swann®

swann AX

Instruction Manual

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Important Information

This instruction manual is designed to cover the use, operation and features of a broad number of Swann CCTV systems. Some features and configuration options shown in this manual aren't available on all models and may only be accessed on specific models. If information is required on specific features not called out on the product web page or packaging, please contact our Swann helpdesk in your region for further information.

Every effort has been made to ensure that the information in this manual is accurate. Because of our on-going efforts to constantly improve our products, additional features and functions may have been added since that time. Swann is not responsible for printing or clerical errors.

Battery Safety Information

DANGER: This product contains a coin/button cell battery.

Keep the battery away from babies and small children at all times.

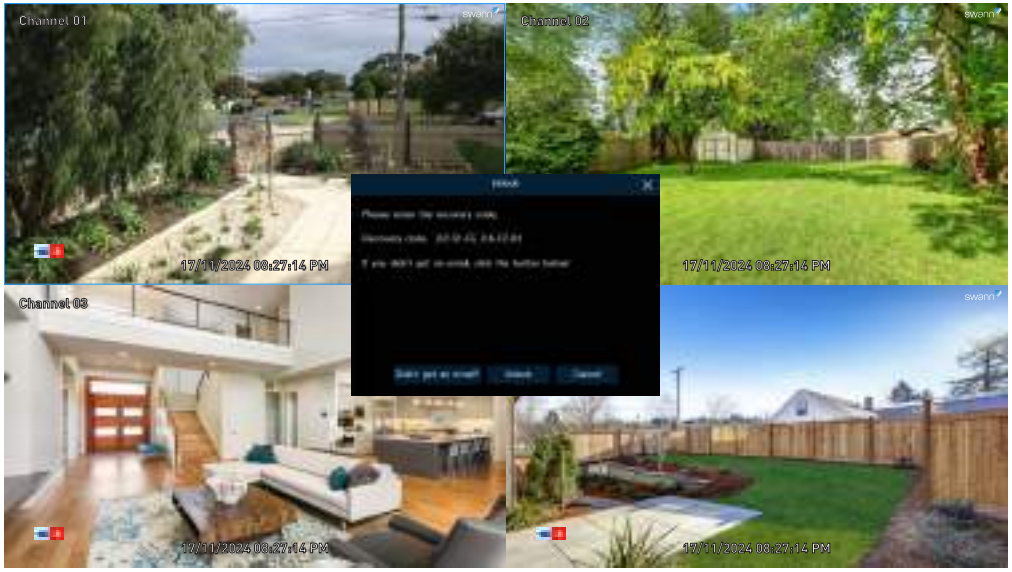
- This battery can cause severe or fatal injuries in two hours or less if it is swallowed or placed inside any part of the body
- If the battery is suspected of or has been swallowed, or placed inside any part of the body, immediately seek medical attention
- If the battery is suspected of or has been swallowed, or placed inside any part of the body, immediately seek medical attention

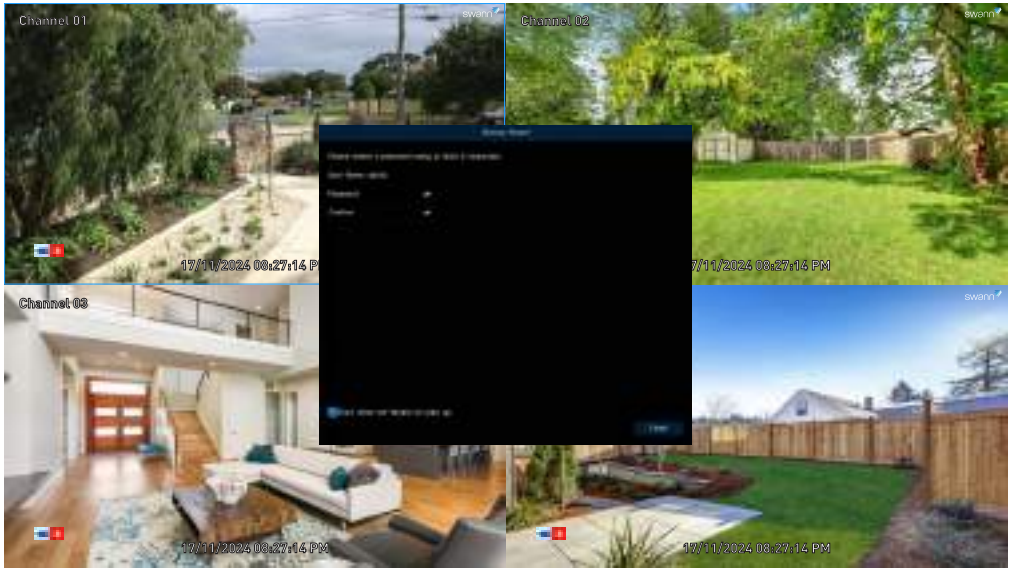
Important Password Information

This NVR does not have a default password. A password is created during the Startup Wizard. If password protection is enabled and you have forgotten your password, your NVR's MAC address is used to create a new password (see page 5 - Password Reset).

Click for contents

Password Reset





Forgotten your password? Please do the following:

1. Right-click the mouse on the Live View screen to display the Menu Bar, click the "Start" button (bottom left on the Menu Bar), then click "Setup".

2. At the password login screen, click "Forgot Password", then click "Yes".

3. After a short moment, you will receive a password reset request email containing your NVR's MAC address (if it's not in your inbox, check your junk or spam folder).

4. Input the MAC address (known as the password recovery code), including the colons (see left example), then click "Login".

5. A message will appear on-screen stating that your password has been reset. Click "OK" to continue.

6. Enter a new password. The password has to be a minimum of six characters and can contain a mixture of numbers and letters. Use a password that you are familiar with but is not known to others.

7. Write down your password in the space provided below for safekeeping.

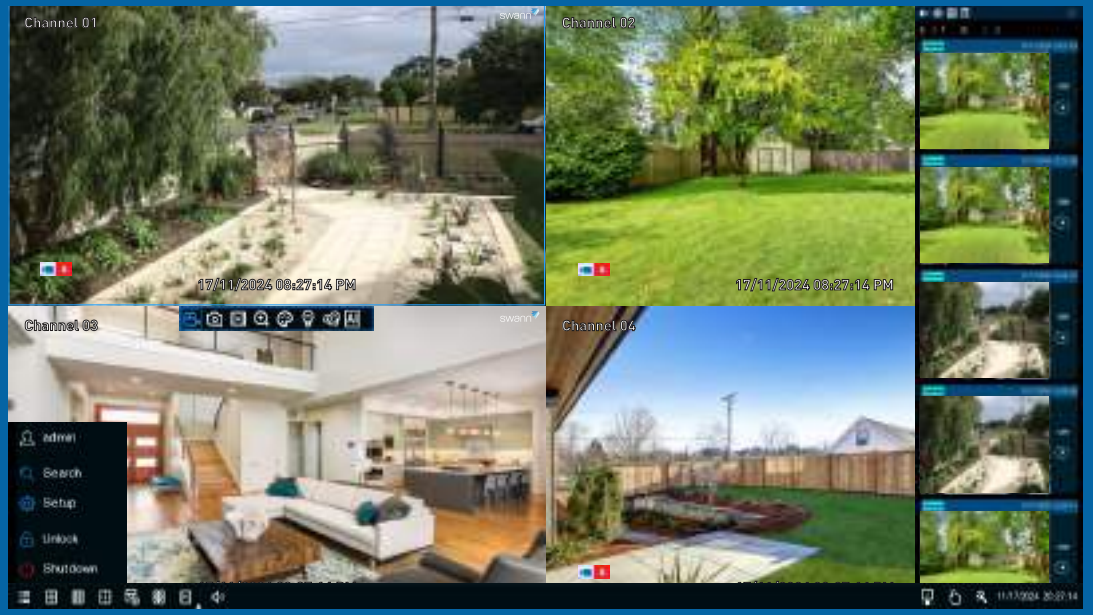
8. When finished, click "Finish". A message will appear on-screen. Click "OK" to finish.

Don't forget to write down your password: _____

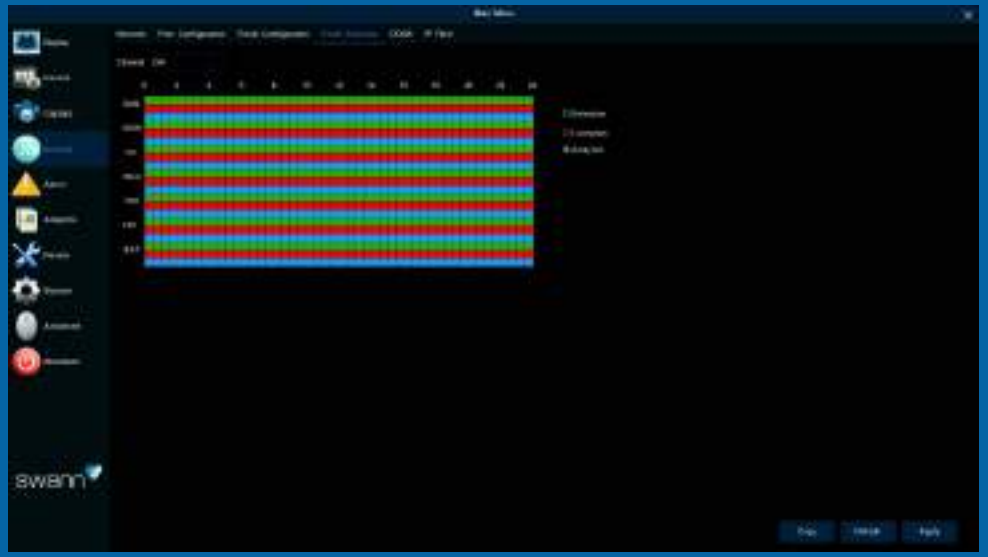
You can do the same steps if you need to change your current password or you can access the User Edit function on page 79.

Live View & Main Menu

Live View is the default display mode for your NVR. Cameras connected will be displayed on-screen. You can check the status or operation of your NVR and cameras using the icons and Menu Bar on the Live View screen. Right-click the mouse to access the Menu Bar.

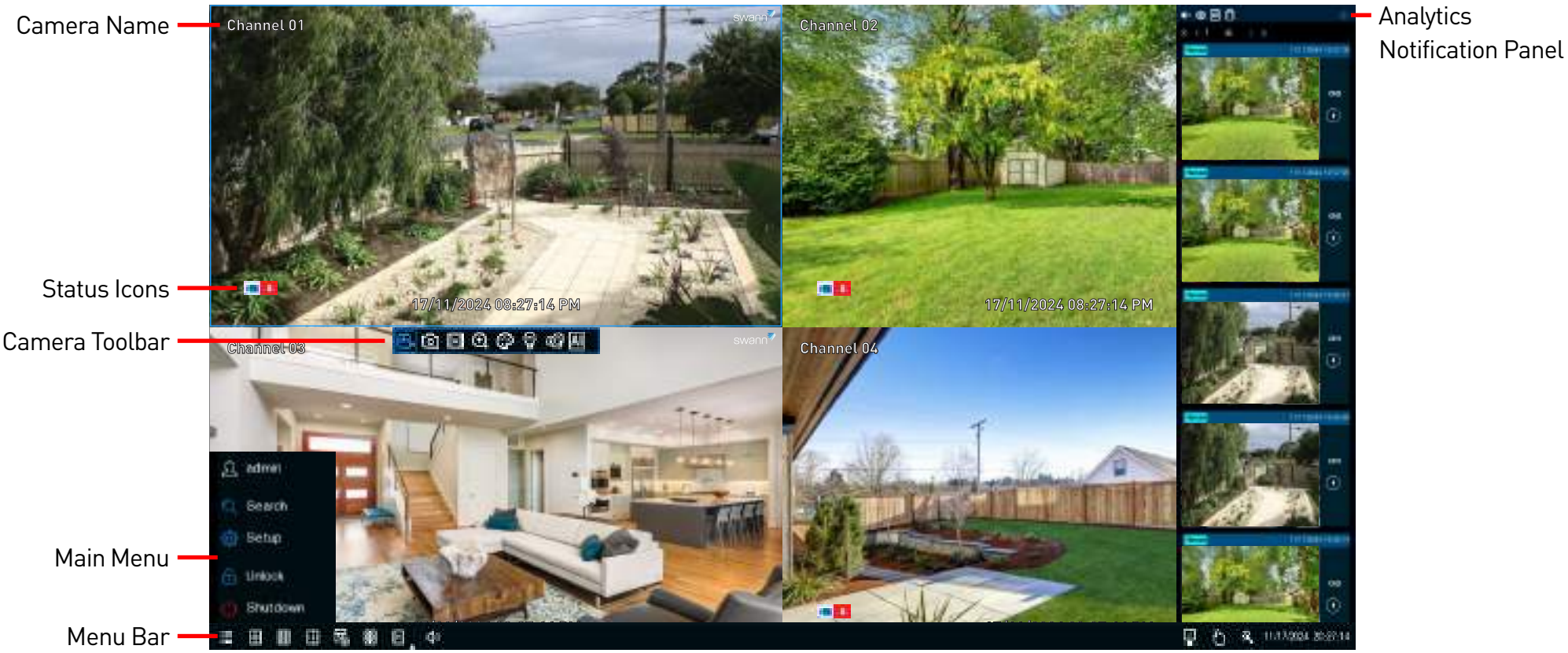


The Main Menu is where you control the actions and options that are available on your NVR. Enable functions such as Privacy Mask to obscure all or part of the image and change the default motion detection area. For system integrity, upgrade the firmware when available.



Live View Mode

Live View mode is the default display for your NVR. Connected cameras will be displayed here (multiple view modes available). You can check the operation of your NVR by using the status icons on the Live View screen. The date and time, as well as the name for each camera, are also displayed.



Double-click a live video channel to view full-screen.

Click & drag a live video channel to reposition it.

Right-click the mouse in Live View mode to display the Menu Bar (see page 8 for more information).

The Camera Toolbar provides access to additional camera functions and settings (see page 8 for more information).

Click for contents

Live View Controls

Menu Bar

1. Click to reveal additional functions available (see dialogue box below).

2. Four camera view.

3. Eight camera view.

4. Click to select from one of the multi-screen viewing modes available.

5. Click to change the bitrate & frame rate when viewing the cameras in Live View mode - Realtime (high bitrate/high frame rate), Balanced (a balance between Realtime and Smooth), and Smooth (high frame rate/low bitrate).

6. Click to repeatedly cycle through each channel full-screen. Each channel will be displayed for five seconds.

7. Click the large button to access the Search menu. From here, you can play previously recorded videos. Click the smaller button to play recent events.

8. Click to change the volume or to mute (click the speaker icon to mute).

9. This icon indicates that your NVR is connected to your modem or Wi-Fi using the supplied Ethernet cable.

10. Click to enter Manual Record mode. When enabled, this will bypass the current recording schedule.

11. Click this to enter the Startup Wizard.

Main Menu

Search: Click to search and play recorded videos (hard drive & USB), view snapshots, and access system log files.

Setup: Click to access the Main Menu.

Unlock: Click to unlock your NVR. If the Menu Timeouts function is disabled, click to lock your NVR to prevent access.

Shutdown: Click to shutdown, reboot or logout of your NVR. Always shutdown your NVR when disconnecting the power.

Camera Toolbar

To access the camera toolbar, left-click a camera to display.

1. While viewing the camera, click to start a manual recording (the icon will turn red when it's recording). Click again to stop.

2. Click to take a snapshot.

3. Click to play back the last recording saved (must be saved in the last five minutes).

4. Click to enter Zoom mode.

5. Click to adjust image settings.

6. Click to change from Substream resolution to Mainstream resolution. Click again to change.

7. Click to enable the cameras' siren and spotlight (if supported).

8. Click to add a Tag when recording. Tagging allows you to record information within the video.

Live View Controls

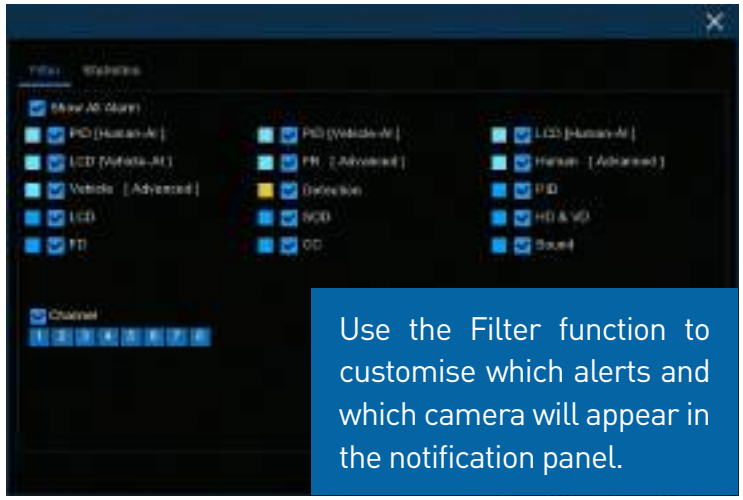
The Event Notification Panel displays a thumbnail of an event that has occurred via motion detection or if one or more of the analytic tools have been enabled. Events are color-coded according to the event type. Use the mouse scroll wheel to scroll up and down (place the mouse cursor over the notification panel first). Click the play button next to or over the thumbnail to play the event.

1. Click to display the notification panel at all times.

2. Click to hide the notification panel.

3. Click to reveal analytic statistics information.

4. Click to reveal the Filter and Statistics functions (Filter function shown below).



Use the Filter function to customise which alerts and which camera will appear in the notification panel.

Status Icons

This indicates that the camera is being recorded (either manually or by motion detection).

This indicates that the camera is set to Motion mode.

S

This indicates that the camera is recording using one of its AI functions.

This indicates that your NVR fails to detect a storage device or it's not formatted.

VIDEO LOSS

This indicates that the channel doesn't have a camera connected or has lost the feed from its camera.

Click for contents

Live View Digital Zoom Mode

1. To enter Zoom mode, left-click a camera in Live View mode then click the "Zoom" button on the Camera Toolbar (as shown on the left).

