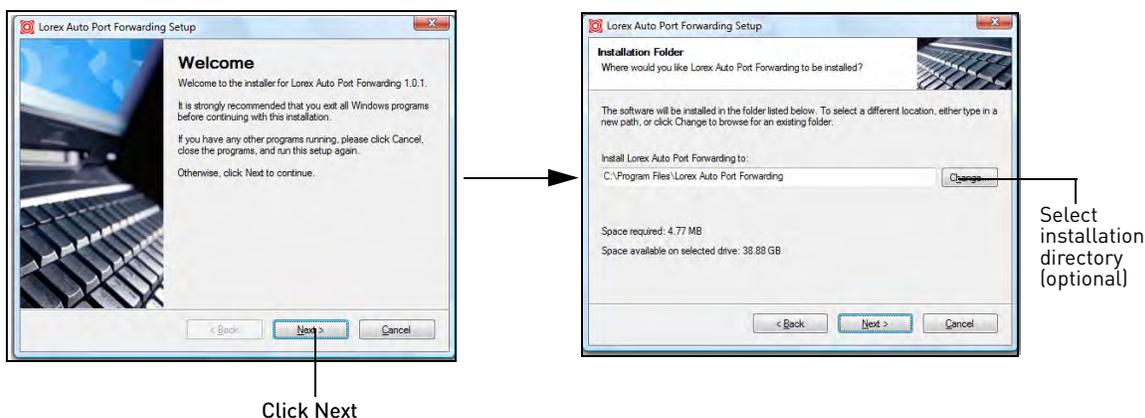
Appendix E: Internet Setup Wizard (PC only)

The Lorex Auto Port Forwarding Wizard is an exclusive software that easily automates router port forwarding. Before setting up a DDNS account, it is recommended to run the Auto Port Forwarding Wizard to port forward the required ports.

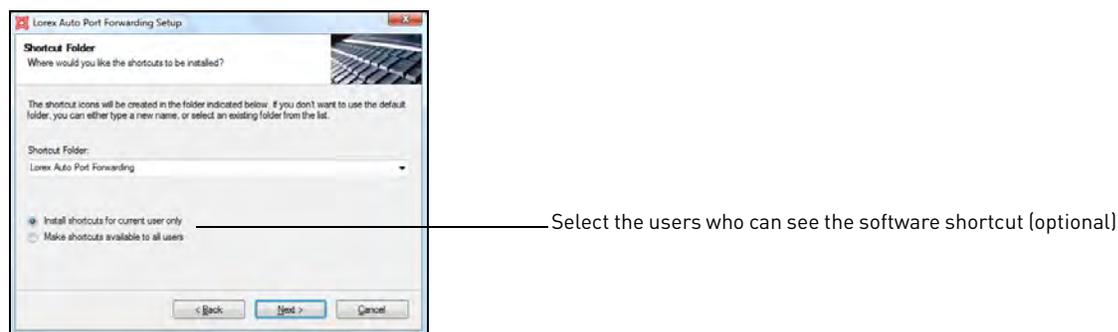
Installation

To install the Lorex Auto Port Forwarding Wizard:

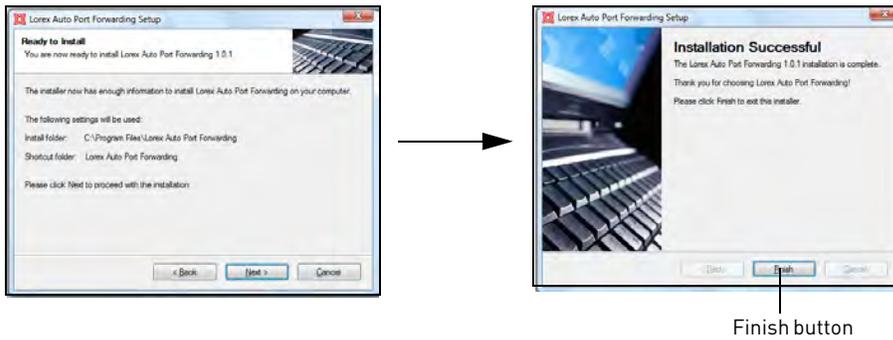
- 1 Insert the system's software CD, and follow the instructions to launch the Lorex Auto Port Forwarding Wizard software.
 - The installation window opens.
- 2 Click **Next** to continue.



- 3 Click the **Change** button to change the default installation directory (optional). Click the **Next** button to continue.
- 4 Select the users who can see the Auto Port Forwarding shortcut (Optional). Click the **Next** button to continue.



- 5 Click the **Next** button and then click **Finish** to complete the software installation.

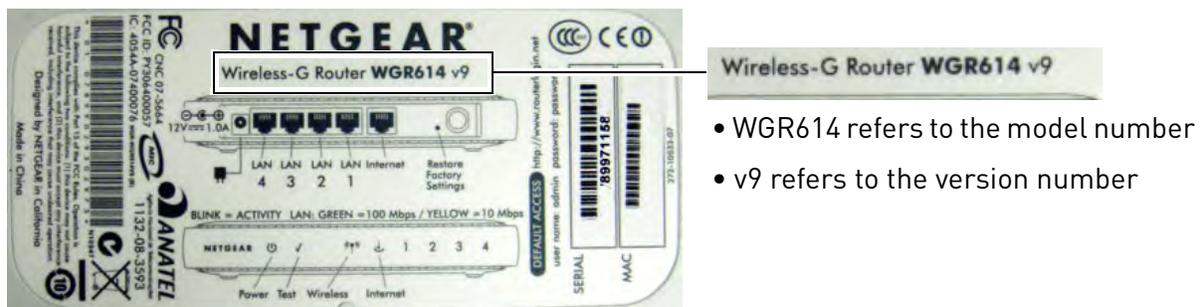


- 6 Double-click the Lorex Auto Port Forwarding shortcut () from your desktop to start the program.

Obtaining Your Router Model Number and Version

On most routers, the model and version number can be found underneath the router, printed on a sticker.

Example



Configuration



You must have the following before you configure the software:

1. Your router's model number and version number
2. Your router's user name and password
3. Your Lorex device's IP address
4. Your Lorex device's port numbers that require port forwarding

Initial Startup: Select language

- 1 Click the Language drop-down menu and select a language (English, French, Spanish). Click the **Start** button to continue.



Language drop-down menu

Software update section

Start button



Download Now button

A software update includes an updated list of routers compatible with the Auto Port forwarding Wizard.

- 2 If software updates are available, click the **Download Now** button in the top-right corner.
 - Run the update file and install the latest version of the software.

Step 1: Populate the router database

The Auto Port Forwarding Wizard automatically populates a list of current routers, and detects the number of connected routers.

- Click the **Next** button after the software detects your router configuration.



Click to update router database

Click to check for multiple routers



If more than one router is detected, you may need to contact your ISP (Internet Service Provider) to port forward.

For details on configuring multiple routers, see "Configuring multiple routers" on page 109.

Step 2: Enter your router settings

- Under the Router drop-down list, select the model of your router.
OR
 - Click the **Search** button () to enter the name of your router model.

NOTE: Click the **Auto Detect** button () if you have a Linksys or Netgear router (works with most Linksys or Netgear models).



Router drop-down list

Router IP

Router user name & password

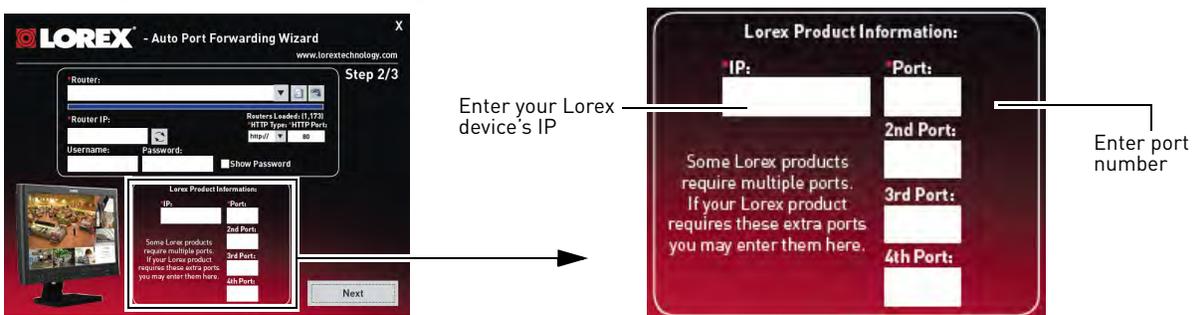
Search and Auto detect button

Enter port **80** under Ports

Enter port **9000** under 2nd Port

Enter port **1025** under 3rd Port

- Under Router IP, click the **Detect Router IP** button ().
 - The router's IP populates in the blank field. Click **OK** to exit the prompt.
- Under Username and Password, enter *the router's* username and password.
 - Optional: Under HTTP Type (default http://) and HTTP Port (default, 80), you may have to change the values depending on your router model. Consult your router manual for details.



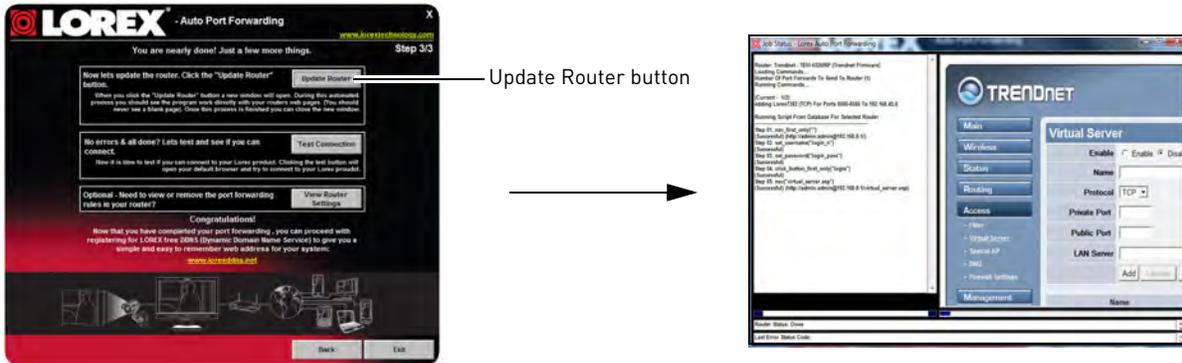
Enter your Lorex device's IP

Enter port number

- Under IP, enter the IP address of your Lorex device.
 - To find your system IP, exit to the main viewing mode, and then press the **INFO** button on your remote, or press the **RETURN** button on the front panel of the system.
- Under **Port**, enter the Web Port (**80**). Under **2nd Port**, enter the Net Client/Media port (**9000**). Under **3rd port**, enter the Mobile Port (**1025**).
- Click **Next** to continue.

Step 3: Update the router settings

- 1 Click the **Update Router** button.
 - You will see your router window open. The Auto Port Forwarding Wizard automatically populates your router with the relevant information. This will take a few moments.



- 2 Close the update window when the update finishes.

Step 4: Test your connection

- 1 Click the **Test Your Connection** button.
 - Your system’s default browser opens and connects to your **Lorex device**.

NOTE: Ensure that Internet Explorer is your system’s default internet browser.
NOTE: A window opens that prompts you to enter in your **DVR’s** user name and password (do not enter your DDNS log in information).
NOTE: ActiveX warnings may appear. Accept all ActiveX installation warnings to connect to your system.

Configuring multiple routers

Your network may have two or more connected routers. During the initial launch of the auto port forwarding wizard, the program scans the network to detect the number of connected routers.

To check for multiple routers:

- 1 Click the **Detect Multiple Routers** button ().
 - A list of connected router populates in the window.



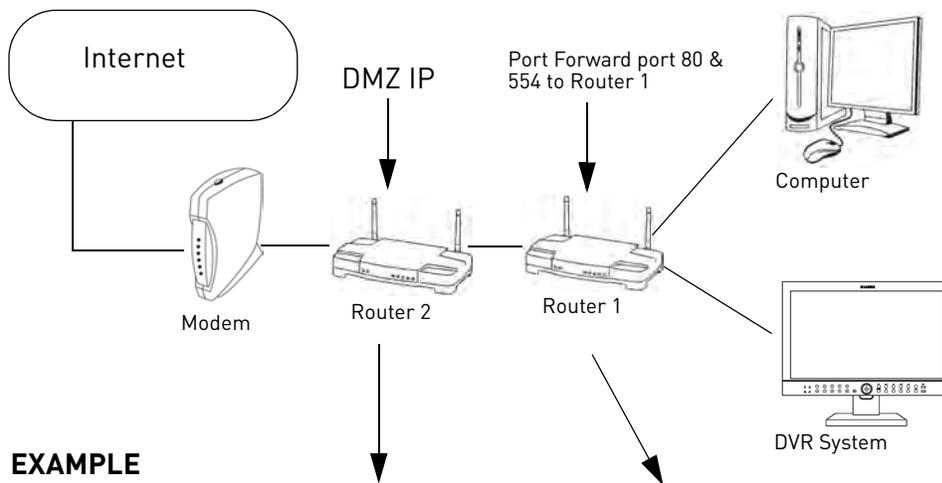
- The "Possible 1st Router" refers to the router directly connected to your system. This is the router that requires the port forward information.
- The "Possible 2nd Router" refers to the router immediate to the internet connection. This is the router that requires you to configure a DMZ host connection.

Scenario A: Router/Modem combination + Router

- You may have a router/modem combination, with a second router in your network.

Scenario B: Multiple Routers

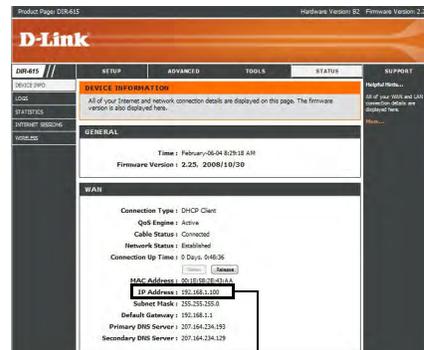
- You may have two routers in your network.



