ELMO DVR User Manual v5.01

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ELMO DVR Server

1. Introduction

1.1. Welcome

Thank you for purchasing our ELMO X-Series Digital Video Recorder (DVR). ELMO is a registered trademark of ELMO USA CORP.

This manual will guide you through the usage of ELMO DVR Server and ELMO DVR Remote software. If you have any questions or concerns, please visit our website at http://www.elmousa.com or contact our technical support team.

1.2. Important changes to ELMO DVR, v.5.01

Please note that the video recordings made with earlier versions of ELMO DVR Server will not be displayed on the ELMO DVR Server v.5.01. The ELMO DVR Server v.5.01 is only available with the hardware upgrade.

Notice that the systems supporting ELMO DVR Server v.5.01 do not have physical watchdog cable as all the circuitry is built-in within the system. The built-in watchdog function works the same way as the physical watchdog cable and can be turned ON/OFF with the switch or button (depending on the chassis model).

1.3. Limited Warranty

ELMO USA CORP. warrants this product to be in compliance with its own plans and specifications, and to be free from defects in materials and workmanship under normal use and service for all parts, excluding the Hard Drives, for a period (or the equivalent) of three (3) years after the original purchase date. During this period, ELMO USA CORP. will replace parts at no charge; however, labor costs will be charged after one (1) year.

Hard Drive: Parts + Labor = 1 year warranty

Other Parts: Parts + Labor = 1st year only*

Parts: 2nd and 3rd year only

* N.B.: Compact (CP) units are warranted for only one (1) year, parts and labor.

This warranty excludes costs for initial technical adjustments (setup) which are the responsibility of the dealer from whom you purchased the unit. It also excludes damages due to misuse or neglect. Damages resulting from electrostatic discharge (ESD) will not be warranted. This warranty does not cover damages beyond ELMO USA CORP.'s control. In no event shall ELMO USA CORP. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation, operation or failure of this product. We, ELMO and its agents, are not responsible for viruses. Users should install anti-virus software on their ELMO DVR at their own risk. For more details on the limitations of this warranty, contact your distributor.

**For technical assistance, please call: 1-877-877-7241

To obtain service, please follow these steps:

1. Arrange for delivery of your equipment to: **ELMO USA CORP., 1478 Old Country Road, Plainview, New York, 11803, USA.**

2. All shipments should be shipped prepaid, insured and properly packaged (preferably in the original packaging) and accompanied by a letter outlining the defect.

3. Supply your warranty registration, bill of sale, or other evidence of purchase date.

NOTE: The ELMO DVR must be used with an Uninterruptible Power Supply (rated at a minimum of 500 watts), with range protection. Failure to do so will void all warranties!

1.4. General

This product is the product of ELMO USA CORP. advanced technology and has passed extensive reliability and compatibility tests. Copyright of this manual belongs to ELMO USA CORP., and may not be reprinted or reproduced without prior written permission. If you need to modify or repair your system, we recommend that you contact a certified ELMO Dealer/Installer. Otherwise, the system warranty will be voided. Should you have any problems or questions with our product, contact your local ELMO Dealer/Installer. This product is certified for domestic and industrial use: uTUVc certified for Europe, and UL certified for the USA.

1.5. Precautions

Please, do not install additional software on our system to be used as a personal computer. Doing so will jeopardize the performance of the ELMO DVR Server and may even result in a system crash.

When selecting a storage location for the system, be sure to avoid:

- excessive heat, such as direct sunlight or heating appliances

- moisture, dust, and smoke

- magnetic fields or electrical waves

- temperatures below 5° Celsius or 41° Fahrenheit

- any obstructions to system ventilation holes

Before installing this system, always ensure the:

- power source is located within 3 feet or 1 meter of the UPS

- power is switched off (**Do not plug the DVR unit in.)

- system and its connecting cables have sufficient space

- system is placed on an even surface

- system is situated far from electronic equipment such as microwaves, radios, fridge compressors, or any type of wireless equipment such as a telephones or cell phones)

- system is at room temperature (18° - 25° Celsius or 64.4° - 77° Fahrenheit)

1.6. Unpacking

To unpack the ELMO DVR, follow these steps:
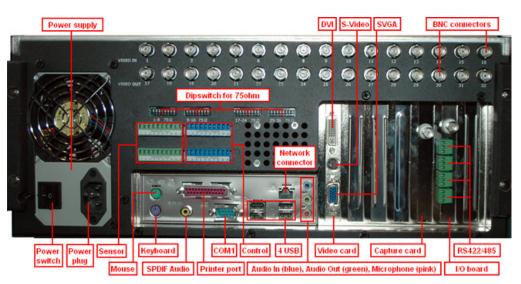
1. Place the box on a flat, clean surface.

2. Remove the box by pulling and lifting the system up with both hands.

3. Place the system down carefully.

4. Read the User Manual thoroughly before installing the system.

5. Make sure all the parts listed below have been included:

1.7. ELMO DVR Back View

The following diagram displays the back of the ELMO DVR:

2. Starting ELMO DVR Server

The ELMO DVR Server is the professional intelligent and innovative software application that offers the user a variety of controls and settings that make the experience with ELMO DVR effortless and efficient.

Usually the ELMO DVR Server starts automatically; if it doesn't, click the **ELMO Server** icon on the Desktop.

With Windows 2000™ and Windows XP™, virtual keyboard can be used to enter information. Click the keyboard icon located on the lower right-hand side of the main screen.

2.1. Logging In/Out

After installation, ELMO DVR automatically creates an administrative account (elmo). It is recommended to change the password for this account or to create at least one other Master User account to set up accounts for other users. It is advisable to reserve the master user option for technicians only. Only the master users have access to the ELMO DVR Desktop and can create other master users.

See Password Setup for more information.

In case if the username and/or password were lost, contact the local dealer for information on how to reset them.

To log into the ELMO DVR Server, do the following:

1.
   Click **Login**

2. The **Log In** window will appear on the screen

3. If logging in for the first time, enter **elmo** for *User Name* and **elmo** for Password. Or log in with the name and password assigned by system administrator. Use the virtual keyboard if necessary.

4. Click the **OK** or press **Enter** to continue

To log out of the ELMO DVR Server, do the following:

1.
Click **Logout**

2. The confirmation window will be displayed. Click **OK** to log out.

Related Topics: Password Setup

2.2. ELMO DVR Server Main Screen

Main Screen contains the following areas:
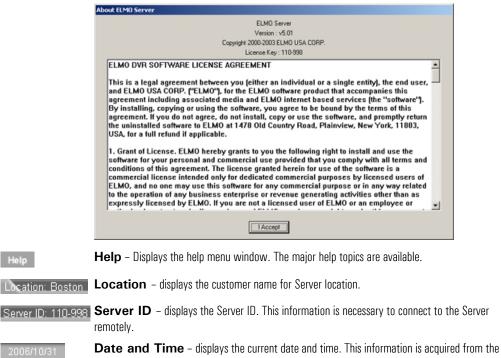
1. About	**7.** Search	**13.** Sensor/Control panel
2. Help	**8.** Setup	**14.** Exit
3. Server Location	**9.** Panic	**15.** Snapshot Button
4. Server ID	**10.** PAC	**16.** Rotate Cameras
5. Date and Time	**11.** Storage/Hard Drive Meter	**17.** Full Screen
6. Login/Logout	**12.** Camera panel	**18.** Screen Division Buttons

ELMO DVR Server Main Screen Features:

About - Displays the ELMO license agreement and the version of the ELMO DVR Server software installed. Click **I Accept** to close.

Help – Displays the help menu window. The major help topics are available.

Location – displays the customer name for Server location.

Server ID – displays the Server ID. This information is necessary to connect to the Server remotely.

Date and Time – displays the current date and time. This information is acquired from the Windows OS. If date/time is not correct, access the Desktop (Master users press **Alt** + **Shift** + **Ctrl** + **F4**) and double-click the Windows time display in the right-hand corner. Set the appropriate time, click **Apply** and restart the ELMO DVR.

Login/Logout – in order to access the ELMO DVR Server Setup, search or view the cameras or access PACDM™ the user must first log in.

> **Note**
> Only the users logged-in as the master users can access the Desktop.

Search – displays the ELMO DVR Server Search window, which permits camera playback and search, image editing and printing, file backup by time/date/camera, object search, etc.

Setup – displays the ELMO DVR Server Setup menu

Panic – the Panic button acts as an Active Sensor Backup. When **Panic** is clicked or the sensor is activated the system will backup the 5 prior minutes of encrypted video onto a CD. The post-activation length of recording is configured by the user in the System Setup menu.

PAC – brings up PACDM™ software for generating reports and P.O.S. or Card Access transactions searching.

> **Note**
> If no SPK key, the demo version of PACDM™ software will be displayed.

Total Space (Storage/Hard Drive Meter) – Displays the total space available on the hard drive. Also displays the amount of remaining free hard drive space available for video recording. When no empty space is remaining, ELMO DVR Server goes into the Overwrite mode and the word "Recycling" is displayed on the Total Space meter.

ELMO Server

Do you want to shutdown system?

Yes   No

> **Note**
> To exit the software without shutting down, master users should press
> Alt + Ctrl + Shift + F4.

Camera panel

Camera panel indicates the ELMO DVR recording activity. Highlighted camera numbers represent currently recording cameras. In the example below, cameras 1 and 2 are currently recording.

Sensor and Control panel

The Sensor/Control panel activates selected controls and displays sensor status. Selected controls and triggered sensors are highlighted on Sensor/Control panel. In the example above, Sensors 7-8 are triggered and Controls 3-4 are activated. Control acts as a relay and can be controlled by a user (turned on/off) from the Sensor/Control panel (authorized users only). Sensor works as a switch and cannot be manually controlled from the main screen.

Screen Division

The Screen Division buttons allow for customization of the main screen appearance. When a specific Screen Division is chosen, the corresponding amount of cameras will be displayed on the main screen. **Important:** The first available

cameras will be displayed. E.g. If the ELMO DVR has 12 available cameras and the 9-cameras screen division is selected, Cameras 1-9 will be displayed on the main screen in a 9-cameras screen division. Screen Division button settings can be customized in the Screen Division Setup to display the selected cameras instead of the first available cameras. E.g. The 4-cameras Screen Division button can be customized to display Cameras 2, 8, 10 and 11 instead of Cameras 1-4.

The Screen Division buttons change on cursor-over and when clicked. The red Screen Division button is the one currently activated

Displays the first 4 available cameras in a 4-cameras Screen division on the Main Display Screen. Click again to display next 4 cameras

Displays the first 6 available cameras in a 6-cameras Screen division on the Main Display Screen

Displays the first 9 available cameras in a 9-cameras Screen division on the Main Display Screen

Displays the first 10 available cameras in a 10-cameras Screen division on the Main Display Screen

Displays the first 13 available cameras in 13-cameras Screen division on the Main Display Screen

Displays the first 16 available cameras in a 16-cameras Screen division on the Main Display Screen

Rotate Cameras - This button continuously rotates cameras in the quad screen division (4-cameras screen division) in a sequence (1-4, 5-8, 9-12, 13-16, 17-20, 21-24, 25-28, 29-32 (if applicable)). To stop camera rotation, click the desired **Screen Division** button or click **Rotate Cameras** again to deactivate it.

Full Screen - This button displays a single camera or chosen screen division without any menu bars (no interface shown). Right-click to exit the full-screen mode.

Snapshot - This button allows taking a snapshot of each connected camera in the Live mode. Ensure that the **Display Snapshot Button** checkbox is checked off in the Server Information setup tab and the Snapshot Setup tab are properly configured. If the Snapshot Setup is not configured, the Snapshot button will become inactive.

Related Topics: Screen Division | Server Information | Password Setup | Snapshot Setup

2.3. PTZ mode

The remote control feature of the PTZ camera, controlled by a user through ELMO software, is one of the camera's main advantages. Ensure that the PTZ function in the Hardware Setup menu is enabled and that the correct brand and make of PTZ camera is chosen from the list.

To access the PTZ mode, do the following:

1. Locate a PTZ camera in the main ELMO DVR Server window

2. Click on the image. The PTZ window will be displayed.

PTZ cameras can be controlled from:

1. ELMO DVR Server (authorized users only)

2. ELMO DVR Remote (authorized users only)

3. ELMO Websecurity
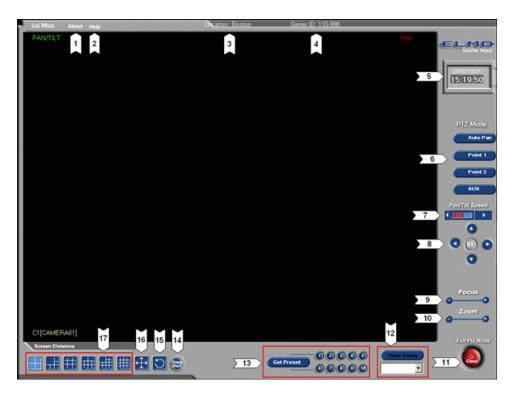
In the PTZ window the user can:

1. change the pan-tilt settings

2. zoom in and out

3. focus the image

4. configure the presets and the preset touring

The PTZ window can be controlled with:

1. The PTZ window buttons

2. The Mouse in-cameo function. To do so, point towards the desired direction with the mouse cursor, click and hold left mouse button

3. The Keyboard Num Pad arrow buttons (4 and 6 for Pan; 2 and 8 for Tilt; - and + for Zoom in/out functions)

The main areas of the PTZ mode window are:

1. About - *Same as in the main screen*

2. Help - *Same as in the main screen*

3. Server Location - *Same as in the main screen*

4. Server ID - *Same as in the main screen*

5. Date and Time - *Same as in the main screen*

6. PTZ Camera Menu

7. Pan/Tilt Speed

8. Pan/Tilt Setup

9. Focus

10. Zoom

11. Close – *Exits the PTZ Mode*

12. Preset Touring

13. Preset Setup

14. Snapshot Button - *Same as in the main screen*

15. Rotate Cameras - *Same as in the main screen*

16. Full Screen - *Same as in the main screen*

17. Screen Division - *Same as in the main screen*

PTZ Camera Menu - this area is specific to each PTZ camera. The OSD button for Speed dome camera will be replaced by AUX (Auxiliary) button for other supported PTZ camera models. This function allows changing the camera settings remotely through the software, as opposed to adjusting settings manually on the mounted camera.

Pan/Tilt Speed – this is the speed of the camera response to the user input. Increase the Pan/Tilt speed for the PT camera to move faster. Increase or decrease Pan/Tilt speed by clicking the arrows.

Pan/Tilt Setup – adjust camera Pan-Tilt position by clicking the arrows up and down for Tilt; left and right for Pan.

Focus - Focus the image by clicking + and - signs

Zoom - Zoom the PTZ camera in and out by clicking + and - signs

Preset Touring - this setup allows for the configuration of the presets used by the Preset Touring function.

Preset Setup - this menu allows for the set up of up to 10 presets for each PTZ camera. A preset is the unique combination of Pan, Tilt and Zoom values for each camera that gets recorded and stored by the ELMO DVR Server. After the preset is programmed, only one button has to be clicked to position the camera in the specific direction and/or zoom in/out instantly. The presets

configured in this menu are also used by Intelli-Zone™ and the Preset Touring function.

To configure the presets for a PTZ camera, do the following:

1. Enter the PTZ mode by clicking on the PTZ camera on the main screen.

2. Locate the Preset menu in the bottom of the screen:

3. Click **Get Preset**. The button will become **Set Preset**

4. Program the desired Preset (see instructions below).

5. AFTER programming the preset, click the **Preset** number (1-10). The preset gets recorded once the preset number is clicked.

6. Repeat **Steps 4**-**5** to configure all presets.

7. Exit PTZ mode

Program the desired Preset with the PTZ window buttons:

1. Adjust camera Pan-Tilt position by clicking the arrows up and down for Tilt; left and right for Pan.

2. Increase/Decrease Pan/Tilt speed by clicking the arrows. The higher the speed, the faster the PTZ camera will move in response to the user command.

3. Focus and Zoom in/out by clicking + and - signs

OR

Program the desired Preset with the in-cameo PTZ function:

1. Point with a mouse cursor in the desired direction. An arrow will appear.

2. Hold down the left mouse button, the camera will move in the desired direction.

3. Focus and Zoom in/out with the **Focus** and **Zoom** buttons on the right side of the window.

OR

Program the desired Preset with keyboard:

Use Num Pad arrow buttons (4 and 6 for Pan; 2 and 8 for Tilt; - and + for Zoom in/out functions)

Related Topics: Camera Setup | Preset Touring | Intelli-Zone™

> ⓒ **Note**
>
> PTZ function has to be enabled and Camera ID has to be assigned for all PTZ cameras in Hardware Setup.

3. Configuring ELMO DVR Server

ELMO DVR Server Setup. Save and Close buttons.

Every ELMO DVR Server Setup page has **Save** and **Close** buttons:

The Setup tabs that require user input have a Virtual Keyboard button:

Click **Save** before closing the Setup window or accessing a different Setup tab in order to save any changes made.

OR

Click **Close** to exit without saving.

When trying to change the Setup tab or close Setup without saving, a confirmation window will appear:

Click **Yes** to save the changes. Click **No** to exit without saving. Click **Cancel** to continue editing setup settings.

3.1. Hardware Setup - Camera Setup

3.1.1. Overview

Camera Setup allows:

1. Assigning a numerical camera ID number to each selected camera

2. Associating Sensor(s) with selected cameras

3. Configuring selected cameras to record based on motion that occurred on associated camera(s)

4. Choosing the PTZ camera type

5. Setting up an auto pan for selected cameras

3.1.2. Creating/Modifying Camera Settings

Camera Setup

To setup all connected cameras, do the following:

1. Check the **Enable** checkbox for all connected cameras. The numbers correspond with the physical BNC connectors in the back of the DVR.

2. Assign a **Camera ID** to any camera that can be controlled by a user - a P/T camera. Cam IDs are assigned in order to distinguish between the different P/T cameras connected to the same parallel connection. Most Speed Domes have their Cam ID assigned by dip-switches in the back of the camera. Fixed cameras do not have a Cam. ID.

3. **Label the cameras** for easy identification (e.g. Front Door)

4. Enter the **Sensor** number to be associated with the specific camera. If the specific sensor is triggered, that camera will begin recording (see Sensor Setup, Schedule Setup). In the above example, if Sensor 2 is triggered, Camera 1 (Front Door) will start recording.

5. In the **Motion** field associate the current camera with one or more cameras. When motion is detected on an associated camera(s), the current camera will start recording. Motion detection has to be configured and Schedule Setup has to be set to Motion recording for the associated camera(s). (see Motion Setup, Schedule Setup). In the above example, if the motion occurs on Camera 3 (Back Door), Camera 1 (Front Door) and 4 (Warehouse) will begin recording.

6. Check the **P/T/Z** (Pan-Tilt-Zoom) checkbox for cameras supporting the P/T feature

7. Choose the correct camera make and model (Type) for the PTZ cameras from the list provided

8. Check the **Auto-Pan (A/P)** checkbox for the installed PTZ cameras. This feature allows the PTZ camera to return to the programmed auto pan after a user adjusts the PTZ settings remotely and exits the program without returning to the original settings.

9. Assign **Dwell Time** for the A/P setting. This is the time that will pass before the Auto-Pan (A/P) will be activated. In the above example, Camera 1 will return to the original pan after 20 seconds.

Related Topics: PTZ mode | Sensor Setup | External Monitor | Motion Detection | Schedule Setup | Screen Division | Password Setup

3.2. Hardware Setup - Sensor Setup

3.2.1. Overview

In the Sensor Setup the user can configure the connected sensors. Sensors are set as NC or NO (NC = Normally Closed; NO = Normally Open).

An **NC** sensor is any sensor with an electrical circuit closed by default.

E.g. - a sensor on a closed door. When the door is opened, the electrical circuit is broken and the sensor is triggered.

> **Note**
>
> This feature is NOT available on ELMO DVR Remote.

> **Note**
>
> The BNC connector number does not have to match the Cam. ID number.

> **Note**
>
> This feature is NOT available on ELMO DVR Remote.

An **NO** sensor is any sensor with electrical circuit open by default. E.g. - the light in a refrigerator. The light is off by default. When the refrigerator door is opened the circuit is closed and thus the sensor is triggered and the light goes on.

3.2.2. Creating/Modifying Sensor Settings

To configure the available sensors, do the following:

1. **Enable** all connected sensors

2. Choose **NC** or **NO** depending on the type of the sensor

3. Choose which WAV file will play when the Sensor is triggered. Type in the WAV file name in the field provided. The WAV files are stored in the C:\ELMO_Server\WAV folder.

4. Choose **Enable Alarm** to have the chosen custom alarm sound every time the sensor is triggered

   OR
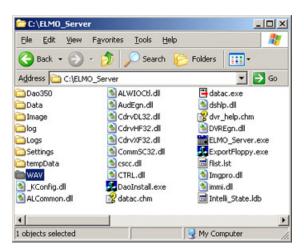
   Choose **Disable Alarm** to disable the custom alarm. The internal speaker alarm will sound instead.

5. Set the Post Recording time between 1 and 60 s. In this example, the camera(s) will record for 60 seconds after the Sensor is activated or after the detected motion stops.

To customize the Alarm for Sensor activation, do the following:

1. Record the sound file in the WAV format

2. Save the file in the C:\ELMO_Server\WAV folder

3. In the Sensor Setup, type the WAV- source file name with the file extension in the **Sound File** field. In the above example, the customized WAV files are chosen for Sensors 1-5.

> (☞) **Note**
>
> Motion and Schedule Setups must be configured.