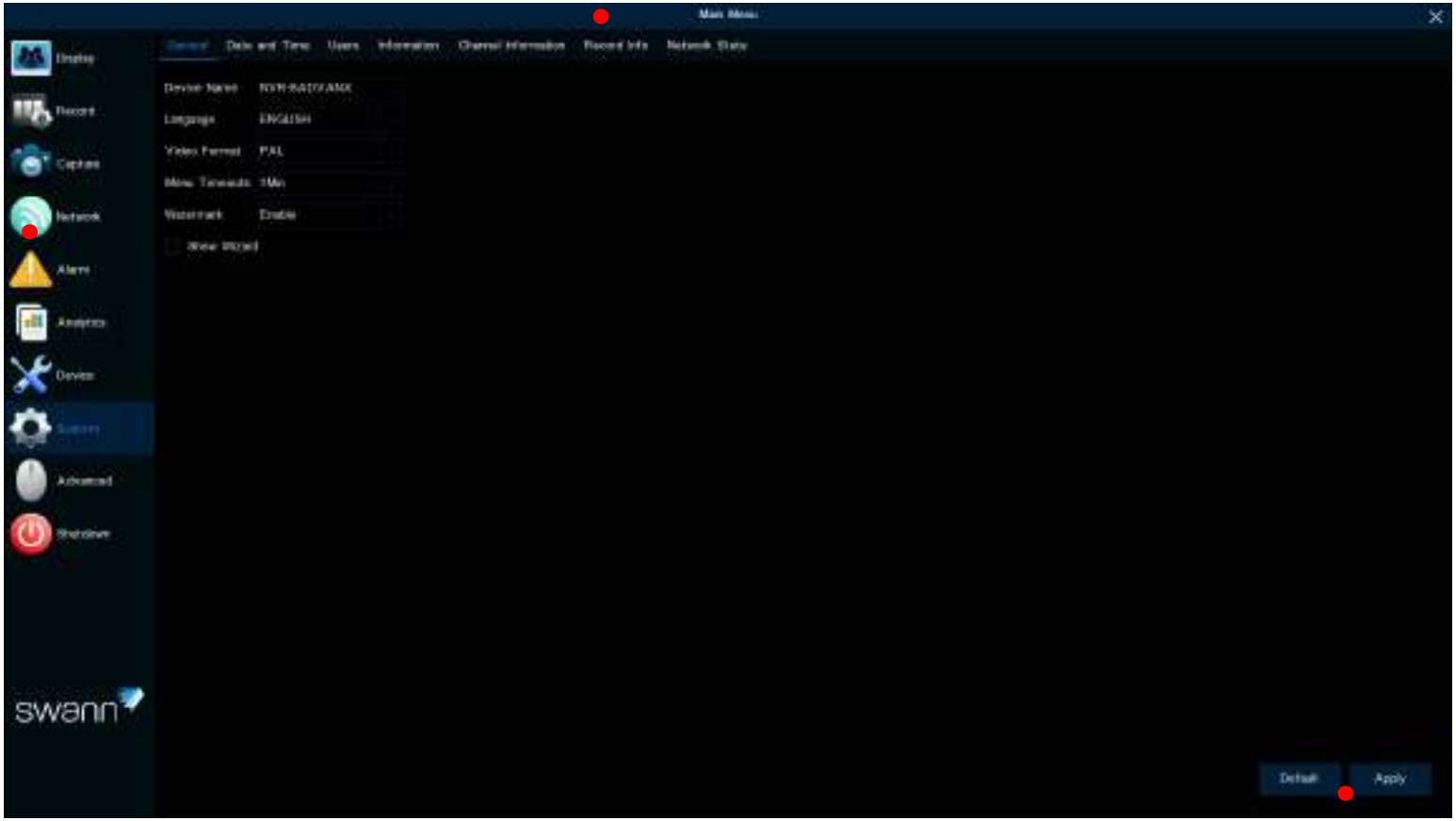
2. To zoom, move the mouse to the area or object that you want to zoom to then use the scroll wheel on the mouse to zoom in or out. When zoomed in, click and hold the rectangle (as shown bottom right of the screen) to scroll around the image. Right-click to exit.

Double-click the mouse to view multiple cameras.

Menu Layout

The various functions and options available, are categorized on the left-hand side of the Menu.

Clicking each category will reveal several tabs or sub-categories that can be changed from their default setting.



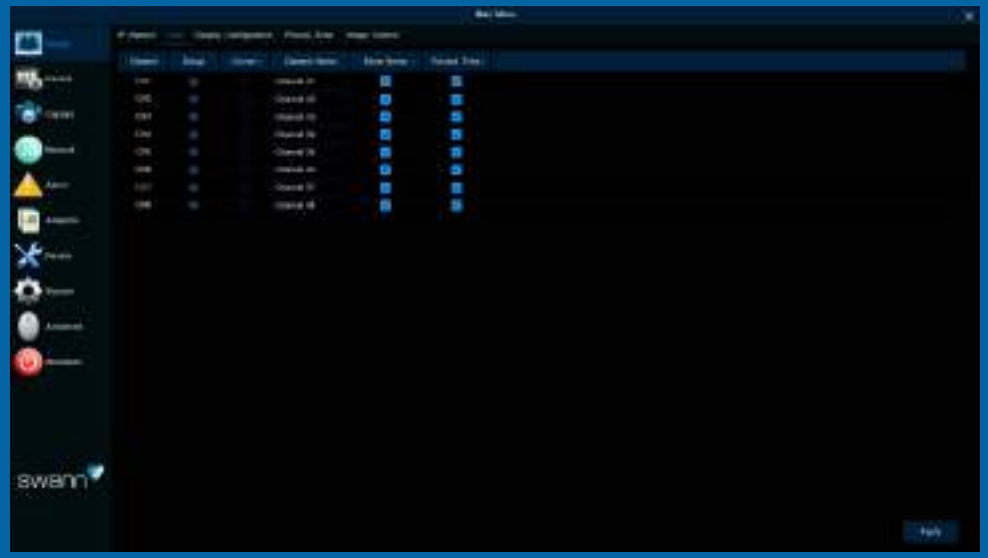
To exit or access the previous menu, right-click the mouse.

Save changes that have been made or restore default settings.

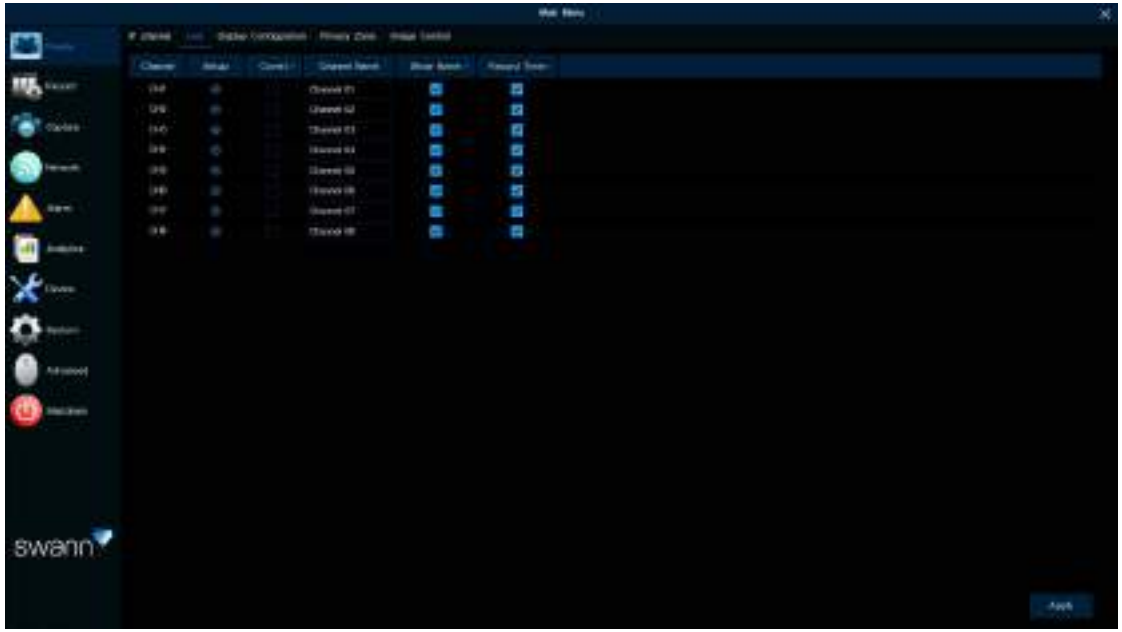
Click for contents

Camera Configuration

The camera configuration options are available in the Display, Record, and Alarm menus accessible from the Main Menu. Your NVR has controls for detecting motion, allowing you to define specific areas to alert you to a potential threat in and around your home. You can create one or more zones for privacy and setting a schedule for the camera's sensor warning light. Controls are also available to enable the built-in microphone and to change the frame rate that your NVR will record.



Display: Live



The configuration options available allow you to name each camera relevant to where it's mounted, as well as the ability to adjust image settings such as brightness and contrast. You can also enable covert mode to hide the cameras' image in Live View mode.

→ Click "Apply" to save settings.

Setup: Click the button to access the camera display settings. You will see the camera display settings on the left (see page 14) and the descriptions below.

Covert: When enabled, the camera will detect motion and trigger your NVR to record, but you will not see an image of the camera in Live View mode. Enable this if your NVR and TV is in a public area (shop, warehouse, etc.), but you don't want others to see an image from the camera.

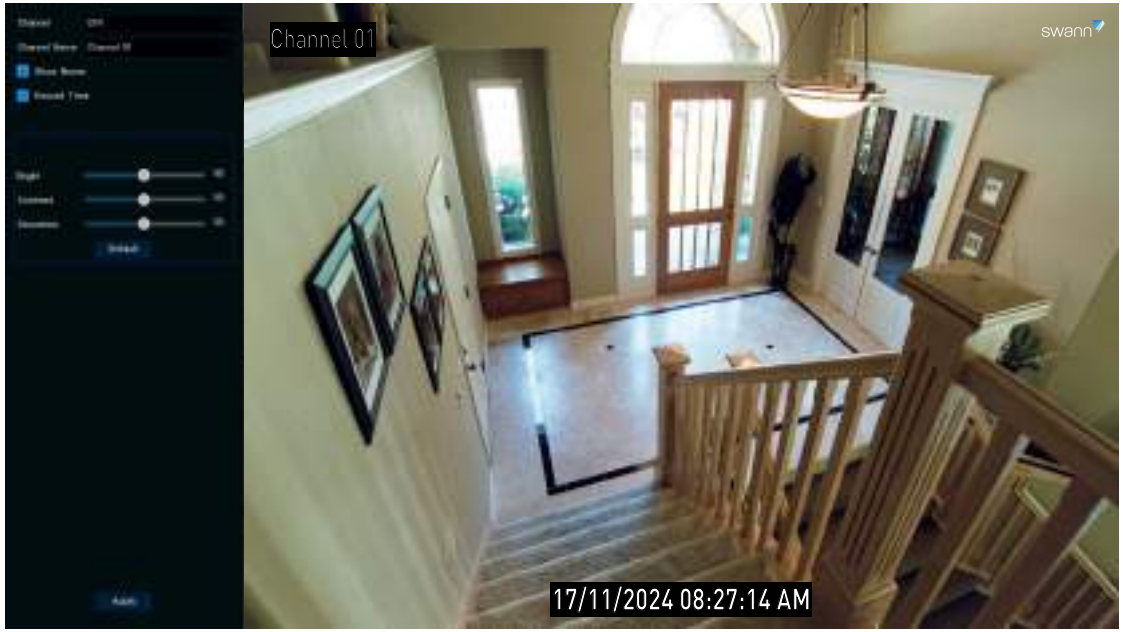
Channel Name: Enter a name for the camera selected. It can be up to 16 characters in length.

Show Name: Leave this enabled to display the camera name in Live View mode, otherwise click the checkbox to disable it.

Record Time: Leave this enabled, as a timestamp will be embedded on all video recordings. Click the checkbox if you wish to disable it.

(continued on next page)

Display: Live - Settings



Bright: This changes how light the image appears to be.

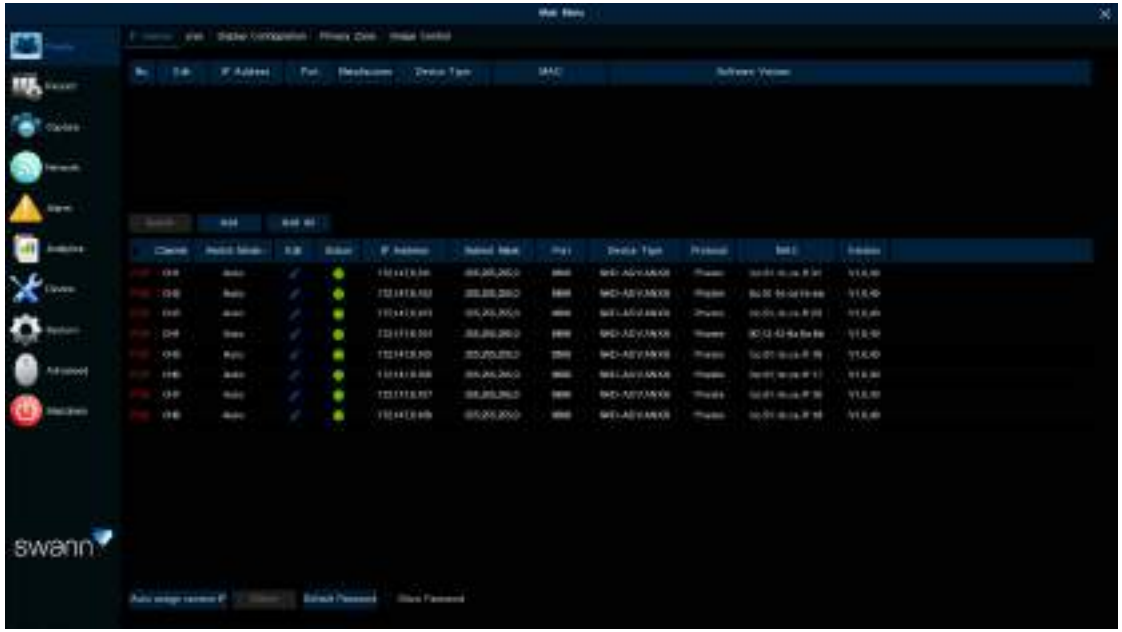
Contrast: The difference in luminance that makes an object distinguishable.

Saturation: This alters how much color is displayed in the image.

Use the slider to adjust each setting. When finished, click the "Apply" button then click "OK". Right-click the mouse to exit.

Any changes made to the display settings available will affect your recordings.

Display: IP Channel



When adding a camera connected to your router, it's paired to an available channel on your NVR. If all channels are currently being used, you cannot add additional cameras.

This function is an advanced feature that is used to manage the cameras connected directly to your NVR as well as compatible IP cameras connected to your router or switch.

Adding an IP camera connected to your router or switch

We recommend using a router or switch with PoE ports. These provide power to the camera using an Ethernet cable. A non-PoE router or switch can be used however you will need to source a 12V DC 1A power adapter to power the camera.

1. Click the "Edit" button on the channel that you want to add the camera to.

2. Switch Mode: Click the drop-down menu and select "Manual".

3. User Name: Input "admin" as the user name.

4. Password: Enter your NVR's login password.

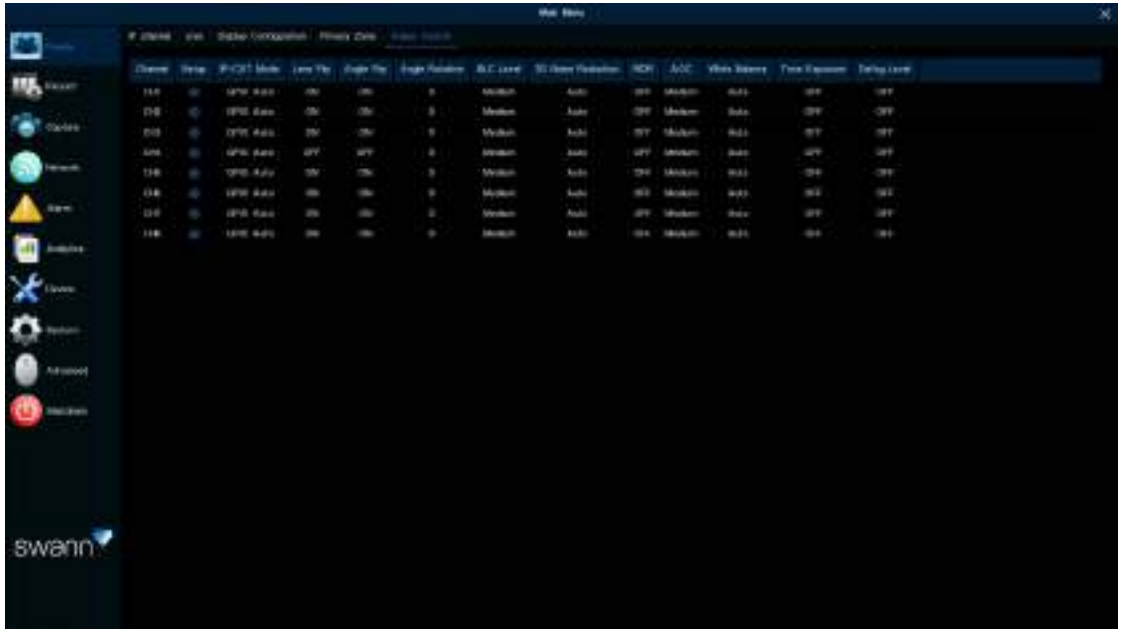
5. Click "OK" to continue.

6. Click "Search". The camera connected to your network will appear. Click the checkbox to select, then click "Add".

7. Delete the current password and enter your NVR's login password. Click "Add" then click "Close". You will now see your camera in Live View mode.

Please note: If you see a "Failed to connect to camera" or "Username or password error!" message in Live View mode for the camera that you have added, this indicates that either the password is incorrect (or has been changed) or it has been physically disconnected from your router or switch.

Display: Image Control



The functions available enable you to control the appearance and characteristics of the image shown from each camera. Each setting can be adjusted to obtain the best possible image quality, providing you with the flexibility to install the camera in the most challenging of lighting situations.

Setup: Click the button to access the camera image settings. You will see the camera image settings on the left (see page 17).

Changes made to the camera image settings are displayed here.

Display: Image Control - Settings

Channel: Select a camera that you would like to edit.

IR-CUT Mode: Choose how the camera handles color and how it manages the transition from daytime to night-time and vice versa:

- **GPIO Auto:** This will instruct the camera to switch automatically from "Color Mode" to "Black White mode" and vice versa.
- **Color Mode:** This will instruct the camera to operate in color mode only. In low light conditions, the color will be quite faint. Image clarity will also be reduced in low-light conditions.
- **Black White Mode:** This will instruct the camera to operate in black & white mode only.

Lens Flip & Angle Flip: Turn the image upside down and/or horizontally reverse the orientation of the image.

Angle Rotation: Rotate the image by 90°, 180° and 270°.

Back Light: Improves exposure of an object that is in front of a light source. This may happen if an object is in front of a window or if a person is coming in from the outside. The camera will pick up the natural light, therefore the object or person in the foreground becomes dark.

(continued on next page)

Display: Image Control - Settings

DWDR (Digital Wide Dynamic Range): This function will balance images with a larger dynamic range. It does this by brightening dark areas and darkening bright areas. An example of this would be if an indoor camera is pointing towards a window or building entrance. The image during the day is washed out due to the high brightness of the incoming light. If this is required, click the drop-down menu to enable:

→ **Level:** Click and hold the slider left or right to change. The higher the number, the wider the dynamic range will appear.

3D Noise Reduction: This function will reduce the overall noise content for recordings done at night or in lower light conditions. The "Auto" selection will be suitable for most camera locations but can be disabled if needed.

AGC (Automatic Gain Control): This function allows an increase in sensitivity, enabling operation in lower light conditions. The camera will automatically boost the gain control so that objects can be seen more clearly. Click the drop-down menu to select a level of control that you would like to apply.

Shutter: This function controls the length of time a camera's shutter is open and the amount of light reaching the sensor. In low light situations, the shutter needs to stay open longer for the sensor to receive enough light. The "Auto" setting will be suitable for most camera locations but can be adjusted if needed:

→ **Time Exposure:** When selecting "Manual", click the drop-down menu to select a different exposure time. The lower the number, the slower the shutter speed (may cause a motion blur on moving objects).