EXAMPLE



Enter 192.168.1.100 into the DMZ Host IP section into Router 2



IP Address: 192.168.1.100 (Assigned by Router 2)

In both scenarios, the router that is immediate to the internet connection (Router 2 in illustration) must act as a "bridge" to another router (Router 1 in illustration). The Auto Port Forwarding Wizard must connect to Router 1.

A proper DMZ configuration in Router 2 allows all incoming traffic going through Router 2 to automatically pass to Router 1. Router 2 acts as a "dummy" router and passes all the incoming data onto Router 1. Router 1 is the router that needs the port forwarding information.

Configuring a DMZ host connection

- Connect to "Router 1" on your network (referred to as "Possible 1st Router" in the Auto Port Forwarding Wizard). Obtain the IP address of Router 1. Usually this can be found in the "Status" section of your router menu. The IP should begin with "192.168...." This IP address is your DMZ IP.
- Enter the IP address obtained from Router 1 into the DMZ section of Router 2.
- Once you have configured Router 2 with a DMZ connection, run the Auto Port Forwarding Wizard to begin auto port forwarding to Router 1.
- Consult your router's owner's manual for details on configuring DMZ settings.

Example

DMZ stands for Demilitarized Zone. Enabling a DMZ IP on your router enables one of the routers to pass information onto the second router.

DMZ IP address assigned by a secondary router

Locating your Router IP - The Status Page

The "Status Page" of a router normally includes the router's vital information such as the IP address.

EXAMPLE

Product Page: DIR-615 Hardware Version: B2 Firmware Version: 2.25

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFO

DEVICE INFORMATION

All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.

Helpful Hints...
All of your WAN and LAN connection details are displayed here.
More...

LOGS

STATISTICS

INTERNET SESSIONS

WIRELESS

GENERAL

Time : February-06-04 8:29:18 AM
Firmware Version : 2.25, 2008/10/30

WAN

Connection Type : DHCP Client
QoS Engine : Active
Cable Status : Connected
Network Status : Established
Connection Up Time : 0 Days, 0:48:36
[Renew] [Release]

MAC Address : 00:1E:58:2E:43:AA
IP Address : 192.168.1.100
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1
Primary DNS Server : 207.164.234.193
Secondary DNS Server : 207.164.234.129

The IP information is normally under a header called "WAN" or "Internet Port". Each router has different terminology.

Router IP assigned by the main router. Enter this IP into the DMZ section of the primary router.

Appendix F: Assigning A Static IP To Your DVR

When connecting to your DVR through a local area network (LAN), you have the option of connecting to your system by entering the local IP of the DVR in a web browser. The local IP of your DVR is like your home's address. If someone wants to visit you, they need to know your home address. Similarly, the local IP of your DVR is your DVR's address.

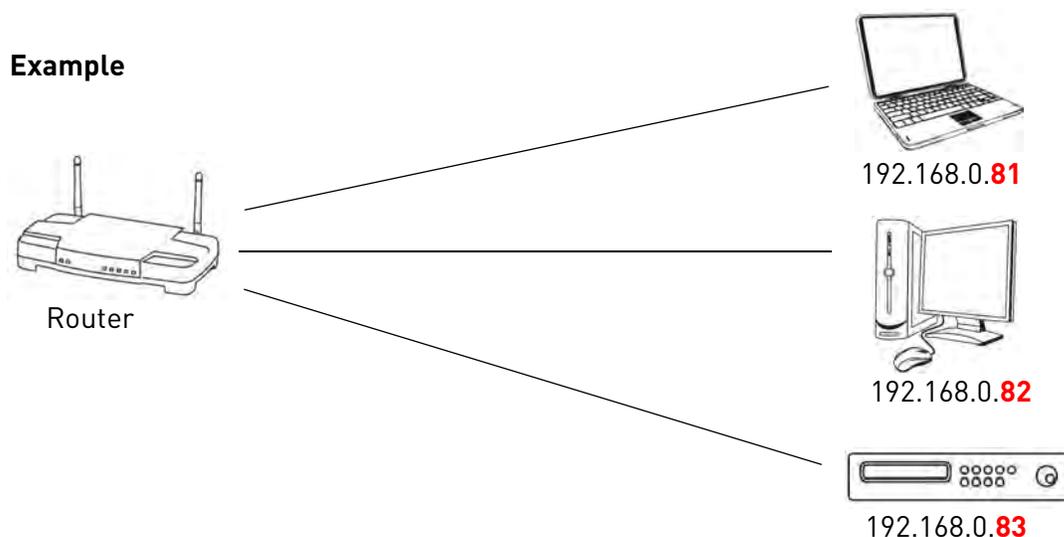
The problem arises when the local IP address of the DVR changes. Imagine moving every three months—nobody would ever be able to find you. To solve this problem, we can assign a fixed IP address—also known as a static IP address—so that the local IP of your DVR will never change.

What's the difference between DHCP and Static IPs?

DHCP

DHCP (Dynamic Host Configuration Protocol) allows your router to automatically assign an IP address to devices that are connected to it. DHCP is a convenient method for connected devices on your router to have an IP address immediately. This allows devices connected to your router to work right away on the network.

For example, your router assigns an IP address to your laptop, your desktop, and your DVR.



Each time the router restarts (due to power failure etc.), there is no guarantee that the router will assign the same IP address to your laptop, desktop or your DVR. The router may assign a new IP address to all of the devices connected to it. This can be a problem if you want to connect to your DVR locally, since the IP address of the DVR has changed.

Static IPs

Setting a static IP on the router tells the router to reserve an IP address to a particular device. The static IP number is saved onto the router, and remains saved even if the router is powered off. Likewise, a static IP address must also be specified in your DVR so that even if your DVR turns off, the IP address of the DVR remains the same. The static IP address must be assigned in the router and DVR. The end result is that you can power on and off the router and DVR, and the router will always assign the same IP address to the DVR.

Setting up a static IP

Creating a static IP must be done on both the router and DVR.

NOTE: These are guidelines on how to create a static IP. Refer to the DVR & Router's owner's manual for details.

To create a static IP on the DVR:

1. Disable DHCP on the DVR.
2. Assign the designated local IP address of the DVR.

To create a static IP on the router:

1. Write down the MAC address of your DVR.
2. In the "DHCP Reservation List", enter the DVR's MAC address, and the desired IP that you wish to reserve.

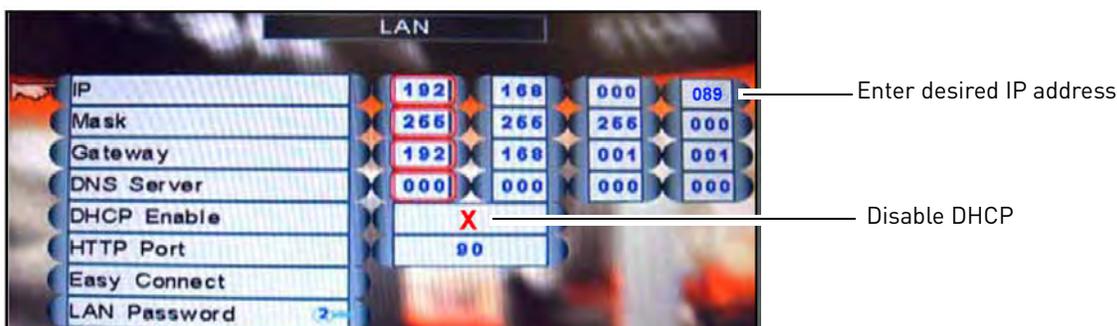
NOTE: The terminology varies between routers. "DHCP Reservation List" is an example only. Consult your router's user's manual for details.

Scenario Example

NOTE: The following scenario example is based on the Lorex Edge series (LH300 series) DVR, and the Trendnet TEW-652BRP router. The instructions below are for reference only.

Step 1 of 2: Enter the desired static IP address in the DVR

1. Open the LAN menu (Main Menu → LAN).
2. Beside **IP**, Enter the desired IP address. This IP address must be in the range specified by your router.
3. Beside **DHCP Enable**, Disable DHCP. Right-click to save your settings.



About IP Ranges

It is recommended to set the static IP address below the scope of your router. For example, if the router assigns an address ending between 100-254, choose an address ending between 2-99.

Step 2 of 2: Enter the desired static IP address in the router

Prerequisites:

- Obtain the DVR's MAC address

To enter a static IP into the router:

1. Under the main menu, click on **LAN & DHCP Server**.
2. Configure the following:
 - **Static DHCP:** Select **Enabled** and then click **Apply**.
 - **Name:** Enter the desired name of your device
 - **IP Address:** Enter the IP address that you wish to make static. This IP address must be the same address specified in the DVR.
 - **MAC Address:** Enter the MAC address of your DVR.

The image shows two screenshots from the Trendnet router's web interface. The left screenshot shows the 'LAN & DHCP Server' configuration page with the 'Static DHCP' section highlighted by a red circle. The right screenshot is a detailed view of the 'Static DHCP' configuration form. Annotations include: 'Select Enabled' pointing to the 'Enabled' radio button; 'Add' pointing to the 'Add' button at the bottom; and 'Enter DVR name, IP address and Mac address' pointing to the 'Name', 'IP Address', and 'Mac Address' input fields.

3. Click **Add**.
 - The DVR info appears in the Static DHCP list.

Static DHCP List		
Host Name	IP Address	MAC Address
Edge DVR	192.168.0.89	12:9B:DC:24:AC:5D

Once the DVR has been added to the Static DHCP list, you have successfully created a static IP address for your system.

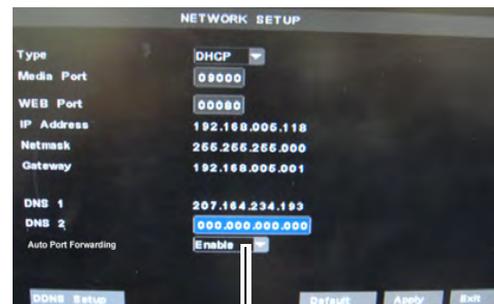
Appendix G: Auto Port Forwarding Router Compatibility List

The system features a built in port forwarding feature that is compatible with most routers. Below is a list of routers that is compatible with the Auto Port Forwarding feature.

Brand	Model	Version
ASUS	WL-500g Deluxe	1.9.6.0
AVM	WLAN 7170	29.04.29
Belkin	F5D7230-4	9.01.10
Belkin	F5D8233-4V3	
Billion	BiPAC 7401VGP R3	
Billion	BiPAC 7404VGOX	
Billion	Billion BiPAC 7404VGPX	
Billion	BiPAC 7404VNOX	
Billion	BiPAC 7404VNPX	
D-Link	DI-524	2.04TW
D-Link	DI-604	v2.20
DrayTek	Vigor 2700 series	2.8.2_1401302
DrayTek	Vigor 2900 series	2.5.6
Free	Freebox ADSL	v5
Inventel	LiveBox	
LevelOne	WBR-3407A	
LinkSys	BEFW11S4	2.1
LinkSys	RTP300	5.01.04
LinkSys	WAG200G	1.01.09
LinkSys	WRT54G	v4.20.7
LinkSys	WRT120N	1.0.00
Motorola	VT2442	11.4.1-r070201-1.3.2
Netcore	V1.1.77	
Netgear	MR814	v2
Netgear	RP614	v3
Netgear	WGT624	v3
Netgear	WPN824	
PCI	MZK-W04NW	
PLANET	ADE-3400B	
Siemens	Gigaset SE551	
SMC	SMCWGBR14-N	
Surecom	EP-4904SX	
Thomson	Speedtouch 546	
Thomson	speedtouch 780	
ZyXEL	Prestige 660H-61	

To enable the Auto Port Forwarding feature:

- 1 Right-click, and the click **Main Menu**→**Network**.
- 2 Beside the Auto Port Forwarding drop-down menu, select **Enable**.
- 3 Click **Apply** to save your settings.



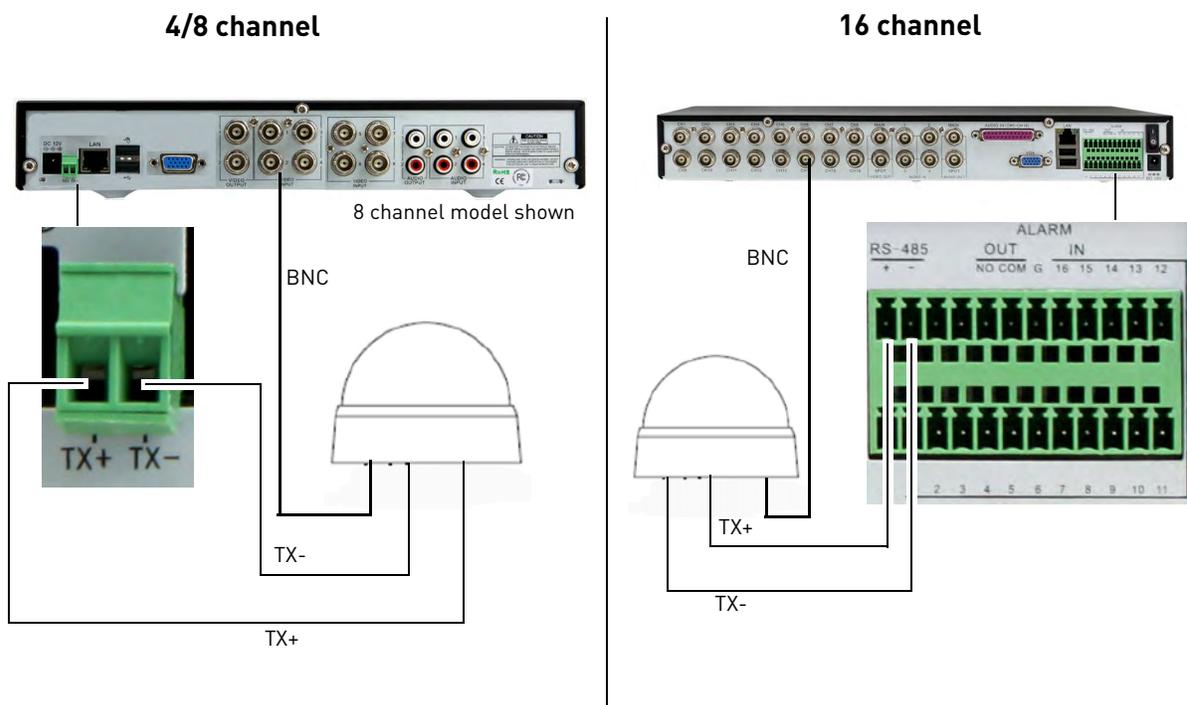
Select Enable

Appendix H: Connecting a PTZ Camera

You can connect RS-485 PTZ cameras (not included) to the PTZ Control Block on the rear panel.