Related Topics: Camera Setup | Control Setup | Preset Touring | Schedule Setup | Communication Setup | Server Information | System Setup | E-Map Setup | Email Setup

3.3. Hardware Setup - Control Setup

3.3.1. Overview

Control settings are applicable only if controls are available and are being used.

Active Time

Active Time refers to the designated time when the control is active (is on). The default setting is **00:00-00:00**, which means the control is always off. The control will be continuously on, if the Active Time is set to **00:00 - 24:00**. During the Active Time, the control cannot be turned off from the main screen. Outside of the Active Time, the control can be activated by sensor, or manually from the main screen.

Dwell Time

Dwell Time is the time that the control will stay turned on when it is sensor-triggered. This does not apply if the control is turned on manually from the main screen. In other words, if the control is turned on manually from the main screen, it will stay on until manually disabled by the user. Dwell time also does not apply during the Active Time, when the control is continuously on.

3.3.2. Creating or Modifying Control Settings

To configure the available controls, do the following:

1. Check the **Enable** checkbox for all installed controls

2. Give each control a descriptive **Name**.

3. Set the **Active Time** for each control if required. In the above example, Control 1 (Open the Door) is always off; Control 2 (Turn on the Light) is continuously on between 8:30 AM and 5 PM.

4. Associate the controls with the desired **Sensors**. If a selected sensor is triggered outside of the Control Active Time, the specific control is activated. In the above example, if Sensor 1 is triggered, Control 1 (Open the Door) will be activated. If the Sensor 3 is triggered, Control 2 will be activated.

5. Enter the **Dwell (Sec)** time for the control. In the above example, Control 1 (Open the Door) will stay on for 5 seconds if Sensor 1 is triggered. Control 2 (Turn on the Light) will stay on for 10 seconds if Sensor 3 is triggered outside of the Active Time.

Related Topics: Sensor Setup | Motion Detection | System Setup | E-Map Setup | Intelli-Guard™ | Intelli-Zone™ | VideoLogix™

3.4. Hardware Setup - External Monitor Setup

3.4.1. Overview

The **External Monitor** section allows the user to view specified cameras on an external monitor. Cameras are displayed one-by-one in a sequence with a delay equal to the dwell time.

Dwell (Sec)

Dwell refers to the interval (in seconds) between the display of each camera.

3.4.2. Creating or Modifying External Monitor Settings

To set up an External Monitor do the following:

1. Select the cameras to be shown in the sequence

2. Specify the **Dwell** time for the sequence. (1-10 sec)

3. Click **Save**

OR

1. Check the **Ext. Monitor Follows Main Screen** checkbox to associate the external monitor with the ELMO DVR Server main screen.

2. Click **Save**

If the **Ext. Monitor Follows Main Screen** option is unchecked, the External monitor will display selected cameras one-by-one in the sequence. Each camera will be displayed for the length of the Dwell time configured in the External Monitor setup. In this example, cameras 4, 9-12 will be shown in a sequence on the external monitor. Each camera will be shown for 1 second.

If the **Ext. Monitor Follows Main Screen** option is checked, the configured camera sequence will be ignored. The External monitor will display the camera currently in full screen mode in the ELMO DVR Server - chosen by the user or in response to detected motion. The external monitor will display the last camera until the next camera is displayed in the Full Screen mode in the ELMO DVR Server.

Related Topics: Camera Setup

3.5. The Preset Touring & Alarm/Preset Setup

3.5.1. Overview

The Preset Touring & Alarm/Preset Setup in the Hardware Setup tab is for PTZ camera setup. The presets for PTZ cameras are configured in the PTZ mode. Preset Touring specifies the time that the PTZ cameras dwell on each configured preset, and the Alarm/Preset Setup associates enabled sensors with configured presets for PTZ cameras. Each time a specific Sensor is triggered, the assigned PTZ camera preset will be activated.

3.5.2. Configuring Preset Touring & Alarm / Preset Setup

To set up the Preset Touring, do the following:

1. Program all desired presets in the PTZ mode

2. In PTZ mode, click on the drop-down menu under the **Preset Touring** button and check all the presets that will be used in the Preset Touring sequence. In the example below, Presets 1,3,4,5, and 8 will be used in Preset Touring.

3. In PTZ mode, click the **Preset Touring** button

4. The **Preset Touring** will become **Stop Touring**. Click **Stop Touring** to stop camera touring.

5. Exit PTZ mode

6. In Hardware Setup, enter the **Working Time** value. This will configure the time that the PTZ camera will remain at each preset. In the example below, the PTZ camera will remain at each preset for 5 seconds.

7. Click **Alarm/Preset**. The **Alarm/Preset** window will appear.

8. Configure the Preset for each camera related to the sensor number that will activate the specified preset. In example below: Sensor 1 activates Preset 4 on Camera 1; Sensor 2 activates Preset 9 on Camera 5; Sensor 4 activates Preset 1 on Camera 7; Sensor 5 activates Preset 5 on Camera 2.

Related Topics: PTZ Mode | Camera Setup | Sensor Setup

3.6. Motion Setup

3.6.1. Overview

Motion Setup allows for the configuration of up to 5 motion detection zones for each camera. Video display and recording options are configured in the Setup menu.

> ### 📧 Note
>
> Unless Motion Recording is activated in the Schedule setup, the camera will not record and motion will not be detected even if the Motion detection target zones are configured for this camera.

3.6.2. Setup for individual camera

To set up each individual camera, do the following:

1. Click the camera number. The chosen camera will be displayed in the live view screen.

2. Set the camera's **Sensitivity**. The greater the Sensitivity, the less change in an image is needed to set off the alarm. If the Sensitivity is set to Less, the change in an image will have to be dramatic to be detected as motion. This function only works properly indoors. The natural changes in the outdoor environment (e.g. clouds) can cause false alarms.

3. Check the **Alarm** checkbox to enable the internal speaker alarm for the Motion Detection

4. Set the Active Time for the **Alarm**. If the motion is detected outside of the active time, the Alarm will not go off. In this example, the Alarm is always active.

5. Check the **Control** checkbox to enable the control association for the chosen camera

6. Choose the control number to be associated with the Motion detection on the chosen camera. In the example above, the Control 2 will be activated if any motion is detected on the selected camera.

7. Set the dwell **[Time]** for the control feature. This is the length of time that the control will stay on if activated by Motion detection. In the example above, the control will stay on for 5 seconds.

To draw the Motion detection zones on the selected camera, do the following:

1. Place the cursor at the starting point on the live view screen

2. Hold down the left mouse button and drag to draw a rectangular area. Up to 5 motion detection zones can be configured.

3. Adjust the area if necessary

4. Click **Area Clear** to reset all motion detection zones on a specified camera

5. Click **Area Draw** to set the entire camera screen for motion detection

3.6.3. Individual Camera Adjustment

1. Set the **Brightness**, **Hue** and **Contrast** for the selected camera

2. Choose between **Color** and **Monochrome** recording. Color recording provides the realistic video images. Monochrome is best suited for low light conditions, such as nighttime recording.

3. Click **Default** to reset the Brightness, Hue and Contrast values back to 0

3.6.4. Setup For All Cameras
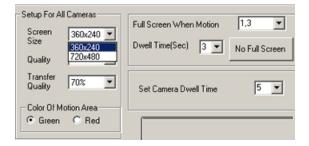
To set the motion detection zones for all cameras, do the following:

1. Click **Area Draw** to select entire screen on all cameras for motion detection

2. Click **Area Clear** to clear all selected zones on all cameras. This will disable motion detection.

3.6.5. Setup For All Cameras - Recording/Display Options
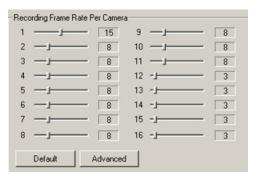
To set up recording/display options for all cameras, do the following:

1. Choose the **Screen Size** for all cameras from **360x240** and **720x480** pixel. Screen Size refers to the resolution of the received video image. The larger the screen size, the larger the picture and the better the quality. Large screen size, however, will result in larger file size and shorter recording period.

2. Choose **Quality** (30%-100%). This value refers to the recording quality of the video. The higher the percentage, the better the recording quality.

3. Choose **Transfer Quality** (30%-100%). This value refers to the transfer quality of the video recording that is viewed remotely through ELMO DVR Remote. The lower the quality, the worse the image appearance. The transmission speed, however, improves as the quality decreases.

4. Choose **Color of Motion Area** between Green and Red depending on personal esthetical preferences. When the motion is detected on a specific camera, the triggered motion detection zone will be highlighted on the main screen in the chosen color.

5. Set the cameras to be displayed in the Full Screen mode on the main screen, when motion is detected. One or more cameras can be configured. Separate camera numbers with commas. In this example cameras 1 and 3 will be displayed in the Full Screen mode if the motion is detected on them.

6. Set the **Dwell Time(Sec)** (1 to 60 seconds) for the camera to stay in the full screen mode after the motion detection. In the example above, the camera will remain in the Full Screen mode for 5 seconds after the motion detection.

7. Click **No Full Screen** to reset the **Full Screen When Motion** option

8. **Set Camera Dwell Time** (3 to 30 seconds). This is the Dwell time for the camera rotation on the main screen. When the main screen is set to 4 cameras division and **Rotate** is clicked, available cameras will rotate according to the dwell time specified. In this example, the quad screen will display next 4 cameras every 5 seconds.

> **Note**
>
> This option only becomes available when 8 or more cameras are supported by the system.

3.6.6. Recording Frame Rate per Camera

Adjust the frame rate value individually for each camera. The sum of fps for all cameras is the maximum fps supported by the capture board.

In this example, it is known that the ELMO DVR has 12016 connected cameras. The total fps number cannot exceed 120 fps.

Increase the fps number for the cameras facing most important locations or locations, where most activity occurs. Increasing the fps on specific cameras will decrease the fps number on the rest of the cameras in order to preserve the total fps number.

Click **Default** to assign the common denominator fps for all enabled cameras. (E.g. If ELMO DVR has 120xx series capture board installed, and 12 connected cameras, 10 fps value will be assigned to each camera by default.) All disabled/unavailable cameras will automatically be assigned fps of 0.

> **Note**
>
> If the VideoLogix™ is enabled for a specific camera, the maximum frame rate is 13 fps.

3.6.7. Recording Frame Rate per Camera - Advanced Setup

In the Advanced Setup:

1. Configure the **Record Frame** FPS for each camera

2. Configure the **Emergency Frame** FPS for each camera. The Emergency Frame Rate is activated when motion is detected on the specific camera. This function will reduce the recording speed on all other cameras to compensate. The camera will return to its normal recording speed once the motion has stopped. In this example, the recording speed is 10 fps for all 12 connected cameras. When the motion is detected, the camera, where the motion has occurred, will start recording 30 fps.

3. Configure the **Resolution** for each camera

4. Configure the **Recording Quality** for each camera

5. Configure the **Transfer Quality** for each camera

6. Click **Reset** to reset all changes. Click **Ok** to save the changes.

Related Topics: Camera Setup | Control Setup | Schedule Setup

3.7. Schedule Setup - Simple Mode
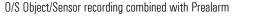
3.7.1. Overview

Schedule setup controls the type of recording for each camera: Continuous, Motion, Sensor or Pre-alarm. Each camera can have its own settings, which can also be copied to other cameras.

C: Continuous recording – the video signal is being recorded continuously. A lot of hard drive space is required for this type of recording. Continuous recording is required for audio recording. Continuous recording has to be used on its own and cannot be combined with any other types of recording.

M: Motion recording – the selected camera records only when motion is detected. Motion detection target zones have to be configured in the Motion Setup. Motion recording can be used on its own or can be combined with Sensor and/or Pre-alarm recordings.

O/S: Object/Sensor recording – the selected camera records based on the alarms triggered in the VideoLogix or when the sensor has been triggered. The VideoLogix has to be enabled for the selected camera and/or sensor has to be enabled and be associated with the specific camera in Hardware Setup. Object/Sensor recording can be used on its own or can be combined with Pre-alarm recordings. When combined with M:Motion, O/S:Object/Sensor becomes S:Sensor recording.

O/S Object/Sensor recording combined with Prealarm   Motion and Sensor recording combined with Prealarm

P: Prealarm recording – is combined with either Motion, Motion and Sensor, or Object/Sensor recording. ELMO DVR stores 5 seconds of video recording in a buffer which is continuously overwritten. If Prealarm recording is used, a 5-second video buffer is added to the beginning of the recorded video segment.

3.7.2. Creating a quick recording schedule

1. Select a Camera number

2. Select the time for video recording. Click on the schedule, hold down the left mouse button and drag it until the desired area is selected

3. Select the record mode: Continuous; Motion; Object/Sensor; Motion and Prealarm; Object/Sensor and Prealarm; or Motion, Sensor and Prealarm.

3.7.3. Creating a custom holiday

> **Note**
>
> The holiday schedule will be identical to the Sunday schedule.

1. Click **Custom Configuration**

2. Choose the date from the calendar

3. In the **Rotate** drop-down menu, choose rotation setting: **None**, **Month** or **Year**

4. Click **Add**. The date will be added to the **Holiday List** on the right.

3.7.4. Copying a schedule to other cameras

1. Click **Copy To** and choose a desired cameras from the list

2. Click **All Cameras** to apply the same schedule to all available cameras

3.8. Schedule Setup - Advanced Mode

To switch to the Advanced Mode, click **Simple Mode** and choose **Advanced Mode**.

In Advanced Mode, the time can be adjusted up to the minute:

Camera 1	Weekday		Saturday		Sunday/Custom
00:00-00:24		00:00-01:00	M:S:P	00:00-01:00	M:S:P
00:24-02:00	M:S:P	01:00-02:00	M:S:P	01:00-02:00	M:S:P
02:00-03:00	M:S:P	02:00-03:00	M:S:P	02:00-03:00	M:S:P
03:00-04:00	M:S:P	03:00-04:00	M:S:P	03:00-04:00	M:S:P

Example

The recording for Camera 1 based on the snapshot below is as follows:

Camera 1	Weekday		Saturday		Sunday/Custom
00:00-01:00	O:S:P	00:00-01:00	M:S:P	00:00-01:00	C
01:00-02:00	O:S:P	01:00-02:00	M:S:P	01:00-02:00	C
02:00-03:00	O:S:P	02:00-03:00	C	02:00-03:00	C
03:00-04:00	O:S:P	03:00-04:00	C	03:00-04:00	None
04:00-05:00	O:S:P	04:00-05:00	C	04:00-05:00	C

- Weekdays (12:00AM - 4:59AM) - based on Object/Sensor and Prealarm

- Saturdays (12:00AM - 1:59AM) - based on Motion, Sensor and Prealarm

- Saturdays (2:00AM - 4:59AM) - continuous recording

- Sundays and custom holidays (12:00AM - 2:59AM) - continuous recording

- Sundays and custom holidays (4:00AM - 4:59AM) - continuous recording

Notice that there is **NO** recording on Sundays and custom holidays 3:00AM-3:59AM. **It is highly recommended not to leave any gaps in the video-recording schedule.**

Related Topics: Camera Setup | Sensor Setup | Motion Setup | VideoLogix™

3.9. Screen Division

In the Screen Division setup, the main screen display is configured. Each screen division can be configured separately.

To configure the screen division setup, do the following:

1. Click the desired screen division icon

2. In the **Camera Selection** menu, choose all cameras that will be displayed on the selected screen division. The cameras can be chosen sequentially or randomly.

3. In the **Large Screen** drop-down menus, choose which camera(s) will be displayed in the large screen(s). This only applies to 6, 10, 13, and 33 screen divisions

Important: When switching to the larger screen division (e.g. from 4 to 16) click **Default All**, otherwise only 4 cameras will be displayed in the 16-cameras screen division.

Related Topics: Main Screen

3.10. Communication Setup

3.10.1. Overview

Communication Setup contains the Phone numbers and IP addresses that will be used in case of emergency. The phone numbers from Communication Setup are used by Intelli-Guard™. The IP Emergency Address is used to communicate with the Emergency Monitor installed on the remote system.

3.10.2. Configuring Communication Setup

To set up Communication setup, do the following:

1. Specify whether the connection is allowed. **PSTN** (Public Switched Telephone Network - modem). **ISDN** (Integrated Services Digital Network). If no connection available (no modem, no LAN, etc.), check **No Connection** - this will also prevent unwanted guests from accessing the system remotely.

2. Configure the **Live Video Stream Bandwidth**. This menu controls the bandwidth of the data transferred over the network. Select **No limit** to use all the available connection speed to transfer data. If **No limit** is selected, the Server might be slowed down in cases where multiple users are dialing into the system at the same time.

3. Define the **Frequency of Call Out** in a 24-hour period. If motion is detected or a sensor is triggered, the ELMO DVR will send an alert either to the phone number or to the IP address. The Frequency of Call Out is the maximum allowed number of phone call alerts per day. In the example below, the ELMO DVR will only dial out once every 24 hours. If the sensor is triggered more than once in 24 hours, one phone call will be made, but the rest of the occurrences will be ignored. The maximum number of phone call alerts that can be send per day is 9999. Note that this number does not limit the maximum number of alerts sent to the IP address (Remote Monitor).

Frequency of Call Out (0:00-24:00)

    1   (1-9999)

4. In the **Emergency Setup**, define which cameras/sensors will cause an alert. In this example, if the motion is detected on Cameras 1,3 and 7 or if the Sensors 2-4 are triggered, an alert will be sent.

Emergency Setup

Motion for Emergency
Message   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Sensor for Emergency   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

5. Choose **Emergency Phone Numbers** to receive an alert via telephone. The first number is the default number for all emergency communications. The second number is a backup number in case the first one fails. These numbers are also used by the Intelli-Guard™ for Auto Dial-Out.

6. Choose an **Emergency IP Address** to receive an alert on the Emergency Monitor software installed on the same or another system.

    Emergency   18008008080   Transfer Time   0
    Phone Numbers
                     18778787878

    Emergency IP   1.10.10.169   1.10.10.170
    Address

7. Set **Transfer Time**. Transfer Time specifies the time in seconds between the detected motion (triggered sensor) and the alert transmission. In the example above, the alarm will be sent to the Emergency IP address 90 seconds after the sensor has been triggered.

Related Topics: Sensor Setup | Motion Setup | Intelli-Guard™ | VideoLogix™

3.11. Server Information

3.11.1. Overview

The Server Information tab permits configuring the Server, as well as obtaining information about the Server, the ELMO DVR, and the exporting/importing settings. Setting the system time is also done on this tab.

3.11.2. Configuring Server Information Setup

The **Server ID** is a user chosen security code, to be entered when connecting remotely through ELMO DVR Remote or Websecurity. The Server ID can consist of up to 7 alphanumeric characters. When trying to connect to the server from a remote location, the system will check the Server ID, user Name and Password together. If any of these variables is incorrect, connection will fail.

In Server Information enter the following:

1. Server ID (7 alphanumeric characters - digits/letters)

2. Server Name

3. Location

4. Model

5. Distributor

6. Sale Date

7. Any other notes

3.11.3. Configuring Main Screen appearance

Configure Main Screen appearance:

Display Server Information:

When checked, Server Location and Server ID will be displayed on top of the main screen. This information is obtained from the Server Information tab.

Display Camera Status Bar:

When checked, the camera status bar is displayed on the main screen.

Display Control Status Bar:

When checked, the control status bar is displayed on the main screen.

Display Sensor Status Bar:

When checked, the sensor status bar is displayed on the main screen.

Display Motion Detection Grid:

If checked, the motion detection grid will be displayed on the main screen when motion is detected. The motion grid will be displayed in either green or red, depending on the user settings in the Motion Setup and will highlight the area selected for Motion Detection (target zone).

Check/uncheck to save image as JPEG/BMP

When unchecked, the snapshots are saved in BMP format by default. When checked, the snapshots are stored in JPEG format.

Disable Video on Main Screen:

When checked, the video from the main screen will be hidden when a user is logged in. The main screen will appear black, when this option is checked.

Display Snapshot Button

When checked, the **Snapshot** button is displayed on the Main Screen next to the Rotate button:

3.11.4. ELMO DVR Information

This part of the menu contains the following information about the ELMO DVR:

- the ELMO DVR Server version currently in use. Another way to find out which software version is in use, click **About** on the main screen.

- User Name (Windows user ID)

- Computer Name

- Product ID

- Processor type

- RAM size

- Windows operating system version

- Server Pack version

- List of drives/partitions

- Total and free space information

3.11.5. Additional Configurations

Enable Intelli Search Tooltip:

When checked, tooltips will be shown automatically when the cursor is pointed at the icon in Search mode.

Date Display Format:

Permits changing the format of date and time display. Select the desired type of display.

Sensor Type:

Select **8 Sensor** to use eight sensors and controls, and **16 Sensor** to use sixteen sensors and controls. Proper number of sensor and control buttons will be displayed on the main screen, in **Hardware** and **Communication Setup** tabs.

3.11.6. Export/Import Settings

All user settings can be exported to a folder of choice for future use. In case of multiple servers, the same settings can be easily applied by importing them from the folder.
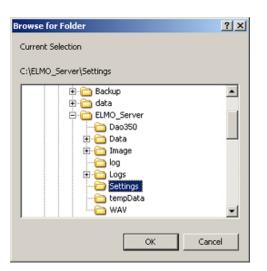
Export Setting:

Will export customized Server settings to a folder for future use.

Import Setting:

Will import customized Server settings from the folder.

All exported Server settings are stored in a chosen designated folder. To store several sets of settings, create several folders and export each set of settings to its designated folder. When exporting or importing settings, browse through the hard drive and locate the appropriate folder for the exportation/importation of the Server settings and click **OK**.

3.11.7. Setting the System Clock

Adjust the System Clock if the system was shipped from a different time zone.