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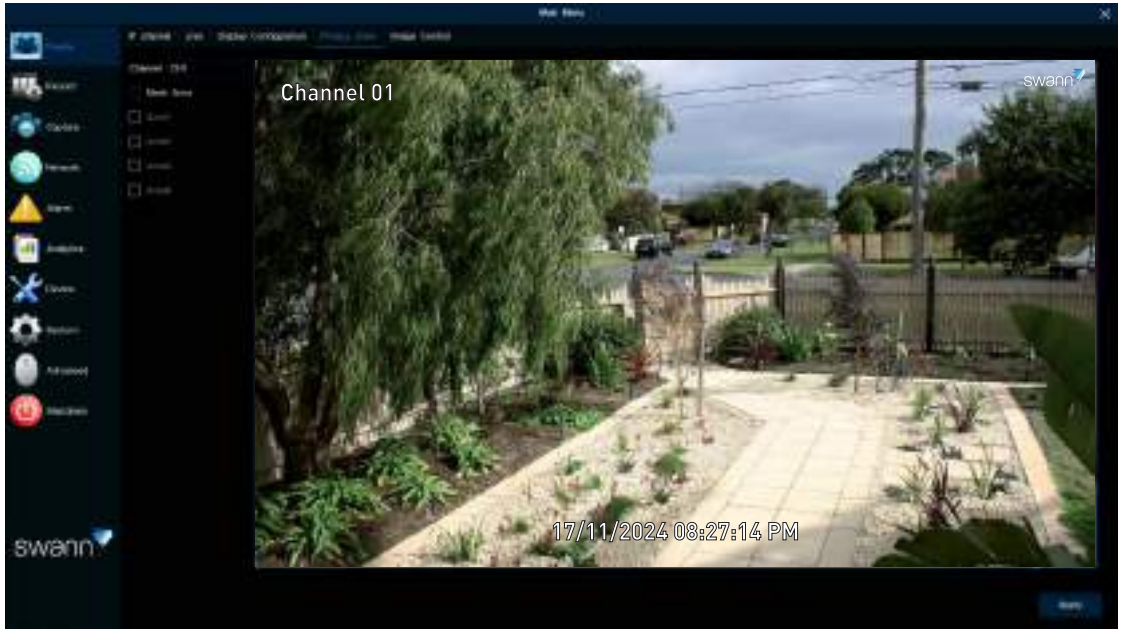
Display: Image Control - Settings

Defog Mode: This function improves video quality if there is moderate to heavy fog or haze. The "Auto" setting will be suitable for most camera locations. If selecting "Manual", click and hold the slider left or right to change.

Display: Privacy Zone



This function can obscure all or part of your image for privacy (you can create up to four privacy masks per camera). You can also use this to minimize false triggers when motion is detected. Areas obscured by a mask won't be shown live or recorded.

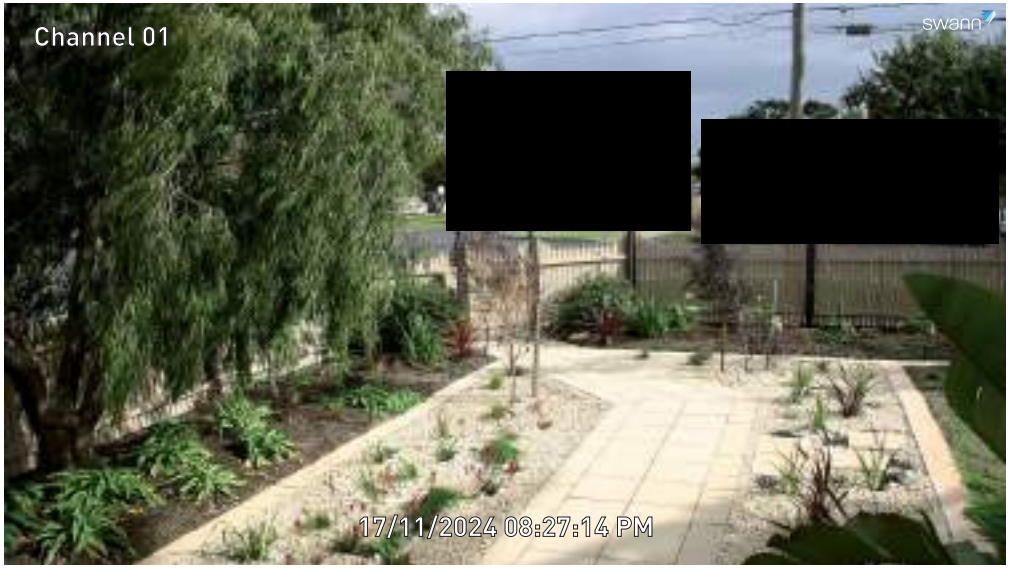
Channel: Select a camera that you would like to edit.

Mask Area: To create a mask, click the checkbox to enable it.

Area 1 to 4: Click the checkbox on the number of privacy masks that you want to enable. Up to four privacy masks can be enabled per camera.

Depending on the number of privacy masks enabled, one or more masks will appear in the Live View windows (see page 21 - Enabling a Privacy Mask).

Enabling a Privacy Mask



1. Depending on the number of masks that you want to enable, each mask will be numbered. To reposition the mask, click and hold the mask number then move the mask to the desired location.

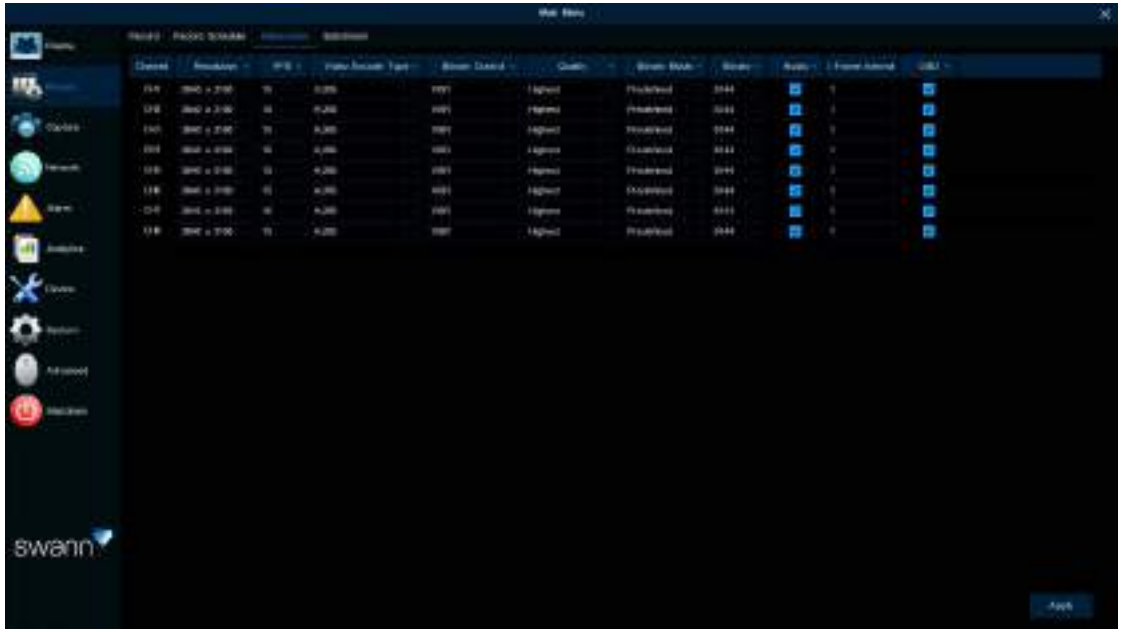
2. To resize the mask, click and hold the bottom right corner of the mask then resize to the desired size. You can reposition and resize each mask to overlap each other.

In the example provided on the left, two masks have been enabled to block out cars and pedestrians adjacent to the front yard of the house. This will minimise false triggers and block movement that is not relevant to entry via the front entrance.

3. When finished, click "Apply" to save. Areas obscured by a mask won't be shown live or recorded (see below left).

To remove a mask, uncheck the checkbox next to the relevant area, then click "Apply" to save.

Record: Mainstream



The functions available allow you to change the resolution, frame rate, bitrate control and bitrate mode of the camera. By default, the recording resolution and frame rate of the camera is auto-selected by your NVR.

→ Click "Apply" to save settings.

Resolution: The optimal recording resolution of the camera is auto-selected by your NVR.

FPS: The optimal frame rate of the camera is auto-selected by your NVR.

Video Encode Type: Your NVR utilizes two codecs to record video. The H.265 codec will compress the information more efficiently and provide the best video quality for a given bandwidth between each camera and your NVR. This setting allows your NVR to automatically adjust the video so that the connection and quality are consistent and reliable. The other codec is H.264. We don't recommend it as it will impact the reliability of the connection between each camera and your NVR due to the higher bandwidth required.

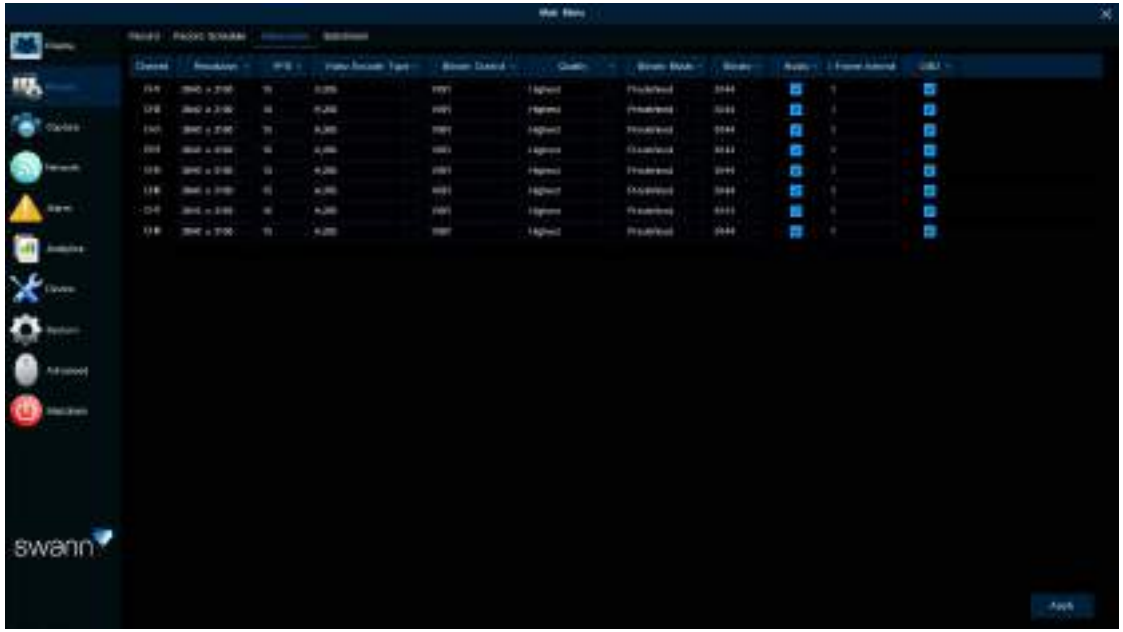
Bitrate Control: This is set to VBR by default. CBR (Constant Bitrate) utilises a fixed bitrate and bandwidth to record video. This means your NVR will use the same number of bits throughout the entire recording, regardless of what is happening on-screen. VBR (Variable Bitrate) utilises a bitrate and bandwidth that changes when your NVR is recording. The bitrate will increase or decrease depending on how complex the scene is. A high-quality recording is created, but one that will use storage more efficiently. We recommend using the VBR setting.

Quality: You can adjust the recording quality when VBR is selected. Higher settings provide better video clarity but require more storage.

Bitrate Mode: You have the choice of selecting a predefined or user-defined bitrate. For most instances, the default selection will be suitable.

(continued on next page)

Record: Mainstream



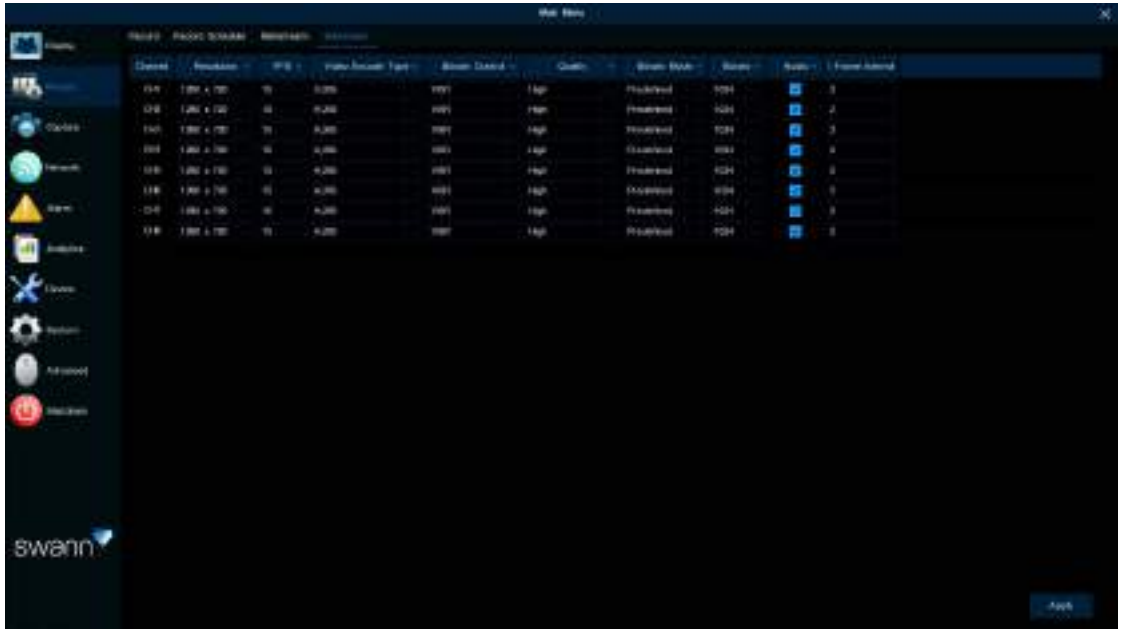
Bitrate: The amount of data that your NVR will use to record video. A high bitrate will increase the video quality but will increase the need for more data traffic and each recording will consume more storage.

Audio: Your NVR will record audio using the camera's built-in microphone. Click the checkbox to disable or enable.

I Frame Interval: This configures the number of partial frames that occur between full frames (I-Frames) in the video stream. For example, in a scene where a door opens and a person walks through, only the movements of the door and the person are stored. The stationary background that occurs in the previous partial frames are not encoded. As the I-Frame increases, the number of partial frames also increases. Higher values are only recommended on networks with high reliability, otherwise, leave the default selection.

OSD: Click the checkbox to hide the on-screen display when viewing the camera full-screen.

Record: Substream



The functions available here allow you to control how video is streamed to your mobile device using the Swann Security app. You can change the frame rate, bitrate mode and bitrate control if you're having issues streaming live video from your NVR.

→ Click "Apply" to save settings.

Resolution: The optimal recording resolution of the camera is auto-selected by your NVR. You can select a lower resolution if you're having issues streaming to your mobile device.

FPS: The number of frames per second (fps) that your NVR will process when streaming to your mobile device. For most instances, the default frame rate will be suitable. This is especially the case for cameras that monitor medium to high traffic areas and will result in smoother motion. Just be aware this will increase the bandwidth required. You can lower this if monitoring low traffic areas.

Video Encode Type: Your NVR utilizes two codecs to record video. The H.265 codec will compress the information more efficiently and provide the best video quality for a given bandwidth between each camera and your NVR. This setting allows your NVR to automatically adjust the video so that the connection and quality are consistent and reliable. The other codec is H.264. We don't recommend it as it will impact the reliability of the connection between each camera and your NVR due to the higher bandwidth required.

Bitrate Control: This is set to VBR by default. Specifies whether to use a constant (CBR) or variable (VBR) bitrate. CBR keeps the data rate fixed, while VBR adjusts it based on the scene's complexity.

Quality: You can adjust the recording quality when VBR is selected. Higher settings provide better video clarity but require more storage.

Bitrate Mode: This is set to Predefined by default.

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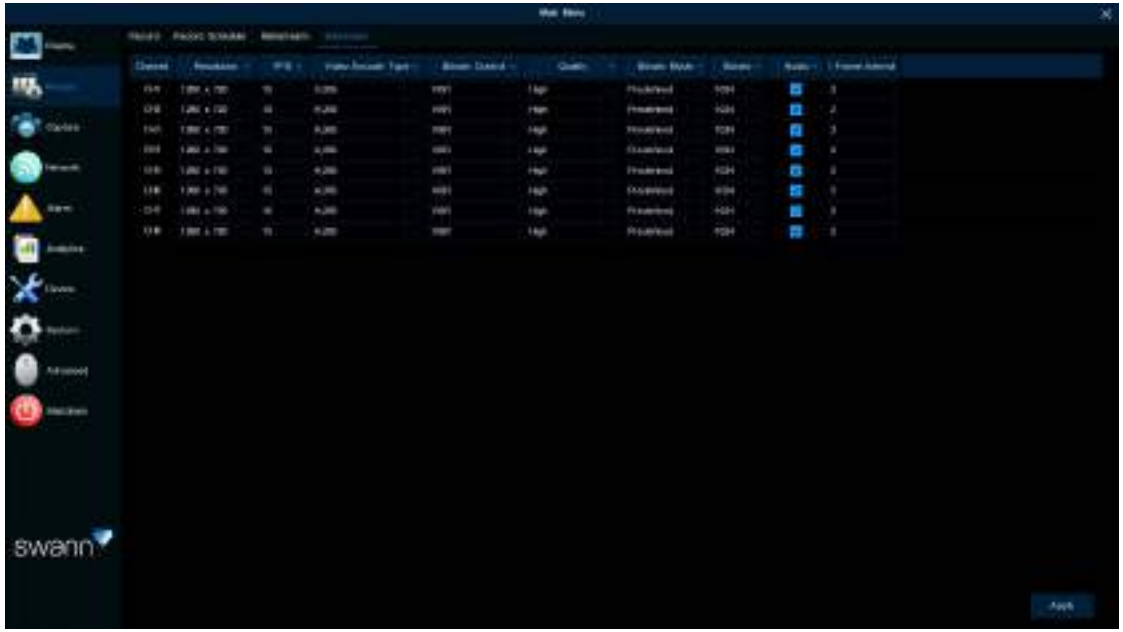
Record: Substream



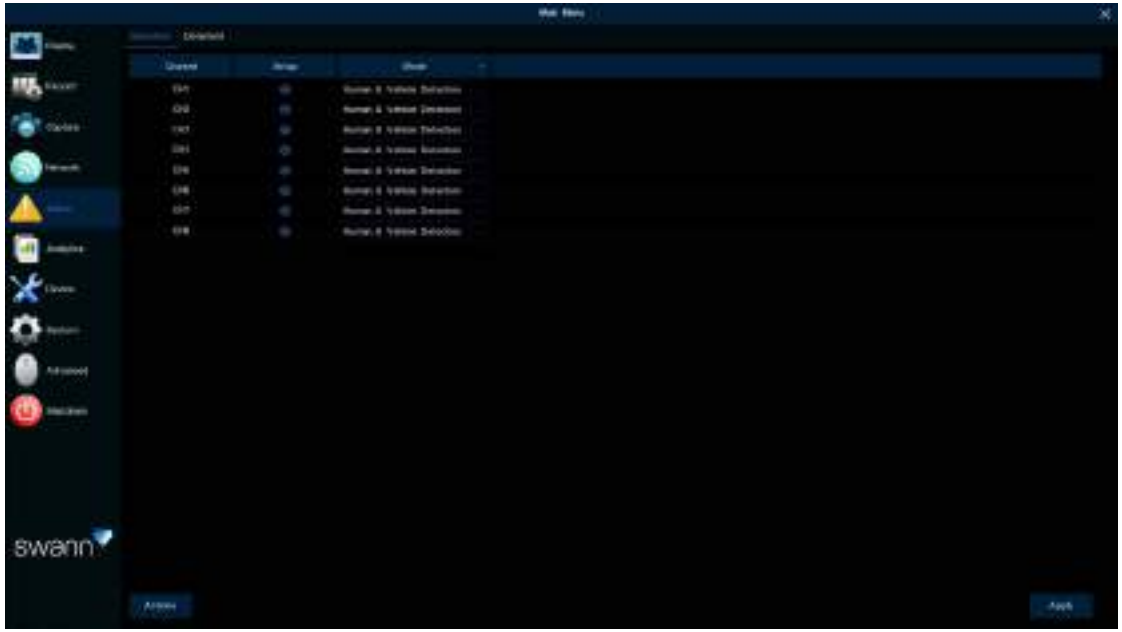
Bitrate: The amount of data that your NVR will use to record video. A high bitrate will increase the video quality but will increase the need for more data traffic and each recording will consume more storage.