To connect a PTZ camera to the system:

- 1 Connect the Transmit Cable to the **TX (+)** port of the PTZ block on the rear panel.
 - 16-channel models: Connect the Transmit Cable to the **RS-485 +** port.
- 2 Connect the Receive Cable to the **TX (-)** port of the PTZ block on the rear panel.
 - 16-channel models: Connect the Receive Cable to the **RS-485 -** port.
- 3 Connect the video cable to a BNC port.



To enter PTZ camera settings in the DVR:

- 1 Right-click to open the sub-menu, and then click **Main Menu**→**Device**→**PTZ**.
- 2 Enter the PTZ protocol settings into the PTZ setup menu. Consult your PTZ camera's user's guide for PTZ protocol details.

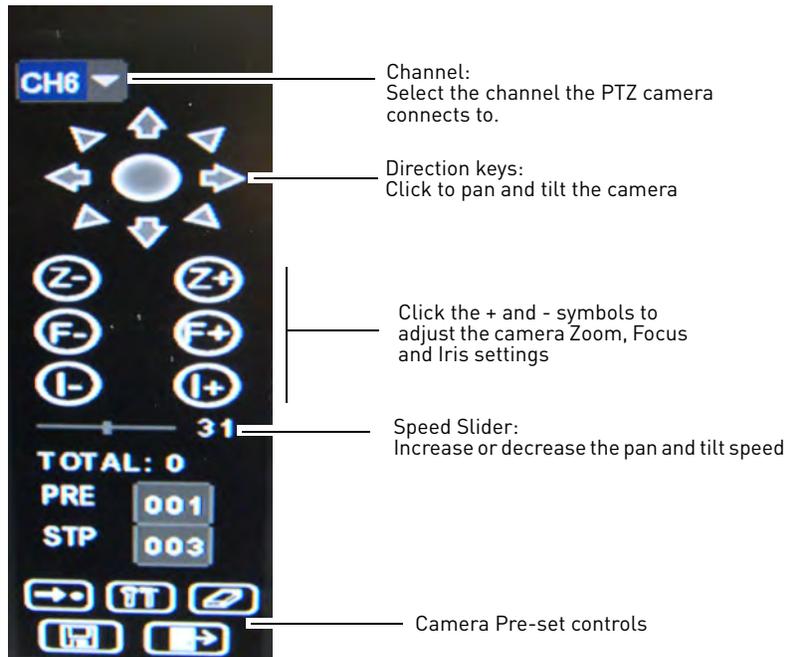
Using the PTZ Menu (Local DVR)

To control the PTZ camera locally on your DVR:

- 1 Select the channel that the PTZ camera is connected to.
- 2 Press and hold the **PTZ** button on the front panel of the system for 6 seconds. The PTZ menu opens.



- 3 Manipulate the PTZ controls on screen.

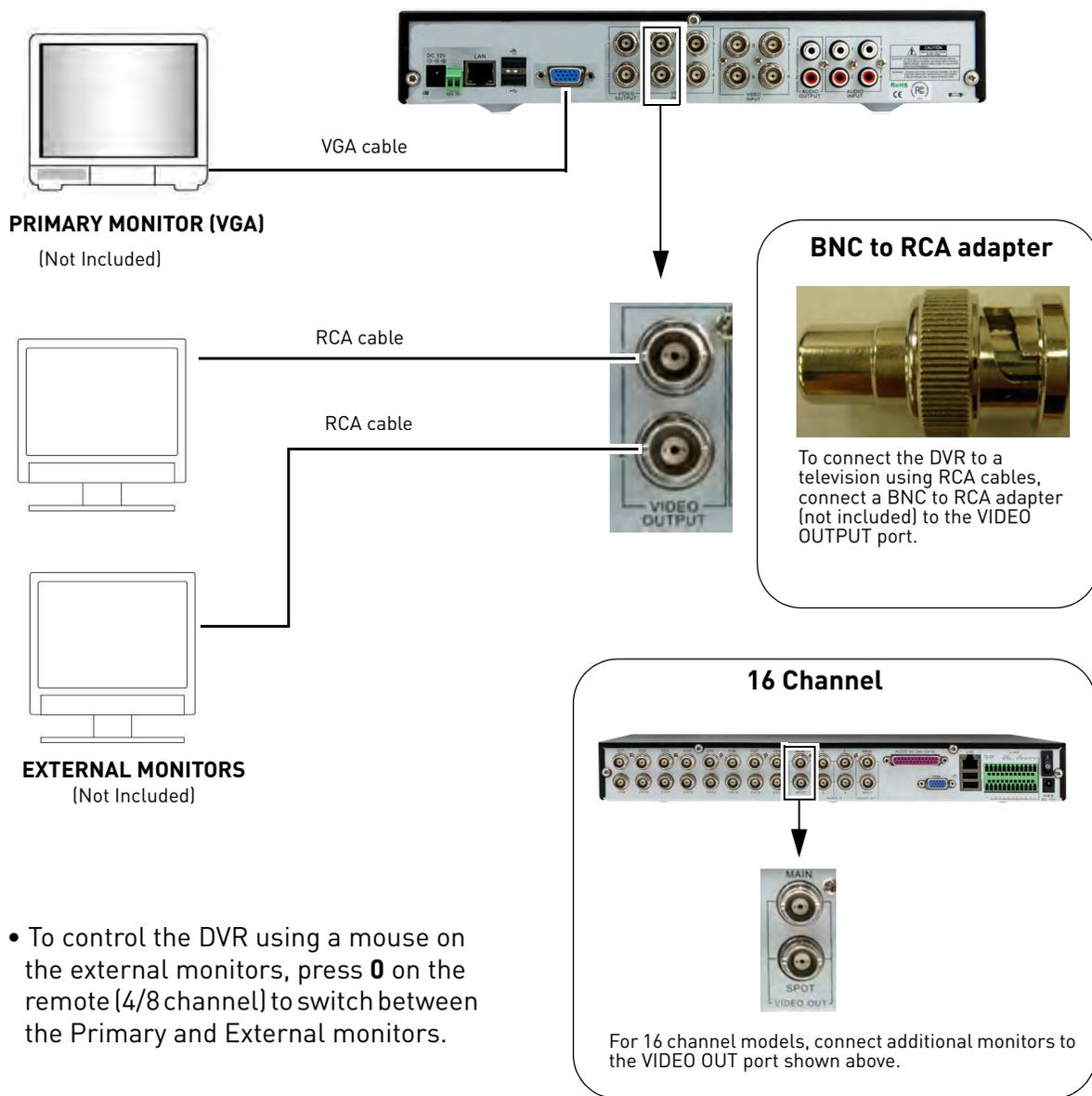


To create a pre-set:

- 1 Adjust the camera to the desired pre-set location using the direction keys.
- 2 In the **Pan&Tilt Pos** drop-down menu, enter a pre-set number.
- 3 Click the Set () button.
- 4 Click **Save** () to save your settings.
To open a pre-set, enter the desired Pan&Tilt Pos number. Click the **Go To** button ().

Appendix I: Connecting Additional External Monitors

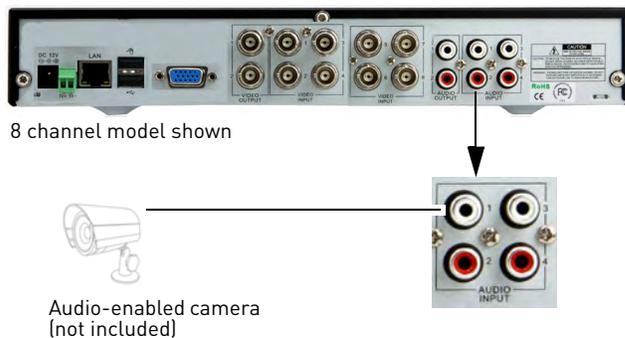
Use the VIDEO OUTPUT ports (BNC) on the rear panel of the system to connect an external monitor(s). Monitor-out mirrors the entire screen image of your system. This is useful if you need to monitor the system from a second location (e.g. a back office).



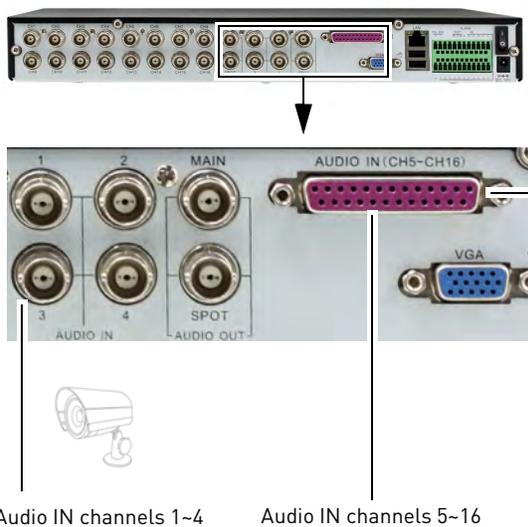
Appendix J: Recording Audio

To enable audio recording, Right-click in the main viewing window, and then click **Main Menu** → **Record**. In the Channel drop-down menu, select the channel that you wish to enable audio recording. In the Audio drop-down menu, select **Enable** and then click **Apply**. Connect RCA audio cables from an audio capable camera(s) to the **AUDIO IN** ports on the rear panel of the system. The audio port should correspond to the matching VIDEO IN port (i.e. *Audio camera 1* should be connected to *Video In port 1* and *Audio In port 1*).

Connecting Audio Cameras (4/8 channel)



Connecting Audio Cameras (16 channel)



Audio harness:

Connect the audio harness into the **AUDIO IN (CH5-CH16)** port. The ends of the audio harness requires a BNC to RCA adapter to connect RCA audio cameras.

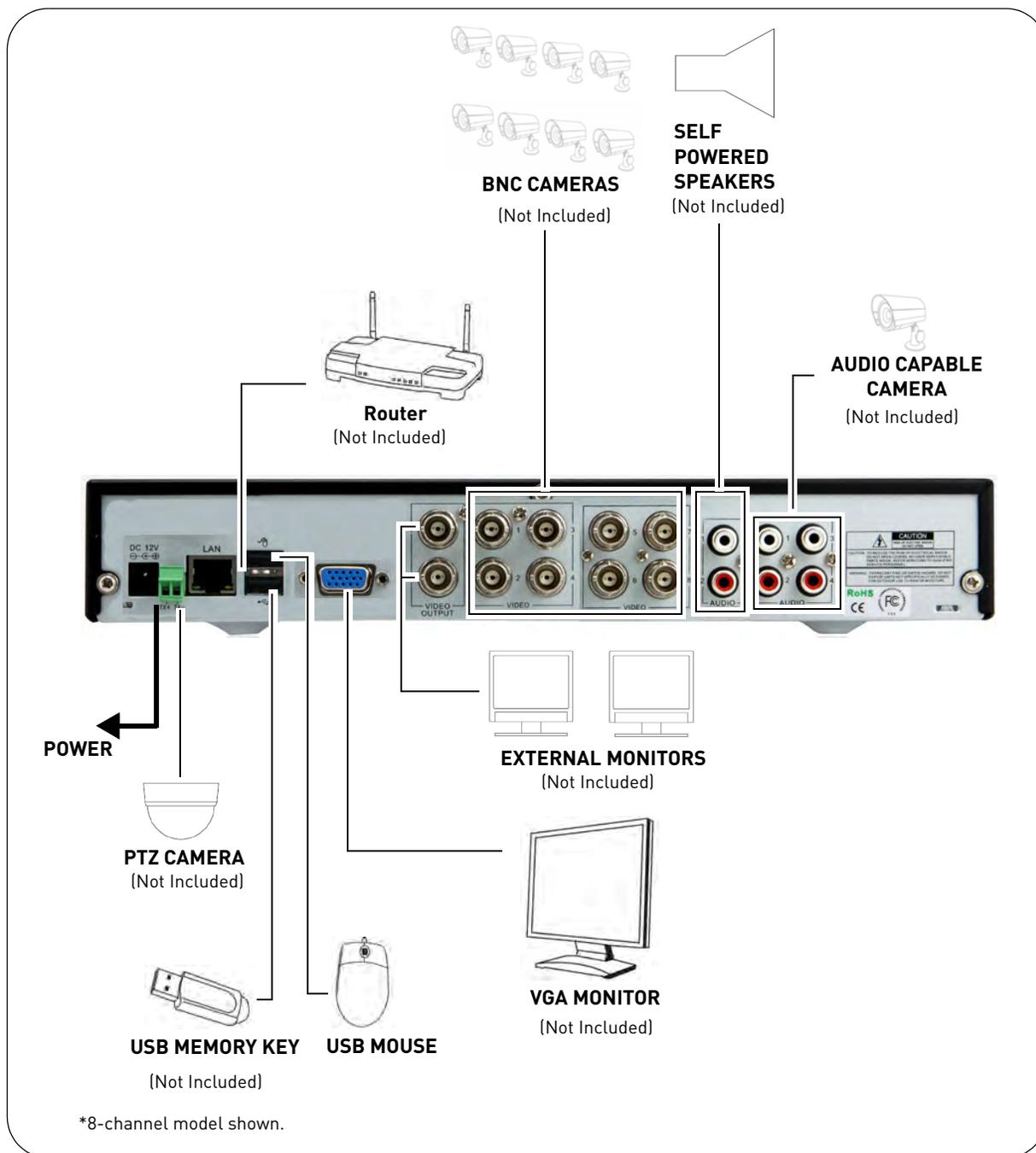


Connect a BNC to RCA connector (not included) to connect RCA devices to BNC ports.