Get Time:

Imports the time from the Windows operating system.

Set Time:

The clock can only be set forward, not backwards. To set the clock back, exit the software and adjust the time in the Windows operating system. If the time is set forward in the Server, it will automatically be applied to the Windows system time.

If the time change has been successful, the following window will appear:

If an attempt was made to set the time backwards, the following warning window will appear:

3.11.8. Switching to the Daylight Saving Time

Setting the time forward one hour will cause no system confusion. The particular hour jumped will simply be missing from the timeline. However, a problem may occur when the time is moved back one hour in the fall. When this happens, the system will have to overwrite the previously recorded hour of information. As a result, valuable information could be lost, which is why the System time can only be set forward from the ELMO DVR Server. The latest ELMO DVR Server version has a newly developed, efficient way of avoiding this problem.

When servicing the older ELMO DVR Server versions (version E and older), a technician must manually adjust the Daylight Saving Time on the machine and then reboot the system. In the new ELMO DVR Server versions (2003G and up) a 25th hour is added when the Daylight Saving Time ends in the Fall and clocks are set back an hour. This new method of time adjustment prevents the loss of video data and does not "confuse" the system.

Example: With the new method, the timeline has two '1:00's. In this way the video data will not be lost or recorded over, and the system time stays correct and up-to-date.

Related Topics: Main Screen | Search Window

3.12. Password Setup

3.12.1. Overview

In Password Setup, the administrator can create, delete and configure other users' accounts.

After installation, ELMO DVR automatically creates an administrative account (elmo). It is recommended to change the password for this account or to create at least one other Master User account to set up accounts for other users. It is advisable to reserve the master user option for **technicians only**. Only the master users have access to the ELMO DVR Desktop and can create other master users.

The master user accounts do not expire. For all other accounts **Expiry Date** and **Daily Active Time** can be configured. **PTZ Priority** can be configured for all user accounts.

Selected cameras, ELMO DVR Server functions and Setup tabs can be disabled in individual users' accounts in the Password Setup. The Password Setup allows the manager/administrator to restrict certain users from accessing the setup tabs with important settings that should not be changed by non-authorized users. The administrator can choose to disable certain setup tabs, such as Hardware Setup, Passwords Setup and Storage Setup tabs or "hide" specific cameras from the users.

When the Setup tab (camera) is disabled in the Password Setup, it will not show up in the user's Setup menu (main screen) when they log in with their user name and password.

3.12.2. Setup List

The Setup List has the list of all ELMO DVR Server setup tabs, main screen and other functions that can be blocked from the individual users:

- **PAC** - When unchecked, hides the PAC button from the main screen. This option will not be displayed if the SPK key is not plugged in.

- **Enable MainScreen Function** - If unchecked, this option will disable the following main screen functions: Control panel, Screen Division buttons, **About** and **Help** buttons

- **Exit** - When unchecked, disables the **Power** button

- **Search** - When unchecked, hides the **Search** button from the main screen

- **Enable PTZ** - When unchecked, the PTZ cameras will not respond to the user command

- **In-cameo PTZ** - When unchecked, disables the mouse PTZ control in PTZ mode

- **Disconnect Remote Client(s)** - When unchecked, the user will not be unable to access the Setup menu, if someone dials into the ELMO DVR Server remotely (through ELMO DVR Remote or Websecurity). When checked, all remote clients will be disconnected and the user will have access to the ELMO DVR Server Setup.

ELMO DVR Server warning message   ELMO DVR Remote warning message

- **Panic Button** - When unchecked, hides the **Panic** button from the main screen

3.12.3. Creating new users

1. Click **Add User**

2. Enter **User Name** and **Password**. Confirm Password.

3. Check the **Master User** checkbox to create a master user account.

4. For non-master users select **Never Expires** or configure the **Expiry Date** (default 3 months) and **Daily Active Time**. In the example below, the user's account will expire on December 31st, 2007. The user can log in daily from 8:00AM to 5:00PM.

   The user will get the following message when trying to log in before the **Start Date** / past the **Expiry Date** or outside of the **Daily Active Time**.

5. Enable the Setup features and Setup tabs that the new user will have access to in the Setup List

6. Enable all the cameras that the new user will have access to in the Enable Camera list

7. Configure the **PTZ Priority** (1-30). The lower the number, the higher the priority. By default, the master users are assigned the PTZ Priority of '1', and the non-master users - the priority of '30'. The **PTZ Priority** setting is used to determine the user priority, when two or more users are trying to control the PTZ camera remotely.

8. Click **Save**. The new user will appear on the list.

3.12.4. Deleting existing users

To delete an existing user, do the following:

1. Click the user account to select it

2. Click **Delete**

3. Click **Save**

3.13. Audio Settings

3.13.1. Overview

Audio recording is available with your ELMO DVR if a sound card is installed. Audio Setup displays the number of audio channels supported by the system. In case the system does not have a sound card installed, or the sound card has not been detected, the message "Audio Recording Disabled" will be displayed.

> (☞) **Note**
>
> Continuous video recording is required for Audio Recording.

3.13.2. Configuring Audio Setup

To enable audio recording on specific cameras, do the following:

1. Select the camera in the **Associate Audio with Camera** menu

2. Check the **Enable Audio Recording** checkbox

To enable audio playback on specific cameras, do the following:

1. Select the camera in the **Associate Audio with Camera** menu

2. Check the **Enable Audio Playback** checkbox

To test the audio channel, do the following:

1. Select the camera in the **Audio out test** menu

2. Check the **Enable Audio Out** checkbox. The incoming audio signal will be sent to the system speakers

Related Topics : Schedule Setup

> ### ☞ Note
> This function is only available for the cameras that have Audio Recording enabled. When the video recording from these cameras is played back in the Search mode, the audio recording is played back together with video.

3.14. System Setup

3.14.1. Overview

In the System Setup tab, the user can:

1. Configure server restart time

2. Enable watermarking features

3. Configure backup schedules

3.14.2. Configure System Restart Time

Enable the system restart time and set the system to restart once a week. Choose the most convenient time for the customer. If the system freezes it will be restarted by the I/O board. If, however the system is running smoothly without freezing, it can work for months without being restarted. The caches that will accumulate in that period of time will eventually slow the system down. To avoid this problem, it is advisable to set the weekly restart time for the system.

> (☞) **Note**
>
> This feature is NOT available on ELMO DVR Remote.

3.14.3. Synchronize System Clock with NTP Server

This feature allows synchronizing the DVR system clock with one of the default NTP servers daily based on the user-defined time. This function allows keeping the system time up-to-date without having to log out of the ELMO DVR Server and updating the system time via Windows OS.

To use this feature, check off **Enable** checkbox.

Configure the **Daily Synchronize Time** (24 hour clock). The system time will be synchronize daily based on the time configured. The process may take several minutes. During the synchronization process, the following message will be displayed.

Synchronizing system clock with NTP server... Please wait.

In addition to updating the system time, the synchronisation feature also checks the SPK key status every hour. If the SPK key has been removed from the system, the PACDM application will stop working after the SPK key status is set to "missing" by synchronisation feature.

3.14.4. Watermarking

Please note that the video recordings and snapshots made with ELMO DVR Server are **always** watermarked, regardless of the user configuration of this menu.

In the **Watermark** menu select one of the following (only one checkbox can be checked at the same time):

Display WATERMARK logo - If checked, the watermark logo will be displayed during the playback in the top right corner. Uncheck to hide the logo. Note that even if the watermark logo is hidden, the video is watermarked.

Embed Text Overlay - If checked, the text "ELMO" will be embedded in the right bottom corner of every video frame. After the overlay text is embedded, it becomes a part of the video recording and cannot be hidden. Uncheck to record without the embedded text.

3.14.5. More about Watermarking

When performing a snapshot backup from the Search mode, the option of saving the WaterMark check program on the hard drive is available. Click **Yes** if this program has not been previously saved on a hard drive. If it has, there is no need to include it again. The **Wmchecker.exe** file will be added to the same folder as the saved snapshot.

3.14.6. Checking Authenticity of a Watermarked Image

To check the snapshot authenticity with the WaterMark checker, do the following:

1. Locate the folder, where the snapshot was saved.

2.

   Locate the WaterMark Checker Program: **Wmchecker.exe** Wmchecker.exe

3. Double-click to open the program.

4. Click **File Open** and choose the saved watermarked snapshot. The snapshot will be either in *.bmp or *.jpeg format, depending on the customer settings in the Server Information Setup tab.

5. Click **Water Mark Check**

6. If an image is intact and has not been edited/altered or tampered with, the Watermark will be recognized and approved.

7. If an image was edited/altered or tampered with, the program will report the corrupted Watermark.

3.14.7. Creating Scheduled Backup

In the Backup menu:

Backup Settings: Set schedule for local or remote backups

Activate Sensor Backup: Configure the recording settings for the main screen's **Panic** button feature. Associate the backup with the specified Sensor(s). If a Sensor is triggered, or **Panic** is clicked, an encrypted video backup will be performed onto a CD-R/DVD-R.

The Scheduled backup is the scheduled encrypted backup. The Scheduled backup can be performed to both Local and Remote drives. A number of media can be chosen for the same scheduled backup process.

To create a scheduled backup, do the following:

1. Click **Backup Settings**

2. Click **Add**

3. In the **Add Schedule** window, name the backup schedule

4. Set the **Start** and **End time** of the scheduled backup recording

5. In the **Rotate Option** drop-down menu, choose from: **None**, **Weekly**, **Monthly** or **Yearly**

6. In the **Backup Start Time Interval After** drop-down menu, choose from: **Immediately**, **1, 2, 3** or **4 hours**.

7. Click **Add Media** to choose backup destination. More than one medium can be added to the list. Video can be saved to the Local or Remote Drive.

    Saving to the local drive.

Note

Make sure the CD-R/DVD-R is in the CD-R/DVD-ROM drive. Please avoid using CD-R/DVD-RW as the lengthy formatting process might slow down the ELMO DVR.

a. Select **Local Drive** to save an encrypted video recording to any local drive

b. Click the drop-down menu in the **Path** field

c. Select the desired drive. The recording will be saved to the **LocalDrive:\kdb\backup folder**.

d. Click **Ok**

Saving to the remote drive.

> **Note**
>
> All video recordings saved to the remote drive will be displayed under the Backup Data category in the ELMO DVR Remote local Search mode.

a. Select **Remote Drive** to save an encrypted video recording to a remote drive

b. Enter the IP Address of the remote computer

c. Enter the password to access the remote computer

> **Note**
>
> The ELMO DVR Remote Software has to be installed and the K-Remote Backup Server has to be running on the remote computer, otherwise the connection will not be established.

d. Click **Select Drive**. The **Drive Select** window will appear.

e. Choose the remote drive from the **Drive Path** drop-down menu once the connection has been established. The recording will be saved to the **RemoteDrive:\kdb\backup**

f. Click **OK**

g. Click **OK** in the **Select Backup Media** window to close its

8. Check the **Overwrite Mode** checkbox if the target medium is full. The video recording will be recorded over the old data. If this option is unchecked, no backup will be made on the full medium.

9. Choose the **Priority** of the backup video recording between **High** and **Low** priority.

There are two types of video backup: current backup and scheduled (manual) backup. If "High" priority is assigned to the scheduled backup, the current backup will be automatically assigned "Low" priority. In practice, this priority affects the speed of the process, where "High" priority results in means fast backup and "Low" results in slow backup.

10. Click **Add**. The new schedule will be added to the list.

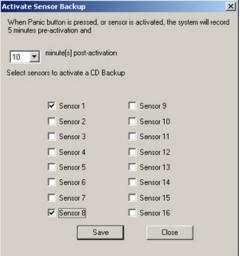11. Click on the calendar to see the scheduled backups for each day.

To delete a schedule, do the following

1. Select the schedule from the list (left-click with the mouse)

2. Click **Delete**

3.14.8. Panic and Sensor Backup

Note

This feature is NOT available on ELMO DVR Remote.

To associate the backup with a specific sensor(s), do the following:

1. Click **Activate Sensor Backup**

2. Choose post-activation recording time from drop-down menu (0-30 minutes)

3. Select desired sensors to trigger the automated backup

4. Click **Save**

5. Click **Close** to return to Setup

By default, the **Panic** button feature backs up 5 minutes of video recording prior to the sensor/**Panic** button activation. The user, however, can configure the length of time that ELMO DVR will record after the sensor/**Panic** button activation.

Important: this option is not the same as pre-alarm, which uses a 5-second buffer and adds it to the final recording. The **Panic** button does not add any buffer video recording to the final backup. Instead it backs up only the recorded information that was recorded by ELMO DVR based on the Schedule Setup configurations (e.g. Continuous recording)

The manual backup can be associated with one or more sensors. Each time the sensor is triggered, 5 minutes of video recorded prior to sensor activation, as well as the number of minutes (set by the user) of post-activation recording, will be recorded onto a CD.

In the example below: When the **Panic** button is clicked or sensors 1 or 8 are activated, the system will backup 5 minutes of pre-activation recording and 10 minutes of post-activation recording. In this case, the **Panic** button or one of the selected sensors was activated at 15:05 (blue line). This means that the actual video backup performed by the system will start at 15:00 (green line) and end at 15:15 (red line) - 5 minutes pre-activation and 10 minutes post-activation.

3.14.9. Network Port Setting

> **Note**
>
> This feature is NOT available on ELMO DVR Remote.

In this menu the network connection ports for ELMO software are configured.

> **Note**
>
> After the network port settings are changed, the system will automatically restart.

3.14.10. Video Loss Alarm

To configure the Video Loss Alarm menu, do the following:

1. Check the **Enable Alarm** checkbox to activate alarm every time that video loss is detected on any of the cameras.

2. Check the **Enable Sound** checkbox for the audible alarm to sound on PC speaker every time that video loss is detected on any of the cameras.

3. Choose the Control from the *Enable Control No.* drop-down menu to be associated with the video loss. In this example - if there is video loss detected on one of the cameras, the Control 1 will turn on (e.g. turn on a the light)

4. Set the **Working Time** for the control output and audio alarm. In this example, the Control 1 will stay on and the alarm will sound on the PC speaker for 20 seconds after video loss occurred on one of the cameras.

> ☞ **Note**
>
> In the E-Mail Setup tab, check Enable E-mail for Video Loss to receive an e-mail every time video loss occurs on one of the cameras.

3.14.11. Select the Num of days to Store Data

> ☞ **Note**
>
> This feature is NOT available on ELMO DVR Remote.

Select the number of days (1 to 30 days) for video recordings to be stored. This option has been implemented mostly for European customers. Some European countries now have legislation specifying how long a video surveillance recording can be stored. In Norway, for example, a security surveillance recording can only be stored for seven days, after which is must be deleted. Disable this feature to have video data stored for as long as there is hard drive space available.

3.14.12. Video Format

> ☞ **Note**
>
> This feature is NOT available on ELMO DVR Remote.

NTSC (North America, most of South America, Japan) video format is supported by ELMO DVR Server, v.5.01. **PAL** video format (Europe, most other countries) is not supported.

Related Topics: Sensor Setup | Control Setup

3.15. Storage Structure Setup

Attention: This function should be used by Authorized Technicians ONLY! The Storage Setup option is used to format the ELMO DVR hard drive(s) file structure. ALL VIDEO DATA WILL BE LOST! After the drive/partition is allocated, the video data that was recorded on it will no longer be accessible.

Understanding ELMO DVR storage structure:

In order for the ELMO DVR to be able to record video data on a selected drive, the drives/partitions have to be structured in a certain way. After the initial allocation of the specific hard drive/partition, the entire available space is filled with files that have the extensions *.bix and *.box.

These files act as a medium for the digital video recording. The size of these files remains static regardless of whether or not they actually contain video data (*.bix files - 2.5MB, *.box files - 64MB). These files can be compared to video/audio tapes. In both cases, the mediums of recording take up the same amount of space when they are empty, or when they contain data.

As the ELMO DVR records video information onto the prepared *.bix and *.box files, they are assigned the exact time of the video recording. Reallocating the drive will reset this time, and the video recording will be lost. All of the *.bix and *.box files remain on the hard drive after the drive is re-allocated, but they will no longer contain any video data. All days that previously contained video data in the Search window, on the Server, will appear blank.

Allocating the drive does not physically format it. To format the hard drive completely, so that it is no longer allocated for digital video recording, use the appropriate format command from the Windows OS.

3.15.1. Overview

The Storage Structure tab displays the following:

1. names of all the drives/partitions

2. capacity of each drive/partition

3. available space on each partition that can be used by OS (anything other than video recording)

4. allocation status of each drive/partition

3.15.2. Formatting ELMO DVR File Structure

To format the file structure of the selected drives or to allocate new drives/partitions for video storage, do the following:

1. Click **Modify Storage Structure**

2. Click **Yes** in the warning window

3. Close Setup and restart the ELMO DVR Server

4. When the server restarts, the Storage Structure dialog box shown below will appear. Click **Allocate**, next to the drive/partition, to allocate it for video recording, or to format the file structure.

5. The **Allocate** button will become **Cancel Allocation**. New Allocation Space represents the hard drive space that will be used exclusively for video recordings (i.e. will be filled with *.bix and *.box files).

6. Click **Proceed** to start the allocation process

7. The Format confirmation window will appear. Click **Yes** to proceed with formatting.

8. The **Select file system** window will appear. Select **NTFS** for more security or **FAT32** for normal security and click **Ok**.

9. The selected drives will be formatted...

10. Once the allocation is complete, the ELMO DVR Server will start normally

3.16. E-Map Setup

3.16.1. Overview

The E-Map function allows to lay out cameras on a map for quick launch of a specific camera. Positioning of the cameras, controls and sensors is done on an existing digital drawing/map. The map appears on the main screen and allows quick access to the desired camera by simply clicking on its representative icon. Clicking on a camera's icon will display that camera in full-screen mode.

E-map does not allow manual activation of a control. However, if a control/sensor is triggered, it will be registered on the E-map. The icons representing the sensors/controls will be animated. E.g. If the control that turns on the light is activated, the light icon on the E-map will flash.

3.16.2. Drawing a map

Before configuring the E-map function, draw a map of the building in any available image editor or follow the instructions for the Paint editor below. Make sure to save the map in *.bmp format.

1. On the Desktop, click **Start** > **Programs** > **Accessories** > **Paint**

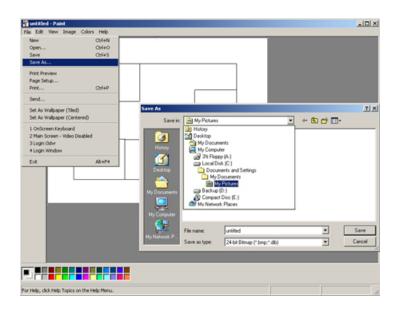2. The following window will appear:

3. Go to **View** and make sure there is a checkmark on **Toolbox**.

4. The following Toolbox panel will appear on the left.

5. In the Toolbox panel choose the Rectangle tool and select the rectangle outline below.

6. To draw the outline of the building/room/warehouse, bring the mouse cursor to the desired starting point in the Paint Editor. Hold down the left mouse button and drag it to form the box of the desired size. Let the mouse button go.

7. Use the Line tool and filled Rectangle tools to draw walls and other objects on the map.

8. When finished, Save the drawing.

9. Click **File > Save As…**

10. Choose the desired folder. Name the map. Choose **24-bit Bitmap** in **Save as type** and click **Save**.

3.16.3. Configuring Emap

To configure the E-Map in the ELMO DVR Server, do the following:

1. Open ELMO DVR Server Setup and go to the E-Map tab.

2. Click **Enable E-map** to activate the E-Map on the main screen.

3. Choose the **Screen Division** in which the E-Map will appear.

4. Choose the **Position No.** (screen) number in which the E-Map will appear on the main screen. In this example, ELMO DVR will display the screen division for 4 cameras with the E-Map being displayed in the first screen. The positions with configured E-maps will be checkmarked

At any time during the E-Map configuration, the current E-Map can be saved to the same or another screen division, to the position chosen by the user.

5. Click **Find > >** to find the bitmap image to load into the E-Map.

6. Click **Go!** to copy the selected image to the drawing area. The Image will appear on the left side of the Setup window.

7. In the **Setting** menu, choose **Camera, Control or Sensor**, the number and type of Camera/Control/Sensor that is to be positioned on the E-Map.

Camera:

To add the camera icon on the E-map, do the following:

a. Select the **Camera** radio button

b. Choose the number and the type of camera from the list. The icons account for the direction in which the camera is pointed

c. After choosing the camera number and type, click on the E-Map bitmap image where the camera is positioned. The camera icon will be added onto the image.

Control:

To add the camera icon on the E-map, do the following:
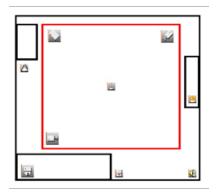
a. Select the **Control** radio button

b. Choose the number and the type of control (Light and Alarm icons are available) from the list

c. After choosing the control number and type, click on the E-Map bitmap image where the control is positioned. The control icon will be added onto the image.

Sensor:

To add the camera icon on the E-map, do the following:

a. Select the **Sensor** radio button

b. Choose the number and the type of sensor (Fire, Laser and Heat icons are available) from the list

c. After choosing the sensor number and type, click on the E-Map bitmap image where the control is positioned. The control icon will be added onto the image.

8. Click **Save** to save the E-Map Setup settings. After all the cameras, sensors and controls are positioned on the map, it will look something like this:

3.16.4. Delete Cameras/Controls/Sensors from Emap

To delete Cameras/Controls/Sensors do the following:

1. Check the **Delete Camera, Control, Sensor** checkbox in the **Setting** menu

2. Click the camera, control or sensor icon on the E-Map to be deleted. The icon will disappear from the image.

Note

Do no switch between screen divisions or positions without saving the settings.