Audio: Your NVR will record audio using the camera's built-in microphone. Click the checkbox to disable or enable.

I Frame Interval: This configures the number of partial frames that occur between full frames (I-Frames) in the video stream. For example, in a scene where a door opens and a person walks through, only the movements of the door and the person are stored. The stationary background that occurs in the previous partial frames are not encoded. As the I-Frame increases, the number of partial frames also increases. Higher values are only recommended on networks with high reliability, otherwise leave the default selection.

When streaming live video, the quality is dependent on your internet connection and the Substream settings utilised. This is important to remember when streaming multiple cameras at the same time.

Alarm: Detection



When the NVR detects motion through its cameras, it notifies you of potential threats at your home. This notification can be delivered via email and/or push notifications through the Swann Security app. Additionally, you can store a snapshot and/or a video clip of the event in the cloud.

→ Click "Apply" to save settings.

Setup: Click the "Setup" button to change the default analytic settings, such as the minimum pixel size for human & vehicle detection and the detection area (see page 27 - Human & Vehicle Detection Settings).

Mode: Your NVR will only record when the camera detects a person, vehicle or a combination of both using its AI technology. This helps reduce false alarms from wind, falling leaves, or rain.

If you want to record all movement in areas like busy walkways or building entrances, change the setting to "Motion."

For advanced detection features like PID and LCD analytics, set it to "Disable."

Actions: Click the button to change options for alarm notifications, alerts and more (see page 29 - Alarm: Detection - Actions).

Click for contents

Human & Vehicle Detection Settings

The green outlined boxes represent the Min Pixel and Max Pixel value specified. This means an object in the detection area must be at least the size of this box (relative to the view) to trigger an event. Click the red square (it will turn yellow) and drag to adjust the size of the box and its value. Click and hold anywhere within the box to reposition, measure and check object sizes.

Snap Mode: Select how snapshots containing a human and or a vehicle will be captured. This can affect the number of object recognition notifications that you will receive:

Realtime Mode: The camera tracks and captures a human and or a vehicle entering and leaving the detection area. You'll be notified in the Analytics Notification Panel in real-time.

Interval Mode: You can specify the number of snapshots to take and the time interval between snapshots (anywhere between one snapshot and an unlimited amount of snapshots).

Min Pixel: The minimum object size in pixels. The smaller the number of pixels, the more objects the camera can recognize. The default value is 64. If the camera is recognizing too many unwanted objects, try increasing the minimum pixel value to train the camera to look for objects that are typically at a closer distance.

Max Pixel: The object size in pixels. If you would like the camera to detect objects within proximity to each other, try increasing the maximum pixel value, otherwise leave the default value.

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Human & Vehicle Detection Settings

Detection Mode: In Static Mode, all objects in the camera's field of view will be analyzed. In Motion Mode, only moving objects will be analyzed.

Detection Range: The entire view of the camera is enabled for human and/or vehicle detection. Select Customize to change the default detection area (see above right for instructions).

Sensitivity: Adjust the sensitivity level of the detection area. The higher the number, the more sensitive it will be when detecting objects.

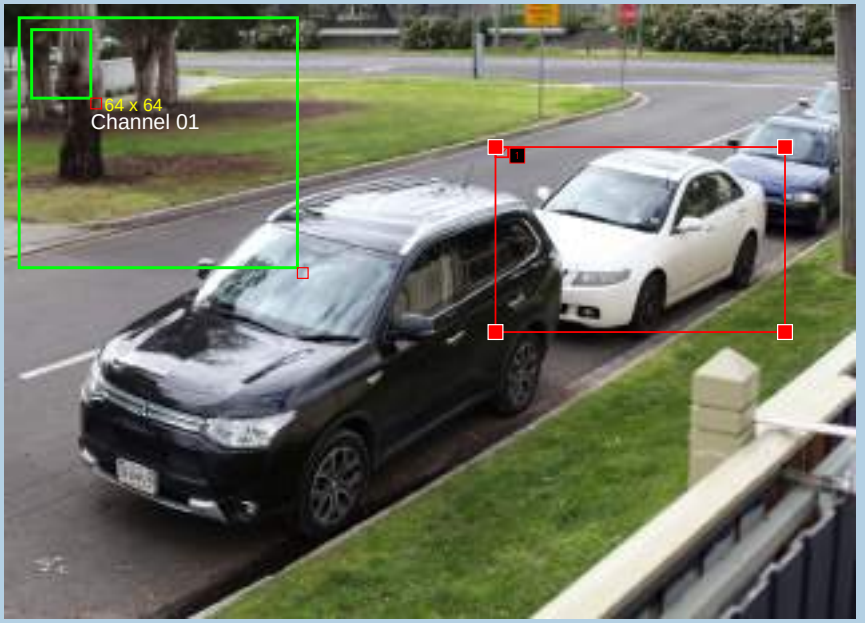
Save: Click this to save any changes made, then click "OK" to continue.

Right-click to exit.

Customizing the Detection Range

1. Detection Range: Select Customize in the drop-down menu.

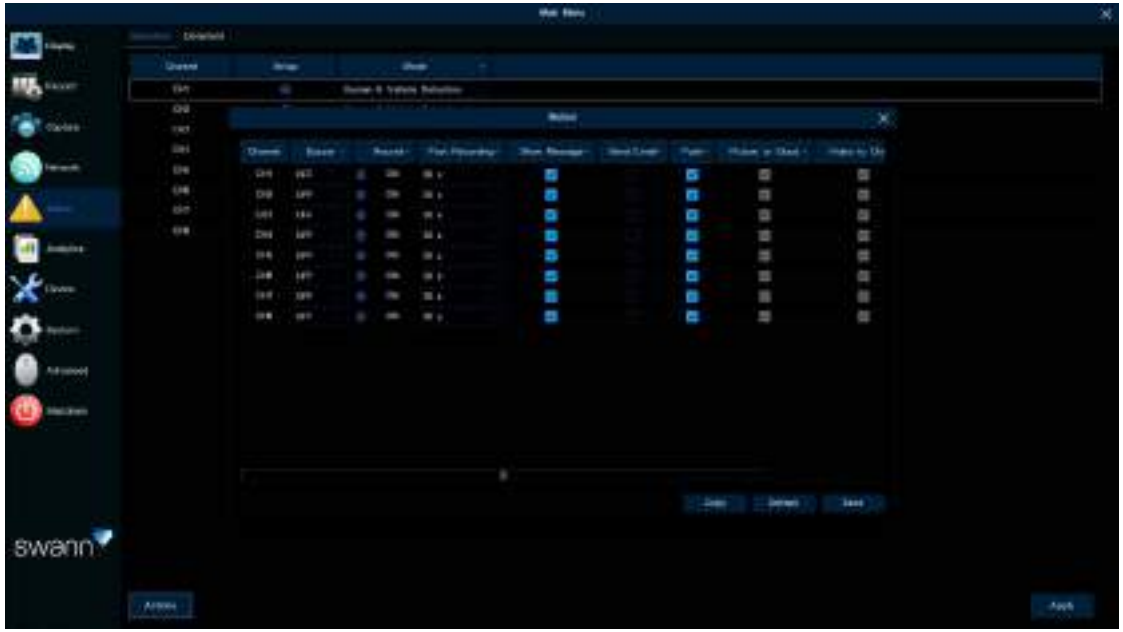
2. Click and drag any red square (sizing handle) in the corners of the rectangle to shape and customize the object detection area. You can resize the rectangle to any shape or size to exclude the area in which human and/or vehicle detection isn't needed. See the example below.



3. When finished, click the "Save" button.

Right-click to exit.

Alarm: Detection - Actions



Buzzer: Enable the NVR's buzzer to alert you when motion is detected for a set time. Choose the time from the drop-down menu.

Record: This option instructs your NVR to turn recording off or on.

Post Recording: This option instructs your NVR to record for a set time after an event has occurred. For most instances, the default selection will be suitable. You can change this if you wish.

Show Message: When motion is detected, the motion icon will appear on-screen. Click the checkbox if you want to disable this.

Send Email: Click the checkbox to enable your NVR to send an email alert when motion is detected.

Push: Push notifications are sent via the Swann Security app. Click the checkbox if you want to disable this.

Picture to Cloud: By default, snapshots are copied to the cloud. Click the checkbox if you want to disable this. This is greyed out if cloud storage has not been enabled.

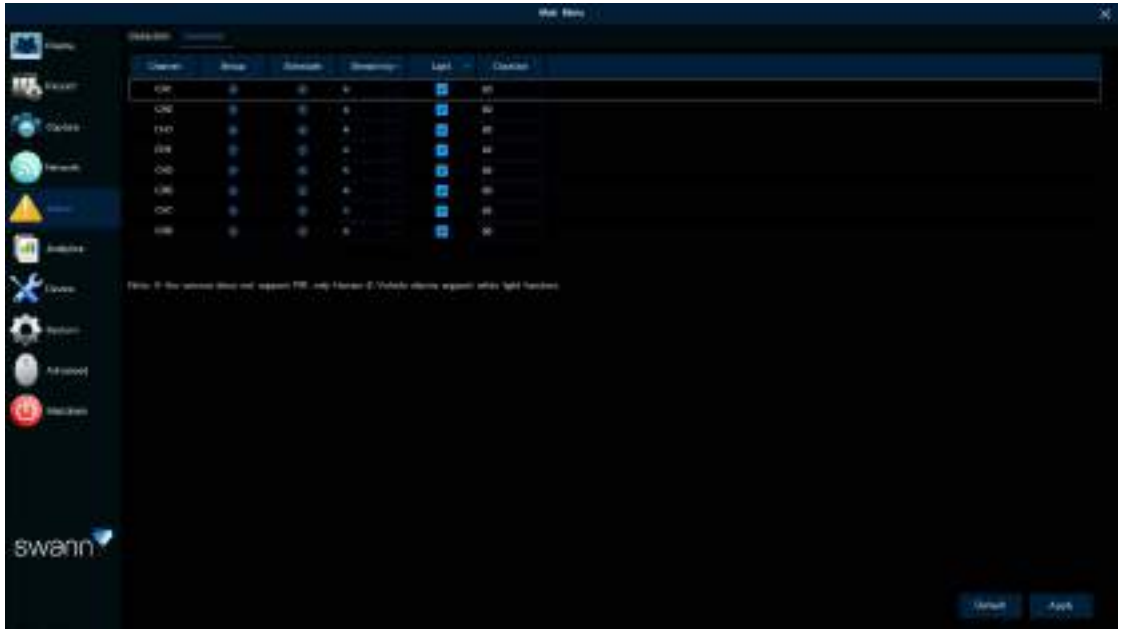
Video to Cloud: By default, videos are copied to the cloud. Click the checkbox if you want to disable this. This is greyed out if cloud storage has not been enabled.

To enable cloud storage, see page 76 - Device: Storage - Dropbox Activation.

Full Screen (slide to the right to view): Click the checkbox to view the camera full-screen in Live View mode when motion is detected.

Click the "Save" button, then click "OK". Right-click the mouse to exit.

Alarm: Deterrent



→ Click "Apply" to save settings.

When the camera's Detection Mode is set to either 'Motion' or 'Disable', its Deterrent settings cannot be changed.

Setup: Click the button to change the default spotlight detection area. The entire view of the camera is enabled, however, you can select particular areas if you wish (see page 31 - Deterrent Setup).

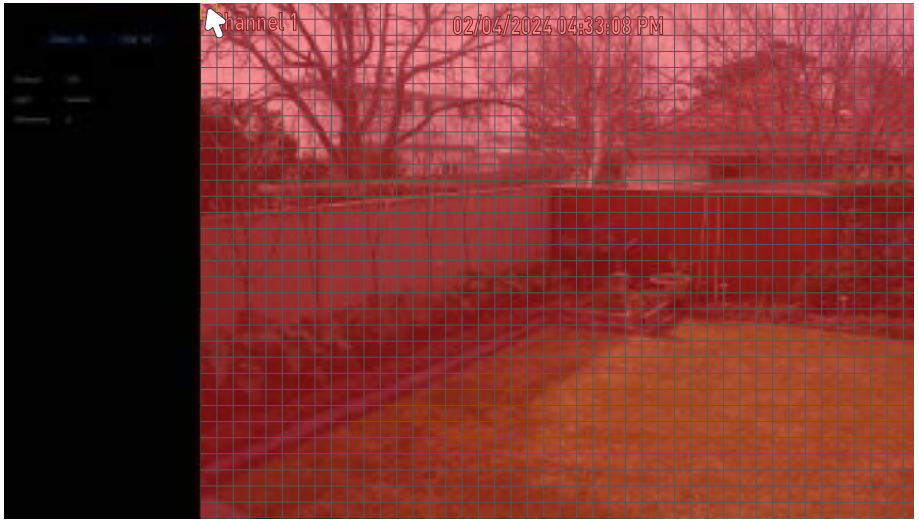
Schedule: Click the button to change the default spotlight schedule (see page 32 - Deterrent Schedule).

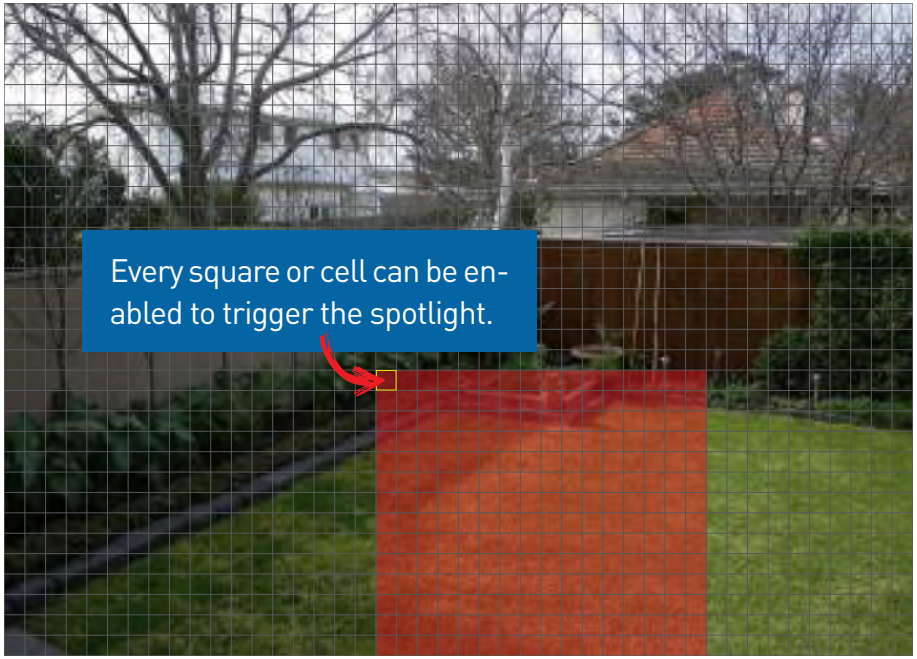
Sensitivity: This option allows you to change how sensitive the spotlight will be when your NVR has detected motion. It's independent of the camera's sensitivity for detecting motion. As an example, you may want to record movement happening in the background but you don't want the spotlight and or the siren to be triggered until one or more objects gets closer to the camera. For this scenario, you would adjust the sensitivity to 1 or 2.

Light: Click the checkbox to enable the camera's spotlight.

Duration: This lets you change the length of time the spotlight will remain lit when motion is detected. Adjust accordingly.

Deterrent Setup





1. Click "Clear All" to delete the default spotlight detection area.

2. To create a new spotlight detection area, press and hold the left mouse button to select the cell or square you want to start at, then click and drag to select the area you want to create. Release the mouse to finish.

3. Multiple areas can be created. Each square can be enabled to trigger the spotlight. The same action also applies to deleting an area that has been created.

Light: Click the drop-down menu to enable the camera's spotlight.

Sensitivity: This option allows you to change how sensitive the spotlight will be when your NVR has detected motion. It's independent of the camera's sensitivity for detecting motion. For example - you may want to record movement that is happening in the background, but you don't need the spotlight to be triggered until an object gets closer to the camera. For this scenario, you would adjust the sensitivity to 1 or 2.

4. Right-click the mouse to exit.

5. Click "Apply" to save changes made.

Deterrent Schedule

By default, the spotlight will not trigger between 06:30 a.m. and 04:30 p.m., however you can change this according to your needs.

Each square represents 30 minutes. Using the mouse, click on a particular square to change or click and drag the mouse over the squares corresponding to your desired period.

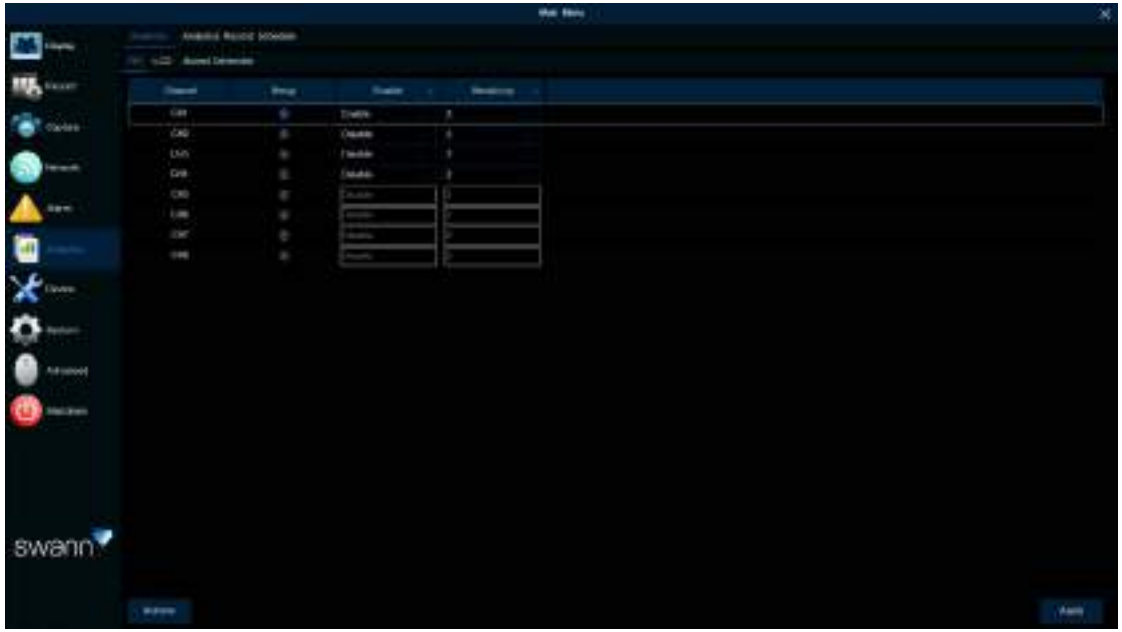
Click “Save” to save changes made. Right-click the mouse to exit.