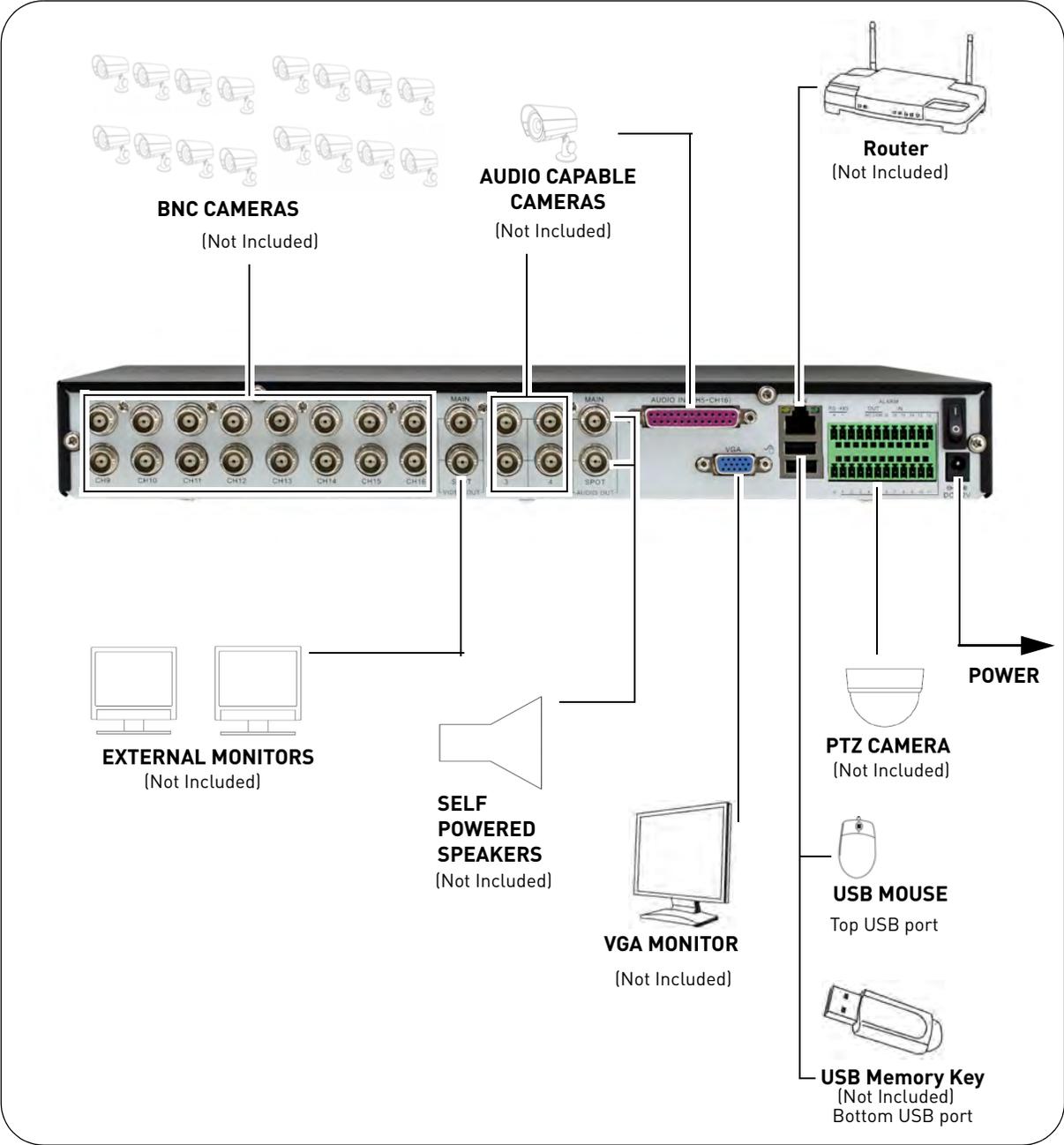
Appendix K: Full Connectivity Diagram

The following diagram outlines a general set of connections available with the system*.

4/8 Channel Model



16 Channel Model



NOTE: Audio for channels 5-16 requires an audio harness cable (included) and BNC to RCA converters (not included).

NOTE: USB Memory Key can be used to store back up video on the bottom USB port only.

Appendix L: Replacing the Hard Drive

The system comes with a pre-installed 3.5" SATA hard drive. You can expand the system with a replacement single hard drive up to 2 terabyte (TB).

NOTE: Make sure that the system is OFF and the power cable has been disconnected before changing the hard drive.

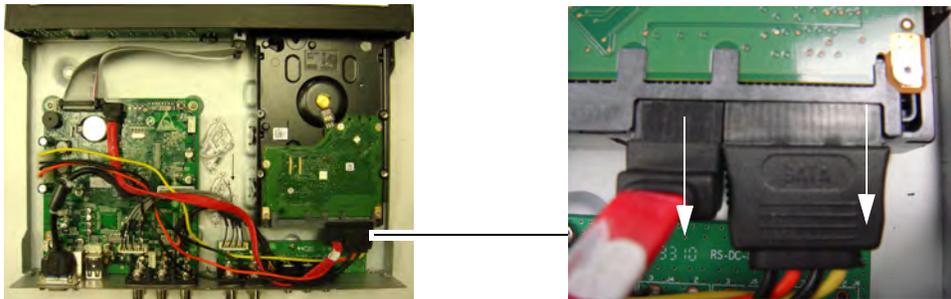
Removing the Hard Drive

To remove the hard drive:

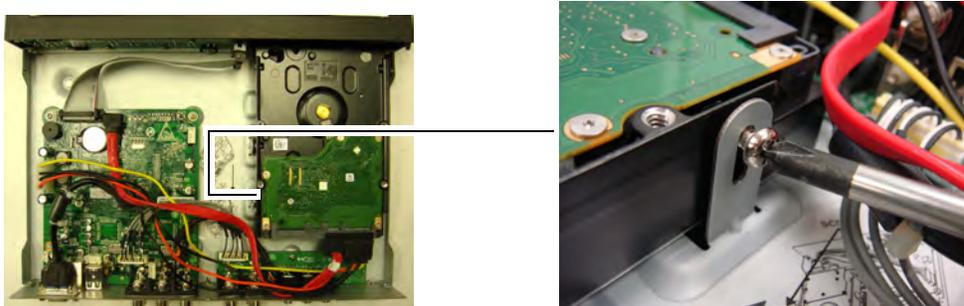
- 1 Remove the screws from the side panel (x2) and rear panel (x3) of the cover.



- 2 Gently slide the cover away from the rear panel and lift off. Be careful of sharp edges.
- 3 Disconnect the power and data cables.



- 4 Remove the screws from the mounting brackets.



- 5 Gently remove the hard drive from the housing.

Replacing the Hard Drive

To replace the hard drive:

- 1 Place the new drive in the housing. Note that the hard drive must be installed upside down on the 4/8 channel models only.
- 2 Reconnect the power and data cables. Each cable can only be connected one way.
- 3 Replace the cover, tucking the lip of the cover at the front panel.
- 4 Replace the screws on the side and rear panels of the cover.

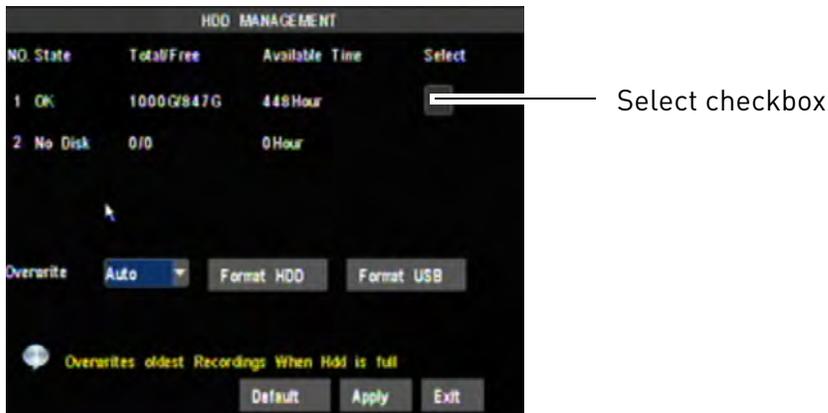
Formatting the Hard Drive

If you replace the pre-installed hard drive, it *must* be formatted in order to function properly with the system.

ATTENTION: Formatting the HDD erases **all data** on the hard disk.
This step cannot be undone.

To format the hard disk:

- 1 Right-click in the main viewing window, and then click **Main Menu**→**Device** → **HDD**.
- 2 Click the checkbox under Select to choose the drive you wish to reformat.



- 3 Click **Format HDD**.
- 4 When the warning window appears, click **OK**. Wait for the system to format the hard drive.

NOTE: You will notice that the size of the HDD and the free space are not the same. The system uses a portion of the disk space for the operating system and initialization. This is common in all security DVRs as well as common PC hard drives.

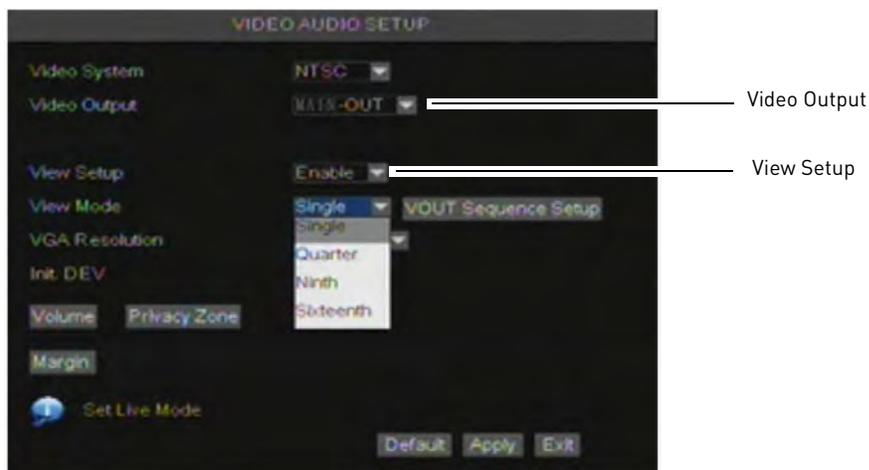
Appendix M: Assigning camera channels (16 Ch. only)

In the 16 channel model, you can re-assign camera channels. For example, you can have the video feed from channel 16 appear on channel 1. This gives you the flexibility to re-arrange the order that your camera channels are displayed.

To re-assign your cameras:

- 1 Right-click anywhere in the main menu → **Main Menu** → **Advance** → **A/V Setup**.
- 2 Configure the following:
 - **Video Output:** Select **MAIN-OUT** or **SPOT OUT**.
 - **Spot Audio:** Select the channel that you wish to output audio from (Available only if you select SPOT OUT in the Video Output drop-down menu).
 - **View Setup:** Select **Enable**.
 - **View Mode:** Select the number of channels you would like to configure. Choose from **Single**, **Quarter**, **Ninth** (9 channels), **Sixteenth** (16 channels, available only if you select MAIN OUT as the Video Output).

NOTE: The 16 channel configuration (shown as "Sixteenth" in the menu) is only available if you select MAIN-OUT in the Video Output drop-down menu.



- 3 Click the **VOUT Sequence Setup** button (or the **SPOT Sequence Setup** button if you select SPOT OUT as your Video Output).

- 4 In the channel drop-down menus, select the channels that you wish re-arrange.
 - For example, selecting **CH8** in the channel 1 drop-down menu will change the channel 1 channel to display channel 8.



MAIN OUT menu shown. SPOT OUT menu will have a maximum of 9 configurable channels.

NOTE: If you select MAIN-OUT as your Video Output, you can configure a maximum of 16 channels.

NOTE: If you select SPOT-OUT as your Video Output, you can configure a maximum of 9 channels.

- 5 Click **Apply** to save your settings.

Configuring Video Margins

If you connect your DVR to a BNC monitor, you can adjust the video margins.

To adjust video margins:

- 1 From the A/V setup menu, click **Margin**.



Margin

- 2 Drag the sliders to adjust the Left, Right, Top and Bottom margins.
- 3 Click **Apply** to save your settings.

Appendix N: Daylight Saving Time on your DVR

You may have to adjust your system's time during daylight saving months. The table below illustrates the DVR's that automatically adjust to Daylight Saving Time (DST), and DVRs that must have their system time manually adjusted.

NOTE: You must configure and enable automatic DST on your DVR even if your system supports the feature.

Why is the DVR timestamp important?

Your DVR's time stamp is crucial when submitting surveillance video as court evidence. It is highly recommended to double-check that your system has the proper time, even if your system supports automatic DST adjustments.

When should I adjust my system clock?

In North America, most cities observe DST.

- **In March:** the clock moves one hour **forward**
- **In November:** the clock moves one hour **backward**

The specific date in the month where DST starts and ends varies each year. **The table below applies to North America only.**

Daylight Saving Time 2010 - 2015

Year	DST Begins 2:00am (+ 1hr)	DST Ends 2:00am (- 1hr)
2010	March 14	November 7
2011	March 13	November 6
2012	March 11	November 4
2013	March 10	November 3
2014	March 9	November 2
2015	March 8	November 1

Source: NASA (2010).

Retrieved online: <http://eclipse.gsfc.nasa.gov/SEhelp/daylightsaving.html>

Appendix O: Remote Viewing (Mac)

Prerequisite:

- Follow the steps on page 55 to page 62 to set up remote viewing on the DVR.

Remote Viewing Interface



- 1 Navigation Tabs:** Allows you to access the following tabs:
 - **Live:** Live view of video
 - **Playback:** Revisit archived video footage
 - **Remote Config:** Configure DVR settings remotely.
 - **Local Config:** Configure where your saved files and images are saved.
 - **Logout:** Exits remote viewing
- 2 Active Channel List:** Displays channels that are currently live. Purple play buttons indicate viewing is active.
- 3 Main Screen:** Main display screen for live viewing and playback.
- 4 Toolbar:** The system tool bar allows you to change viewing modes, start playback, take image snapshots, and control audio volume.
- 5 PTZ Controls:** PTZ (Pan, Tilt, Zoom) control for connected PTZ cameras (not included).