3.16.5. Delete/Change the E-Map bitmap image, do the following

To delete/change the E-Map bitmap image, do the following:

1. Check the **Delete Image** checkbox in the **Setting** menu.

2. Click on the E-Map bitmap image on the left side of the Setup tab.

3. Click **Save**. No image will be displayed in the E-Map Setup tab.

4. Click **Find > >**, choose the new bitmap image and click **Go!**

3.16.6. E-Map on the Main Screen

Close the Server Setup to access the main screen. The E-Map will be displayed in the chosen position of the configured Screen Division:

Click on the E-Map image to bring the E-Map to the full-screen mode. Left-click again to return to the Screen Division mode. By clicking on the camera icon on the E-map (either in full screen or Screen Division mode), the corresponding camera will be brought to the full-screen mode.

Related Topics: Main Screen | Sensor Setup | Control Setup

3.17. View Log Records

3.17.1. Overview

Once the user accounts are set, the Manager can track user activity in the View Log Records Setup tab. Video data can be erased from the ELMO DVR, however there is no way to alter the Log Records. Log Records track the following activities: changes in any of the setup tabs, sensor activation, sent E-mails, video loss, storage structure modification, etc. The logs can be viewed in the Setup menu or exported to the text file.
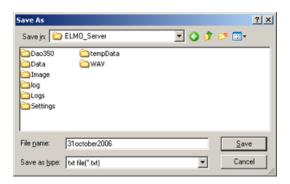
All log activities are stored and organized according to date.

3.17.2. Viewing Log Records

To view and export specific log files, do the following:

1. Click the plus sign (+) next to 'Log Records' to view the months that have log records

2. Click the plus sign (+) next to the desired month to view all entries for that month

3. Select the log filename to view a particular day (yyyy-mm-dd)

4. The activity log will appear on the right-hand panel

5. Click **Export** in the bottom of the screen to export a log to a text file

6. Choose the destination folder for the log text time

7. Name the log text file

8. To view the log text file, locate the exported log file in the destination folder and double-click it. The log file will open in the Notepad application.

3.18. Email Setup

> **Note**
>
> The Email tab is NOT available on ELMO DVR Remote.

3.18.1. Overview

This Setup tab allows sending an alert via email when a sensor is triggered, or when a video signal has been lost. It can also send the status of the Server by sending a screen shot from a specified camera.

Three ways to send an email alert:

1. **Triggered Sensor(s)**

   Select appropriate sensors in the **Enable Email for Sensor** menu. Whenever any of the selected sensors are triggered, an e-mail alert will be sent to the configured e-mail address.

2. **Video Loss**

   Check the **Video Loss** checkbox in the *Enable Email for Video Loss* menu. Whenever video loss is detected on one or more cameras, an e-mail alert will be sent to the configured e-mail address.

3. **Scheduled Server Status**

   Scheduled e-mails to provide server status: an e-mail and snapshot from the specified camera are sent in this case. To have ELMO DVR send the server status e-mails, fill in **Server Status** menu:

   a. Check the **Send Email** checkbox to enable server status e-mail alerts

   b. Select the frequency of the automatic e-mails (1-24 hours) in the **Send Email Every x Hour(s)** field

   c. Choose the Camera in the **Include Image Of** field. A snapshot from this camera will be sent to the configured e-mail address.

   d. Enter the **Email Title** for the server status e-mail alerts (Optional)

> **Note**
>
> Make sure the sensors are enabled and configured in the Hardware Setup.

> **Note**
>
> A first e-mail is sent after changes to this setting are saved and on the ELMO DVR Server startup. The ELMO DVR Server will then send e-mails according to the set schedule. In this example, every hour.

3.18.2. Configuring Email Setup

1. Check the **Enable Email** checkbox

2. Fill in the **Send To** section:

- Enter the **Email Address** of the recipient. Optionally, multiple email addresses can be entered. Separate multiple e-mail addresses by commas or semi-colons.

- Enter the **Email Transmission Delay**. This option sets the delay time in minutes that will pass after the sensor has been triggered before the transmission will start.

- Enter the **Threshold** number. This value sets the number of event lines to be included in the sent emails. Depending on the settings, numerous events can be registered by the Server: detected motion, triggered sensor, activated control, video loss. Each event can be reported individually by e-mail, however, this may flood the recipient e-mail inbox; as a means to avoid this, multiple events (lines) can be sent in a single e-mail.

3. Fill in the **Send From** section:

- Enter the **Name** of the sender (Optional).

- Enter the **Email Address** of the sender.

4. Fill in the **SMTP Server** section: Depending on the location, each Internet provider has specific SMTP information. Obtain this information from the Internet provider.

a. Enter the **IP** Address of the SMTP server. Example: smtp.bellsympatico.com

b. Enter the **Port** number. It is not usually necessary to change the port number. Most SMTP servers have a default port. For more information on default Ports, please contact the email account manager.

c. Enter the **Login Method**. "None" is the default method; otherwise, please contact the email account manager.

d. Enter the **User Name** and **Password**: Some Internet providers require user names and passwords to send out emails, if this is the case, please enter them accordingly.

Related Topics: Sensor Setup | Intelli-Guard™ | VideoLogix™

> **Note**
>
> When setting the Threshold number, remember that an e-mail will not be sent until the necessary number of events has occurred to reach the threshold.

3.19. Intelli-Guard™

3.19.1. Overview

Intelli-Guard™ is an exclusive intelligent feature offered by ELMO USA CORP. The Intelli-Guard™ feature detects motion and counts passing objects within a defined area of the camera's view and can respond by audio alarm, emergency e-mail or a phone call. Intelli-Guard™ requires precise settings in order to work effectively.

Intelli-Guard™ detects change in an image by analyzing its pixels. The same principle is used by the Motion Detection feature. However, Intelli-Guard™ can yield a more precise response than Motion Detection, as it can be adjusted to different kinds of motion. For instance, an object's size and direction of movement can be used to determine the triggering of an alarm. Motion Detection, on the other hand, recognizes and registers any type of motion.

Note that Intelli-Guard™ uses the e-mail address configured in the Email Setup and the Emergency phone numbers configured in Communication Setup. Make sure to configure the appropriate Setup tabs.

Intelli-Guard™ provides two types of motion detection: Surveillance (up to 6 target zones) and Count (up to 3 detection zones).

Important: Count is only available when PACDM™ is installed. The Surveillance motion detection mode is the default option for the ELMO DVR with no PACDM™ installed. The Surveillance type of motion detection can trigger an audio alarm, an emergency E-mail or a phone call in response to the detected motion. The Count type of motion detection counts the number of motions in the specified region and exports this data to the database.

- Example of Surveillance type of motion detection: a motion detected in the restricted area of the warehouse will trigger an audio alarm, emergency E-mail or a phone call.

- Example of Count type of motion detection: ELMO DVR will count the number of cars entering a fast food restaurant's "Drive Through". This number is then exported to the database and can provide the managers with important statistics for use in strategic marketing.

Up to 6 Surveillance target zones (Areas) and up to 3 Count detection zones (Gates) can be set for each individual camera. Every detection/target zone has its own parameters that have to be adjusted and saved individually.

3.19.2. Suggestions for using Intelli-Guard™

1. Before setting a defining area or Gate, experiment at the specific location to test the parameter settings. Make sure that the Intelli-Guard works as expected. Test both real alarm and false alarm situations. Adjust the settings to minimize / illiminate the number of possible false alarms.

2. It may be difficult to achieve good results if the image video contrast is low. Adjust the image brightness and contrast to achieve better results.

3. Intelli-Guard™ is best used in an environment with little color variation. For instance, if the monitored object is placed on a one-color background, any change (e.g. intruder) will be noticeable, therefore easily detectable. For the Count option, it is most efficient to mount the camera on the ceiling facing down, so that the motion is clearly seen and the direction of the motion is easily traced.

3.19.3. General Intelli-Guard™ configurations

1. Click the desired camera number. The selected camera will be displayed in the live view screen on the left.

2. Adjust the camera's **Brightness/Hue/Contrast** in the **Individual Camera Adjustment** menu

3. Click **Default** to reset the Brightness/Hue/Contrast values

4. Choose between **Monochrome** and **Color** modes of recording

5. Choose the **Control Output** for the Intelli-Guard. When the alarm is triggered through the Intelli-Guard, the selected control will be activated.

6. Choose **Surveillance** or **Count**

3.19.4. Surveillance target zone (Area) configurations

Each target zone has its own configuration and has to be saved individually. The **Area** menu specifies which target zone is currently selected. To switch between target zones, select the chosen target zone by clicking on its green box in the live view screen.

1. Define the target zones in the live view screen on the left. Up to 6 target zones (Areas) can be configured

   a. Place the mouse cursor at the start point over the live-mode camera view on the left

   b. Hold down the left mouse button and drag the cursor to draw the rectangular target zone

   c. Let the mouse button go

   d. Adjust or move the created target area if necessary

2. Check the **Send Email** checkbox to have an emergency Email sent every time that the alarm is triggered in this Area. The email address used, is from the Email Setup tab.

3. Check the **Audio Dial Out** checkbox to make an emergency phone call every time that the alarm is triggered in the Area. Emergency phone numbers are taken from Communication Setup tab.

4. Name the specified Area. In this example, Area No. 1 is labeled as "The Door"

5. Set the **Background Refresh Time** (1s - 1800s). If Intelli-Guard™ detects no changes in the monitored area, it will update the area picture according to the selected schedule. This will decrease the cumulative image difference caused by normal occurrences, such as changing illumination across the period of a day. By default, the reload time is set to 20 seconds. It can be adjusted from 1s to 1800s. To keep the same background at all times, check the **Never Update Background** checkbox.

6. Configure **Detection Size** (10p - 100p). This parameter determines the number of pixels representing 1 (one) "block". At least one block has to be detected by Intelli-Guard to trigger the alarm. The smaller the size of the block, the more "sensitive" will Intelli-Guard become and the smaller the size of the objects that will set off the alarm.

   For instance, assume that a bird occupies 10 pixels in a resolution of 720x480. If the Detection Size is set to 10 pixels, the bird will represent 1 block; therefore the alarm will be triggered. However, if the Detection Size is set to 20 pixels, the bird will no longer represent 1 block and will be omitted by the Intelli-Guard. A larger Detection Size, thus, detects larger objects (e.g. people) and omits smaller ones. This setting is used to decrease the number of false alarms. After configuring this setting, it is important to run trials to ensure that the Detection size is reacting to objects of a desired size. On the screen, the area of a detected change will be indicated by, green outline with a number. The number indicates how many detection blocks make up the area.

   In the example below, motion was detected in an area, which is made up of 5 detection blocks. To have the number of detection blocks shown on the live view screen, click **Show Objects**. To hide them, click **Hide Objects**.

7. Configure **Detection Sensitivity** (10% - 97%). This parameter accounts for the even (global) change in image brightness. This percentage determines the acceptable level of brightness change. If the illumination is increased slowly and evenly, it is unlikely to cause an alarm. However, if the light switch is suddenly turned on in a dark room, the dramatic change in image brightness will set off the alarm.

8. Select the **Sound Wave File** for the audio alarm

   a. In the **Area** menu, locate the *Sound Wave File* field

   b. Click the **Browse** button ⬚ to locate the *.wav sound file that will play every time that the alarm is triggered.

    c. Click **Open**

    d. Check or Uncheck the **Audio Dial Out** checkbox

       If the **Audio Dial Out** checkbox is checked, the chosen *.wav file will be played as a message for the emergency phone call.

       If the **Audio Dial Out** checkbox is unchecked, the file will only be played locally on the ELMO DVR.
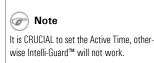
9. Set the **Duration of Sound Wave** (1 sec - 99 sec) to determine how long the *.wav file will play

10. Set Active Time. The specific target Area will only be active during the selected times

11. Click **Save** to save the selected area configurations

    IMPORTANT: Ensure there is NO MOTION occurring in the defined area when clicking **Save**, otherwise the Intelli-Guard™ function will not work properly for that area. The reason for this is that the Intelli-Guard™ does not detect motion itself, but changes in the pixels that make up an image. When **Save** is clicked, Intelli-Guard™ registers the current image as the default image. All consequent changes to that area will be registered. If motion occurs in the defined area when the **Save** is clicked, even the static environment will set off the alarm.

12. To delete one defined target zone, select the area by clicking on it, hold down the left mouse button and drag the area to remove it from the live view screen.

13. To delete all defined target zones, click **Reset**

14. To delete all defined target zones and select the entire camera view for motion monitoring, click **Reset & Add All**

Note

It is CRUCIAL to set the Active Time, otherwise Intelli-Guard™ will not work.
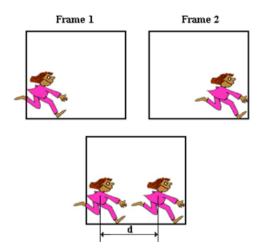
3.19.5. Count target zone (Gate) configurations

Each target zone has its own configuration and has to be saved **individually**. The **Gate** menu specifies which target zone is currently selected. The Count target zone not only detects the motion, but also detects the direction of the motion. The Count target zone is shown as a green arrow with a red number in the middle. The number signifies the amount of detected motions moving in this direction. To switch between the target zones, click the desired target zone arrow in the live view screen.

1. Define the target zones in the live view screen on the left. Up to 3 target zones (Gates) can be configured.

    a. Place the mouse cursor at the start point over the live-mode camera view on the left

    b. Hold down the left mouse button and drag the cursor to draw the rectangular target zone

    c. Let the mouse button go

    d. Adjust or move the created target area if necessary

2. Name the specified Gate. In this example, Gate No. 1 is labeled as "Gate1"

3. Set the Background Refresh Time (1s - 1800s). *Same as Surveillance target zone (Area).*

4. Configure Detection Size (10p - 100p). *Same as Surveillance target zone (Area).*

5. Configure Detection Sensitivity (10% - 97%). *Same as Surveillance target zone (Area).*

6. Configure **Object Speed** (20p - 300p). The Object Speed value determines the speed at which the object has to be moving in order to be counted by the Count option.

    Object Speed:

When motion occurs on the screen, ELMO DVR analyzes consecutive frames, in which motion has occurred, and decides whether the occurred motion(s) represents one same object.

The only way this could be determined is by the speed with which the object moves across the screen. In the diagram on the left, two consecutive frames are analyzed. The distance that the object has traveled between two consecutive frames equals **d**.

In order to be counted as a single object, the distance that the object travels between 2 frames has to be smaller than the **Object Speed** parameter value. If the distance traveled exceeds the **Object Speed**, the motion

will not be counted as an object. Since ELMO DVR analyzes digital images, the distance is measured in pixels (20 pixel - 300 pixel).

If the Object Speed is set to 40 pixels, and the moving car has traveled 45 pixels on the screen in 2 consecutive frames, it will not be counted. The Object Speed has to be set based on experiment. The value will depend on the environment and customer needs.

7. Set the **Activity Weight** (1-10) The Activity Weight option is for adjusting the number of blocks that will set off the alarm. For example, if the Detection Size of one block is set to10 pixels, and the Activity Weight is set to 3, it will take at least 3 blocks (30 pixel) for the alarm to go off.

8. The Gate is represented with the green arrow pointing in one direction with the number in the middle. The number shows how many times the motion was detected in the specified direction. To reset the number, click **Reset**.

9. Click **View Record** to see when a motion was detected on a specified Gate. This data is exported to the database. Earlier data can be accessed through a calendar.

10. Click **Save** to save the selected Gate configurations.

    To delete one defined target zone, select that Gate by clicking on it, hold down the left mouse button and drag the arrow off from the live view screen to remove it.

☞ **Note**

Ensure there is NO MOTION occurring in the defined Gate when clicking Save, otherwise the Intelli-Guard™ function will not work properly for that Gate.

11.

12. To delete all defined target zones, click **Reset**

3.19.5.1. Suggestions for using Object Speed

1. To detect **slow** moving objects, the Object Speed has to be set to a **lower** value

2. To detect **fast** moving objects, the Object Speed has to be set to a **larger** value

3. If the Object Speed value is too low, Intelli-Guard will not count fast moving objects

4. If the Object Speed value is too high, two unconnected motions on the screen might be counted as a single object. This will cause the counter to increase continuously.

Related Topics: Control Setup | Communication Setup | Email Setup

3.20. Virtual Ruler

3.20.1. Overview

With this feature it is possible to approximate the height of a person once they are in the camera's view. During playback, the person's height can be estimated with regard to the virtual ruler. (In the example below, the ruler is 7' long with a division value of 1'.)

3.20.2. Configuring Virtual Ruler

To set up the Virtual Ruler for a camera, do the following:

1. Select the **Camera** for which the ruler will be inserted.

2. Select the **Color** (Black or White) of the ruler and the Start/End point values that will be shown on the screen. Choose the color that will best contrast with the background.

3. In the **Degree** menu, enter the **Start Point** value of the ruler. This number will be shown at the ruler's beginning.

4. In the **Degree** menu, enter the End Point value of the ruler. This number will be shown at the ruler's end.

5. In the **Degree** menu, enter the **Division** value, which is the value of one ruler division. This number has to be smaller than the length of the ruler, or will be assigned the same value as the length of the ruler. The division value is the distance (in chosen units: feet, meters, etc.) between two dividers. To obtain the total number of ruler divisions, the length of the ruler is divided by the Division value.

6. The smaller the division value, the more divisions there will be on the ruler. The ELMO DVR Server will automatically adjust the division value if the length of the ruler can not be equally divided by the specified Division value.
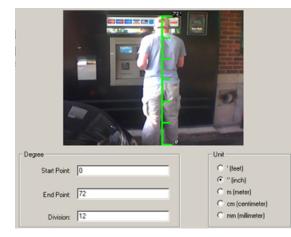
7. In the **Unit** section, select the desired unit of measurement: feet, inches, meters, etc.

8. Draw the Virtual Ruler in the live view screen.

To draw a Virtual Ruler, do the following:

1. Physically measure the height or the area covered in the camera view

2. Draw a mark(s) on that area to signify the start and end points of the ruler

3. Using the mouse, move the cursor to the live view screen in the Virtual Ruler Setup tab

4. Hold down the left mouse button, and drag it in a straight line

5. Adjust or move the ruler if necessary

6. To erase the ruler click **Clear**

Example,

In the following example the height of the person is exactly 72 inches. The ruler starts with 0 (ground) and ends with 72''. The unit of measurement is inches. The division value equals to 12 inches, thus dividing the virtual ruler into 6 equal parts.

Related Topics: Main Screen

3.21. Intelli-Zone™

3.21.1. Overview

Intelli-Zone™ is another exclusive intelligent feature offered by ELMO USA CORP. Intelli-Zone™ is a feature that allows the camera to intelligently pan, tilt, or zoom to a specified preset. The ELMO DVR Server will automatically detect if that camera has P/T/Z features and adjust the pan-, tilt-, or zoom- settings where applicable. In comparison to Motion Tracking, Intelli-Zone™ does not provide real-time motion tracking. Instead, it offers a simulated motion tracking technology.

To set up Intelli-Zone for each camera, do the following:

1. Enable Intelli-Zone by checking the **Enable Intelli-Zone** checkbox.

2. Click the desired camera number that Intelli-Zone will be configured for. The selected camera will be displayed in the live view screen on the left.

3. Select the **Start Position's** preset. This is the position the camera will return to after the specified dwell time.

4. Configure up to 10 desired Presets in the *P/T/Z Control* menu. The presets previously configured in the P/T/Z mode can also be used

5. Set the **Active Time** to enable Intelli-Zone on the selected camera. Intelli-Zone will not work outside of the set Active Time. This value will be the same for all target areas on one given camera.

6. Adjust **Sensitivity**. This value will be the same for all target areas on one given camera.

7. Set the **Refresh** time. Refreshing an image more often will decrease the cumulative image difference caused by normal occurrences, such as changing illumination across the period of a day and will reduce the number of false alarms. This value will be the same for all target areas on one given camera.

3.21.2. Setting up Intelli-Zone target areas

To Set up Intelli-Zone target areas, do the following:

1. Draw a target zone on the selected camera (up to 10 zones can be defined per camera):

   a. Place the cursor over the start point on the live view screen

   b. Hold the left mouse button down and drag to create a rectangular area

   c. Let the mouse button go

   d. Move/adjust the area if necessary

   e. To delete target zone, click a target zone to select it, hold the left mouse button down and drag the target zone off from the live view window.

   f. To erase created areas, click **Reset All Areas**

2. Select the specific target area by clicking on it in the live view window.

3. Enter the **Area Name** for the created target zone in the **Detection Zone** menu.

4. Check the **Display Area Name** checkbox to display the Area Name on the main screen each time the motion is detected in that area.

5. Select the **Go to Preset** position. The camera will move to this position when motion is detected.

6. Set the **Block Count** number by clicking up and down with the arrows. The Block Count number determines the detection sensitivity of the target zone. One block is 10-pixels high and 10-pixels wide. The higher the block count number, the more significant a change must be in an image to set off the alarm. The Percent of Change number cannot be manually changed and depends directly on the block count number. Percent of Change expresses the Block Count as a percentage, as opposed to blocks.

7. Enter the **Dwell Time**. This defines the delay time before the camera returns to the Start Position.

8. Assign the **Control Output** that will be triggered by the motion detected in the target area. The control has to be available and activated in the Hardware Setup.

To associate a target area with another camera, do the following:

1. In **Associated with Camera** menu, choose the associated camera in the *Camera* field. This camera will assume the selected preset when motion is detected in the specific target area.