Analytics

Analytics provides you with much greater control over how your NVR detects motion. You can enable face detection, alert you if static objects are removed or left behind, and count movement crossing a line drawn on the image. You can also define specific intrusion areas that can alert you if one or more objects have stayed within a given time (especially helpful if people are loitering or if a car is parked where it shouldn't be).

To enable the analytic functions, you need to select "Disable" for the Mode drop-down menu in Alarm: Detection (see page 26).

Analytics: PID (Perimeter Intrusion Detection)



A perimeter intrusion region can be used to define specific areas that you want to monitor for motion. For example, a rule can be defined so that your NVR will alert you if one or more objects have stayed within the intrusion region for a particular time. You can also select which direction an object can enter and or exit.

→ Click "Apply" to save settings.

Setup: Click the button to draw one or more perimeter intrusion regions (see page 35 - Drawing a Perimeter Intrusion Region).

Mode: Click the drop-down menu to enable.

Sensitivity: Adjust the sensitivity level of the perimeter intrusion region. The higher the number, the more sensitive the intrusion region will be.

Actions: Click the button to change options for alarm notifications, alerts and more (see page 36 - Analytics: PID (Perimeter Intrusion Detection) - Actions).

Drawing a Perimeter Intrusion Region

To remove a perimeter intrusion region: Click the rule number checkbox to select, then press the "Remove" button. Click "Remove All" if multiple regions are drawn.

Detection Type: By default, a human and or a vehicle will be detected. If you want to detect humans only, uncheck Vehicle and vice versa.

Rule Number: Click the drop-down menu to select the rule number that you want to create. Up to four perimeter intrusion regions can be drawn.

Rule Enable: Leave this enabled.

Rule Type: Three rule types can be selected. Select the appropriate rule for the region created (each region can have a different rule).

A->B: Motion is detected when an object has crossed the line from direction A only.

B->A: Motion is detected when an object has crossed the line from direction B only.

A<->B: Motion is detected when an object has crossed the line from both directions.

Using the mouse, you need to create four points to draw a perimeter intrusion region (it can be drawn at any size). Your NVR does not allow lines to be crossed when drawing an intrusion region.

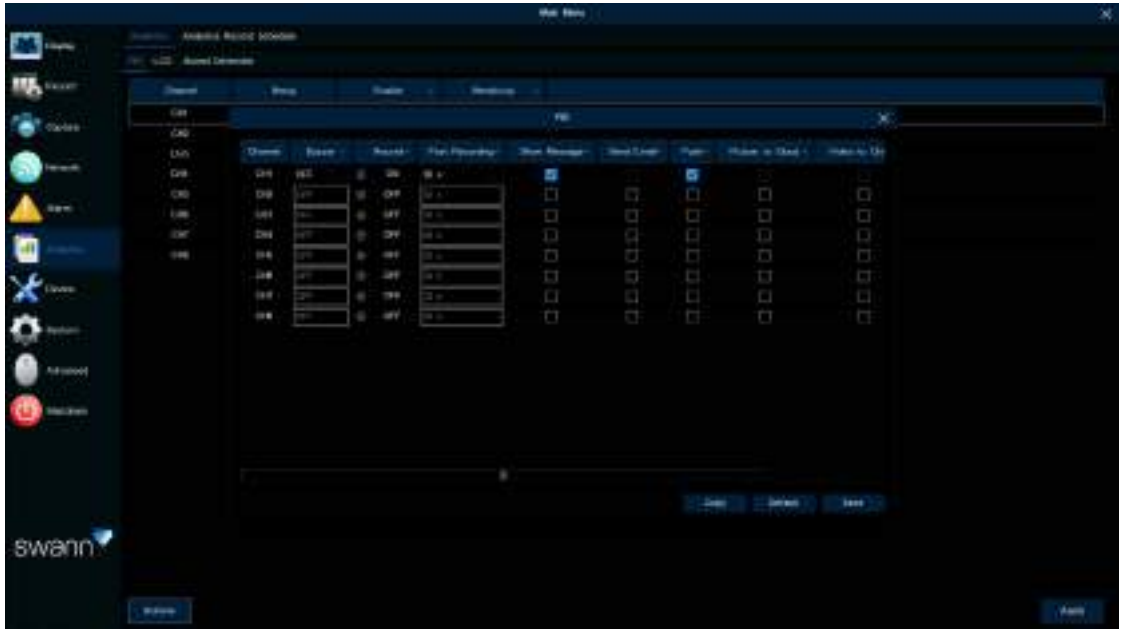
As illustrated above left, click once at the start point, then move right and click once to create the second point. Move the mouse down and click once to create the third point, then move left and click once to create the fourth point.

Remove: See the example above right.

Remove All: Click this to remove all perimeter intrusion regions.

Save: Click this to save any changes made, then click "OK" to continue.

Analytics: PID (Perimeter Intrusion Detection) - Actions



Buzzer: When motion is detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time. Click the drop-down menu to select a time.

Record (Record Channel): This option instructs your NVR to trigger additional cameras to start recording when motion is detected.

Post Recording: This option instructs your NVR to record for a set period after an event has occurred. For most instances, the default selection will be suitable, however you can change this if you wish.

Show Message: The motion icon will appear on-screen when motion is detected. Click the checkbox if you want to disable this.

Send Email: An email alert will be sent when motion is detected. Click the checkbox to enable.

Push: Click the checkbox to receive push notifications via the Swann Security app (a push notification is a message that pops up on your mobile device).

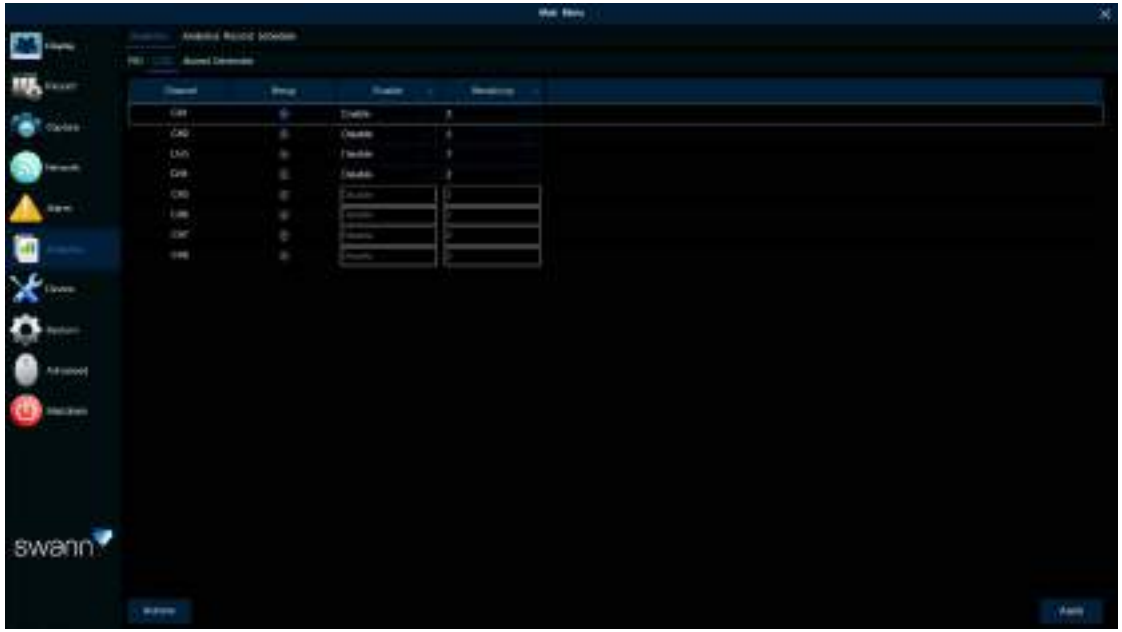
Picture to Cloud: Click the checkbox to copy snapshots to the cloud via Dropbox (see page 76 - Device: Cloud Storage - Dropbox Activation).

Video to Cloud: Click the checkbox to copy video events to the cloud via Dropbox (see page 76 - Device: Cloud Storage - Dropbox Activation).

Full Screen: Click the checkbox to view the camera full-screen in Live View mode when motion is detected.

Click the "Save" button then click "OK". Right-click the mouse to exit.

Analytics: LCD (Line Crossing Detection)



By drawing a detection line (drawn at any orientation, length or angle), you can apply a rule on which direction your NVR detects motion. As an example, this can detect people jumping a fence or entering and or exiting a doorway.

→ Click "Apply" to save settings.

Setup: Click the "Setup" button to draw one or more detection lines (see page 38 - Drawing a Detection Line).

Mode: Click the drop-down menu to enable.

Sensitivity: Adjust the sensitivity level of the detection line. The higher the number, the more sensitive the detection will be.

Actions: Click the button to change options for alarm notifications, alerts and more (see page 39 - Analytics: LCD (Line Crossing Detection) - Actions).

Drawing a Detection Line

To remove a detection line: Click the rule number check-box to select, then press the "Remove" button. Click "Remove All" if multiple lines are drawn.

Detection Type: By default, a human and or a vehicle will be detected. If you want to detect humans only, uncheck Vehicle and vice versa.

Rule Number: Click the drop-down menu to select the rule number that you want to create. Up to four detection lines can be drawn.

Rule Enable: Leave this enabled.

Rule Type: Three rule types can be selected. Select the appropriate rule for the line drawn (each line can have a different rule).

A->B: An object is detected when it has crossed the line from direction A only.

B->A: An object is detected when it has crossed the line from direction B only.

A<->B: An object is detected when it has crossed the line from both directions.

Using the mouse, click once at the start point then click again at the end point. A detection line will be drawn between the two points. Direction A and direction B will be shown, denoting the rule that you can apply to the detection line. A detection line can be drawn at any orientation, length or angle.

As illustrated above left, a detection line has been drawn across the fence line. When selecting rule B->A, motion is detected when an object has crossed the line from direction B only.

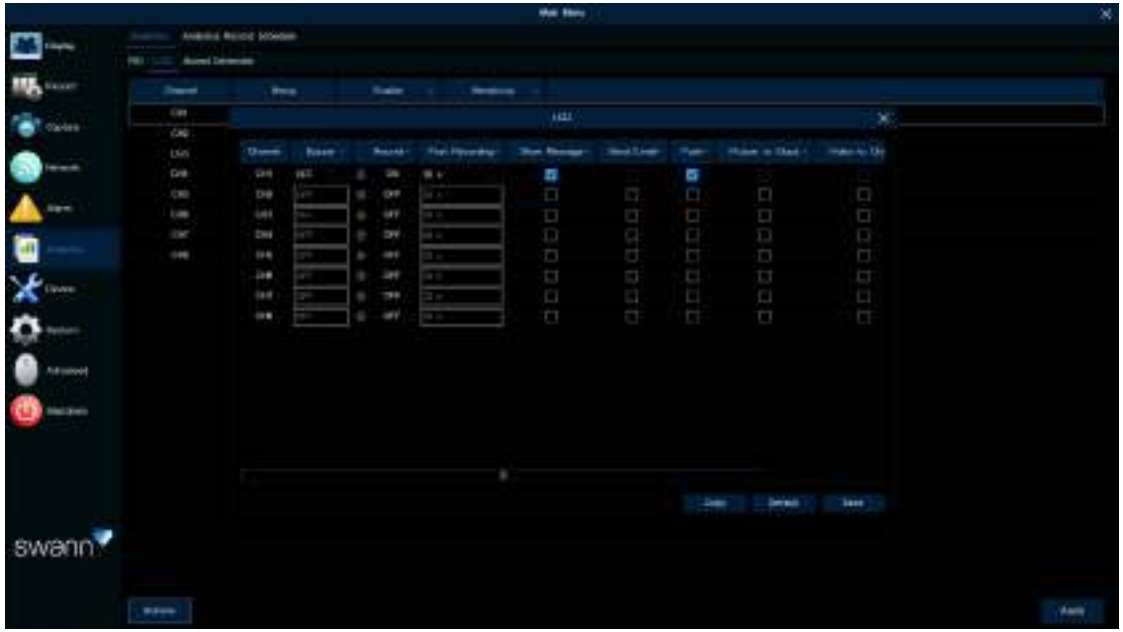
Remove: See the example above right.

Remove All: Click this to remove all detection lines.

Save: Click this to save any changes made then click "OK" to continue.

Click for contents

Analytics: LCD (Line Crossing Detection) - Actions



Buzzer: When motion is detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time. Click the drop-down menu to select a time.

Record (Record Channel): This option instructs your NVR to trigger additional cameras to start recording when motion is detected.

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred. For most instances, the default selection will be suitable, however you can change this if you wish.

Show Message: When motion is detected, the motion icon will appear on-screen. Click the checkbox if you want to disable this.

Send Email: Click the checkbox to enable your NVR to send an email alert when motion is detected.

Push: Click the checkbox to receive push notifications via the Swann Security app (a push notification is a message that pops up on your mobile device).

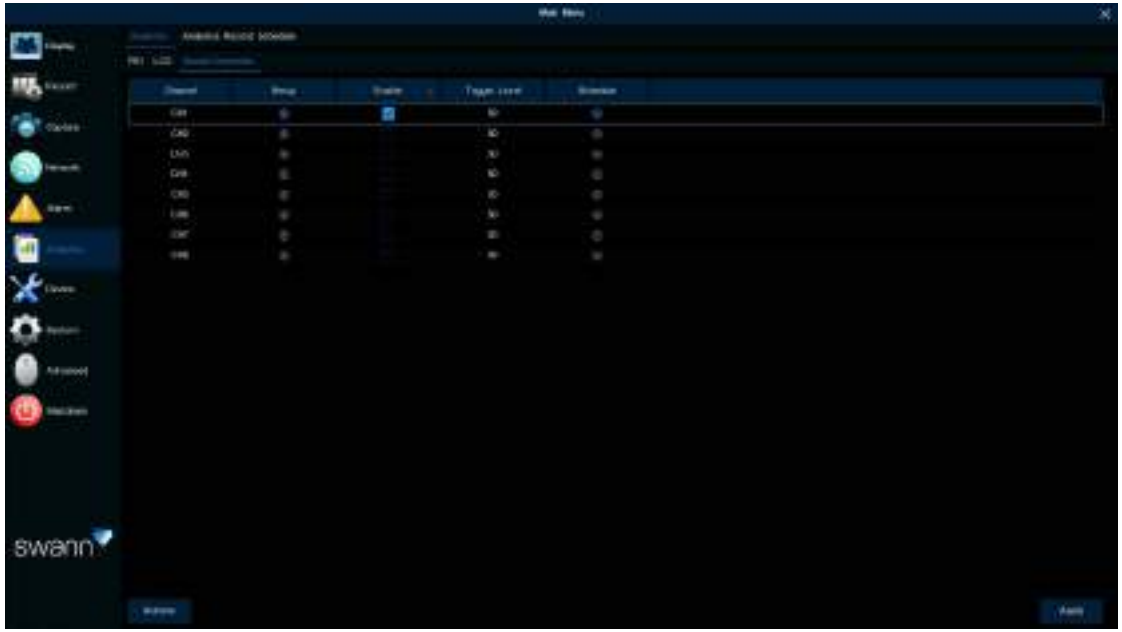
Picture to Cloud: Click the checkbox to copy snapshots to the cloud via Dropbox (see page 76 - Device: Cloud Storage - Dropbox Activation).

Video to Cloud: Click the checkbox to copy video events to the cloud via Dropbox (see page 76 - Device: Cloud Storage - Dropbox Activation).

Full Screen: Click the checkbox to view the camera full-screen in Live View mode when motion is detected.

Click the "Save" button then click "OK". Right-click the mouse to exit.

Analytics: Sound Detection



As many security incidents are preceded or initiated by some kind of noise, this function will alert you when your NVR detects audio that matches or exceeds the set trigger level.

→ Click "Apply" to save settings.

Setup: Click the "Setup" button to change the trigger level (see page 41 - Changing the Audio Trigger Level).

Enable: Click the checkbox to enable sound detection.

Schedule: Click the button to change the default sound detection schedule (see page 43 - Sound Detection Schedule).

Actions: Click the button to change options for alarm notifications, alerts and more (see page 42 - Analytics: Sound Detection - Actions).

Changing the Audio Trigger Level

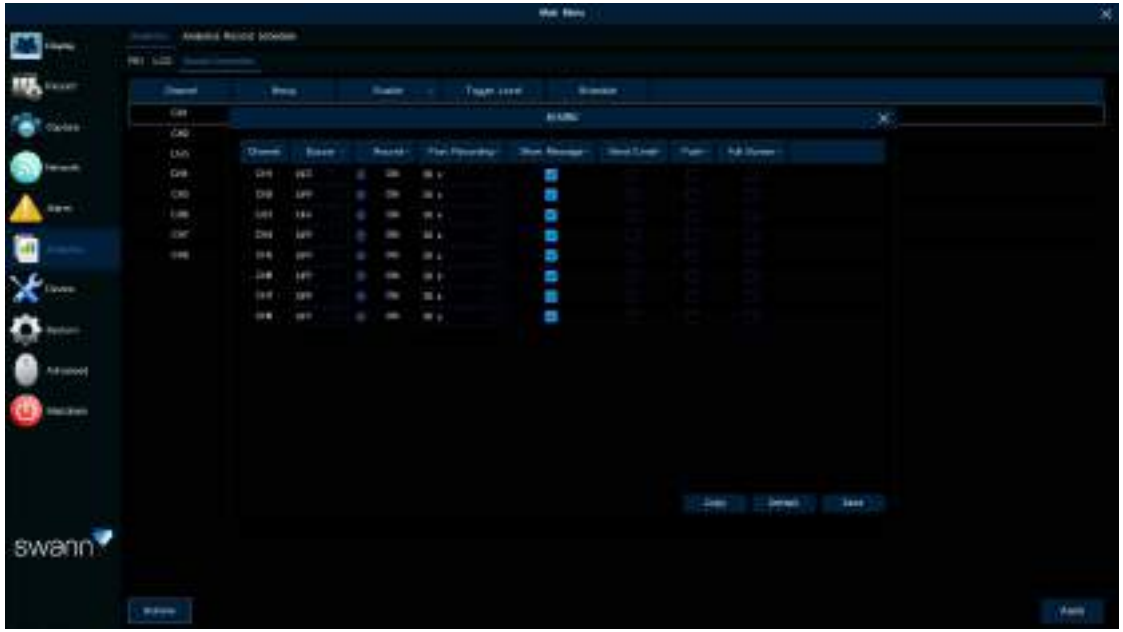
Trigger Level: Click and hold the slider left or right to set the desired trigger level. For example, if you set the trigger level to 20, any audio detected that matches or exceeds this level, an event will occur and an alert will be sent.