Logging Into Your System

Log in to your system to begin remotely monitoring the system.



To log in to the DVR:

- 1 In the User Name field, enter **admin**.
- 2 In the password field, leave the entry blank (default)

NOTE: By default, the user name is **admin**. The password field is left blank.

- 3 Click **Login** to connect to the system.

NOTE: If you recently upgraded your system firmware, you will see the screen below during the initial connection. Follow the on-screen instructions to install the required updates to begin live viewing.



Changing Viewing Modes

You can change the number of channels that the system displays simultaneously (i.e. split screen mode, single channel mode etc.)

To change the DVR's viewing mode:

- Click on one of the viewing mode buttons in the toolbar:



Taking Screen Shots

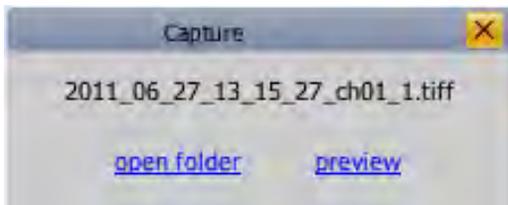
The system can take ascreen shots of a selected channel during live playback.

To take a screenshot:

- 1 Beside the desired channel, click  to capture an image.
 - The file saves onto the local hard disk.



- 2 A pop-up window appears on the bottom left corner of the window. Click **preview** or **open folder** to view the image.



To change the save directory of the image:

- 1 Click the **LOCAL CONFIG** tab.
- 2 Beside the snapshot field, click the **open** button to browse for a save directory.



- 3 Select a save directory, and then click **Open**.

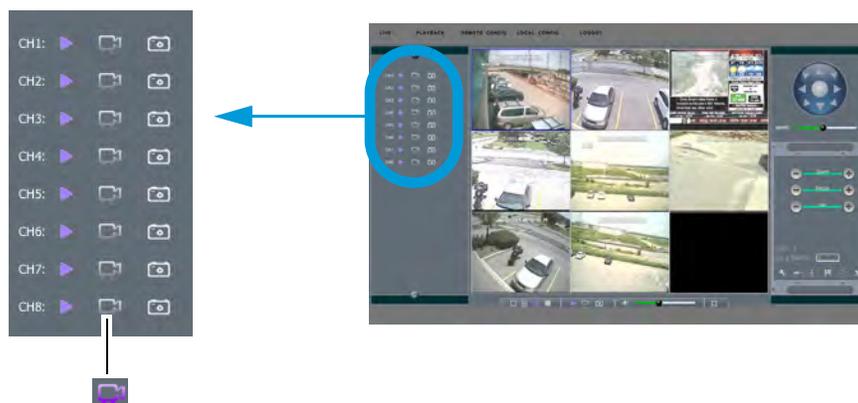
Recording Live Video

You can record live video footage directly onto your local hard drive. Once the video is in your hard drive, you can back up the video footage onto recordable media such as USB memory keys and blank CD/DVD media.

To record live video:

- 1 Beside the channel that you wish to record, click the **Record** button (). The record button turns purple to indicate the channel is currently being recorded.

NOTE: The video records to the default save directory (Users/your user name/dvr/Record).



- 2 Click the **Record** button () to stop recording. The file saves into the "Record" folder (

To change the save directory of the video:

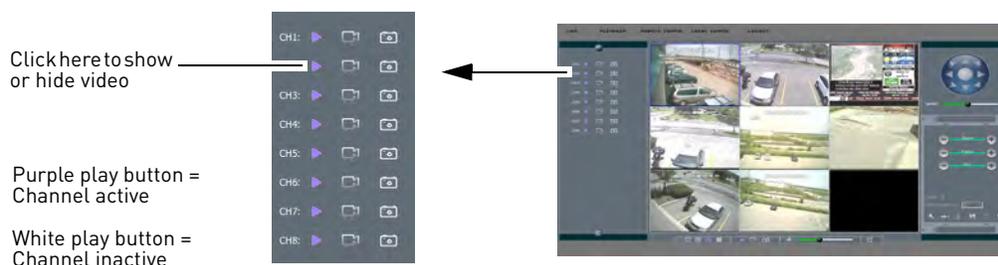
- 1 Click the **Local Config** tab.
- 2 Beside the **record** field, click the **open** button to browse for a save directory.
- 3 Select a save directory, and then click **Open**.

Showing & Hiding Channels

The Active Channel List is a convenient way to show / hide the cameras that display in the main viewing window.

To show or hide video in the main video window:

- Click  beside the channel number to show a channel. Click  again to hide the channel.



Viewing recorded video files

To view the files downloaded on your system, you will need to install Lorex Player Mac.

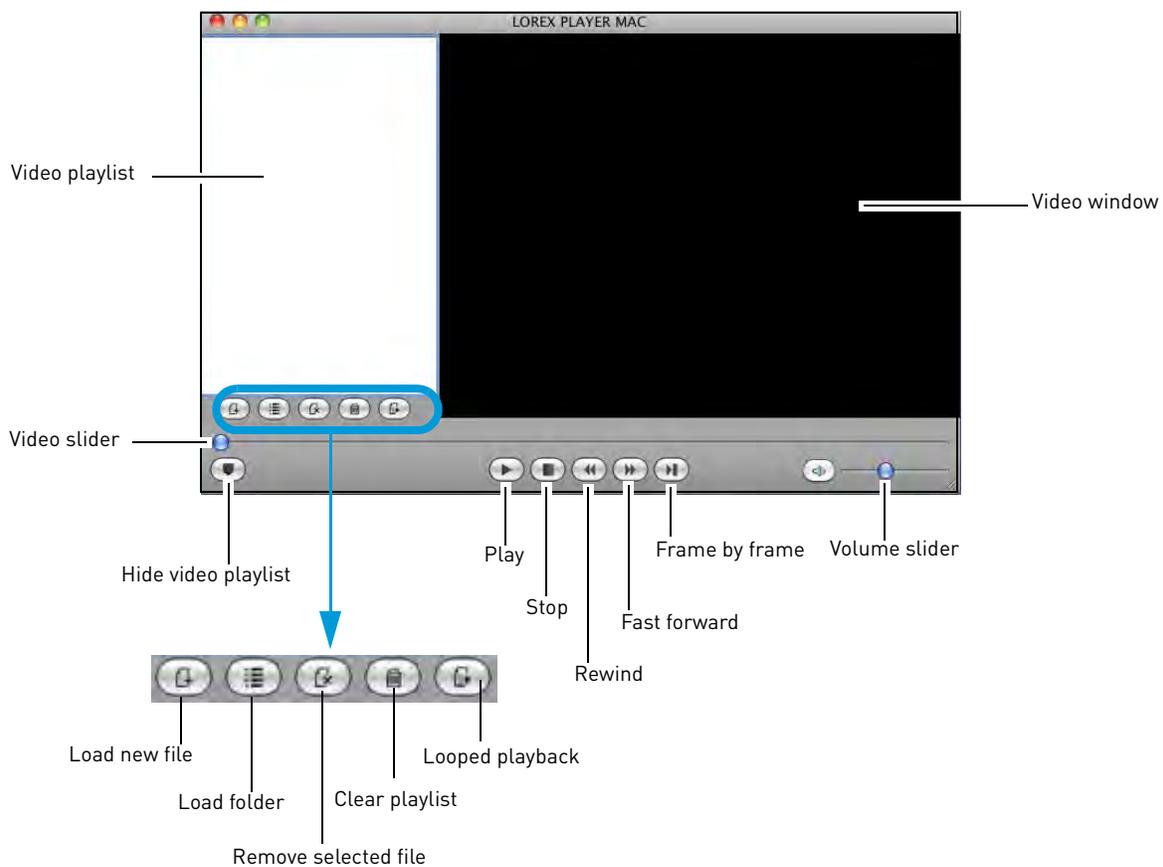
To install Lorex Player Mac:

- 1 Go to www.lorextechnology.com, and search for your DVR's model number (for example, LH114501, LH118501, or LH1161001). Click on the model of your DVR.
- 2 Download the Lorex Player Mac software from the Downloads tab.
- 3 Double-click the Lorex Player Mac installation file. Follow the on-screen instructions to install the software.

Launching Lorex Player Mac:

- Click the Lorex Player Mac icon () in the Dock.

Lorex Player Mac interface

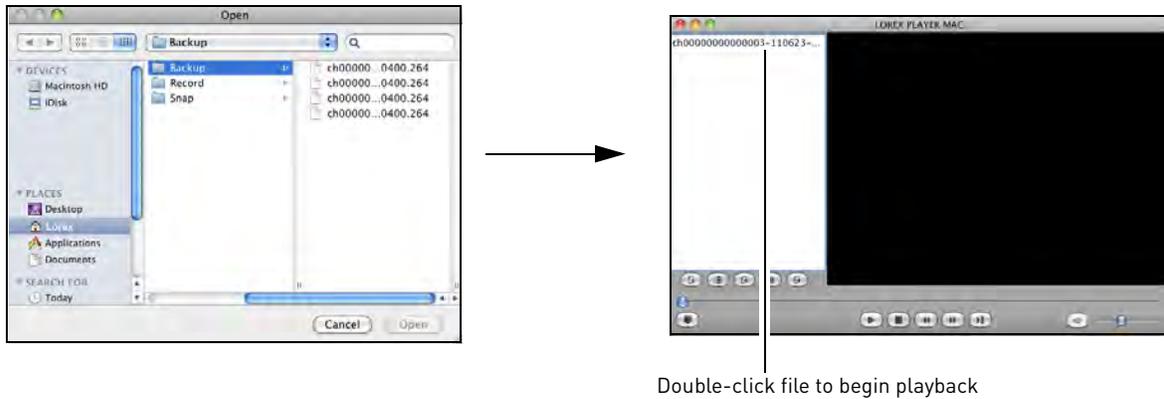


Loading Individual Video Files

To load files saved onto your hard drive:

- 1 Click the Load new file button ().
- 2 Browse and select the desired file. Click **Open** to add the file to the video playlist.

NOTE: The default save directory is in your Home folder → dvr.



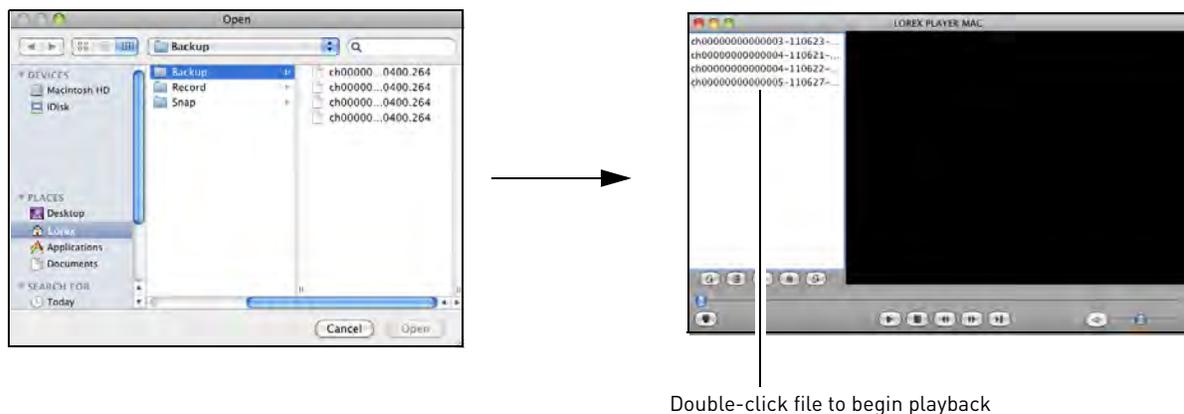
- 3 Double-click the video file in the playlist to begin playback.

Loading Multiple Video Files

You can load an entire folder of video files.

To load multiple video files saved onto your hard drive:

- 1 Click the Load folder button ().
- 2 Select the desired folder you wish to add to the playlist. Click **Open** to add all the videos in the folder.



- 3 Double-click the video file in the playlist to begin playback.

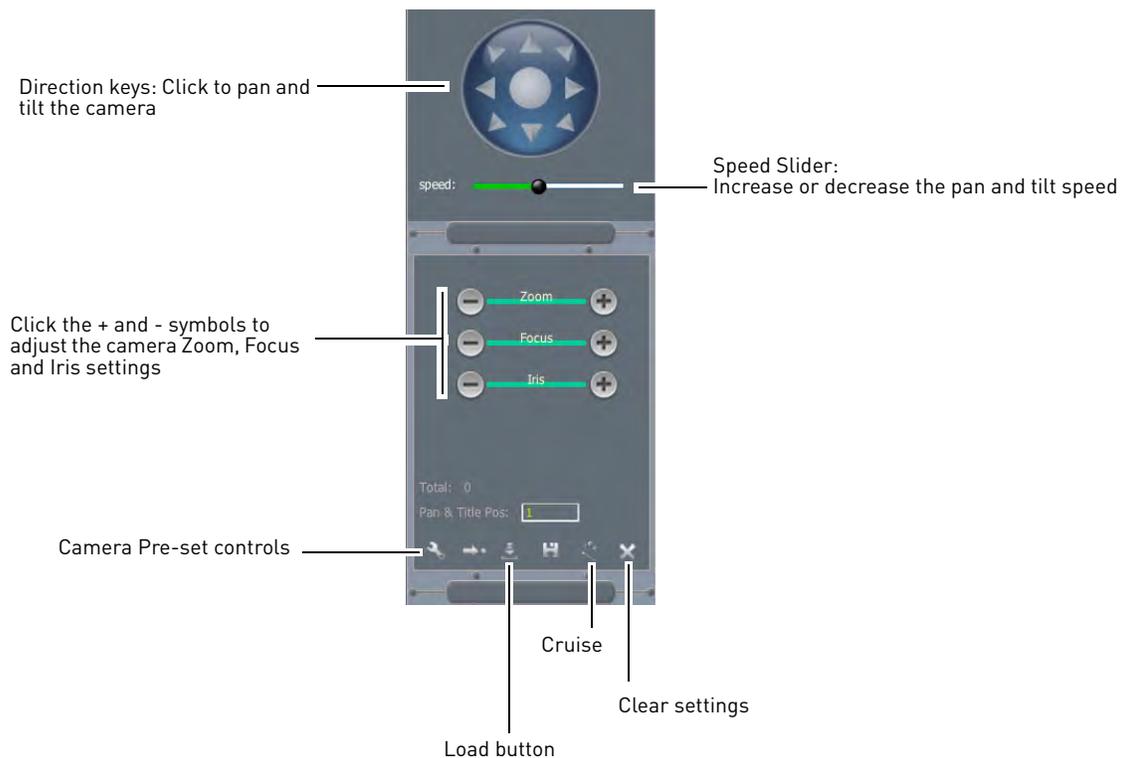
Configuring PTZ settings

The system supports PTZ (Pan, Tilt, Zoom cameras. PTZ cameras are sold separately).