2. In **Associated with Camera** menu, in the *Preset Number* field, choose the Preset position that the associated camera will go to once motion is detected in the target area.
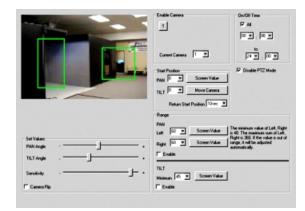
In the example above,

If a change of at least 5 blocks (5% of the total target area) occurs in the target area labeled "Door", Camera 1 will go to Preset 02, Control 2 will be activated, and the camera labeled Front Door will move to Preset 01. After 40 seconds, the camera will return to the Preset 01.

Related Topics: PTZ mode | Control Setup

3.22. Motion Tracking

3.22.1. Overview

Motion tracking is a real-time tracking technology offered by supported cameras. When a camera is configured for motion tracking, the camera moves to the location of the object detected in the target zone. In order to use motion tracking, you must first select a camera which supports motion tracking.

To set up motion tracking on a camera, do the following:

1. Select the desired camera.

2. On the video window, move the mouse to the start point. Hold down the left mouse button and drag the mouse to draw a rectangular 'box' (target zone).

3. In the **Enable Camera** section, select the camera from the **Current Camera** drop-down list **.**

4. Click the numbered button to enable the selected camera.

> **Note**
>
> You must have a camera that supports motion tracking before any cameras will be available.

5. Define the **Start Position** of the camera.

    a. Set the **PAN** and **TILT** respectively.

    b. Click **Screen Value** to get the current position of the camera.

    c. Click **Move Camera** to move the camera to your new position.

    d. Set the **Return Start Position** time in seconds for when to move the camera back to the original **Start Position** , after the camera stops tracking motion.

6. Define the **Range.**

    a. Set the **PAN** to move left and right. The camera moves from the **Start Position** that you pre-set. The minimum value to the left and right is 40 degrees. The sum of value to the left and to the right cannot exceed 360 degrees. If the sum of both values exceeds 360 degrees, then the value will be adjusted automatically.

    b. Click **Screen Value** to get the current camera position.

    c. Click **Enable** to activate the panning range.

d. Set the minimum angle of the **TILT** based on the value you placed in the **Start Position** .

e. Click **Screen Value** to get the current minimum value of the **TILT** .

f. Click **Enable** to let the camera move within the value of the angle.

7. **Define On/Off Time**

a. Set the time for which to activate the **Motion Tracking** function. The default value is 00:00 ～ 00:00. The camera works in **PAN/TILT** mode outside of the configured time.

b. Click **Disable PTZ Mode** : to disable PTZ mode from the motion tracking camera. If you don't select this option, both motion tracking and PTZ will be used.

8. Define the **Set Values**

a. Adjust the **PAN Angle** to set the value when the selection box is not in correct range.

b. Adjust the **Tilt Angle** to set the value when the selection box is higher or lower than the position chosen.

c. Increase or decrease the **Sensitivity** of the camera movement. You will need to adjust this value properly depending on the location. Note that motion tracking may become sensitive to light, and may shift a little.

d. Enabling **Camera Flip** will allow a **PAN/TILT** camera to maintain an upright viewing position. For example, the image will not be inverted.

Related Topics: Motion Detection | Intelli-Guard™

3.23. VideoLogix™ Setup

3.23.1. Overview

VideoLogix™ is an intelligent human(vehicle) tracking/theft detection module developed exclusively by ELMO USA CORP. This module allows:

1. Detecting Human Presence

2. Detecting a Vehicle

3. Detecting Missing Object

4. Analyzing Human/Vehicle behaviour

5. Initializing pre-selected response depending on the nature of the behaviour

To use VideoLogix™ module, your system must meet the following requirements:

For 1 channel of VideoLogix™:

• **CPU:** Pentium 4, 2.4 GHz or above

• **RAM:** 512 MB

• **OS:** Windows XP Pro

For 4 channels of VideoLogix™:

- **CPU:** Pentium 4, 3 GHz or above

- **RAM:** 1GB

- **OS:** Windows XP Pro

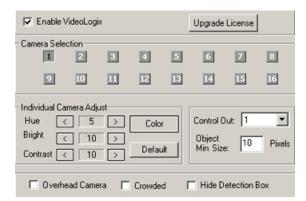New systems come with 1 free channel of VideoLogix™. It is possible to upgrade to the total of up to 4 VideoLogix™ channels. Please note that it will also require necessary hardware upgrades in order to meet the minimum hardware requirements. After the purchase of additional VideoLogix™ channels, call technical support to obtain your License Key. To add the additional VideoLogix channel(s), click **Update License** in the VideoLogix™ Setup and enter the new License Key.

The VideoLogix™ tracking module is a versatile device that allows for seven different types of human/object detection and tracking: Area, CrossWire™, Idle, Missing, Stop, Direction, Passthrough Counter™.

3.23.2. Configuring VideoLogix™

Note

Configure each VideoLogix™ channel separately.

To configure the camera settings, do the following:

1. Click the desired camera number. The selected camera will be displayed in the live view screen on the left.

2. Check the **Enable VideoLogix** checkbox to enable the VideoLogix™ module for the selected camera. In the example above, VideoLogix™ is configured for Camera 1.

3. Set the **Hue, Brightness** and **Contrast** for the selected camera as desired.

Note

The maximum frame-per-second rate on the cameras configured for VideoLogix™ is 13 fps.

4. Click **Default** to reset the Hue, Brightness and Contrast values back to 0.

5. Click **Color/Monochrome** to choose between color and monochrome recording. Color recording provides realistic video images. Monochrome is best suited for low light conditions, such as nighttime recording.

6. Choose the **Control Out** in the drop-down menu for the selected VideoLogix™ channel. When the alarm is triggered on the selected VideoLogix™ channel, the configured control will be activated. In the example above, Control 1 will turn on when the VideoLogix™ alarm is triggered.

7. Set **Object Min Size**. This pixel value is the minimum size that the human form has to represent on the live-view screen in order to be detected by VideoLogix™. By default, this value is set to the absolute minimum value of 10 pixels. Any objects smaller than the selected object minimum size will not be recognized.

8. If necessary, configure the environment for the selected camera. Check **Overhead Camera** checkbox if the selected camera is facing downwards. Check **Crowded** checkbox if the selected camera is mounted in a crowded location. Please note that only *one* checkbox can be selected.

Note

The environment limitations, such as restricted camera view due to the mounting location or the crowded site will restrain VideoLogix™ functionality. I.e. If Overhead Camera is checked, only Missing and Passthrough Counter alarm options will be available. If Crowded is checked, only Direction alarm option will be available.

9. Check the **Hide Detection Box** checkbox in order to hide the detection box on the main screen.

After configuring the common channel settings, choose and configure the desired type of human/object detection.

3.23.3. Configuring Object/Alarm type

To configure the Object/Alarm type, do the following:

1. Choose the **Object Type** between **Human**, **Vehicle** or **All Objects**.

2. Choose the **Alarm** type from seven possible choices:

   a. *Area* (not available when **Overhead Camera** or **Crowded** options are checked)

   b. **CrossWire** (not available when **Overhead Camera** or **Crowded** options are checked)

   c. **Idle** (not available when **Overhead Camera** or **Crowded** options are checked)

   d. **Missing** (available only for **All Objects** object type. Not available when **Crowded** option is checked)

   e. **Stop** (not available when **All Objects** object type is selected. Not available when **Overhead Camera** or **Crowded** options are checked)

   f. **Direction** (not available when **Overhead Camera** option is checked)

   g. **Passthrough Counter** (not available when **Crowded** option is checked)

3.23.3.1. Configuring Area alarm

The Area alarm detects the human / vehicle / object presence in the defined area and initiates an alarm.

Please note that the Area alarm option will not be available for the overhead-mounted cameras and in the crowded locations.

To configure Area alarm, do the following:

1. Choose **Area** in the **Alarm** menu.

2. Choose rectangular [ ] or polygon [ ] drawing tool

3. Draw the detection zone in the live view screen. A total of three Area alarm detection zones can be drawn – rectangular, polygon or both.

   a. **For rectangular area:** Click on the live view screen to define the area starting point, hold down the left mouse button and drag to draw a rectangular area.

   b. **For polygon area:** Click on the live view screen to define each vertex of the polygon. Click on the first point defined to complete the polygon.

Note
Human and Vehicle object types can be combined

Note
Due to the background registration technique the persons, who remain in the same position, without moving, for an extended period of time will not be detected.

c. To adjust the detection zone position on the screen, click on the desired detection zone, hold the left mouse button down and drag the selected zone to the desired position.

d. Click **Undo** to delete the last detection zone

e. Click **Clear** to delete all detection zones for the selected camera

f. Name the detection zone in the **Area** field if required. Enter the desired name in the text field under the live view window.

Area:	Area0	Name

4. Set the **Active Time** for each detection zone. In the example below, the Area alarm is active from 8 AM to 5 PM.

> **Note**
>
> Active Time must be configured. Unless the Active Time is set, object detection will not occur in the selected area.

Active Time Setting

| 8 | : | 0 | ~~~ | 17 | : | 0 |

Area0 OutPut Setting

☑ Send Email   ☑ Audio Dial Out

Sound Wave File: C:\WAV\cameraclick   ...

Duration of Sound: ———————   30 Second(s)

5. Configure the **Alarm Output Setting** for the selected detection zone

a. Check the **Send Email** checkbox to send an emergency Email every time that the alarm is triggered in this detection zone. The email address is must be configured in the Email Setup tab.

b. Check the **Audio Dial Out** checkbox to make an emergency phone call every time that the alarm is triggered in the Area. Emergency phone numbers must be configured in the Communication Setup tab.

> **Note**
>
> If the Audio Dial Out checkbox is enabled, the chosen *.wav file will be played as a message for the emergency phone call.

c. Select the **Sound Wave File** for the audio alarm

i. Click the **Browse** button ... and locate the *.wav sound file that will play every time that the alarm is triggered

ii. Click **Open**

6. Set the **Duration of Sound** (1 – 100 sec) to determine how long the *.wav file will play

7. Configure the **Area Alarm Setting** for the selected detection zone by selecting one of the following conditions:

a. In the *Condition* drop-down menu, choose **any** to trigger an alarm every time human/vehicle/object presence is detected in the defined area.

b. In the *Condition* drop-down menu, choose " = " (equal to) in the drop-down menu and enter the desired number of persons/vehicles/objects. This way the alarm will be triggered only if the specified number of persons/vehicles/objects is met in the defined area.

c. In the *Condition* drop-down menu, choose " > = " (greater or equal to) in the drop-down menu and enter the desired number of persons/vehicles/objects. This way the alarm will be triggered only if the specified number of persons/vehicles/objects is met or exceeded in the defined area.

3.23.3.2. Configuring CrossWire alarm

The CrossWire alarm detects any human/vehicle/object that is crosses the specified boundaries in a predetermined direction and initiates an alarm.

Please note that the CrossWire alarm option will not be available for the overhead-mounted cameras and in the crowded locations.

To configure CrossWire alarm, do the following:

1. Choose **CrossWire** in the **Alarm** menu

2. Choose the CrossWire drawing tool

3. Draw the detection zone in the live-view window. A total of three CrossWire detection alarm zones can be drawn.

> **Note**
>
> Due to the background registration technique the persons, who remain in the same position, without moving, for an extended period of time will not be detected.

a. Click on the live view screen to define the starting point

b. Hold down the left mouse button and drag the cursor to set the end point. The arrow in the middle should point in the desired location.

c. To adjust the detection zone position on the screen, click on the desired detection zone, hold the left mouse button down and drag the selected zone to the desired position.

d. To adjust the detection zone, click on start/end point, hold down the left mouse button and drag in desired location to expand/shrink or change the direction of the CrossWire detection zone

e. Click **Undo** to delete the last detection zone

f. Click **Clear** to delete all detection zones for the selected camera

g. Name the detection zone in the **Area** field if desired

4. Repeat steps **4**-**6** of the Area alarm setup
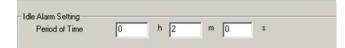
3.23.3.3. Configuring Idle alarm

The Idle alarm detects a human/vehicle/object and initiates an alarm if the detected object remains in the defined area for a period of time longer than that defined by user.

Please note that the Idle alarm option will not be available for the overhead-mounted cameras and in the crowded locations.

To configure Idle alarm, do the following:

1. Choose **Idle** in the **Alarm** menu

2. Repeat steps **2**-**6** of the Area alarm setup

3. Configure the **Idle Alarm Setting** for the selected detection zone. Set the **Period of Time**, in hours, minutes and seconds that an object is allowed to remain in the defined area. Once the person/vehicle/object stay has exceeded the allowed period of time, the alarm will be triggered.

   In the example below, the alarm will be triggered if the person remains in the defined area for 2 or more minutes.

3.23.3.4. Configuring Missing alarm

The Missing alarm tracks any selected object and initiates an alarm if the object has been removed/moved from its original position.

Please note that the Missing alarm option will not be available in the crowded locations.

To configure Missing alarm, do the following:

1. Choose **Missing** in the **Alarm** menu

2. Repeat steps **2**-**6** of the Area alarm setup

3. Configure the **Missing Alarm Setting** for the selected detection zone. Set the **Area Change Percent**
   (0% - 100%). The higher the number, the more profound the change in the defined area has to be in order to set off
   the alarm. To detect the item being moved slightly from its original position, the **Area Change Percent**
   number should be set to a lower value.

3.23.3.5. Configuring Stop alarm

The Stop alarm detects a human/vehicle and initiates an alarm if the detected human/vehicle stops in the defined area
for a period of time longer than that defined by user.

Please note that the Stop alarm option will not be available for the overhead-mounted cameras and in the crowded locations.

To configure Stop alarm, do the following:

1. Choose **Stop** in the **Alarm** menu

2. Repeat steps **2**-**6** of the Area alarm setup

3. Configure the **Stop Alarm Setting** for the selected detection zone. Set the **Period of Time**, in hours,
   minutes and seconds that a human/vehicle is allowed to stop for in the defined area. Once the person/vehicle stops
   in the defined area for the period of time longer than defined by user, the alarm will be triggered.

   In the example below, the alarm will be triggered if the human/vehicle stops in the defined area for 15 or more
   seconds.

3.23.3.6. Configuring Direction alarm

The Direction Alarm detects any human/vehicle/object that moves in a predetermined direction and initiates an alarm.

Please note that the Direction alarm option will not be available for the overhead-mounted cameras.

To configure Direction alarm, do the following:

1. Choose **Direction** in the **Alarm** menu

2. Choose the Direction drawing tool

3. Draw the detection zone in the live-view window

   a. Left-click on the live view screen to define the starting point

   b. Hold down the left mouse button and drag the cursor to set the end point. The arrow should point in the desired
      direction.

c. To adjust the detection zone position on the screen, hold the left mouse button down and drag the selected zone to the desired position.

d. To adjust the detection zone, click on start/end point, hold down the left mouse button and drag in the desired direction to expand/shrink or change the direction of the CrossWire detection zone

e. Click **Undo** to delete the last detection zone

f. Click **Clear** to delete all detection zones for the selected camera

g. Name the detection zone in the **Direction** field if desired

4. Repeat steps **2**-**6** of the Area alarm setup

3.23.3.7. Configuring Passthrough Counter alarm

The Passthrough Counter alarm detects any human/vehicle/object that is moving in a defined direction, counts this motion and stores it in the Access database.
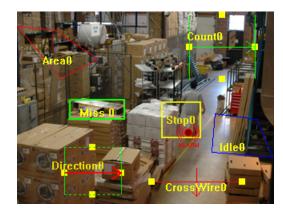
Please note that the Passthrough Counter alarm option will not be available in the crowded locations.

To configure Passthrough Counter alarm, do the following:

1. Choose **Passthrough Counter** in the **Counting** menu.

2. Repeat steps **2**-**3** of the Direction alarm setup.

3. Repeat step **4** of the Area alarm setup.

> ☞ **Note**
>
> Due to the background registration technique the persons, who remain in the same position, without moving, for an extended period of time will not be detected.

3.23.4. VideoLogix on the Main Screen

The Main Screen displays all configured VideoLogix™ detection zones along with the assigned names. Once the alarm is triggered in one of the specified zones, in one of the specified zones, the Alarm icon is displayed on the screen.

3.24. Snapshot Setup

3.24.1. Overview

Snapshot setup allows the user to configure the default location and the default file name for the image snapshots.

When the Snapshot button is clicked on the main screen, the ELMO DVR will take the snapshots from the configured cameras and save them to the destination specified in this setup page. The embedded text and the file name template are also configured in the Snapshot setup page.

3.24.2. Configuring Snapshot Setup

To configure the Snapshot setup, do the following:

1. Check the **Enable** checkbox for all cameras that will be used with the Snapshot feature. Check the **All Cameras** checkbox to enable all cameras. When the **Snapshot** button is clicked on the main screen, the snapshots from enabled cameras will be taken. If no cameras are enabled in the Snapshot Setup, the **Snapshot** button on the main screen will not work.

2. Set the File Name Extension to **File Name**, **Suffix**, or **Prefix**. This feature allows customizing the snapshot name for easy classification.

   a. **File Name** extension:

   The text entered in the **File Name** field will be used in the snapshot file name. In the example below, the snapshot name for Camera 1 will start with "Front Door" and end with "01", where 01 is the camera number.

   b. **Suffix** extension:

   When the **Snapshot** button on the main screen is clicked, the **Snapshot** window is displayed.

Enter the file name and click **OK**. In this example, the file name is "Yesterday". The text entered in the **Suffix** field will be added in the end of the file name. In the example below, the snapshot name for Camera 1 will start with "YesterdayFront Door" and end with "01", where 01 is the camera number.

c. **Prefix** extension:

When the **Snapshot** button on the main screen is clicked, the **Snapshot** window is displayed.

Enter the file name and click **OK**. In this example, the file name is "Yesterday". The text entered in the **Prefix** field will be inserted in the beginning of the file name. In the example below, the snapshot name for Camera 1 will start with "Front DoorYesterday" and end with "01", where 01 is the camera number.

3. In the **Preset Setting** menu, select the desired Presets for the PTZ cameras. When the **Snapshot** button on the main screen is clicked, the PTZ camera adjusts to each selected preset and takes a snapshot. In the example below, three snapshots are saved when the **Snapshot** button is clicked. The camera and preset numbers become the part of the snapshot name.

4. Check the **Overwrite old image(s)** checkbox to replace old snapshots with the new ones every time the **Snapshot** button is clicked. Uncheck to create a new copy of a snapshot every time the **Snapshot** button is clicked.

When checked, no time stamp is used in the file name. (E.g. "Front Door__01.jpg"). The snapshot from the selected camera is replaced every time the **Snapshot** button is clicked.

When unchecked, the time stamp is added to the file name. The template for the time stamp is the following: YYYYMMDD_HHMMSS (E.g. "Front Door_20060104_165235_01.jpg"). Every time the **Snapshot** button is clicked, the snapshot copy is created in the selected folder.

In the example below, three snapshots have been taken with the **Overwrite old image(s)** feature on. The File Name Extension was set to **File Name,** then to **Suffix** and, finally, to **Prefix**.

5. Check the **Embed text to image(s)** checkbox to use the embedded text with the snapshots. The embedded text can be customized for each individual camera. The embedded text will be positioned in the bottom left corner of the snapshot. The date and time are automatically embedded in the top right corner of the snapshot.

6. Click the camera number. The chosen camera will be displayed in the live view screen.

7. Configure the settings for the selected camera.

   a. Click **Select Folder** and set the snapshot destination folder for the selected camera. A different destination folder can be configured for each individual camera. Only local and remote folders can be used. The same folder will be used by the Snapshot feature in the Search window. To save the snapshots onto the DVD-R/CD-R/DVD-R, please use the Snapshot backup in the Search window.

   b. Enter the embedded text for the selected camera in the **Embed Text** field. This text can be customized for each individual camera.

8. Click **Default** to set the destination folder to default (C:\ELMO_Server\TemporarySnapshotImages) and to disable the snapshot feature for all cameras.

Related Topics: PTZ mode | Snapshot Backup

Note

Please avoid using the D:\ drive.

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4. Search on ELMO DVR Server

Search is one of ELMO DVR Server's most used features. ELMO DVR technology provides an instantaneous search by time/date/camera and smart search - an exclusive feature not offered by VCR technology. The effective and easy search capabilities make DVR technology much more efficient as it eliminates hours of video screening - a task which is not un-common with conventional VCR technology.
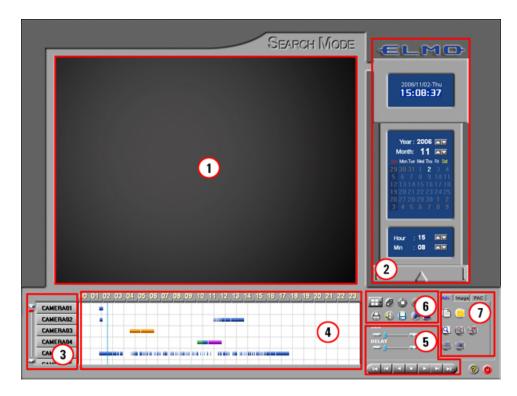
To browse through the recorded video, click **Search** on the main screen.

The **Search** window will appear.

The main areas of the Search window are:

1. Display window

2. Time panel

3. Camera Selection buttons

4. Timeline

5. Playback Control panel

6. Tools panel

7. Advanced settings

  - a) Advanced search panel

  - b) Image settings panel

  - c) PAC panel

4.1. Time Panel

Current Date and Time

Current Date and Time is obtained from the Windows Date/Time Properties. **In this example:** system time is November 02, 2006, 15:08:37 PM

Calendar

Browse through the years and months by scrolling the arrows up and down.

Days highlighted in red are days for which there is recorded data.