Live Level: This gives you a real-time reading of the audio that your NVR detects using the camera's built-in microphone.

Save: Click this to save any changes made, then click "OK" to continue.

Right-click to exit.

Analytics: Sound Detection - Actions



Buzzer: When motion is detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time. Click the drop-down menu to select a time.

Record (Record Channel): This option instructs your NVR to trigger additional cameras to start recording when sound is detected.

Post Recording: This option instructs your NVR to record for a set period after an event has occurred. For most instances, the default selection will be suitable, however, you can change this if you wish.

Show Message: The motion icon will appear on-screen when motion is detected. Click the checkbox if you want to disable this.

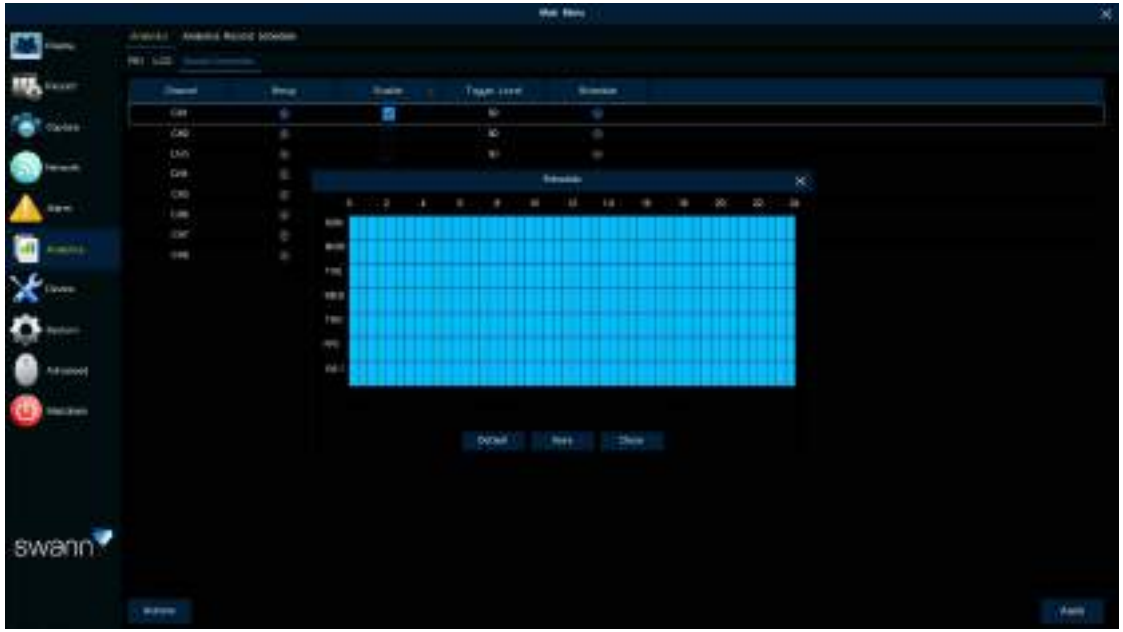
Send Email: An email alert is sent when motion is detected. Click the checkbox if you want to disable this.

Push: Click the checkbox to receive push notifications via the Swann Security app (a push notification is a message that pops up on your mobile device).

Full Screen: Click the checkbox to view the camera full-screen in Live View mode when motion is detected.

Click the "Save" button, then click "OK". Right-click the mouse to exit.

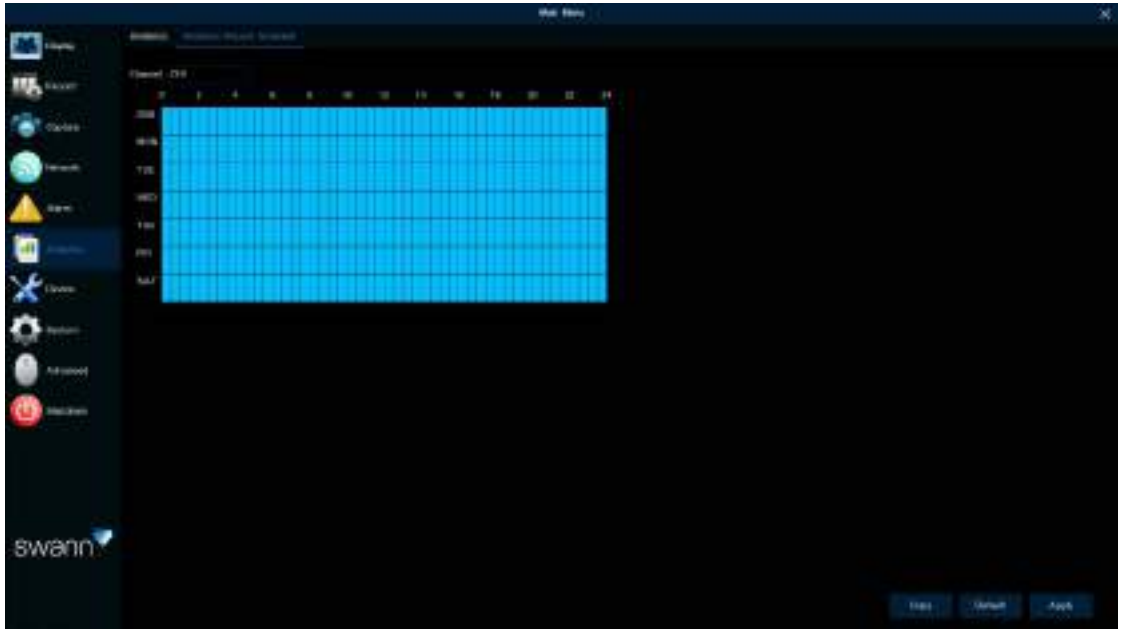
Sound Detection Schedule



Each square represents 30 minutes. Using the mouse, click on a particular square to change or click and drag the mouse over the squares corresponding to your desired period. The same action can also be applied if a sound detection schedule is not required (on one or more sections enabled).

Click “Save” to save changes made. Right-click the mouse to exit.

Analytics Record Schedule



To record events that are detected using analytics, a recording schedule must be created for cameras that have them enabled. Each camera can have a different recording schedule if needed.

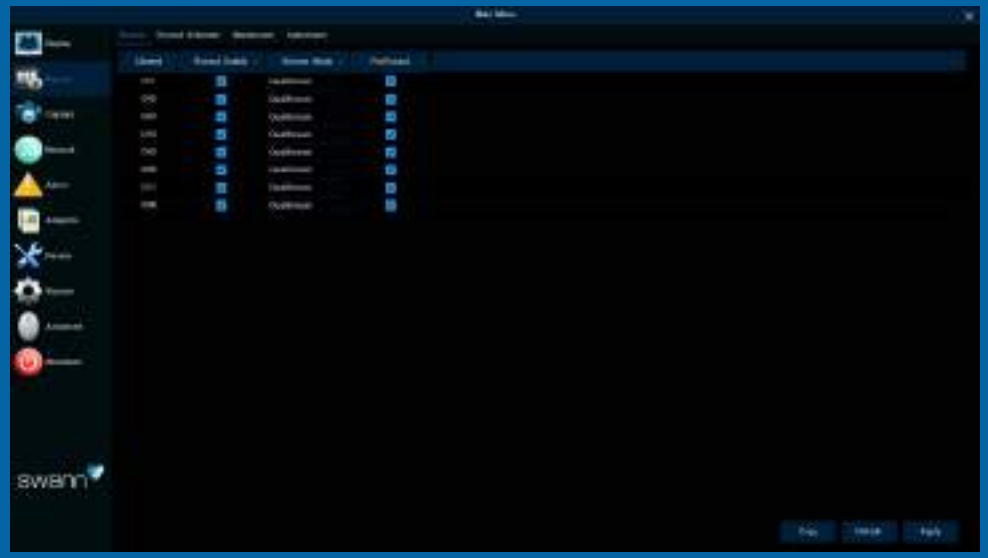
- → Use the "Copy" function to apply all settings to the other cameras connected.
- → Click "Default" to revert to default settings.
- → Click "Apply" to save settings.

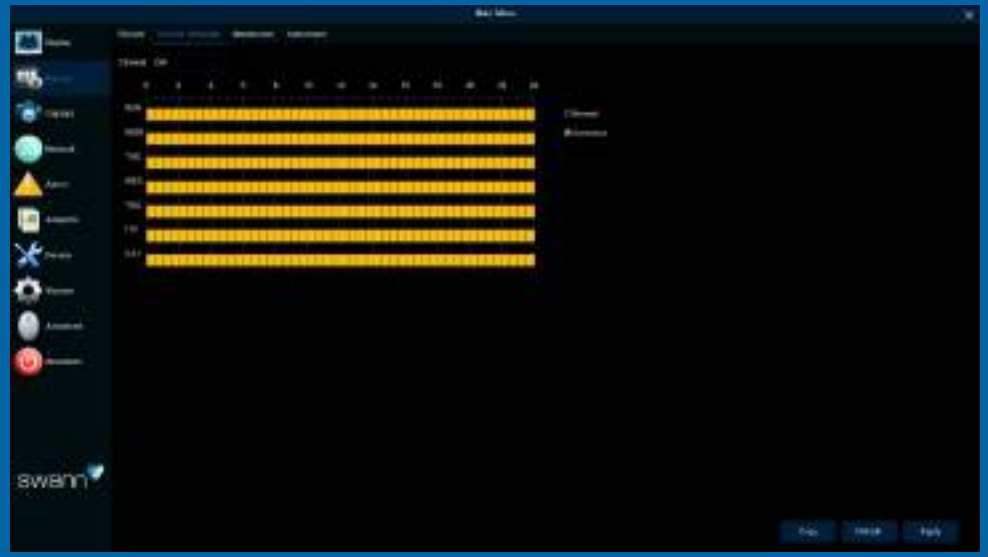
Channel: Select a camera that you would like to edit.

Each square represents 30 minutes. Using the mouse, click on a particular square to change or click and drag the mouse over the squares corresponding to your desired period. The same action can also be applied if a recording schedule is not required (on one or more sections that have been enabled).

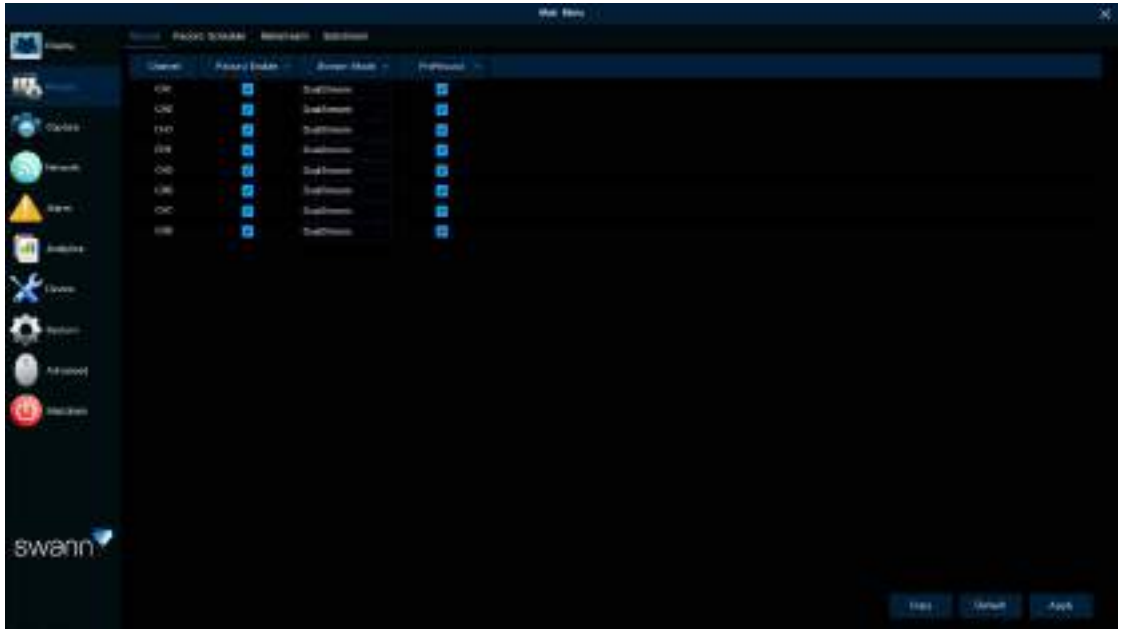
Recording Configuration

The recording configuration options are available in the Record and Capture menus accessible from the Main Menu. From here, you can access and change the default recording schedule (presented as a 24 hour 7 days a week grid and is color-coded) for each camera connected. You can also enable and set a schedule for your NVR to take a snapshot each time an event occurs.





Record: Record



- Use the “Copy” function to apply all settings to the other cameras connected.
- Click “Default” to revert to default settings.
- Click “Apply” to save settings.

Record Enable: When disabled, your NVR will detect motion but it will not record (manual record is also disabled).

Stream Mode: By default, your NVR will record both Mainstream and Substream video (known as DualStream). Mainstream (high quality) video is used for playback when using your NVR directly, and Substream (reduced quality) is used for remote playback on your mobile device. If remote playback is not required, you can select Mainstream recording only.

PreRecord: Allows your NVR to record for several seconds before an event occurs. It’s recommended to leave this enabled.

Record: Schedule

By default, a 24-hour 7 days a week Detection schedule has been enabled for each camera connected. The schedule can be changed to suit your needs and each camera can have a different schedule if needed. The schedule is color coded to represent the event type.

- → Use the "Copy" function to apply all settings to the other cameras connected.
- → Click "Default" to revert to default settings.
- → Click "Apply" to save settings.

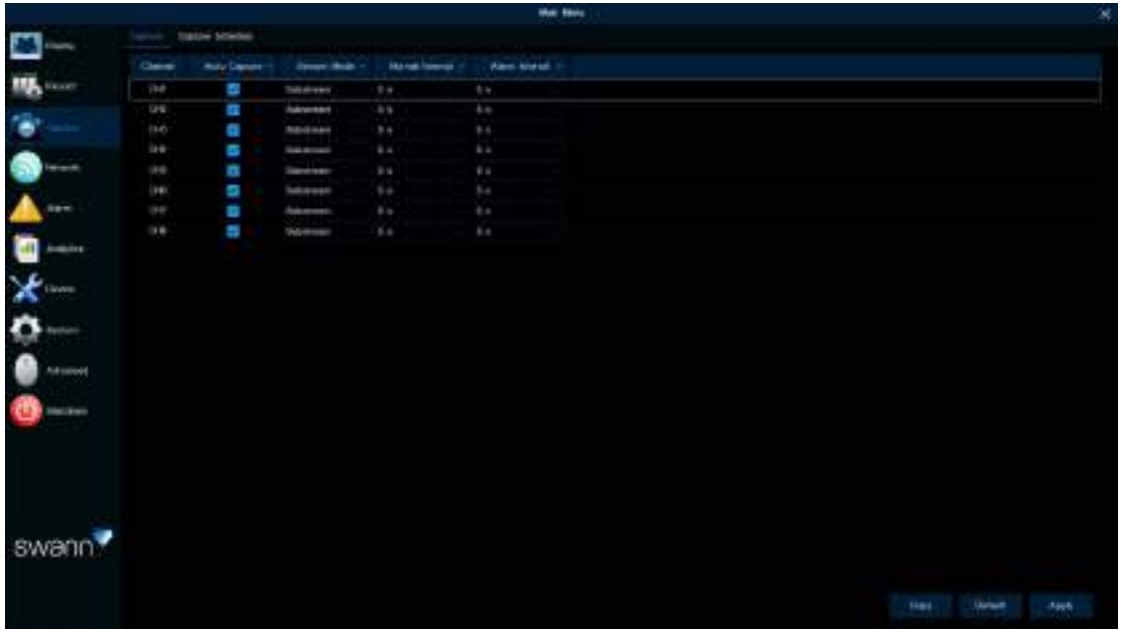
Channel: Select a camera that you would like to edit.

Normal: Your NVR will constantly record for a set period.

Detection: Your NVR will only record when motion is detected from one or more cameras.

Each square represents 30 minutes. Using the mouse, select the desired recording mode then click on a particular square to change or click and drag the mouse over the squares corresponding to your desired time period. The same action can also be applied if Normal or Detection recording is not required (on one or more sections that have recording enabled).

Capture: Capture



As an added feature, you can enable and set a schedule for your NVR to take a snapshot each time an event occurs. It helps to find motion events quickly and can also be used for time-lapse photography.

- → Use the "Copy" function to apply all settings to the other cameras connected.
- → Click "Default" to revert to default settings.
- → Click "Apply" to save settings.

Auto Capture: When enabled, your NVR will take a snapshot each time an event occurs.

Stream Mode: Only Substream resolution is available.

Normal Interval: The length of time that must elapse before a snapshot is taken. For example, when setting a Normal capture schedule, a snapshot is taken every 5 seconds using the default selection. Adjust accordingly.

Alarm Interval: When setting a Detection capture schedule, a snapshot is taken each time motion is detected, according to the interval selected. Adjust accordingly.

As this is an added feature, a capture schedule is not enabled by default. To enable this (see page 49 – Capture: Schedule).

Capture: Schedule

Like the analytic recording schedule, you must create a capture schedule so your NVR can take snapshots when an event has occurred or if you want to take snapshots using a time interval (every 5 seconds, for example).

- → Use the "Copy" function to apply all settings to the other cameras connected.
- → Click "Default" to revert to default settings.
- → Click "Apply" to save settings.

Channel: Select a camera that you would like to edit.

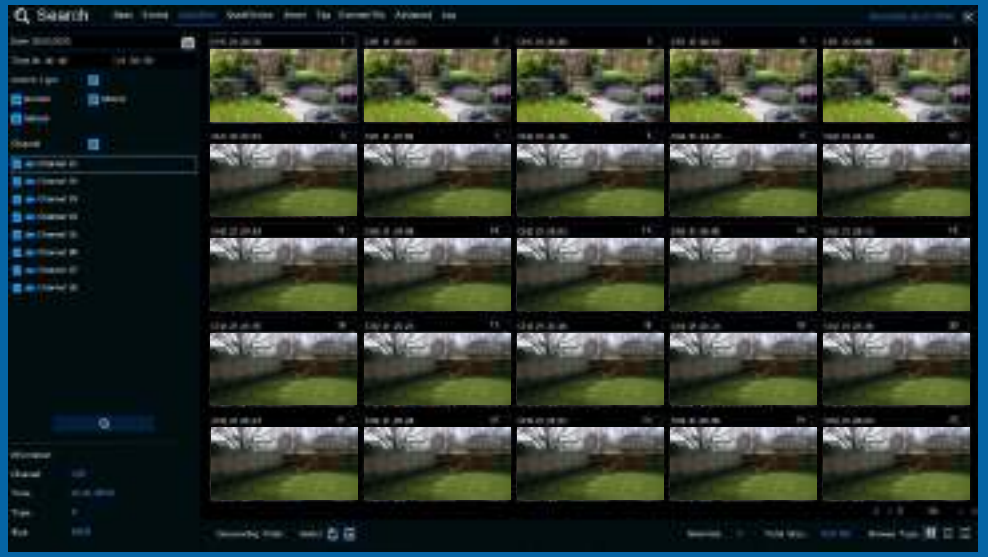
Normal: A snapshot is taken according to the normal interval setting selected (every 5 seconds, for example).