- For details on connecting PTZ cameras to your system, see “Appendix H: Connecting a PTZ Camera” on page 116.

To control the PTZ settings on the DVR:

- 1 Select the channel that the PTZ camera connects to.
- 2 Use the PTZ control panel to control the pan, tilt, zoom, focus and iris control of the PTZ camera.

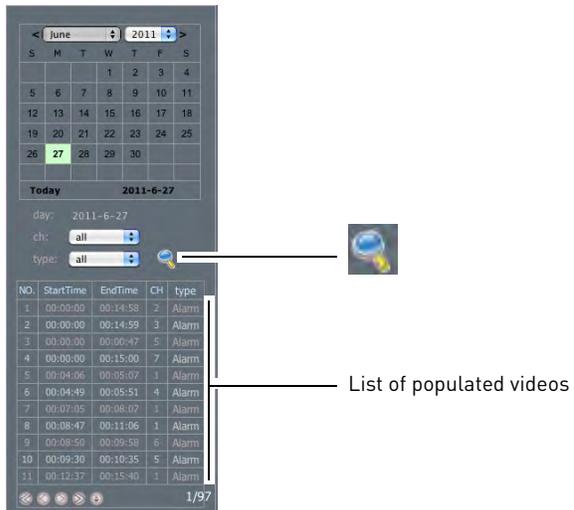


To assign a camera pre-set:

- 1 Adjust the camera to the desired pre-set location using the direction keys.
- 2 In the **Pan&Tilt Pos** drop-down menu, enter a pre-set number.
- 3 Click the Set () button.
- 4 Click **Save** () to save your settings.

To open a pre-set, enter the desired Pan&Tilt Pos number. Click the **Go To** button ().

- 4 Click the search button (). A list of videos populate in a list.



The screenshot shows a video player interface. At the top, there is a calendar for June 2011. Below the calendar, there are fields for 'day' (2011-6-27), 'ch' (all), and 'type' (all). A search button with a magnifying glass icon is located to the right of the 'type' field. Below these fields is a table of 11 rows of video data. A line points from the search button to the table, and another line points from the text 'List of populated videos' to the table.

NO.	StartTime	EndTime	CH	type
1	00:00:00	00:14:58	2	Alarm
2	00:00:00	00:14:59	3	Alarm
3	00:00:00	00:00:47	5	Alarm
4	00:00:00	00:15:00	7	Alarm
5	00:04:06	00:05:07	1	Alarm
6	00:04:49	00:05:51	4	Alarm
7	00:07:05	00:08:07	1	Alarm
8	00:08:47	00:11:06	1	Alarm
9	00:08:50	00:09:58	6	Alarm
10	00:09:30	00:10:35	5	Alarm
11	00:12:37	00:15:40	1	Alarm

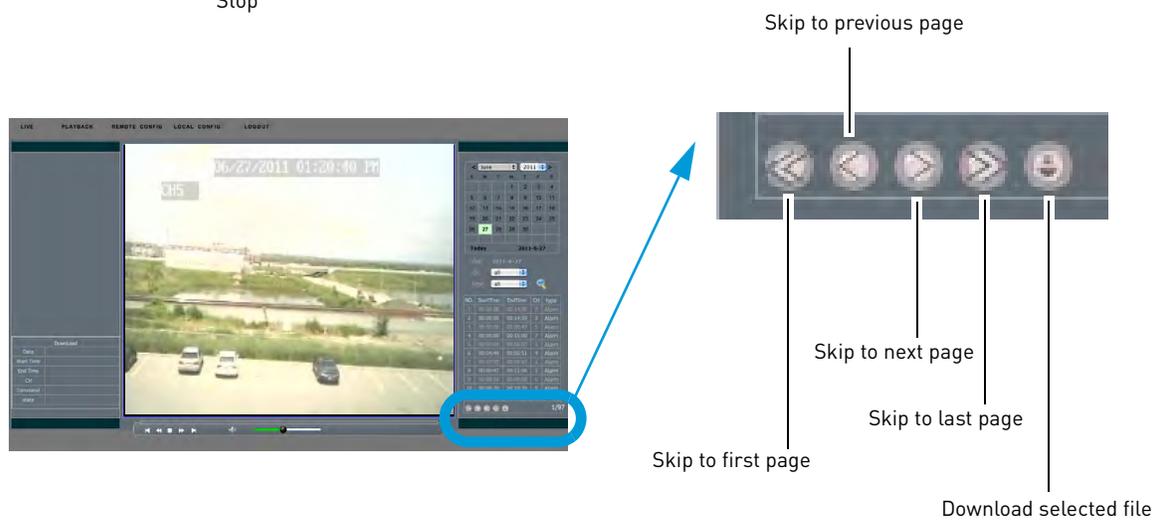
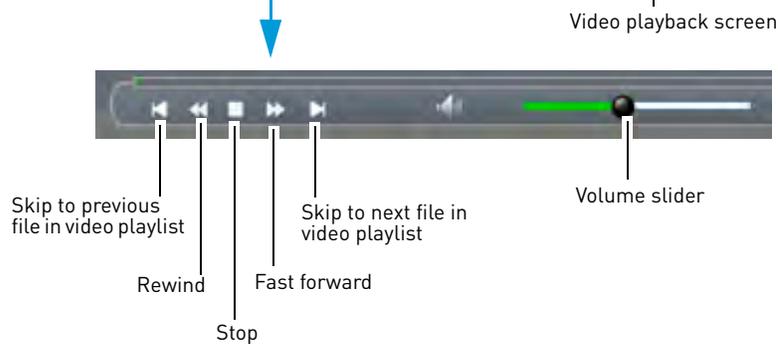
- 5 Double-click on the desired file in the list to begin playback.



The screenshot shows the same video player interface as in the previous image. A line points from the text 'Double-click to begin playback' to the second row of the video list table.

NO.	StartTime	EndTime	CH	type
1	00:00:00	00:14:58	2	Alarm
2	00:00:00	00:14:59	3	Alarm
3	00:00:00	00:00:47	5	Alarm
4	00:00:00	00:15:00	7	Alarm
5	00:04:06	00:05:07	1	Alarm
6	00:04:49	00:05:51	4	Alarm
7	00:07:05	00:08:07	1	Alarm
8	00:08:47	00:11:06	1	Alarm
9	00:08:50	00:09:58	6	Alarm
10	00:09:30	00:10:35	5	Alarm
11	00:12:37	00:15:40	1	Alarm

Navigating the playback window

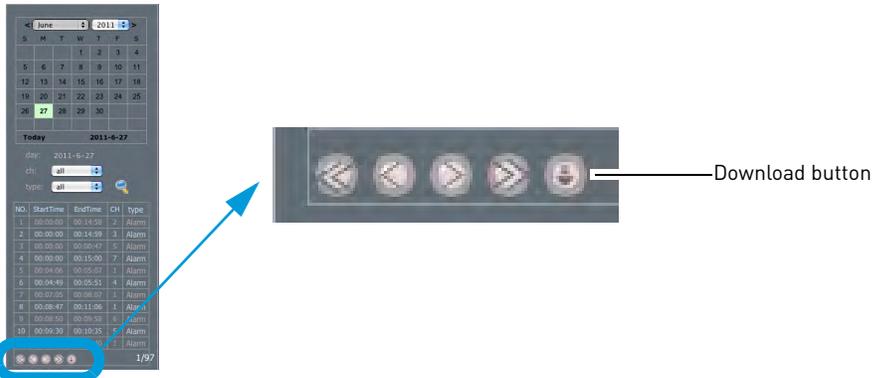


Downloading video files

You can download the files from the DVR directly to your local hard drive.

To download video files from the DVR:

- 1 Select the file you wish to download in the video playlist.
- 2 Click the download button ().
 - The video downloads into the default backup folder(Users/your user name/dvr/Backup)

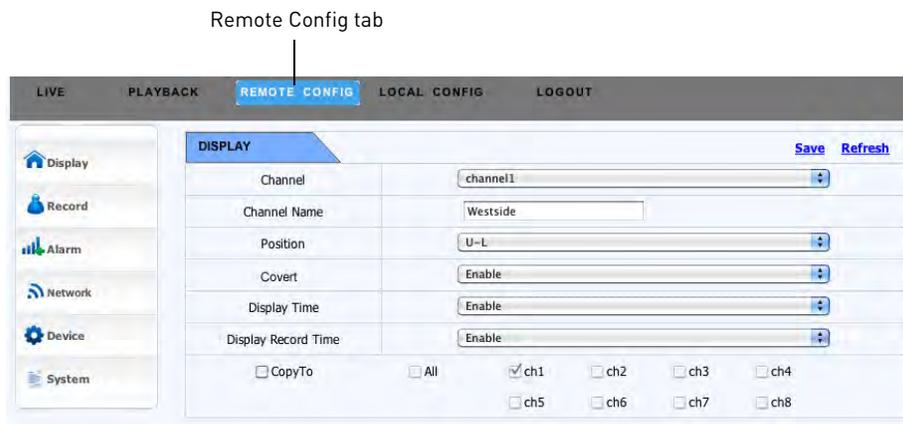


- 3 Use the Lorex Video Player Mac to view the file.

Configuring the system remotely

To configure your DVR system settings:

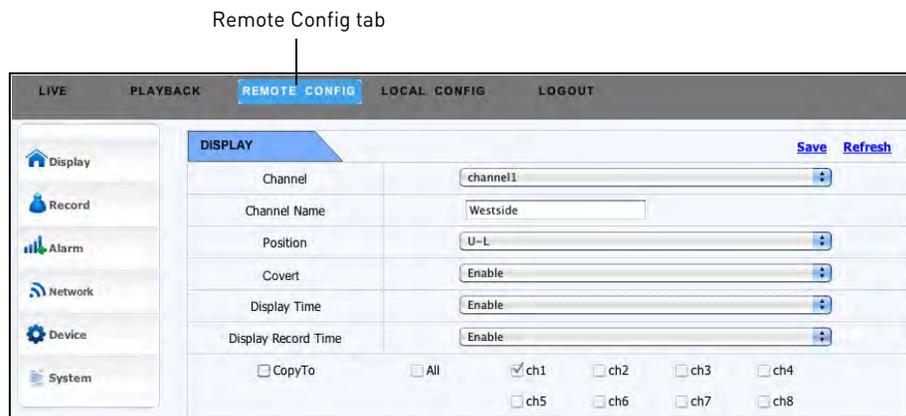
- Click the **REMOTE CONFIG** tab.



Display menu

To configure channel display settings:

- 1 Click the **REMOTE CONFIG** tab.



- 2 Configure the following:

- **Channel:** Select the channel that you want to apply the settings to.
- **Channel Name:** Enter the desired channel name.
- **Position:** Select the position of where the text appears in the channel.
 - U-L: Upper left hand corner
 - D-L: Lower right hand corner
 - U-R: Upper right hand corner
 - D-R Lower right hand corner
- **Covert:** Select **Enable** to blank out the channel locally on the DVR. Note that the system will continue to record despite being in Covert mode.
- **Display Record Time:** Show or hide the channel recording time.

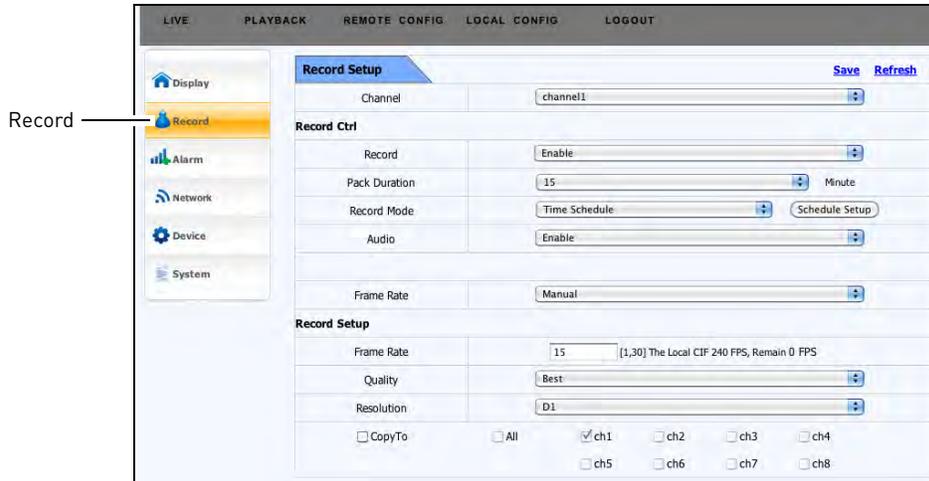
- 3 In the selection boxes, select the channels that you wish to apply the settings to.

- 4 Click **Save** to apply your settings.

Record menu

To configure the record menu:

- 1 Click **REMOTE CONFIG**→**Record**.



- 2 Configure the following:

- **Channel:** Select the channel that you want to apply the settings to.
- **Record:** Select Enable or Disable to start or stop the channel from recording.
- **Pack Duration:** Select the duration you want each saved file to be (for example, every file can be 15 minutes long).
- **Record Mode:** Select from "Time Schedule" recording, or "Continuous" recording. If you select "Time Schedule", click the Schedule Setup button to configure the recording times.
- **Audio:** Enable or disable system audio.
- **Frame Rate:** Select from "Fixed" or "Manual" frame rate.
- **Record Setup**→ **Frame Rate:** Enter the desired system frame rate.
- **Quality:** Select the video recording quality. Choose from "Best", "Better" or "Good".
- **Resolution:** Select the resolution type. Choose from "CIF", "HD1", or "D1".