A day highlighted in white indicates a day selected for a search.

A day highlighted in yellow indicates the current day of recording.

The red box highlights the day that the cursor is pointed to.

In this example: There is recorded video data on January 3rd, 2006. Video recording for January 4th is currently displayed in the timeline bar. The current day of the video recording is January 6th 2006, and the cursor is pointed at January 5th.

Clock

Browse through the 24-hour clock by scrolling the arrows up and down. Adjusting the time in this menu will move the time line marker on the timeline bar.

In this example: the time line marker in the timeline bar is set to 3:08 PM

4.1.1. Timeline Bar

The timeline provides a visual representation of the recorded video data. The recorded data is represented by multi-colored bars. The color of the bar indicates the type of the video recording (motion, sensor, pre-alarm or continuous).

The timeline bar permits navigation through recordings made with different cameras, and to browse through a 24-hour clock.

The main areas of the Timeline bar are:

1. 24-hour timeline

2. Camera scroll bar

3. Camera activation buttons

4. Video recording bars

5. Video recording area

6. Timeline marker

4.1.2. 24-hour Timeline

This timeline represents a single day chosen in the Calendar. It can be expanded to simplify a search. Click on the 24-hour time line once to expand it once, click twice to expand it twice. When expanded, the Timeline bar has both vertical and horizontal scroll bars. The vertical is used to browse through all available Camera Activation buttons, the horizontal scroll bar is added to browse through the expanded 24-hour timeline.

Timeline (zoom x1)

Timeline (zoom x2)

4.1.3. Camera Activation Buttons

Camera Activation buttons allow for a choice of specific cameras for each search. These buttons display camera custom labels as configured in the Hardware Setup. To select a camera for a search, click the Camera Activation button. The selected camera will be highlighted in blue.

4.1.4. Camera Scroll Bar

Scroll up and down to see all the available Camera Activation buttons cameras

4.1.5. Timeline Marker

The vertical blue line is the Timeline marker that indicates the playback start time. In the example above, the Timeline marker is set to 11AM.

4.1.6. Video Recording Bars and Types of Recording

Multicolored bars in the white video recording area represent different types of recording.

- the pink bar indicates Continuous Recording

- the blue bar indicates Motion Recording

- the green bar indicates Pre-alarm Recording

- the orange bar indicates Object / Sensor Recording

The timeline below indicates that the Camera 1 (Front Door) has recorded continuously from 5 AM to 11:30 AM. Camera 2 (Parking) has recorded based on motion detection from 5:30 PM to 10:40 PM. Camera 3 (Back Door) has recorded based on Prealarm from 10 AM to 3:50 PM. Camera 4 (Warehouse) has recorded based on object detection / sensor activity from 12:30 AM to 6:50 AM.
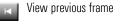

4.1.7. Playback Control Panel

Playback buttons are located on the bottom right corner of the Search Window.

 Skip to the beginning of the recorded data

 View previous frame

 Reverse playback

 Stop

 Play

 View next frame

 Skip to the end of the recorded data

 Real time - video is played back with the natural speed

 Snapshot - takes the snapshot(s) during the video playback

Skip – the playback will skip several frames at a time. The higher the Skip value, the more frames will be skipped during the playback

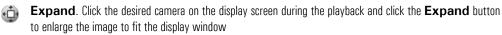**Delay** – will slow down the playback. The higher the Delay value, the slower the video recording will be played.

4.2. Tools Panel

The Tools panel contains the following function buttons:

 Screen Division. Click the **Screen Division** button to switch between 4, 9, and 16 screen divisions. Depending on the amount of chosen cameras, the Search window will display the appropriate screen division to accommodate all chosen camera inputs. (e.g. if 5 cameras are chosen, a 9-camera screen division will be displayed)

 Panorama. Click the **Panorama** button to view the video segment frame-by-frame in the multiple screen division

 Expand. Click the desired camera on the display screen during the playback and click the **Expand** button to enlarge the image to fit the display window

 Zoom In / Zoom Out / Drag. Click the **Zoom** button to switch between the Zoom In, Zoom Out and Drag functions. The user can zoom in or out of a still image or video during playback and drag the enlarged image on the display screen.

 Refresh. Click the **Refresh** button to refresh the timeline to display the recently recorded video.

🖨 **Print**. Click the **Print** button to print the still image on the connected printer.

🔊 **Audio Setup**. Click the **Audio Setup** button to mute/adjust the audio volume

💾 **Backup**. Click the **Backup** button to save the video/still image on the local or remote media.

🔍 **Bookmark**. Click the **Bookmark** button to save the exact time of the video recording, so that it can be quickly located on the timeline later.

🖼 **Full Screen**. Click the **Full Screen** button to display a single camera, selected screen division or still image in the full screen mode with no Graphic User Interface (GUI)

4.3. Video Recording Playback

To playback the video recording in the Search mode, do the following:

1. In the Time panel, choose the date from the **Calendar** window

2. Set the time of the recording in the Time panel **Clock** window

   OR

   Set the time of the recording by clicking inside of the timeline bar to set the timeline marker (the vertical blue line) to the start of the video recording to be played back.

3. Choose one or more cameras in the Timeline bar by clicking on the appropriate **camera activation** buttons. If no cameras are chosen for the search, the following warning window will appear:

> **Note**
>
> Depending on the number of selected cameras, the video recording will be displayed in a 4, 9 or 16-camera screen division.

4. Adjust the **Skip** and **Delay** parameters on the Playback Control panel. The higher the Skip value, the more frames will be skipped during the playback. Increase the Delay value to slow down the playback.

5. To start the playback, click the **Play** button ▶

6. To view a single camera in a 1-camera division screen: stop the playback ■, click the desired camera, resume playback ▶

7. To go back to the multiple-cameras screen division: stop the playback ■, click on the display screen, and resume playback ▶

4.4. Snapshot Function

The Snapshot function allows taking snapshots on a single or multiple cameras during the video playback. This new and improved feature allows taking instantaneous snapshots without pausing the video. The snapshots taken with this feature are automatically stored to the configured folder on a local or remote drive. To save the snapshots onto the CD-R/DVD-R/DVD-R, please use the Snapshot Backup feature.

To use the Snapshot function, do the following:

1. Select camera(s) for playback

2. Set the start time in the **Clock** window or by clicking directly on the timeline

3. To start the playback, click the **Play** button ▶

4. During the playback, click on the **Snapshot** button at the exact instance that needs to be saved. 📷

   The snapshots will be saved in the default destination folder. The snapshot name will start with "SSI" and will include the time stamp and the camera number. E.g. "SSI_20060104_094105_01.jpg"

   The changes done to the video (zoom, sharpness, contrast, etc.) will NOT be reflected by the snapshot.

Related Topics: Server Information | Snapshot Setup | Snapshot Backup

4.5. Panorama Function

The panorama function can be used to view the video recording frame-by-frame in the selected screen division. This can be done to see the motion progression, count the number of frames in a second, etc.

To use the Panorama function, do the following:

1. Select a camera

2. Set the start time in the **Clock** window or by clicking directly on the timeline

3. Click the **Panorama** button on the Tools panel 🗗

4. Select the desired screen division: 4, 9 or 16. (the number of frames to view on the display screen at one time) ▦

5. Adjust the **Skip/Delay** parameters in the Playback Control panel. Start playback by clicking the **Play** button

   OR

   Click the **Next Frame** button ▶▌ to display each consequent frame in the next screen division

In the example below, Camera #1 is displayed on nine screens in the 9-screen division Panorama mode. The Screen division shows 9 consequent frames starting at 10:34:08 (frame#1) and ending at 10:34:08 (frame#9) on June 14, 2006.

C01 2006/06/14-10:34:08- 1   C01 2006/06/14-10:34:08- 2   C01 2006/06/14-10:34:08- 3

C01 2006/06/14-10:34:08- 4   C01 2006/06/14-10:34:08- 5   C01 2006/06/14-10:34:08- 6

C01 2006/06/14-10:34:08- 7   C01 2006/06/14-10:34:08- 8   C01 2006/06/14-10:34:08- 9

4.6. Image Zoom In/Zoom Out

To zoom in/zoom out/drag enlarged image, do the following:

1. Select the camera

2. Set the start time in the **Clock** window or by clicking directly on the timeline

3. Start playback

4. Click the desired camera to display it separately in the display window. For the still image, go to the step 5. To zoom into the video during the playback, go to the step 6.

5. Stop the video recording by clicking the **Stop** button in the Playback Control panel [▪]

6. On the Tools panel select the plus sign to zoom in ⊕ or minus sign to zoom out ⊖

   To switch between zoom in/zoom out and drag buttons, click the **Zoom** button on the Tools panel.

7. Right-click on the video recording/still image to zoom in/out until the desired result is achieved. The video recording/image can be zoomed in digitally up to 17 times. Digital zoom refers to the pixelation of an image. This is not the same as optical zoom, which uses lens capacity to zoom in on a picture. Digital zoom changes the size of the image without affecting its resolution.

8. To drag the enlarged image, choose the **Drag** button 🖑 on the Tools panel, click on the image, hold down the left mouse button and drag the image

4.7. Using Bookmark

Much like regular paper bookmarks, bookmarks in the Server Search mode are used to mark specific instances in the video recording for quick access at a later time. The Bookmark function saves the date and start time of specific video instances in a single database, to simplify the search process later on.
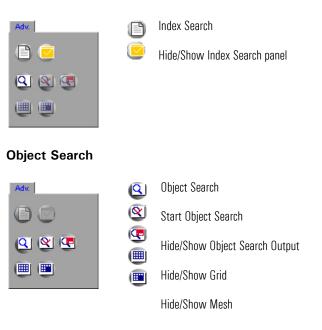
To use the bookmark, do the following:

1. Select the date of the recording in the **Calendar** window

2. Set the start time in the **Clock** window or by clicking directly on the timeline

3. Click the **Bookmark** button on the Tools panel 🔨

4. Click **Add**. The set time and date will be automatically added the bookmark database.

5. Enter the Bookmark description. E.g. below: Meeting, Closing Time, etc. Use the regular keyboard or the virtual keyboard provided by the ELMO DVR Server.

6. To locate the bookmark on the time line, click **Go To**. The Time line marker will jump to the specified time on the Timeline Bar.

7. 7. To delete a bookmark, click on the bookmark in the list and click **Delete**

8. To delete all bookmarks, click **Delete All**

9. To close the **Bookmark** window, click **OK**

4.8. Advanced Search Panel

The Advanced Search panel allows Index and Object searching of the recorded video data.

Index Search

Index Search

Hide/Show Index Search panel

Object Search

Object Search

Start Object Search

Hide/Show Object Search Output

Hide/Show Grid

Hide/Show Mesh

4.8.1. Index Search Panel

Click the **Hide/Show Index Search panel** button to bring up the **Search Option** panel.

The Index Search panel allows the users to distinguish between the different types of recording and gives quick access to the specific frames where detected motion, triggered sensors, or pre-alarm recording took place.

The camera/sensor numbers that have recorded video data will be highlighted in yellow. The cameras/sensors with no recorded video data are grayed out. To select the recordings made with a camera/sensor to be displayed on the timeline bar, select the appropriate number on the Index Search panel. The selected camera/sensor buttons are colored blue.

The following information is known from the example below:

1. Camera 1 has recorded video data

2. Video data was recorded based on Pre-alarm, Motion and Sensors 2-4

Example 1,

In the example above,

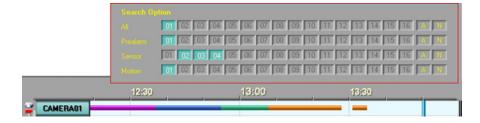The sensor video recording made with Sensors 2-4 is currently selected for display.

The following is know from this example:

1. Camera 1 was recording based on sensor activity from 1:08 PM to 1:28 PM and from 1:31 PM to 1:35 PM

Note: the following conditions had to be met for this sensor recording to occur:

1. Sensors 2-4 are activated in the Sensor Setup

2. Camera 1 is associated with Sensors 2-4

3. Recording schedule for Camera 1 is either **O:S**, **M:S**, **O:S:P**, or **M:S:P**

Example 2,

In the example above,

All types of video recording are currently selected for display.

The following is known from this example:

1. Camera 1 was recording continuously until 12:37 PM. Schedule Setup setting: **C**

2. Camera 1 was recording based on Motion from 12:38 PM to 12:55 PM. Schedule Setup setting: **M**

3. Camera 1 was recording based on Pre-alarm from 12:56 PM to 1:07 PM. Schedule Setup setting: **M:P**, **O:S:P** or **M:S:P**

4. Camera 1 was recording based on Sensor from 1:08 PM to 1:28 PM and from 1:31 PM to 1:35 PM. Schedule Setup setting: **O:S**

4.8.2. Index Search

Index Search allows for searching a recorded video according to recording type: motion or sensor. As opposed to the Index Search Panel, this function does not recognize Pre-alarm recording.

After clicking the **Index Search** button, the following panels will appear in the Search screen:

> **Note**
>
> This feature is NOT available on ELMO DVR Remote.

To search the available video recording based on Sensor or Motion, do the following:

1. Select the day in the **Calendar** window

2. Select the start time for Index Search. This can be done either from the **Clock** window or in the Index Search panel by scrolling the arrows up and down. In this example, the start time for Index Search is set to 9:30 AM. The Index Search will search all available video recordings starting at the selected start time until midnight of the same day. An Index Search can only be performed **within one calendar day**.

3. Select the Sensor number that triggered the motion recording (if applicable). Click **A** for "All" to select all sensors. Click **N** for "None" to deselect the chosen sensors.

4. Select the camera, by number, that recorded based on Motion (if applicable). Click **A** for "All" to select all cameras for motion recordings. Click **N** for "None" to deselect chosen cameras.

5. To view a specific frame, click on the desired frame in the list of found frames. The selected frame will be displayed in the Search display window.

Index Search displays the list of frames that meet the requirements (camera number and type of recording). In the above example, motion occurred on Cameras 1 and 2 starting 9:30 AM

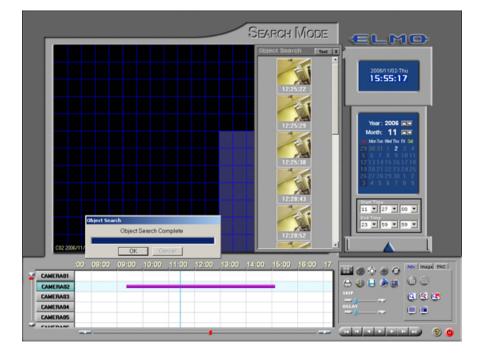**The Search display window contains the following information:**

1. the frame number. **E.g. No.0003**

2. the sensor number that triggered the video recording (if applicable) **E.g. Sensor 2,3,4**

3. the camera number for motion recording (if applicable) **E.g. Motion 1**

4. the camera number from which the video came **E.g. Cam 01**

5. the exact time when the frame was recorded **E.g. Time 09:30:00:080**

The list will be updated instantly when the settings in the Search Option panel are changed. E.g. If the start time is changed to 9:35 from 9:30, all frames recorded before 9:30 will be deleted from the list.
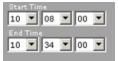
4.8.3. Object Search

The Object Search function is the smart search function that allows searching for a change in the highlighted area.

To use the Object Search, do the following:

1. Click the **Object Search** button in the Advanced Search panel

2. Choose the camera in the **Timeline** bar for an Object Search

> (☞) **Note**
>
> An Object Search can only be performed one camera at a time.

3. Select the **Start Time** and the **End Time** in the **Clock** window. Only the selected part of the video recording will be processed by the Object Search. An Object Search can only be performed **within one calendar day**

4. Click the **Grid** button to remove the grid or to overlay the grid on the video image for easier area selection

5. Click the **Mesh** button to remove the blue mesh or to highlight the selected search area

6. Click the **Object Search Output** button to hide/display the separate Object Search window

7. Highlight the area to be searched. Click on the screen. Hold the left mouse button down and drag the mouse until the desired area is covered. To remove the selection, hold the right mouse button and drag to deselect the area.

8. Click the **Object Search Start** button to start the Object Search

9. Wait while the Object Search is processing the data

10. When the Object Search is finished, one of the following message should appear:

    a. No object motion was detected on the selected camera within the selected time period

    b. The Object Search has completed successfully

11. In the **Object Search Output** window browse through the found instances.

The **Object Search Output** window can display results in either graphical or text format. In both cases, the Object detection instance will have the time stamp displayed. To view the instance in the display window, left click on either the image thumbnail (example on the left) or the text line (example on the right).

12.

4.9. Image Settings Panel

The Image Settings panel is for editing still images. The edited image can then be printed or saved to a local or remote media.

To enable the Image Settings panel, do the following:

1. Select the camera

2. Set the start time in the **Clock** window or by clicking directly on the timeline

3. Start the playback

4. Stop the playback at the exact frame

5. Click the desired camera to show it separately in the display window. The Image Setting panel will now be enabled.

Brightness. Click the right (left) icon to increase (decrease) image brightness.

Contrast. Click the right (left) icon to increase (decrease) image contrast.

Sharpness. Click the right (left) icon to increase (decrease) image sharpness.

Noise Reduction. Click the icon to reduce the noise in the image

Deskew. Images may sometimes be off-centered by a few degrees. The Deskew option is used to correct such skews. . Click the right (left) icon to rotate the image clockwise (counterclockwise).

Gamma correction. Click the right (left) icon to decrease (increase) the gamma correction input. This is done in order to display the image colours correctly by customizing the gamma correction for the monitor output. The lower the gamma correction input the lighter the image.

Rotation. Click the icon to rotate the image clockwise by 90º and to flip it vertically or horizontally.

Undo. Click the icon to undo all the changes and to return to the original image.

Backup on ELMO DVR Server

Four types of Backup are available on the ELMO DVR Server:

1. Quick Backup - Configured in the ELMO DVR Server Search Window

2. Manual Backup - Configured in the ELMO DVR Server Search Window

3. Scheduled Backup - Configured in the ELMO DVR Server Setup menu

4. Panic/Sensor Backup - Configured in the ELMO DVR Server Setup menu

1. Quick CD Backup

Quick CD Backup allows quickly saving a portion of the video recording onto the CD-R/DVD-R in either the Encrypted or AVI format.

To perform a Quick Backup, do the following:

Note

Quick CD backup is available on CD-R/DVD-R/DVD-R only.

1. Ensure that there is enough free space on the C drive.

2. Insert a CD-R/DVD-R/DVD-R into the combo drive.

3. Select one or more cameras

4. Set the start time in the **Clock** window or by clicking directly on the timeline

5. Right-click on the data area of the Search Bar: the context menu will appear. Select **Mark Start** to choose the start time.

6. Set the end time in the **Clock** window or by clicking directly on the timeline

7. Right-click on the data area of the Search Bar. The context menu will appear. Select **Mark End** to choose the end time. Start Time on the Timeline has been marked with the broken green line

8. Right click and select **Start CD backup – AVI** to backup in AVI format. End Time on the Timeline has been marked with the broken red line; the segment of the recording between Start and End time lines has been highlighted in blue.

9. To backup in encrypted format, select **Start CD backup – Encrypted** in the context menu.

```
Mark Start
Mark End

Clear

Start:  09:25 End:  09:30

Start CD Backup - Encrypted
Start CD Backup - AVI
```

10. To clear the Start and End times for quick backup, select **Clear** in the context menu.

```
Mark Start
Mark End

Clear

Start:  09:25 End:  09:30

Start CD Backup - Encrypted
Start CD Backup - AVI
```

11. Wait for the backup process to complete. In the **Backup** window click **Yes** to burn the backup onto a CD-R/DVD-R immediately or **No** to burn later. (*see Multi-CD Backup*)

```
Backup                                  [X]

   (?)   Click 'YES' to Burn CD or 'NO' to burn later

          [  Yes  ]     [  No  ]
```

Related Topics: Multi-CD Backup

2. Manual Backup

Backup types:

1. **Snapshot** (single frame / still image)

2. **Encrypted** (video can only be viewed with ELMO DVR Remote Software). One minute of the Encrypted video backup is always 66 megabytes.

3. **AVI** (video can only be opened by AVI viewers). One minute of the AVI video backup can fluctuate between 1.3 megabytes and 2.5 megabytes depending on the recording settings.

4. **Email** (a single frame or a 1 min. long video will be e-mailed as an attachment)

Note

Please avoid using CD-R/DVD-RW/DVD-RW for backup on the ELMO DVR Server, as the recording process is significantly longer compared to the CD-R/DVD-R/DVD-R. Backup on CD-R/DVD-RW/DVD-RW might slow down the ELMO DVR Server.

2.1. Snapshot Backup

Snapshot backup allows saving a single frame as a still image on any local drive in both *.bmp and *.JPEG formats.

To save a still image (Snapshot), do the following:

1. Stop the video playback on the exact frame ▪

2. Click the desired camera to show it separately in the display window

3. Click the **Backup** button 🖫 on the **Tools** panel

4. Choose **Snapshot** as the **Type** field

5. Click **Select Media** to choose the type of media to save the snapshot to

6. Choose the local or removable drive for the Snapshot backup. The snapshot file will be saved to the root catalogue of the selected drive.

7. In the **Watermark Checker Copy** window, click **Yes** if this program has not been previously saved on the hard drive. Click **No** if it has been previously saved on the local drive before.

2.1.1. Browse Image

The **Browse Image** option allows browsing through the snapshots saved with the Snapshot feature via the main screen or the search window. The selected images can then be saved onto the local or removable drive (CD-R/DVD-R/DVD-R).

To save a single/multiple snapshot(s) to the local/removable media, do the following:

1. Click **Select Media** to choose the type of media to save the snapshot to.

2. Choose the local or removable drive for the Snapshot backup. The snapshot file will be saved to the root catalogue of the selected drive.