Detection: A snapshot is taken each time motion is detected according to the alarm interval selected.

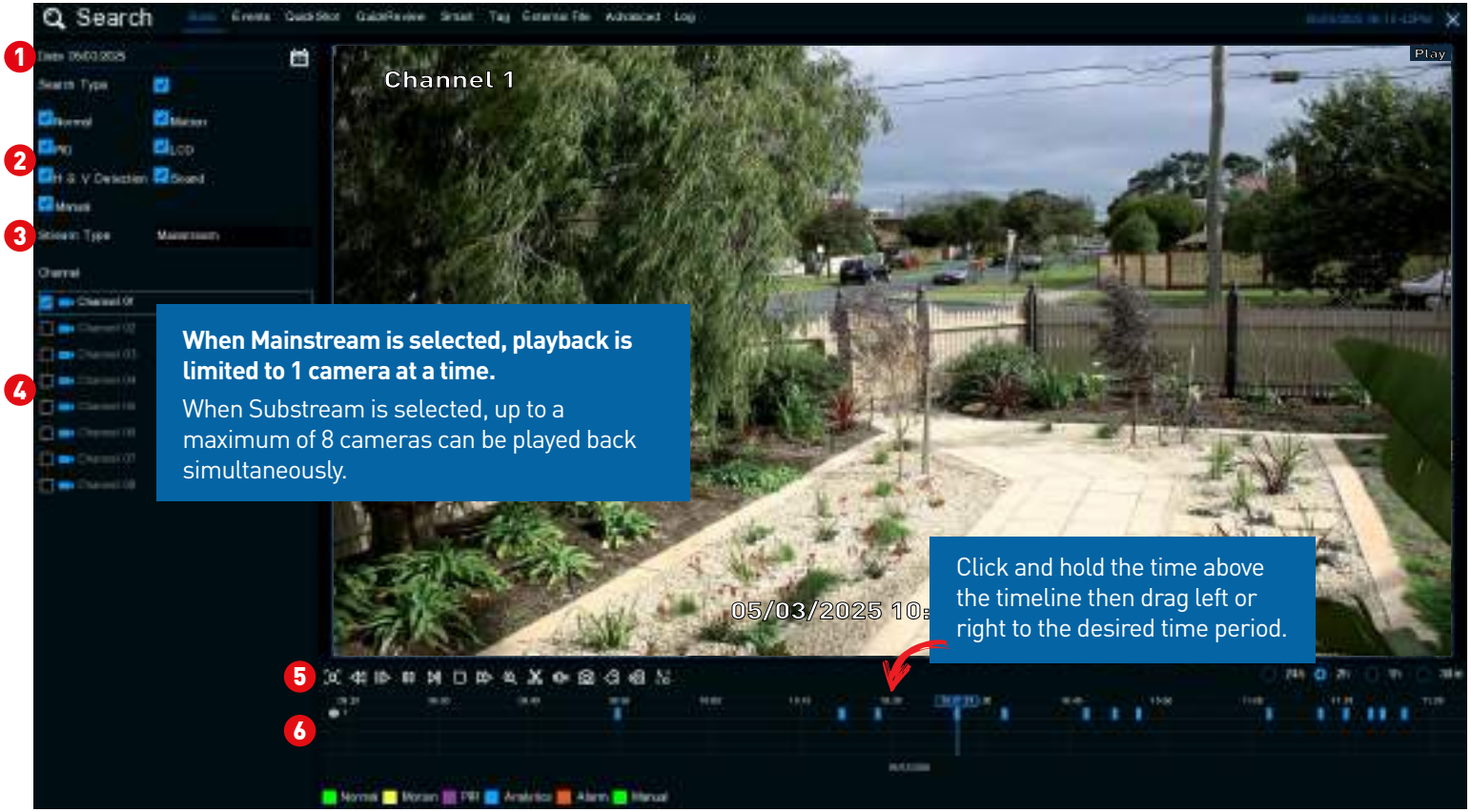
Each square represents 30 minutes. Using the mouse, select the desired capture mode, then click on a particular square to change or click and drag the mouse over the squares corresponding to your desired period. The same action can also be applied if Normal or Detection capture mode is not required (on one or more sections enabled).

Event Playback & Backup

Search allows you to play recorded videos and snapshots saved to your NVR's hard drive. You can play video that matches your recording schedule, analytic events, and more. The Backup function allows you to save wanted events to a USB flash drive.



Search: Basic



1 Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates.

2 This is the event type that you can search for. You can leave all event types enabled if you want to search for all, or you can select specific event types. Adjust accordingly.

3 Select either Mainstream or Substream for playback.

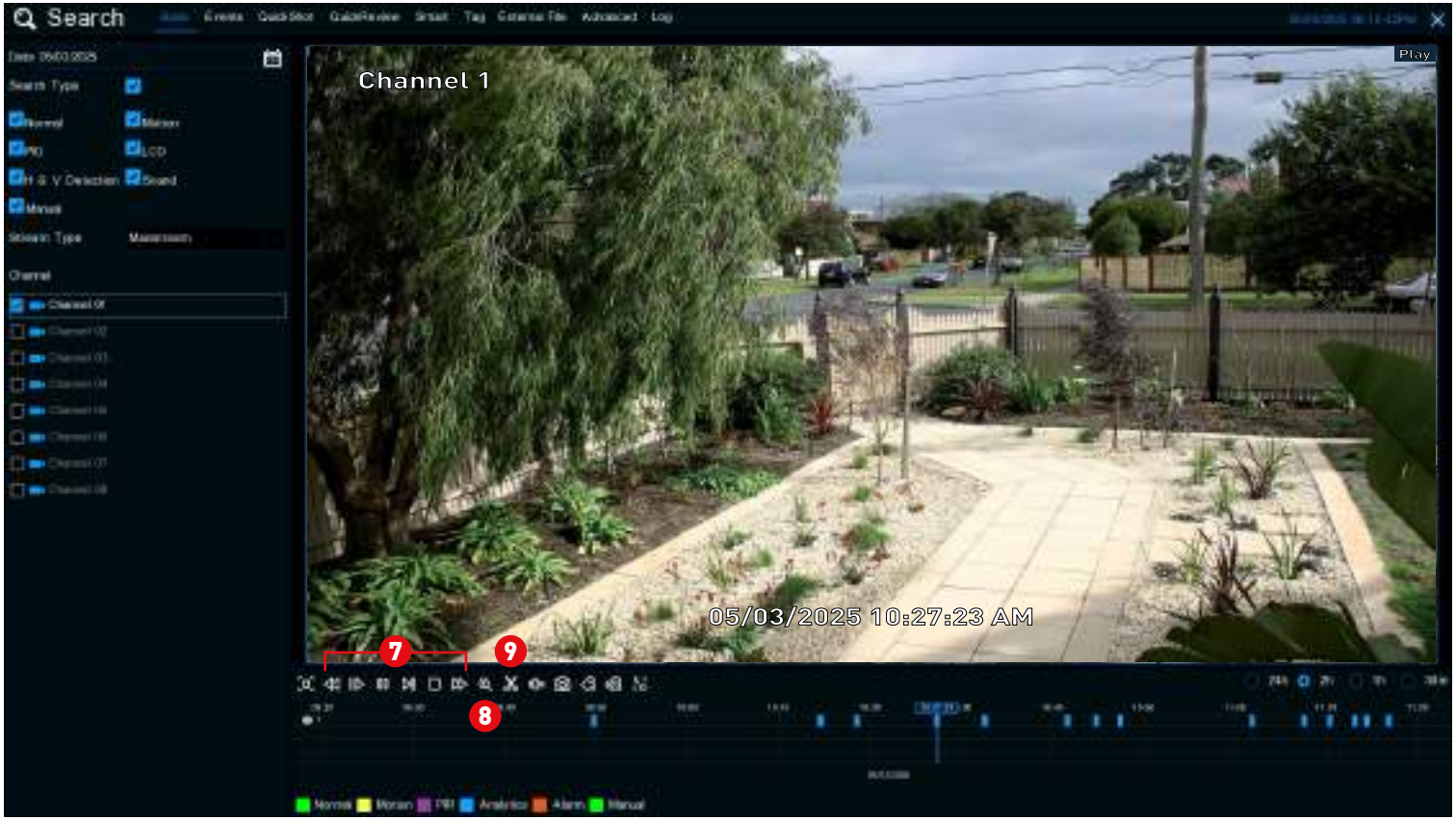
4 Select a camera to display for playback (click "Channel" to select a different camera). A blue camera indicates which cameras match your search criteria.

5 Click this to hide the playback interface so you can maximise your viewing area (watch full-screen). Right-click to restore.

6 Recordings that match your search criteria will be displayed here.

(continued on next page)

Search: Basic



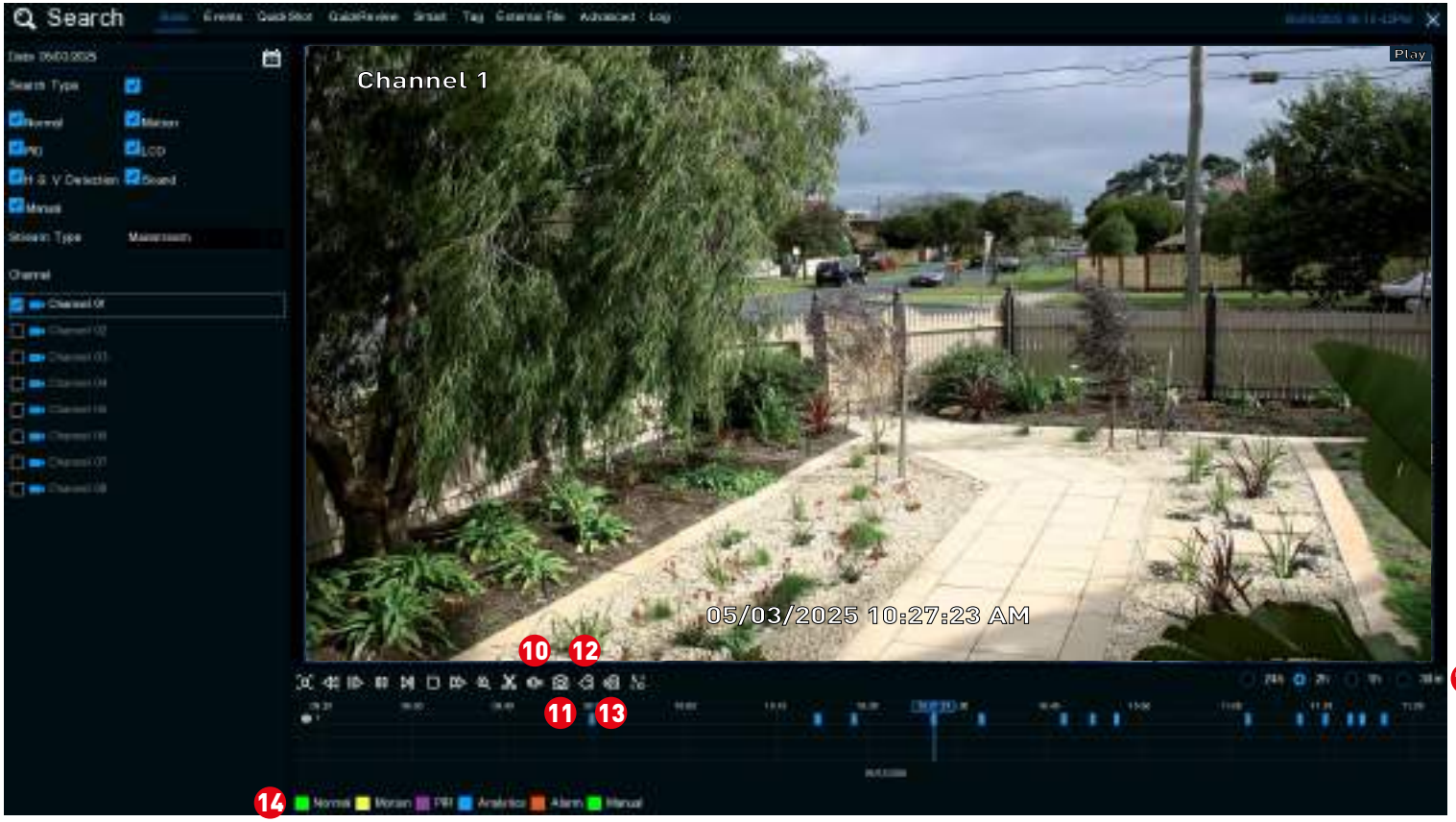
7 From left to right are your reverse, slow motion, play/pause, frame advance, stop and fast forward controls. Subsequent presses of the reverse, slow motion and fast forward buttons will increase the speed of each action.

8 Click this button then use the scroll button on the mouse to zoom. Use the picture-in-picture screen to select a different area to view. Right-click to exit.

9 This button allows you to edit the video by setting mark in and mark out points which you can then copy to a USB flash drive. Click on a camera to select it, then press this button. You will see two white triangles on the timeline. Move them left or right on the section of the video that you want to edit. Click the disk icon (Back-up) to save. For the backup type, leave the default selection (mp4) for wider playback compatibility on your computer. Insert a USB flash drive to your NVR, then click "Save". Click "OK" to save, then click "Close" when finished.

(continued on next page)

Search: Basic



10 Click this button to mute or unmute the audio.

11 This button allows you to save a snapshot to a USB flash drive. Click on a camera to select it, then press this button.

12 Tagging allows you to record information such as a person or object within the video. Click on a camera to select, pause the video when you see a person or object to be tagged, then press this button (multiple tags can be created).

13 As above, but you can choose your tag name.

14 Indicates the video type on the timeline.

15 Represents the visible time. Click on a different period to zoom in for precise control or to zoom out.

To search for tags (see page 61 - Search: Tag).

Click for contents

Search: Events (copy events to a USB flash drive)

1 Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates. For time, you can search over 24 hours or you can use the keypad to enter a specific start and end time.

2 This is the event type that you can search for. Adjust accordingly.

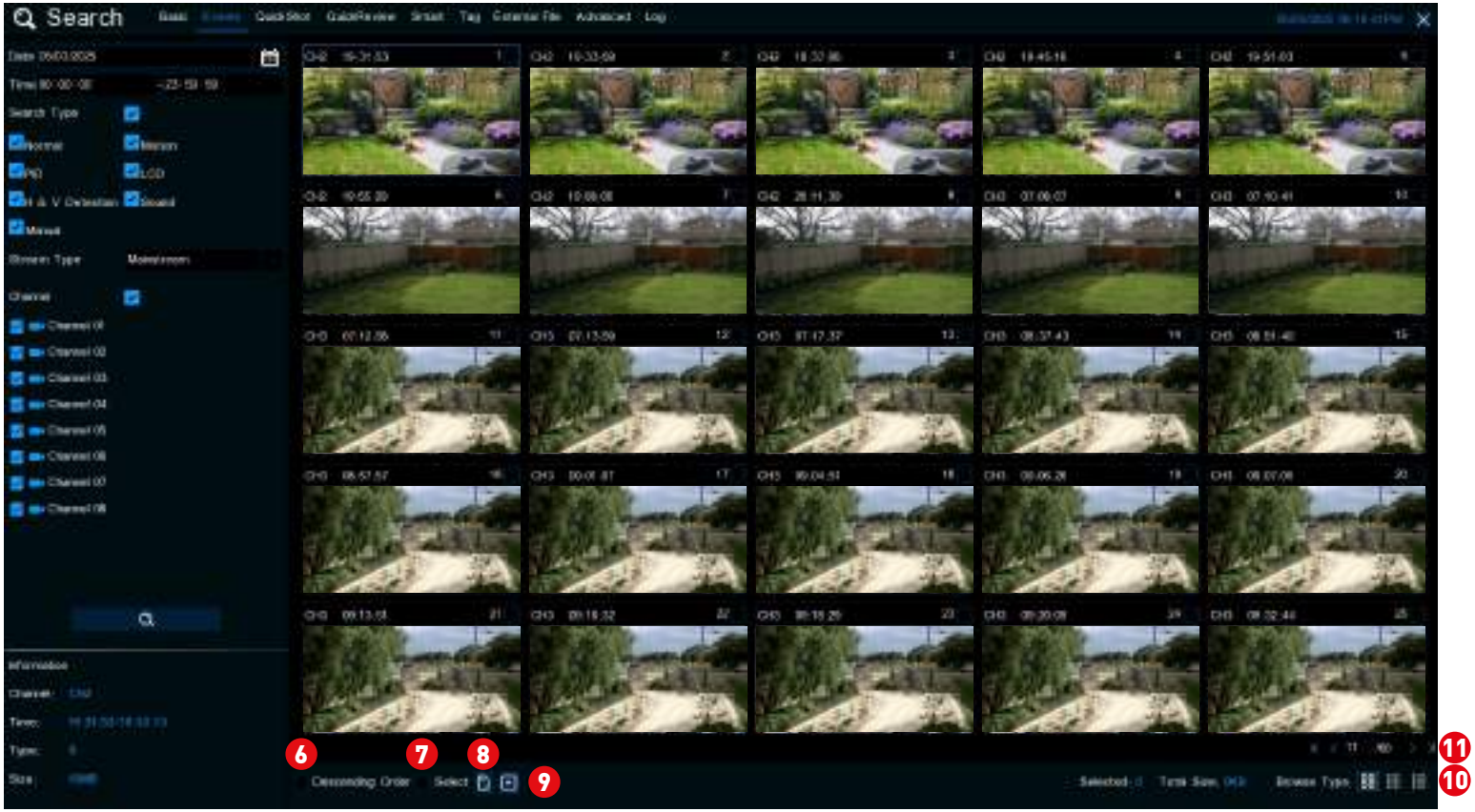
3 Select either Mainstream or Substream to search for (Mainstream will play video at the camera's native recording resolution).

4 Select from one or all cameras that you would like to search on. A blue camera indicates which cameras match your search criteria.

5 Click this button to commence a search. You will see a thumbnail of each event that matches your search criteria. Click the checkbox above each thumbnail to select it.

(continued on next page)

Search: Events (copy events to a USB flash drive)



6 Click the checkbox to view the events in descending order.

7 Click the checkbox to select all events.

8 When one or more events are selected, click this button to copy to a USB flash drive. For the backup type, leave the default selection (mp4). Insert a USB flash drive to your NVR, then click “Save”. Click “OK” to save, then click “Close” when finished.

9 Click this button to play a selected event. Right-click to exit.

10 Click these to change how the events are displayed. The default view is Thumbnail but, you can change it to List or Detail.

11 Click these to navigate to a different page available. Use the keypad to navigate to a specific page.

Click for contents

Search: QuickShot (copy snapshots to a USB flash drive)

1 Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates. For time, you can search over 24 hours or you can use the keypad to enter a specific start and end time.