- 3 Click **Save** to apply your settings.

Configuring the Scheduled Setup settings

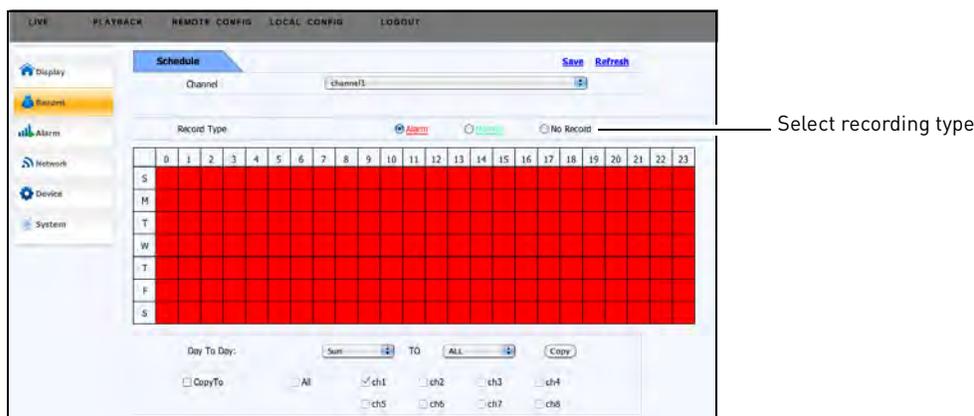
If you decide to configure the recording schedule manually, you must click the "Schedule Setup" button. The Schedule Setup menu allows you to configure if the system records in "Normal" or "Alarm" mode.

To configure the Scheduled Setup menu:

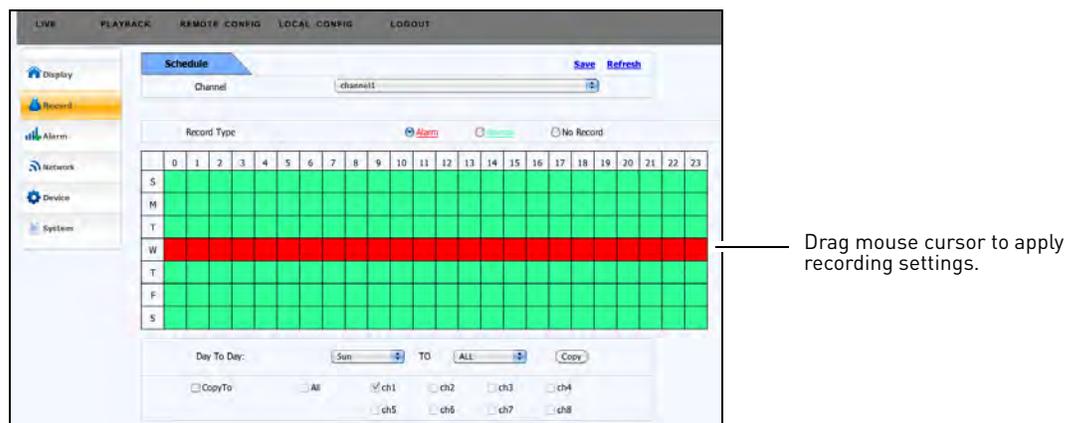
- 1 Within the Record Setup menu, click the **Schedule Setup** button.



- 2 Beside "Record Type" select from **Alarm, Normal** or **No Record**.

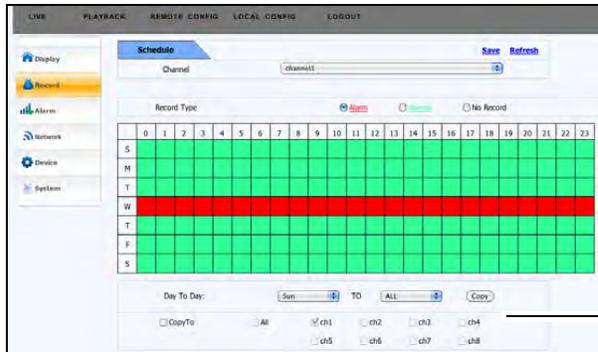


- 3 Drag your mouse cursor in the calendar grid to apply the recording mode.



In this example, Alarm recording was applied to all 24 hours of Wednesday (the grid highlights in red). The remaining days are in "Normal" recording mode (the grid highlights with a light green).

- In the "Day to Day" and "Too" drop-down menu, select the day and channel you wish to apply the settings to. Select the channel(s) you wish to apply the settings to. Use the **Copy** button to copy the settings to multiple channels.



Select the channel(s) you wish to apply the settings to.

- Click **Save** to apply your settings.

Alarm menu

To configure the Alarm menu:

- Click **REMOTE CONFIG** → **Alarm**.



- Configure the following settings you want Alarm recording to record with:
 - **Buzzer Time**: Select the duration of the buzzer time. Choose from **Off, 10s, 20s, 40s, 60s**.
 - **MD Alarm** (Motion Detection Alarm): Select the checkbox to enable motion detection alarm recording.
 - Select the "Email" checkbox if you want the system to send email notifications when motion is detected (configuration required).
 - Select the "Full Screen" checkbox if you want the channel that detects motion, to open in full screen view.

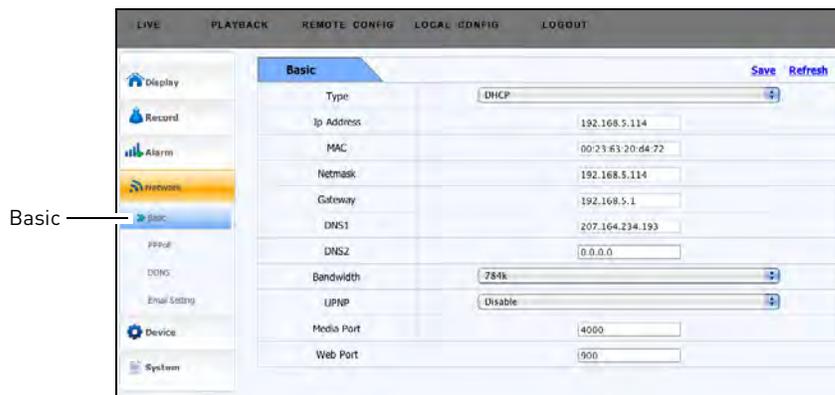
- **HDD Loss:** Select the "HDD Loss" checkbox if you want the system to record as an alarm event if there is a hard drive error.
- **HDD Space:** Select the "HDD Space" checkbox if you want the system to record as an alarm event if there is low storage space.
- **Video Loss:** Select the "Video Loss" checkbox if you want the system to record as an alarm event if video loss occurs in a channel.
- **Post Recording** drop-down menu: Select the duration the system continues to record after an alarm even occurs. Choose from 30s, 1 Min, 2 Min, 5 Min.
- **Pre-Record** drop-down menu: Select **Enable** or **Disable** to enable or disable pre-recording.

3 Click **Save** to apply your settings.

Network menu

To configure the Basic network menu:

1 Click **REMOTE CONFIG**→**Network**→**Basic**.



2 Configure the following:

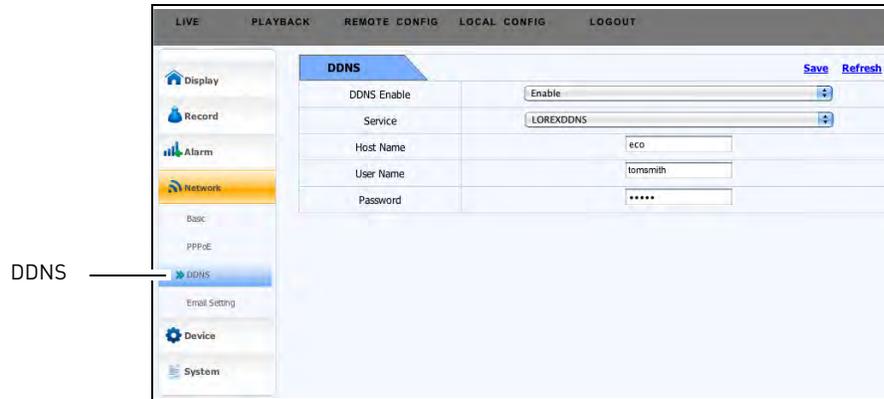
- Type: Select between **DHCP** or **Static**.
 - If you select Static, you can manually edit the IP address, Netmask, Gateway, DNS1 and DNS2 fields.

NOTE: A static IP must be assigned within your router before the changes take effect.

- **Bandwidth:** Select the desired bandwidth you want the system to consume. Set a lower bandwidth if you are on a network with heavy traffic. For smoother playback, select a higher bandwidth.
- **UPNP:** Select **Enable** or **Disable** to enable or disable UPNP (universal plug and play).
- **Media Port:** Enter the desired media port for DDNS. Note that this port must be port forwarded to your router (by default, port 9000).
- **Web Port:** Enter the desired web port for DDNS. Note that this port must be port forwarded to your router (by default, port 80).

To configure the DDNS network menu:

- 1 Click **REMOTE CONFIG**→**Network**→**DDNS**.



- 2 Configure the following:

- **DDNS Enable:** Select **Enable** or **Disable** to enable or disable DDNS.
- **Host Name:** Enter the Domain Name/URL Request that was emailed to you after DDNS registration.

NOTE: For example, if the Domain Name/URL Request is *tomsmith*, the address to access your video will be *http://tomsmith.lorexddns.net*

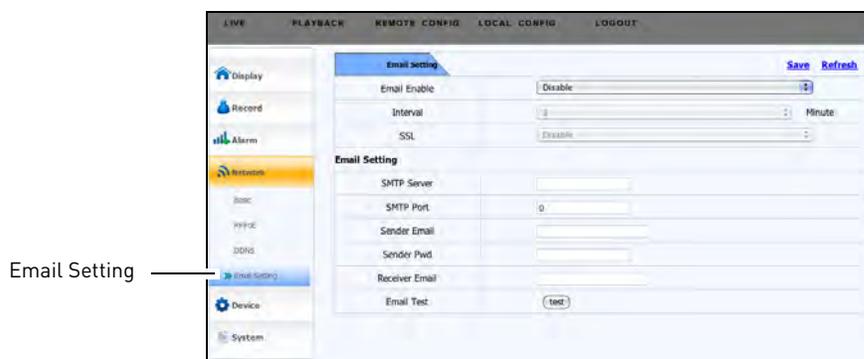
- **User Name:** Enter your DDNS User Name that was emailed to you after DDNS registration.
- **Password:** Enter your Device DDNS Password that was emailed to you after DDNS registration.

- 3 Click **Save** to apply your settings.

Email Setting menu (Email Alerts)

To configure the Email setting menu:

- 1 Click **REMOTE CONFIG**→**Network**→**Email Setting**.



- 2 Configure the following:
 - **Email Enable:** Select **Enable** or **Disable** to enable or disable the system from sending email notifications.
 - **Interval:** Select the time interval the system sends out email notifications. For example, if you select 3, the system sends out email intervals every 3 minutes if there are motion or alarm alerts. If there are no alarm or motion events, the system will not send out an email.
 - **SSL:** Select **Enable** or **Disable**. SSL (Secure Socket Layer) may be required for certain email servers.
 - **SMTP Server:** Enter the name of your email server's SMTP server.
 - **SMTP Port:** Enter your email server's SMTP port.
 - **Sender Email:** Enter the email that you want your receiver to see.
 - **Sender Pwd:** Enter the password of your email account.
 - **Receiver Email:** Enter the email you want to send alerts to.
 - **Email Test:** Click the **Test** button to send a test email the receiver's address.
- 3 Click **Save** to apply your settings.

Using the Lorex Email server

If you do not have your own SMTP email account, you can use the built-in Lorex email server to send out email notifications.

To use the Lorex Email server:

- 1 Beside the "Email Enable" drop-down menu, select **Default**.
- 2 In the "Interval" drop-down menu, select the timing interval between email alerts. For example, if you select 1 minute, the system sends an email alert every minute for the duration that the system detects an event (i.e. motion).
- 3 In the "Sender Email" field, enter the email address that you wish to see when you receive an email alert.
- 4 In the "Receiver Email" field, enter the email address that will receive email alerts from the system.
- 5 Click **Save** to apply your settings.

Device Menu

To configure the HDD Information menu:

- 1 Click **REMOTE CONFIG**→**Device**→**Hdd Information**.
- 2 Configure the following:
 - **Overwrite:** Select the duration the hard drive will record before it overwrites itself. If you leave the setting to "Auto", the hard drive records on a continuous loop.
- 3 Click **Save** to apply your settings.

PTZ Menu

The system is capable of manipulating PTZ cameras (not included) that are connected to the system. Please note that you will need PTZ information from the PTZ manufacturer's users guide.

To configure the PTZ Parameters menu:

- 1 Click **REMOTE CONFIG**→**Device**→**PTZ Parameters**.



- 2 Configure the following:
 - **Channel:** Select the channel that the PTZ camera connects to
 - **Protocol:** Select the protocol of the PTZ camera*
 - **Baud Rate:** Select the baud rate of the PTZ camera*
 - **Data Bits:** Select the data bit rate of the PTZ camera*
 - **Stop Bits:** Select the stop bit rate of the PTZ camera*
 - **Verify:** Select from Odd, Even, Mark, or Space.*
 - **Cruise:** Select enable or disable.*
 - **Address:** Select the address of the PTZ camera*

*Consult the PTZ camera's instruction manual for protocol and configuration details

Optional: Click the **Copy Settings To** button to copy the PTZ settings to different channels.

- 3 Click **Save** to apply your settings.

- For details on connecting a PTZ camera to your system, see "Appendix H: Connecting a PTZ Camera" on page 116.

Mobile Menu

You can change the user name, password and port number required to log in to the system using a mobile device (i.e. iPhone).

You must port forward the mobile Service port to your router before you can access your DVR using a mobile device.