3. Click on the ' **+** ' sign to expand the list of available cameras.

4. Select the desired camera from the list. Once the specific camera is selected, the system accesses the default folder configured in the Snapshot Setup and displays the list of all available images in the middle. To select all images from all cameras, click **Select All Cameras**.

5. To preview, select the image from the list. In the example above, **SSI_20060109_102345** is displayed in the Image Preview in the top right corner.

6. To copy the desired image to the configured media, select the image in the Available Image(s) list and drag-and-drop it to the Selected Image(s) list on the right. To select all images from the selected camera, click **Select All Images**.

7. To remove a single image from the Selected Image(s) list, select the image and drag-and-drop it to the Available Image(s) list in the middle. To remove all images, click **Remove All Images**.

8. Check the **Delete temporary Images** checkbox in order to delete all selected images from the current folder.

9. Click **OK** to proceed with the snapshot backup.

10. All selected images will be saved into the Snapshot_Backup folder on the selected drive. Click **OK** to complete the snapshot backup.

Related Topics: Snapshot Setup

2.2. Encrypted Backup

Encrypted backup is a unique compression method, which records all available camera input in a single

Note

If backing up to a remote drive, ELMO DVR Remote Software has to be installed on the remote computer and the K-Remote Backup Server has to be running. Encrypted backup files can only be played in the ELMO DVR Remote Software.

To perform the Encrypted Backup, do the following:

1. Click the **Backup** button on the **Tools** pane

2. Choose **Encrypted** in the **Type** field

3. Set the **Start** date and time from the **Start** menu

4. Set the **End** date and time from the **End** menu

    Make sure there is recorded video data in the selected time period. Otherwise, the warning window will be displayed and the backup will not be performed.

5. Click **Calculate Size** to estimate the size of the encrypted backup file.

6. Select the desired cameras for backup in the *Camera* field. By default, all cameras are selected for backup. If specific cameras are chosen, the backup must be performed to a CD-R/DVD-R.

7. Click **Select Media** to choose the destination for the encrypted backup. The Encrypted backup file can be saved to the local or a remote drive.

    a. **Saving to the local drive**. The recording will be saved to the LocalDrive:\kdb\backup folder.

    i. Select **Local Drive** to save the encrypted video recording to any local drive

    ii. Click the drop-down menu in the **Path** field

    iii. Select the desired drive

    iv. Click **Ok**

    b. **Saving to the remote drive.** The recording will be saved to the RemoteDrive:\kdb\backup

    i. Select **Remote Drive** to save the encrypted video recording to a remote drive

    ii. Enter the IP Address of the remote computer

    iii. Enter the password to access remote computer

iv. Click **Select Drive**. The **Drive Select** window will appear.

v. Choose the remote drive from the *Drive Path* (drop-down menu) once the connection has been established

vi. Click **OK**

vii. Click **OK** in the **Select Backup Media** window to close it

8. Check the **Copy Remote Software to CD** checkbox if backing up to a CD-R/DVD-ROM to include the ELMO DVR Remote software along with the backup files

9. Set the priority of this backup process (**High/Low**). If set to High, this backup will have priority over other backup processes (e.g. scheduled backup).

   Click **OK** to start the backup process.

10. The backup progress window and the recording icon 🔄 on the top of the screen will be displayed throughout the backup process.

11. If saving onto a CD-R/DVD-R, wait for the backup to complete. In the **Backup** window click **Yes** to burn the backup onto a CD-R/DVD-R immediately or **No** to burn later. (*see Multi-CD Backup*)

Related Topics: Multi-CD Backup

2.3. AVI Backup

AVI Backup can be performed to both Local and Remote drives (folders).

> **Note**
>
> If backing up to a remote drive, ELMO DVR Remote Software has to be installed on the remote computer and the K-Remote Backup Server has to be running. Video recording from each camera input is saved as a separate file with an *.avi extension. AVI backup files can only be opened with the AVI viewers (e.g. Window Media Player, Quick Time, Real Player, etc.)

To perform the AVI Backup, do the following:

1. Click the **Backup** button 💾 on the **Tools** panel

2. Choose **AVI** in the **Type** field

3. Set **Start** date and time from the **Start** menu

4. Set **End** date and time from the **End** menu

    Make sure there is recorded video data in the selected time period. Otherwise, the warning window will be displayed and the backup will not be performed.

5. The **Total Recording Time** will be displayed in the drop-down menu. When backing up lengthy video recordings, this menu will have 5, 10 and 30 minute, and 1 hour backup options that can be chosen instead of the custom total recording time.

6. Select the desired camera for backup in the *Camera* field

7. Click **Select Media** to choose the destination for the AVI backup. The AVI backup file can be saved to a local or remote drive.

    a. **Saving to the local drive.**

    i.   Select **Local Drive** to save the AVI video recording to any local drive

    ii.   Enter the descriptive **File Name** for the AVI backup file

    iii. Click the **Browse** button to select the local drive and folder for the AVI backup

    iv.   Browse through the local drives and select the desired folder

    v.   Click **Ok**

    b. **Saving to the remote drive.** The recording will be saved to the **RemoteDrive:\kdb\BACKUP_AVI** folder

    i.   Select **Remote Drive** to save the AVI video recording to a remote drive

    ii.   Enter the IP Address of the remote computer

Note

The size of the AVI backup file will depend on the video recording settings. The size of a one-minute AVI video recording can fluctuate between 1.3MB and 2.5MB.

Note

If no custom folder is selected, the backup AVI file will be saved to the LocalDrive:\kdb\BACKUP_AVI folder.

Note

All video recordings saved to the remote drive will be displayed under Backup Data category in the ELMO DVR Remote local Search mode.

iii. Enter password to access the remote computer

iv. Click **Select Drive**. The **Drive Select** window will appear.

v. Choose the remote drive from the *Drive Path* drop-down menu once the connection has been established

vi. Click **OK**

vii. Click **OK** in the **Select Backup Media** window to close it.

8. Set the Priority of this backup process (**High/Low**). If set to High, this backup will have priority over other backup processes (e.g. scheduled backup).

9. Select all desired cameras from Camera list. Only the video recordings from selected cameras will be backed up. The server will create backup files with the custom file name and the camera number for each chosen camera. E.g. Closing Time [1].avi; Closing Time [5].avi. In this example, 2 AVI backup files were created: for cameras 1 and 5.

10. Select the video codec for the AVI backup from the **Select Compressor** field. Select the codec name displayed for the list of all available codecs.

Attention: It is *highly advisable* to leave the default codec chosen by the Server - it is always the latest available codec. (In this example, Microsoft MPEG-4 Video Codec V2) The only reason to change the codec to the earlier version is to play back the AVI backup file on the older system with older codecs installed.

11. Select the desired AVI Caption format for the AVI file. Select the default caption format for the list of all available caption formats. The AVI Caption text will be overlaid on the AVI video recording. Select **Disable** for no caption text overlay.

12. Select the position for the AVI caption from the list. The Caption position determines the position of the Caption text overlay on the AVI video recording. Select the default caption position (Left, Top) for the list of all available caption positions.

13. Click **OK** to start the backup process.

The backup progress window and the recording icon on the top of the screen will be displayed throughout the backup process.

14. If saving onto a CD-R/DVD-R, wait for the backup to complete. In the **Backup** window click **Yes** to burn the backup onto a CD-R/DVD-R immediately or **No** to burn later. (*see Multi-CD Backup*)

Related Topics: Multi-CD Backup

2.4. Email Backup

E-mail backup allows the user to send a Snapshot or an AVI video file from a single camera as an e-mail attachment to one or multiple recipients. Due to the fact that many mailing providers do not allow large e-mail attachments, the length of video recording for AVI attachments is automatically limited to 1 minute.

2.4.1. Emailing a Snapshot

In order to email a snapshot, do the following:

1. Stop the video playback on the exact frame [■]

2. Click the desired camera to show it separately in the display window

3. Click the **Backup** button [icon] on the **Tools** panel

4. Choose **Email** in the **Type** field

5. Choose **Still Image backup**

6. Add recipients e-mail addresses to the Recipients List. The still image/AVI video will be sent to all recipients on the list

   a. Click **ADD** [ADD]

   b. Type in the Recipient's e-mail address

   c. Click **Save/Exit** to add the e-mail to the list

   d. Click **Close** to exit without adding the e-mail

   e. To delete an e-mail, click on it in the Recipients List and click **DEL** [DEL]

7. Enter the simple mail transfer protocol (SMTP) in the **Outgoing Mail** field. In this example, smtp.bellnexxia.net. Obtain this information from the e-mail provider.

8. Enter **Sender's Email**

9. Enter **Mail Subject**

10. Click **OK** to send the e-mail

2.4.2. Emailing an AVI Video

In order to email an AVI video file, do the following:

1. Click the **Backup** button on the **Tools** panel

2. Choose **Email** in the **Type** field

3. Choose **AVI backup**

4. Select the desired single camera from the Camera list

5. Select the video codec for the AVI backup from the **Select Compressor** field. Select the codec name displayed for the list of all available codecs.

Attention: It is *highly advisable* to leave the default codec chosen by the Server - it is always the latest available codec. (In this example, Microsoft MPEG-4 Video Codec V2) The only reason to change the codec to the earlier version is to play back the AVI backup file on the older system with older codecs installed.

6. Select the desired AVI Caption format for the AVI file. Select the default caption format for the list of all available caption formats. The AVI Caption text will be overlaid on the AVI video recording. Select **Disable** for no caption text overlay.

```
Disable
✓ [Camera No.] [Camera Name] [Date] [Time]
  [Camera No.] [Date] [Time]
  [Camera Name] [Date] [Time]
  [Camera No.]
  [Camera Name]
```

7. Select the position for the AVI caption from the list. The Caption position determines the position of the Caption text overlay on the AVI video recording. Select the default caption position (Left, Top) for the list of all available caption positions.

```
✓ Left, Top
  Left, Middle
  Left, Bottom
  Center, Top
  Center, Middle
  Center, Bottom
  Right, Top
  Right, Middle
  Right, Bottom
```

8. Add recipients e-mail addresses to the Recipients List. The still image/AVI video will be sent to all recipients on the list.

    a.
       Click **ADD** `ADD`

    b. Type in the Recipient's e-mail address

    c. Click **Save/Exit** to add the e-mail to the list

    d. Click **Close** to exit without adding the e-mail

    e.
       To delete an e-mail, click on it in the Recipients List and click **DEL** `DEL`

9. Enter the simple mail transfer protocol (SMTP) in the **Outgoing Mail** field. In this example, smtp.bellnexxia.net. Obtain this information from the e-mail provider.

10. Enter **Sender's Email**

11. Enter **Mail Subject**

12. Click **OK** to send the e-mail

3. Multi-CD Backup

Multi-CD Backup feature works for both **AVI** and **Encrypted** backups. It can be performed either through **Quick Backup** or **Manual Backup** in the Search mode. Multi-CD Backup allows temporary saving the Encrypted/AVI backup files onto a hard drive in order to burn several backup processes onto a single CD-R/DVD-R at a later time without accessing the Desktop.

To perform the Multi-CD Backup, do the following:

1. Click Search

2. Complete Quick Backup - Encrypted or AVI

    OR

    Complete Manual Backup - Encrypted or AVI. Make sure to choose CD-R/DVD-R as a Backup Media.

3. Start Backup, wait for the following window:

4. Click **No** to temporary save the current backup onto the hard drive.

5. The following Multi-CD buttons will appear in the Search Window:

    The **Del. Backup** button allows deleting all backup processes temporary saved onto the hard drive.

    The **Burn CD** button allows burning all backup processes temporary saved onto the hard drive onto a single CD-R/DVD-R.

    The same Multi-CD buttons will be displayed on the Main Screen outside of the Search Mode.

ELMO DVR Remote

The ELMO DVR Remote software is used to connect to and manage multiple servers by using the Internet or a local LAN connection. The managers can easily view the cameras in the remote location, search the recording database or access the PACDM™ database from the comfort of their home. Most of the features provided in ELMO DVR Server are available in ELMO DVR Remote, though these software products are not identical. Unlike the ELMO DVR Server, ELMO DVR Remote can easily be turned off without shutting down the system or can be minimized like any other Windows application. The level of access assigned to the user in the ELMO DVR Server remains the same when logging in from ELMO DVR Remote. E.g. If the user is restricted from viewing Camera 1, they will not be able to see it via ELMO DVR Remote when they log in with their name and password.

1. Starting ELMO DVR Remote

The ELMO DVR Remote software is used to connect to and manage multiple servers by using the Internet or a local LAN connection. The managers can easily view the cameras in the remote location, search the recording database or access the PACDM™ database from the comfort of their home. Most of the features provided in ELMO DVR Server are available in ELMO DVR Remote, though these software products are not identical. Unlike the ELMO DVR Server, ELMO DVR Remote can easily be turned off without shutting down the system or can be minimized like any other Windows application. The level of access assigned to the user in the ELMO DVR Server remains the same when logging in from ELMO DVR Remote. E.g. If the user is restricted from viewing Camera 1, they will not be able to see it via ELMO DVR Remote when they log in with their name and password.

Before connecting to a remote site, please ensure the following:

1. The following minimum hardware specifications are met (PIII 500 MHz; 128MB RAM; 64MB Radeon video card; Windows 2000/XP)

2. The same versions of ELMO DVR Server and ELMO DVR Remote are used.

3. The remote ELMO DVR Server is on. The correct type of connection and Live Video Stream Bandwidth are set in the Communication Setup.

4. The correct type of connection is set in ELMO DVR Remote - Communication Setup.

Note

If connecting to ELMO DVR Server v.5,01 remotely, the video image will appear narrower than the screen division resulting in two vertical black stripes on either side of the time. Please note that this is caused by higher resolution and is normal.

1.1. Logging In

To open the ELMO DVR Remote software, do the following:

1.
   Click the **ELMO DVR Remote** icon on the Desktop ELMO Remote

2. When logging in for the first time, enter **elmo** as the password. Click **OK** to log in.
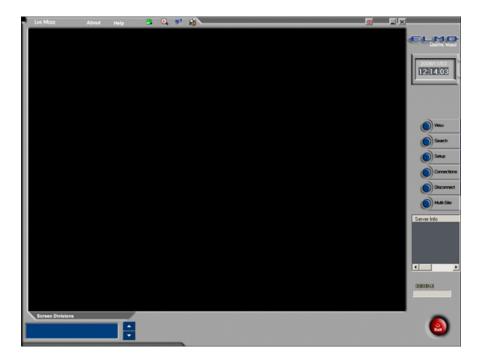
3. To change the password for ELMO DVR Remote, do the following:

a. Click **Change Password**

b. Enter old password

c. Enter new password

d. Re-enter new password to confirm it

e. Click **OK** to save the new password

When the ELMO DVR Remote software is started, the following screen will appear:

1.2. Creating New Remote Site Connection

To create a new Server connection, do the following:

1.
   Click **Connections** on the main screen

2. Click on the "**Server**" group

3. In the **Server Connect** - **LAN** window, click **Add**

4. The **Insert to new site** window will appear

5. Choose the group to which the new connection will be established

   a. Choose the existing group from the drop-down menu

   b. To add a new group, click **Add Group** and Enter the name of the new group. Click **Ok**.

6. Enter **Server ID** – a maximum of 7 alphanumeric characters. This must match the remote Server ID as entered in the Server Information Setup.

7. Enter a **Server Name** – a descriptive name for the server. E.g. "boston"

8. Enter the **Server IP Address**. This *must match the remote Server IP Address.* Unless the ELMO DVR Server has a static IP Address or a Dynamic IP domain service, the remote connection will not be established.

If the remote site is currently in the Setup mode, the connection will not be established and the following warning message will be displayed.

9. Check the **Connect when system starts** checkbox to connect to the site automatically every time the ELMO DVR Remote software loads.

10. Enter the User **Name** and User **Password**. When trying to connect to the remote server, the system will check the **Server ID**, User **Name** and User **Password** together. If either of the variables is incorrect, the Remote software will not be able to connect to the site.

11. Check the **Emergency Alarm** checkbox to use the custom alarm each time the alarm occurs on the remote site

12. Choose the *.wav file for the custom alarm in the **Sound File** field. Click **Browse** to locate the *.wav sound file that will play every time that the alarm is triggered on the remote site.

13. Configure the **Duration of Sound Wave** for the custom alarm: 1-99 sec.

14. Click **OK** to save the new connection, or click **Cancel** to close the new site setup window without saving

15. To delete an individual site, choose it in the **Connections** list, and click **Delete**

16. To delete the entire group, choose the group from the list and click **Delete**. Click **Yes** in the window below to delete the group. Click No to delete the group but not the remote sites. If **No** is clicked, the group will be deleted from the list and all sites from the group will be added to the first remaining group.

17. When information for the new site is completed, it will appear in green font in the **Server Info** window on the main screen. In this example there are currently 2 configured remote sites, both are currently offline.
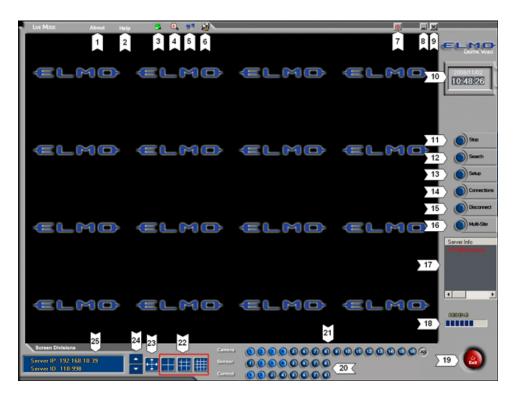
1.3. Main Screen

The areas of the ELMO DVR Remote main screen are:

1. About	**10.** Date and Time	**19.** Exit
2. Help	**11.** View/Stop	**20.** Sensor/Control panel
3. Emergency Monitor	**12.** Search	**21.** Camera panel
4. Health Monitor	**13.** Setup	**22.** Screen Division
5. Intelli-Upgrader	**14.** Connections	**23.** Full Screen
6. K-Remote Backup Server	**15.** Disconnect	**24.** Multi-Site Selection Tool
7. 2-Way Audio	**16.** Multi-Site	**25.** Multi-Site Display
8. Minimize	**17.** Server Info	
9. Close	**18.** RECEIVE	

About - Displays the ELMO USA CORP. license Agreement and the version of the ELMO DVR Remote software installed on the ELMO DVR. To close, click **I Accept** in the bottom of the license agreement.

Help - Displays the help menu window. The major help topics are available.

Emergency Monitor - Displays the emergency messages: sensor activation, motion detection, and video loss.

Health Monitor - Allows a connection to the remote Server, displaying recording status, connected cameras status (on/video loss), and controls status (on/off).

Intelli-Upgrader - Allows for the upgrading of the ELMO DVR Server software on the connected remote sites (sites must be configured in the Connections setup; ELMO DVR Remote must be connected to them at the time of the upgrade).

K-Remote Backup Server - Handles backup processes, and gives the option of canceling the running backup process. This application MUST be running in order to perform remote backups.

2-Way Audio - Allows the remote user to communicate via voice with anyone who may be at the Server side.

Minimize - Minimized ELMO DVR Remote without shutting down or closing the application.

Close- Exits the ELMO DVR Remote application without shutting down the ELMO DVR

Date and Time - displays the current time and date. This information is acquired from the Windows OS time and date settings. If time/date is not correct, minimize/close the ELMO DVR Remote application and double-click the Windows time display in the right-hand corner. Set the appropriate time and click **Apply**. The time will be automatically updated in the ELMO DVR Remote software.

View/Stop - connect to the remote server, select desired cameras in the Camera panel, and click **View** to display the selected cameras. Click **Stop** to stop transmitting live video from the remote server.

Search - In local mode, the **Search** button gives access to video recordings stored on the local or removable drive. When connected to the remote server, the **Search** button gives access to the video database of the remote server.

Setup - In local mode, the **Setup** button gives access to the ELMO DVR Remote software setup menu. When connected to the remote server, the **Setup** button gives access to the remote ELMO DVR Server software setup menu.

> **Note**
> The accessibility of the remote server setup will depend on the user's access level.

Connections - Manages the lists of the remote server connections.

Disconnect - Breaks the connection with the connected remote server(s).

Multi-Site - Displays the window with all available cameras on all connected sites. Cameras from different connected servers can be displayed on the same Screen Division. This is accomplished through drag-and-drop.

Server Info - Displays the connection status of all configured remote sites (online/offline). The connected sites are highlighted in red, the sites that are offline, are highlighted in green. In this example, ELMO DVR Remote software is connected to two remote sites; the remaining two sites are currently offline. To connect to the remote site, double-click the desired remote site in the Server Info window.

RECEIVE - Displays the progress of data transmission

Power – Exits the ELMO DVR Remote application without shutting down the ELMO DVR

Sensor and Control panel

The Control panel activates the selected controls on the connected remote site. The Sensor panel displays the sensor status on the connected remote site

Camera panel

The Camera panel allows choosing the cameras to be displayed in the ELMO DVR Remote main screen. Click the desired camera numbers and click **View**. To display all the available cameras, click **All**. The camera numbers that are currently displayed are highlighted in blue. In this example, cameras 1-4 are presently displayed in the main screen.

Screen Division - this panel allows customizing the main screen appearance. By clicking on the Screen Division buttons, ELMO DVR Remote will select the corresponding amount of cameras for viewing. Three screen division options are available on ELMO DVR Remote: 4, 9 and 16-cameras screen divisions.

Selects and displays the first **4** available cameras on the Main Display Screen in a 4-cameras screen division

Selects and displays the first **9** available cameras on Main Display Screen in a 9-cameras screen division

Selects and displays the first **16** available cameras on Main Display Screen in a 16-cameras screen division

Full Screen - This button displays a single camera or chosen screen division without any menu bars (no interface shown). Right-click to exit the full-screen mode.

Multi-Site Display, Multi-Site Selection Tool - Scroll the arrows up and down to switch between connected sites. The Server IP and Server ID of the currently active connection are displayed in the multi-site display window.

1.4. Connecting to the Remote Site

Before connecting to a remote site, ensure that the remote ELMO DVR Server is on. **The same versions of ELMO DVR Server and ELMO DVR Remote must be used**.

It is possible to connect to multiple remote sites at the same time.

There are two ways to connect to the remote site from the ELMO DVR Remote software.

1. **Main Screen**

   In the **Server Info** window, double-click the desired server.

2. **Connections menu**

   a.
      Click **Connections** on the ELMO DVR Remote main screen

   b. Click the (+) sign next to the group and choose the desired connection

   c. Click **Connect**

   d. The following window will appear to indicate that the ELMO DVR Remote software is urrently connecting to the remote Server

   e. The **Server Info** window provides the connection status for the configured remote sites. The sites currently connected are highlighted in red, the sites that are currently disconnected are highlighted in green.

1.5. Viewing the cameras on the connected remote site

To view the real-time video on the remote site, do the following:

1. Connect to the desired remote site(s) *(See the Connecting to a Server section for step-by-step instructions)*

2. Select the cameras for viewing in the Camera panel. Click **All** to view all cameras available on the remote site.

3. Click **View**

   If no cameras were selected in the Camera panel, the following warning window will appear:

4. Click the desired camera on the main screen to display it in a 1-camera screen division. Left-click again to go back to the multiple-cameras screen division.

5. To add additional cameras for display, click **Stop**, select additional cameras in the Camera panel and click **View**

6. To add additional cameras or remove specific cameras from the Screen Division without stopping the video stream, click **Multi-Site**. The **Multi-Site** window with the connected server name(s) will be displayed on the right-hand panel of the main screen window.

a. Double-click on the server name to display the list of available camera labels. Cameras currently displayed are highlighted in red, cameras currently offline are highlighted in orange.

b. To add a specific camera to the main screen display, click the camera label, hold the left mouse button down and drag the selected camera onto the main screen.

c. To stop viewing the specific camera, right-click the camera label in the **Multi-Site** window

d. Click **Exit** to close the **Multi-Site** window

7. To stop viewing all cameras without disconnecting from the remote site, click **Stop**

8. To switch between multiple connected sites, scroll the arrows up and down in the **Multi-Site Selection Tool**

1.6. Using Multi-Site tool

The Multi-Site tool allows for the viewing of cameras from multiple remote sites in the same Screen Division.

To use the Multi-Site tool, do the following:

1. Connected to at least two remote sites

2.
   Click **Multi-Site** on the Control panel

3. The list of the connected server name(s) will be displayed on the right-hand panel of the main screen

4. Double-click each server's name to display the list of all available cameras. Cameras currently displayed are highlighted in red, cameras currently offline are highlighted in orange.

5. Click the desired camera name (label) in the **Multi-Site** window, hold the left mouse button down and drag the camera name onto the main screen. The camera will be displayed in the chosen screen division.

6. To remove a camera from the Screen Division (to stop viewing this camera), right-click the camera name (label) in the **Multi-Site** window

7. Click **Exit**, to close **Multi-Site** window

1.7. Disconnecting from the Remote Site

To disconnect from the remote site(s), do the following:

1. Select the desired remote site in the Multi-Site selection tool by scrolling the arrows up and down

2.
    Click **Stop** to discontinue video transmission from the remote site

3.
    Click **Disconnect**

4. Click **Yes** in the warning window. The connection with the remote site will be broken and the remote site name will be highlighted in green in the **Server Info** window.

> ☞ **Note**
>
> If the user on the ELMO DVR Server side opens the Server Setup, the remote connection is terminated.

2. Configuring ELMO DVR Remote

ELMO DVR Remote Setup is only available in the Local mode. To access Local Setup, disconnect from all remote sites, and click **Setup** on main screen.

2.1. About ELMO DVR Remote

The About setup tab provides information about the system:

1. List of drives/partitions

2. Total and free hard drive space information

3. Processor type

4. RAM size

5. Windows operating system version

6. Service Pack version

7. ELMO DVR Remote software version

2.2. Configuration Setup

In the Configuration Setup, the user can setup the Automatic Backup, configure the Watermark display settings and main screen display settings.

To setup the Configuration Setup, do the following:

1. Check the **Display Sensor Status Bar** checkbox to display the Sensor panel on the main screen when connected to the Remote site.

2. Check the **Display Control Status Bar** checkbox to display the Control panel on the main screen when connected to the Remote site.

3. Check the **Display WATERMARK logo** checkbox to display the watermark logo in green font on all watermarked video recordings during the playback.

4. Check the **Start with Password** checkbox to request password on each startup

5. Configure the Automatic Backup in the **Received Data Save Setup** menu:

   a. Check the **Current Screen Data Save** checkbox to save the live video recordings on the selected local drive, as they are viewed in the ELMO DVR Remote software.

   b. Check the **Current Screen Data Save** checkbox to save the live video recordings on the selected local drive, as they are viewed in the ELMO DVR Remote software.

   c. Choose the local drive in the **Select Save Drive** drop-down menu. The data from the Automatic Backup will be saved to this local drive.

6. In the **Display Mode** menu choose between **DirectX** and **RGB** display modes. If the video card meets the minimum hardware requirement of 64MB, select **DirectX**. If the video card does not meet the minimum hardware requirement, select **RGB**.

<div style="border:1px solid">

☞ **Note**

ELMO USA CORP. does not guarantee proper functioning of ELMO Remote if the system does not meet minimum hardware requirements.

</div>

7. Select the server sort order from **Ascending**, **Descending**, or **None** in the *Sort Server Info by Alphabetic Order* menu

8. Check the **Play Sound with unknown server** checkbox to use the custom alarm with all servers that do not have a custom alarm assigned to them

9. Choose the *.wav file for the custom alarm in the **Emergency Alarm** field. Click **Browse** button [...] to locate the *.wav file that will play every time alarm is triggered on the remote site.

10. Configure the **Duration of Sound Wave** for the custom alarm: 1-99 secs

2.3. Communication Setup

In Communication Setup, configure the type of connection available on the system.

1. Select **PSTN** (modem) **/ ISDN** - **No Router** for modem connection.

    a. Enter **Installed modem name**

    b. Enter **Initialization string**

    c. Enter **Port** number and modem transfer speed (**Bps**)

    OR

    Select **LAN/ISDN** – **Router / Leased Circuit** for other Internet connections.

2. Click **OK** to save the settings

2.4. Other Setup

To view/change port settings, do the following:

1. Click **Network Port Setting**

2. Change the settings if needed

3. Click **OK** to save the changes.

   OR

   Click **Cancel** to exit without saving

To change the time and date display, click the *Clock display format* drop-down menu. The current time and date in the ELMO DVR Remote main screen will be displayed according to the format chosen here.

3. Search on ELMO DVR Remote

ELMO DVR Remote software allows searching video recordings stored on the remote site and video recordings stored locally.

3.1. Local Backup Search Categories

When searching the remote backup files saved locally, ELMO DVR Remote distinguishes between the existing backup files based on the type of the backup that they were saved with.

The search Mode Select window distinguishes the following backup search categories:

1. Backup data

2. Removal Hdd Drive Data

3. Server current screen

4. Server search data

Backup Data

This backup category includes all the encrypted backups done through the ELMO DVR Remote, from the remote site or saved remotely to the ELMO DVR Remote from ELMO DVR Server software.

E.g. ELMO DVR Server software is installed on the ELMO DVR at a business's premises. ELMO DVR Remote software is installed in the manager's office. All the encrypted backups made from the ELMO DVR in the store to the manager's computer AND all the encrypted backups made on the manager's computer, while remotely connected to the ELMO DVR Server in the store, will show up under the Backup Data category.

Removal HDD Drive Data

This backup category includes all the encrypted backup files stored on a hard drive that has been removed from the original ELMO DVR and connected to the system, where ELMO DVR Remote software is installed.

Server Current Screen

This backup category includes the automatic backup files of the video recordings viewed remotely, while connected to the remote site. All the backup files made with the "**Current Screen Data Save**" will be saved under this backup category.

Server Search Data

This backup category includes the automatic backup files of the video recordings searched remotely, while connected to the remote site. All the backup files made with the "**Remote Search Data Save**" will be saved under this backup category.

3.2. Local Search on ELMO DVR Remote

To search video recordings stored locally, do the following:

1. Disconnect from all connected servers

2.
   Click **Search** on the main screen

3. In the Search Mode, choose the backup type

4. Choose the local drive where the backup information has been stored

5. In the Server ID list select the appropriate backup file. The backup files are additionally sorted by the remote Server ID from which they have been recorded.

6. Click **Ok**. The local Search window will appear.

3.3. Search Window in the Local mode
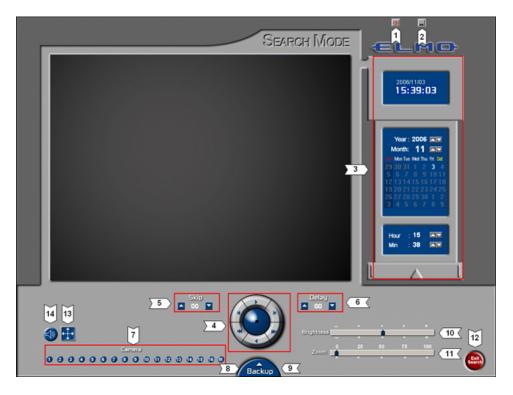
The areas of the Search Window are:

1. 2-Way Audio

2. Minimize the Window

3. Time panel

4. Playback Control panel

5. Skip

6. Delay

7. Camera Selection panel

8. Backup

9. Print

10. Adjust Video Brightness

11. Zoom In/Out

12. Exit

13. Full Screen

14. Audio Settings

2-**Way Audio** - Allows the remote user to communicate via voice with anyone who may be at the Server side.

Minimize - Minimize ELMO DVR Remote without shutting down or closing the application.

Time Panel

The Time panel is identical to that of the ELMO DVR Server Search window. (*See the Search on ELMO DVR Server section for more information*) Days, highlighted in red, signify that there is a corresponding video recording stored on the local hard drive. In this example, there is backup video information for October 1st and 3rd, 2004.

Playback control panel.

Except for the graphic aspect, the Playback panel is identical to the Playback panel in ELMO DVR Server Search window. (*See the Search on ELMO DVR Server for more information*)

Skip & Delay - Same as in ELMO DVR Server Search window. (*See the Search on ELMO DVR Server section for more information*)

Camera Selection Panel.

The Camera Selection panel allows for a choice of specific cameras for playback. Click **All** to view all cameras.

Backup panel: (Click **Backup** to expand)

Backup - is identical to the Manual Remote Backup (*See the Manual Backup section for more information*).

Print - This button is for printing the still images with the local network printer

Adjust Brightness - Allows adjustments to the video brightness

Zoom In/Out - Is for zooming in and out of the video recording

Exit – Is for exiting the Local Search mode

Full Screen – Is for entering the full-screen mode - no Graphic User Interface

Audio Settings – Is for enabling the audio playback on specific camera and adjusting the volume (High/Low)

To perform a Search in the Local Search window, do the following:

1. Select the Date in the **Calendar** Window

2. Select the Time in the **Clock** Window

3. Select the cameras to be searched in the Camera panel

4. Adjust the **Skip** and **Delay** values

5. Click **Play** on the Playback Control panel

> ☞ **Note**
>
> Advanced search options, image editing and access to PACDM™ are not available in the ELMO DVR Remote Local Search window.

3.4. Searching a Connected Remote Site

One of the main functions of ELMO DVR Remote software is searching the video recordings stored on the remote site. ELMO DVR Remote software must be connected to a remote site before a remote search can be performed.

To search a remote site, do the following:

1. Connect to a desired remote site.

2. Click **Search** on the main screen [Search]. The Search window will appear.

Please note The remote search window on ELMO DVR Remote is identical to the search window on the ELMO DVR Server with the following exceptions:

1. The Search window on ELMO DVR Remote allows switching between multiple connected remote sites by means of the Multi Site selection tool.

2. The Search window on ELMO DVR Remote allows switching between multiple connected remote sites by means of the Multi Site selection tool.

3. 2-Way Audio connection can be initiated through the ELMO DVR Remote Search window

4. No Advanced Search panel is available in the ELMO DVR Remote Search window

5. No Quick CD Backup is available in the ELMO DVR Remote Search window

Backup on ELMO DVR Remote

Two types of backup are available on ELMO DVR Remote: Automatic Backup and Manual Backup.

1. Automatic Backup

2. Manual Backup

1. Automatic Backup

ELMO DVR Remote software can be configured to save the video recordings viewed or searched remotely onto the local media automatically. Automatic backup is configured in the ELMO DVR Remote local Configuration Setup. *(Please refer to the ELMO DVR Remote Local Setup - Configuration Setup)*

Automatic Backup of the video recordings viewed remotely:

The user has an option of automatically saving all the video recordings that are viewed remotely through ELMO DVR Remote. To automatically save all remotely viewed video recordings onto the local drive, check "**Current Screen Data Save**" option in the ELMO DVR Remote Configuration Setup. Choose the local drive to which the video recordings will be saved. Every time the user connects to the remote site and chooses one or more cameras for display, the video stream displayed on the main screen is automatically saved in the encrypted format onto the selected local drive.

Automatic Backup of the video recordings searched remotely:

The user can configure the ELMO DVR Remote software to save all the video recordings searched remotely on the connected remote site. To automatically save all remotely searched video recordings onto the local drive, check the "**Remote Search Data Save**" option in the ELMO DVR Remote Configuration Setup and choose the local drive to which the video recordings will be saved. Every time the user connects to the remote site and chooses one or more cameras for remote search, the video recordings that are being searched remotely are automatically saved in the encrypted format onto the selected local drive.

☞ Note

In the local Search window the backup data made with the Current Screen Data Save option will be stored under the Server current screen category.

☞ Note

In the local Search window the backup data made with the Remote Search Data Save option will be stored under the Server search data category.

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2. Manual Backup

A Manual Remote Backup is done from the ELMO DVR Remote Search window, while connected to the remote site. It is done in a similar way as the manual backup on the ELMO DVR Server (*See the Backup on ELMO DVR Server - Manual Backup section for more information*). A Manual Remote Backup can only be performed to the local media; a backup to the remote media is not available on ELMO DVR Remote.

There are three types of manual backup available on ELMO DVR Remote:

1. Snapshot

2. Encrypted

3. AVI backup

Note

All Manual Backup files will be displayed under the Backup Data category in the ELMO DVR Remote local Search mode.

2.1. Snapshot Backup

Note

This feature is NOT available on ELMO DVR Remote.

Snapshot backup allows saving the still image from the remote site to the local drive.

To perform Snapshot backup, do the following:

1. Stop the video playback on the exact frame

2. Click the desired camera to be displayed separately

3. Click the **Backup** button on the **Tools** panel

4. Choose **Snapshot** in the **Type** field

5. Choose the local drive for Snapshot backup from the drop-down menu in the **Backup Media** field. The snapshot file will be saved to the root catalogue of the selected drive.

6. In the **Watermark Checker Copy** window, click **Yes** if this program has not been previously saved on the hard drive. Click **No** if it has been previously saved on the local drive.

2.2. Encrypted Backup

Encrypted backup is a unique compression method, which records all available camera inputs in a single file. Encrypted backup files can only be played with the ELMO DVR Remote Software. The K-Remote Backup Server MUST be running during the backup process.

To perform the Encrypted Backup, do the following:

1. Click the **Backup** button on the **Tools** panel

2. Choose **Encrypted** in the **Type** field

3. Set the **Start** date and time from the **Start** menu

4. Set the **End** date and time from the **End** menu

5. Choose the local drive from **Backup Media** drop-down menu. The files will be saved in the **LocalDrive:\KDB\backup** folder

6. Set the priority of this backup process (**High/Low**). If set to High, this backup will have priority over other backup processes (e.g. scheduled backup).

7. Click **OK**

8. The current backup progress is displayed in the K-Remote Backup Server:

In the K-Remote Backup Server the user can see:

a. The IP Address of the remote Server

b. The backup title

c. The path to the backup file

d. The backup progress

e. The list of remote sites the K-Remote Backup Server has connected to and disconnected from.

2.3. AVI Backup

AVI backup files can only be opened with the AVI viewers (e.g. Window Media Player, Quick Time, Real Player, etc.) The video recording from each camera input is saved as a separate file with an *.avi extension. The K-Remote Backup Server MUST be running during the backup process.

To perform the AVI Backup, do the following:

1. Click the **Backup** button on the **Tools** panel

2. Choose **AVI** in the **Type** field

3. Set the **Start** date and time from the **Start** menu

4. Set the **End** date and time from the **End** menu

5. The **Total Recording Time** will be displayed in the drop-down menu. When backing up lengthy video recordings, this menu will have 5, 10 and 30 minute, and 1 hour backup options that can be chosen instead of the custom total recording time

6. Click **Select Media** to choose the destination for the AVI backup

a. Enter the descriptive **File Name** for the AVI backup file

b. Click **Browse** ⬚Browse...⬚ to select the local drive and folder for the AVI backup

c. Browse through the local drives and select the desired folder. If no custom folder is selected, the backup AVI file will be saved to **LocalDrive:\kdb\BACKUP_AVI folder**.

d. Click **Ok**

7. Set the Priority of this backup process (**High/Low**). If set to High, this backup process will have priority over other backup processes (e.g. scheduled backup).

8. Select all desired cameras from the Camera list. Only the video recordings from selected cameras will be backed up. The server will create backup files with the custom file name and the camera number for each chosen camera. E.g. Closing Time [1].avi; Closing Time [5].avi, Closing Time [9], etc. In this example, 3 AVI backup files were created: for cameras 1, 5 and 9.

9. Select the video codec for the AVI backup from the **Select Compressor** field. Select the codec name displayed for the list of all available codecs.

Microsoft Video 1
Microsoft MPEG-4 Video Codec V1
✔ Microsoft MPEG-4 Video Codec V2

Attention: It is *highly advisable* to leave the default codec chosen by the server - it is always the latest available codec. (In this example, Microsoft MPEG-4 Video Codec V2) The only reason to change the codec to an earlier version is to play back the AVI backup file on the older system with older codecs installed.

10. Select the desired AVI Caption format for the AVI file. Select the default caption format for the list of all available caption formats. AVI Caption text will be overlaid on the AVI video recording. Select **Disable** for no caption text overlay.

Disable
✔ [Camera No.] [Camera Name] [Date] [Time]
[Camera No.] [Date] [Time]
[Camera Name] [Date] [Time]
[Camera No.]
[Camera Name]

11. Select the position for the AVI caption from the list. The caption position determines the position of the Caption text overlay on the AVI video recording. Select the default caption position (Left, Top) for the list of all available caption positions.

✔ Left, Top
Left, Middle
Left, Bottom
Center, Top
Center, Middle
Center, Bottom
Right, Top
Right, Middle
Right, Bottom

12. Click **OK** to start backup process.

13. The backup progress window and the recording icon 👓 on the top of the screen will be displayed throughout the backup process.

14. The current backup progress is displayed in the K-Remote Backup Server:

Client informat...	Backup title	Upload file name	Upload progress ...
192.168.10.199...	Immediately b...	c:\kdb\BACKUP_AVI\{57384850-3974-4E9F-BA77-BFF6D124E9CD}\1004...	51.67 %

192.168.10.199 : Connected
192.168.10.199 : Disconnected
192.168.10.199 : Connected
192.168.10.199 : Disconnected
192.168.10.199 : Connected
192.168.10.199 : Disconnected
192.168.10.199 : Connected

In the K-Remote Backup Server the user can see:

a. The IP Address of the remote Server

b. The backup title

c. The path to the backup file

d. The backup progress

e. The list of remote sites the K-Remote Backup Server has connected to and disconnected from.

PACDM™ Integration

1. Setting up Text Overlay

Your ELMO DVR can be configured to display and capture current PAC activity on any camera you configure for PAC support.

To set up PAC Text Overlay on a camera, do the following:

1. Click **Setup** on the main screen

2. Click the Text Overlay tab

3. Select the camera on which you wish to see text overlay

4. On the video window draw a rectangular box around the area for which you would like to see the text overlay.

5. Select **Black/White** for the text color. Selecting **Intelligent** will set the text color to the opposite color of the background. **Example** : If the background is dark the text color would be white. If the background is bright the text color would be black.

6. Adjust the **Brightness** according to desired background sensitivity.

7. Select **Show Text Overlay on Live Mode** to display text inserter on live mode.

8. Enter the **Number of Characters** per line.

9. Set the **Horizontal Start Position** with respect to the rectangle's left edge.

10. Set the **Vertical Start Position** with respect to the rectangle's top edge.

11. Enter the **Scroll Delay** to determine the number of frames delayed when text scrolls up.

12. Enter the **Number of Lines** to display in the rectangle.

13. Enter the **Text Delay Time.** If there is no text input for a long time, the text will disappear automatically.

14. In the **Setup For All Cameras** menu, check off the **Enable Data Collector** checkbox, to start collecting data from the connected POS.

15. In the **Text Overlay Function** menu,

   a. Check off the **Show on Live Mode and Search Mode** checkbox to show the text overlay in both Live and Search modes or leave it unchecked to show on Search mode only

   b. Check off the **Disable Text Overlay, PACDM and PAC Parser** checkbox to disable text overlay on ELMO DVR Server.