To configure the Mobile menu:

- 1 Click **REMOTE CONFIG**→**Device**→**Mobile**.



- 2 Configure the following:

- **User Name:** Enter the desired user name.
- **Password:** Enter the desired password.
- **Service Port:** Enter the service port (default port **1025**).

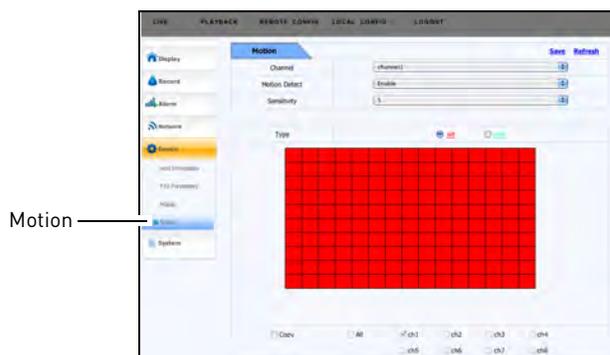
- 3 Click **Save** to apply your settings.

Motion Menu

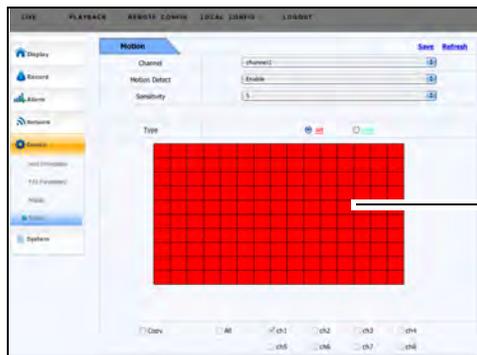
Use the Motion Recording settings to set the DVR's motion sensitivity, and the portion of the screen to monitor for motion activity.

To configure the Motion menu:

- 1 Click **REMOTE CONFIG**→**Device**→**Motion**.



- 2 Configure the following:
 - **Channel:** Select the channel you wish to configure motion detection.
 - **Motion Detect:** Select **Enable** or **Disable**.
 - **Sensitivity:** Select the desired sensitivity. The greater the number, the greater the motion detection sensitivity.
 - **Type:** Select **Set** to allow the cursor to mark the grid as a motion detection zone.
 - Click the **Copy** button to copy the setting to multiple channels. Next, click on the channels that you wish to apply the settings to.
- 3 Drag the cursor over the motion grid to select the area that will detect motion.



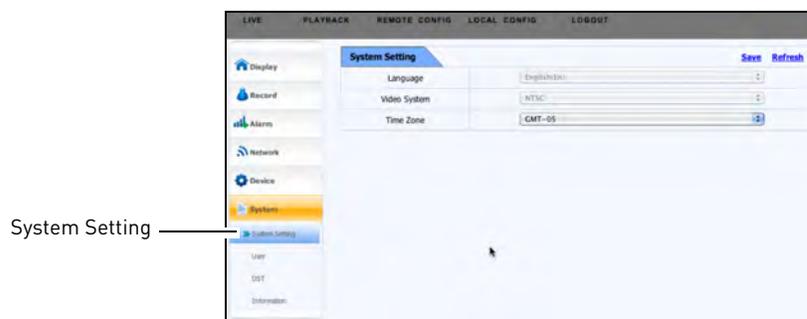
Drag your mouse cursor to mark areas to detect motion.

- 4 Click **Save** to apply your settings.

System Menu

To configure the System setting menu:

- 1 Click **REMOTE CONFIG→System→System Setting**.



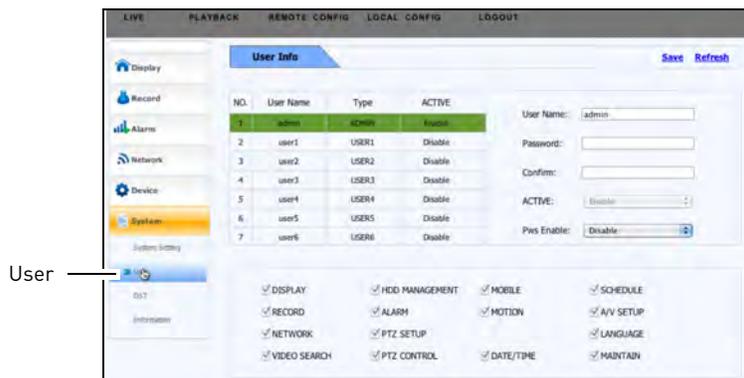
- 2 Configure the following:
 - **Timezone:** Select the DVR's local time zone.
- 3 Click **Save** to apply your settings.

User Menu

You can add new users to the system, and customize the type of menus they have access to.

To configure the User menu:

- 1 Click **REMOTE CONFIG**→**System**→**User**.



- 2 Select a user from the User List that you wish to configure.



- 3 Configure the following:

- **User Name:** Enter the desired user name.
- **Password:** Enter the user password.
- **Confirm:** Re-enter the user password.
- **Active:** Select **Enable** to add the user. Select **Disable** to de-activate the user account.
- **Password Enable:** Select **Enable** or **Disable** to enable or disable the user password.

- 4 Select the checkboxes to enable the menus the user will have access to.

NO.	User Name	Type	ACTIVE
1	admin	ADMIN	Enable
2	user1	USER1	Disable
3	user2	USER2	Disable
4	user3	USER3	Disable
5	user4	USER4	Disable
6	user5	USER5	Disable
7	user6	USER6	Disable

DISPLAY
 HDD MANAGEMENT
 MOBILE
 SCHEDULE
 RECORD
 ALARM
 MOTION
 A/V SETUP
 NETWORK
 PTZ SETUP
 LANGUAGE
 VIDEO SEARCH
 PTZ CONTROL
 DATE/TIME
 MAINTAIN

Select the menus that the users will have access to

- 5 Click **Save** to apply your settings.

To change the Admin Password:

- 1 Click **REMOTE Config→System→User**.
- 2 Select **admin** in the user list.
- 3 In the Pws Enable drop-down menu, select **Enable**.
- 4 In the Password and Confirm fields, enter the new password.
- 5 Click **Save** apply the settings.

DST Menu

To configure the DST (daylight saving time) menu:

- 1 Click **REMOTE Config→System→DST**.

DST
 Enable
 Time Offset: 1 hour
 DST Mode: Week
 Start Time: March 1st 12:00:00
 End Time: November 1st 02:00:00

- 2 Configure the following:
 - DST: Select Enable or Disable to enable or disable DST on the system.
 - Time Offset: Enter the number of hours DST should offset.
 - DST Mode: Select the desired DST mode.
 - Start Time: Select when DST begins.
 - End Time: Select when DST ends.
- 3 Click **Save** to apply your changes.

Information Menu

To view your DVR's system information:

- 1 Click **REMOTE Config**→**System**→**Information**.



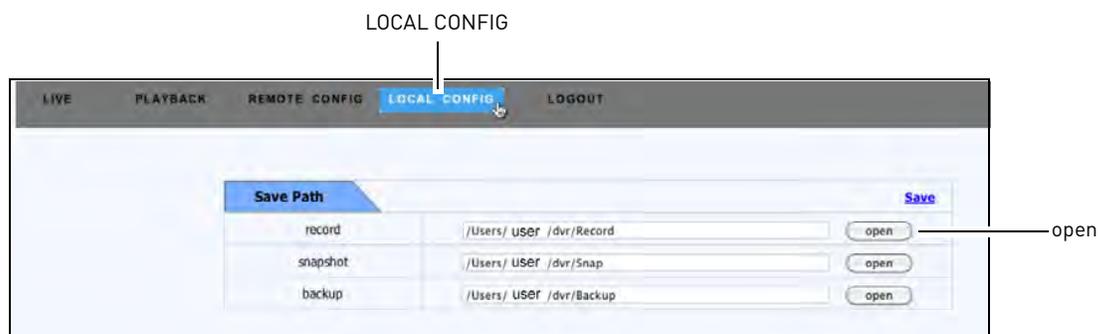
- 2 The following system information is shown:
 - Device Name, Firmware, MAC Version, IP Address, System MAC address, DDNS Name, HDD (Hard drive capacity), Video type, Net Client Port, Web Port, and Mobile Port.

Changing save directories

You can change where the backup file and screen captures are stored on the local hard drive.

To change the save directories:

- 1 Click the **LOCAL CONFIG** tab.



- 2 Click the **open** button beside the appropriate fields:
 - **Record**: Recorded video files are stored here.
 - **Snapshot**: Screen captures are stored here.
 - **Backup**: Backed up video files are stored here.
- 3 Select the desired directory, and click **Open**.
- 4 Click **Save** to apply your changes.

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
<ul style="list-style-type: none"> System is not receiving power, or is not powering up 	<ul style="list-style-type: none"> Cable from power adapter is loose or is unplugged 	<ul style="list-style-type: none"> Confirm that all cables are connected correctly Confirm that the power adapter is securely connected to the back of the unit
	<ul style="list-style-type: none"> Cables are connected, but system is not receiving sufficient power 	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Connecting the power cable to another outlet Test the outlet with another plugged device (such as an electric calculator or phone charger)
<ul style="list-style-type: none"> Remote control is not detected by the system 	<ul style="list-style-type: none"> Battery in the remote control is drained 	<ul style="list-style-type: none"> Install two fresh AAA alkaline batteries in the remote control
	<ul style="list-style-type: none"> There are no batteries in the remote control 	
<ul style="list-style-type: none"> Hard drive is not detected by the system 	<ul style="list-style-type: none"> Hard drive cables are loose or not properly connected 	<ul style="list-style-type: none"> Remove the housing and check that hard drive cables are firmly connected
	<ul style="list-style-type: none"> There is no hard drive in the system 	<ul style="list-style-type: none"> Open the housing and install a 3.5" SATA hard drive
<ul style="list-style-type: none"> Hard drive is full (0%) and the unit is no longer recording 	<ul style="list-style-type: none"> Overwrite is not enabled 	<ul style="list-style-type: none"> From the Main Menu, select <code>DEVICE>HDD>Overwrite</code>. Select Enable and click Apply

Troubleshooting (cont'd.)

Error	Possible Causes	Solutions
<ul style="list-style-type: none"> • Mouse not detected by system 	<ul style="list-style-type: none"> • Mouse cable is not firmly connected to the system 	<ul style="list-style-type: none"> • Firmly connect the mouse cable to the USB Mouse port on the front panel
	<ul style="list-style-type: none"> • Mouse is not connected to the system 	
	<ul style="list-style-type: none"> • System needs to be reset 	<ul style="list-style-type: none"> • Power off the system (disconnect power cable). Firmly connect a USB mouse to the USB Mouse port on the front panel of the system. Reconnect the power cable to the DC 12V port on the rear panel.
<ul style="list-style-type: none"> • There is no picture on selected channels / camera picture is not being displayed 	<ul style="list-style-type: none"> • Camera cables are loose or have become disconnected 	<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • The image on the DVR appears, but does not have sound 	<ul style="list-style-type: none"> • Audio cables are loose or have been disconnected 	<ul style="list-style-type: none"> • Check the AUDIO connections to the DVR
	<ul style="list-style-type: none"> • Audio channels are disabled in the system menu 	<ul style="list-style-type: none"> • Check the Configurations: Main Menu>Record. In the Audio drop-down menu, select Enable, and click Apply
	<ul style="list-style-type: none"> • Volume on external speakers (not included) is low or off 	<ul style="list-style-type: none"> • Increase volume on external speakers (not included)
<ul style="list-style-type: none"> • The system beeps at startup 		<ul style="list-style-type: none"> • The beep at startup is normal
<ul style="list-style-type: none"> • The system beeps during motion detection 	<ul style="list-style-type: none"> • Motion detection is enabled, but the alarm buzzer is activated 	<ul style="list-style-type: none"> • Open the Main Menu and click DEVICE>Alarm • In the Buzzer drop-down, select Off. Click apply.
<ul style="list-style-type: none"> • I am not receiving email notifications 	<ul style="list-style-type: none"> • Email notification is disabled 	<ul style="list-style-type: none"> • Open Main Menu>Device>Alarm. Click the Email Setup button. In the Email drop-down menu, select Default. Enter the Sender and receiver email. Click Apply.
	<ul style="list-style-type: none"> • Default setting is disabled, but you have not entered your own SMTP information 	<ul style="list-style-type: none"> • If you want to use your own SMTP server, deselect the Default box, and enter your SMTP Server address, Port, User name, and Password in the respective fields

Troubleshooting the video display

When connected to a VGA monitor, why can't I see a mouse cursor, or access the system menus by using the front panel controls of the DVR?

Solution 1

You may have accidentally switched the system output by pressing the **0** button on the remote; or the DVR did not properly detect the VGA monitor.

To switch back to VGA mode:

- 1 Turn on the DVR. Wait for it to boot into the main window.
- 2 Press the **0** (zero) button on the remote **three times**.

Pressing the **0** (zero) button on the remote three times changes the DVR from SPOT OUT mode to VGA mode. After the DVR is in VGA mode, you will be able to see your mouse, and have access to the menu.

Solution 2

The DVR may not have correctly detected your VGA monitor because of a loose connection.

Perform the following:

- 1 Unpower the DVR.
- 2 Power down and re-connect the VGA monitor to the DVR. Ensure that the connection is firm.
- 3 Turn on the monitor.
- 4 Turn on the DVR. Wait for it to boot into the main window.

NOTE: After you re-connect the VGA cable between the monitor and DVR, ensure that you first turn on the monitor, and then turn on the DVR last. This allows the DVR to auto-detect the connected VGA monitor.

NOTE: If you still cannot see the mouse cursor, or access the menu, press the **0** (zero) button on the remote control **three times**.

Manually setting the DVR output mode

You can set the DVR to always output to the VGA port by manually configuring the output settings.

To manually adjust the output settings:

- 1 Right-click and click **Main Menu**.
- 2 Click **Advanced**→**A/V Setup**.
- 3 In the Output Device drop-down menu, select **VGA**.

NOTE: In the 16-channel model, select **VGA** in the Init DEV drop-down menu.



4/8 Channel



16 Channel

- 4 Click **Apply** to save your settings.

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