2 This is the event type that you can search for. Adjust accordingly.

3 Select from one or all cameras that you would like to search on.

4 Click this to commence a search. You will see a snapshot of each event that matches your search criteria.

5 Click the checkbox to view snapshots in descending order.

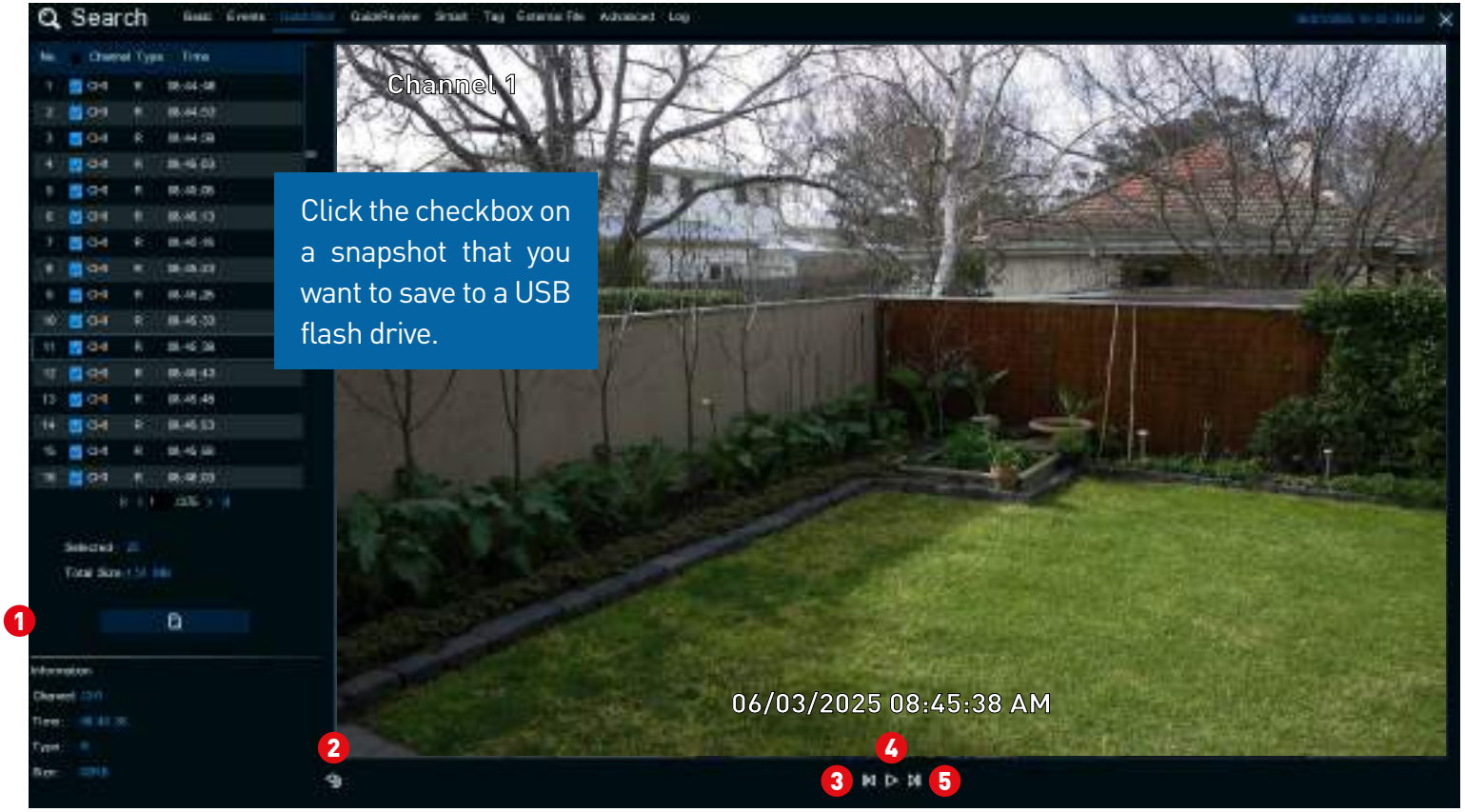
6 Click the checkbox to select all snapshots.

7 Select a snapshot then click this button to copy to a USB flash drive.

8 Click this to play a slideshow (see page 57 - Playing a Slideshow).

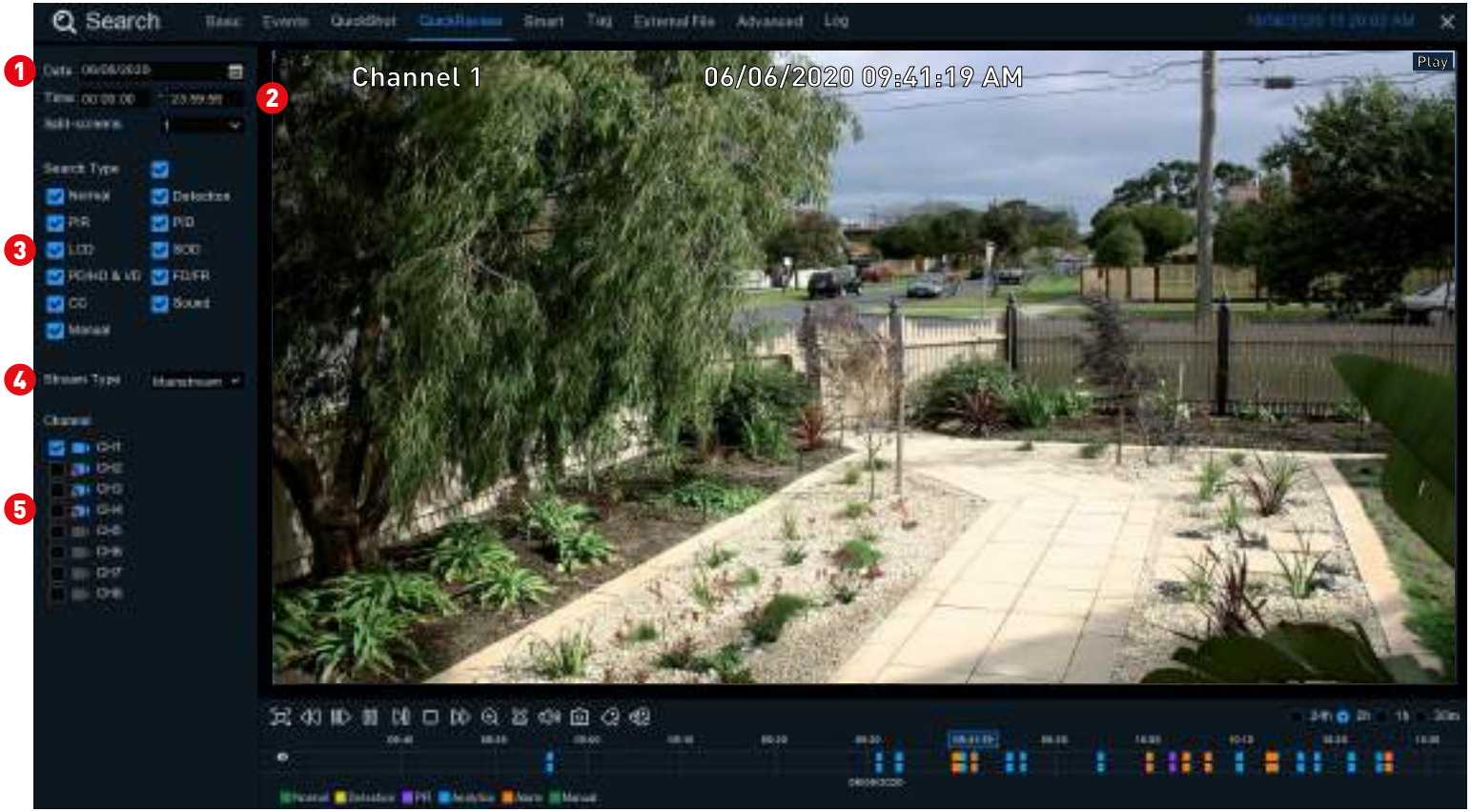
Click for contents

Playing a Slideshow



1. Select a snapshot, then click this button to copy it to a USB flash drive.
2. Click this to go back to the previous screen.
3. Click this to display the previous snapshot.
4. Click this to pause or play a slideshow.
5. Click this to display the next snapshot.

Search: QuickReview



QuickReview has the same function as Basic but with the additional option of changing the time to search on.

1 Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates.

2 Search over 24 hours or you can use the keypad to enter a specific start and end time.

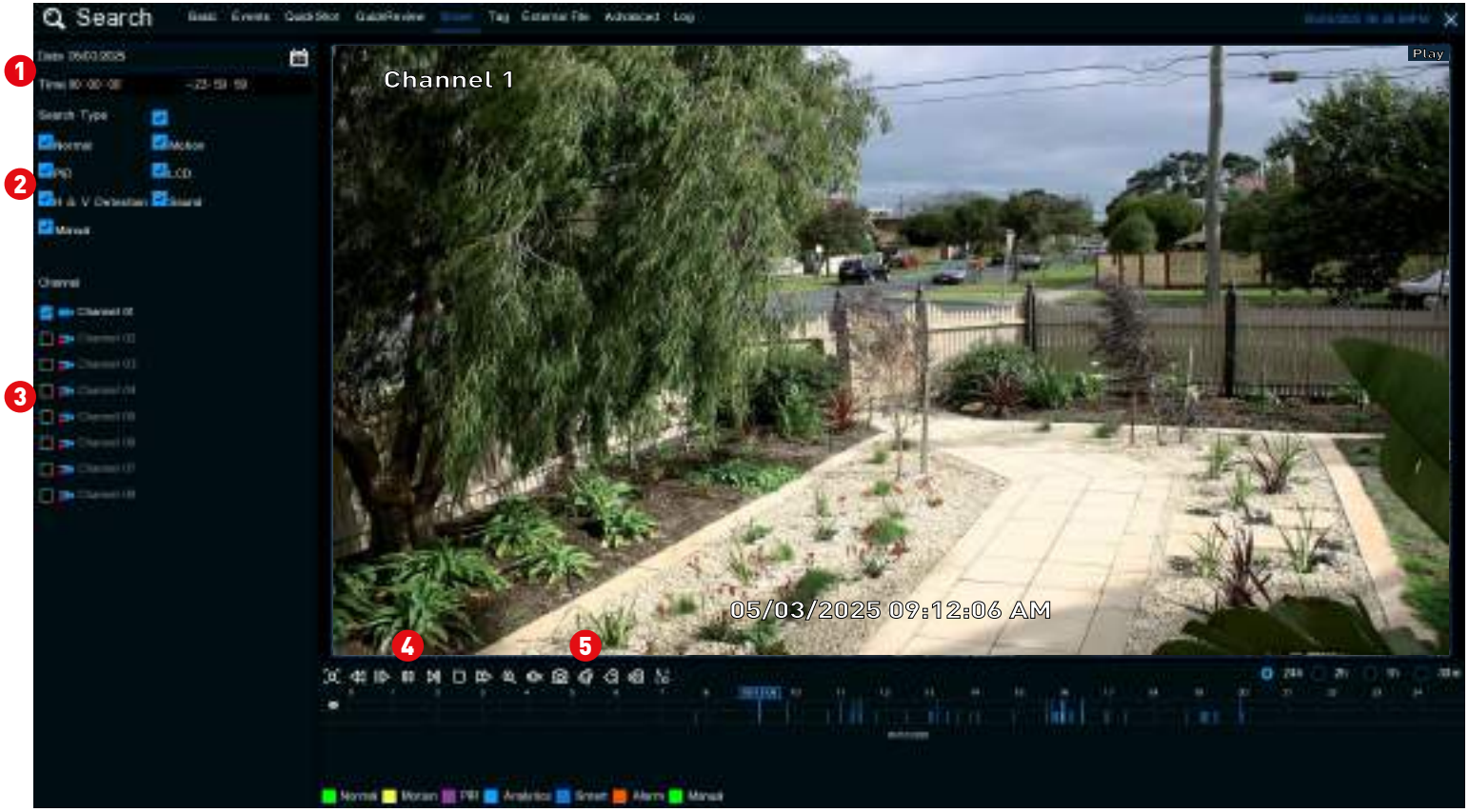
3 The event type that you can search for. Adjust accordingly.

4 Select either Mainstream or Substream to search for.

5 Select the camera that you would like to search on.

See page 51 for an explanation of the controls on the timeline.

Search: Smart



Smart mode allows you to define one or more specific areas of the video, to make it easier to find what you are searching for. For example, you may have movement on the left-hand side of the yard, but you want to see what is happening on the right-hand side.

1 Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates. For time, search over 24 hours or you can use the keypad to enter a specific start and end time.

2 The event type that you can search for. Adjust accordingly.

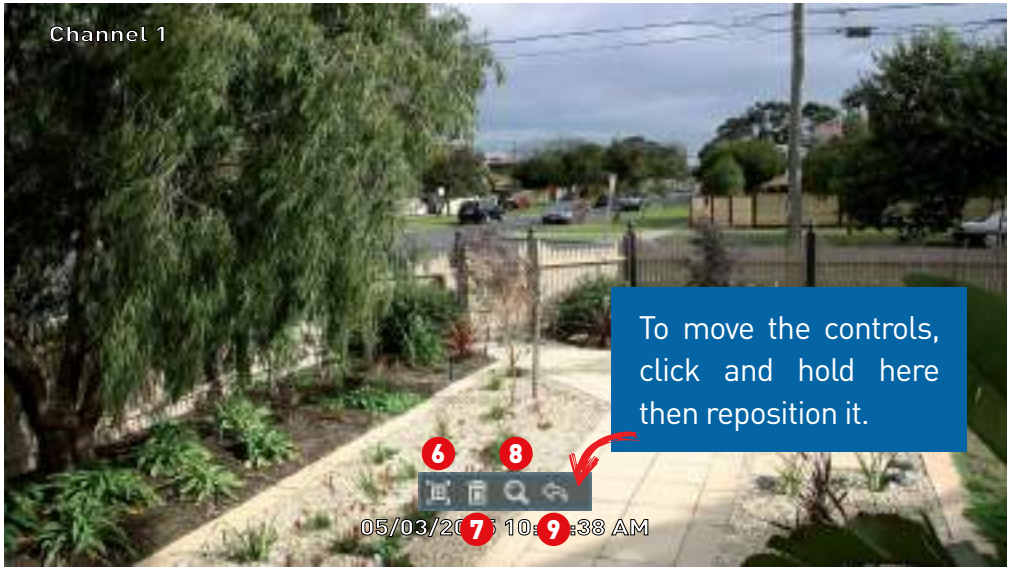
3 Select the camera that you would like to search on.

4 Click this button to play or pause.

5 Click this button to enter Smart mode. The camera will be shown full screen, and the Smart mode controls will be visible.

(continued on next page)

Search: Smart



6 Click this to define a full-screen detection area.

7 Click this to delete all areas created.

8 Click this to search and play video based on the areas defined.

9 Click this to return to the playback interface.

To define one or more specific areas, please do the following:

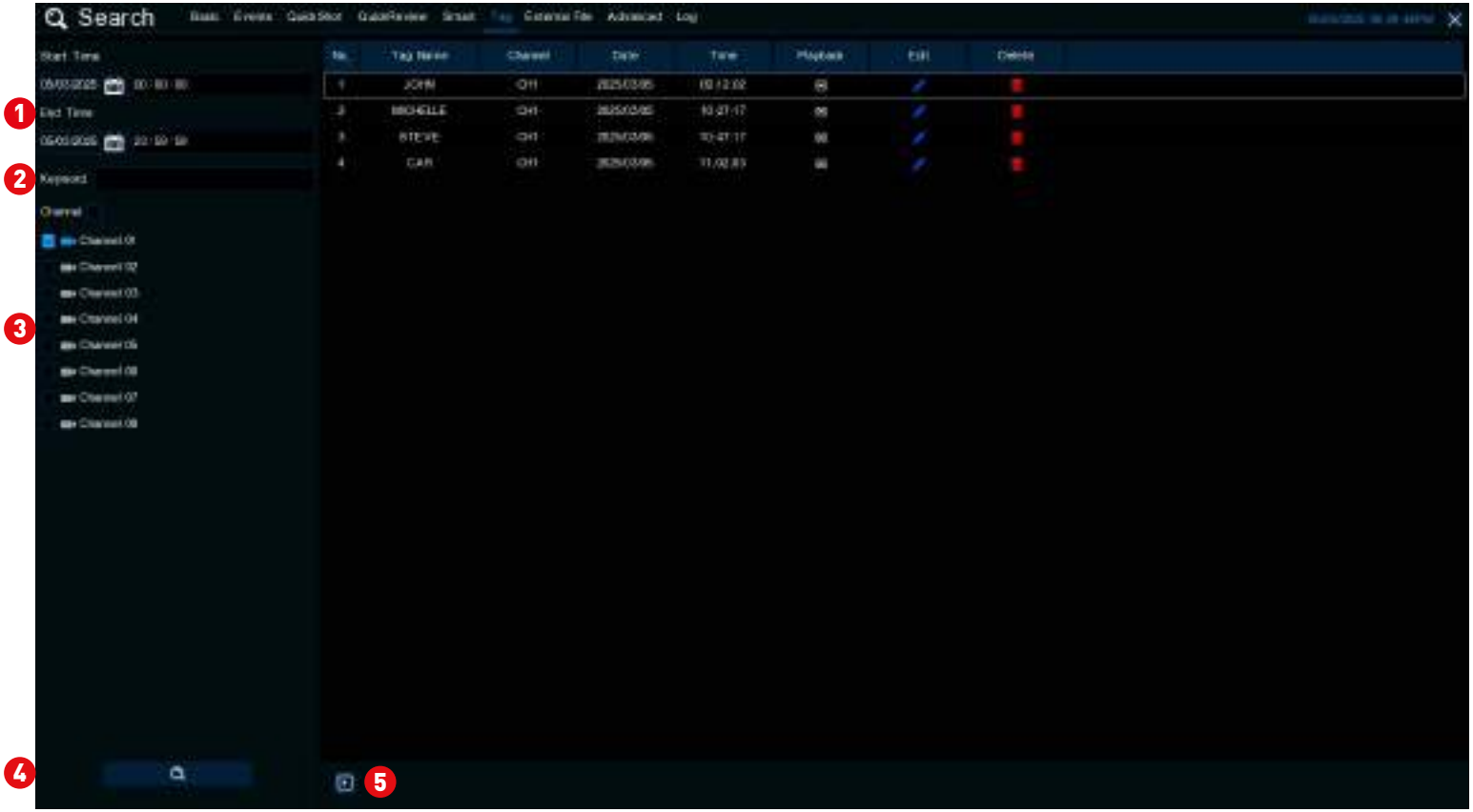
10 Click and drag to select the area that you want to define. Multiple areas can be defined. You can also use the same action to remove sections of the defined area or to delete it entirely.

11 When finished, click the search button (magnifying glass) to play a video based on the areas defined.

You'll be returned back to the playback interface. Segments matching your search criteria will be shown on the timeline in dark blue.

Can I use Smart mode on multiple cameras at the same time? Due to the complexities and processing power required, you can only use Smart mode on one camera at a time.

Search: Tag



1 Click the calendar icon to select a date to search on. For time, you can search over 24 hours or you can use the keypad to enter a specific start and end time.

2 If you have created one or more customized tags, click this to input the tag name (names are case sensitive). Leave it empty to search for all tags.

3 Select the camera that you would like to search on.

4 Click this button to commence a search. Tags matching your search criteria will be displayed.

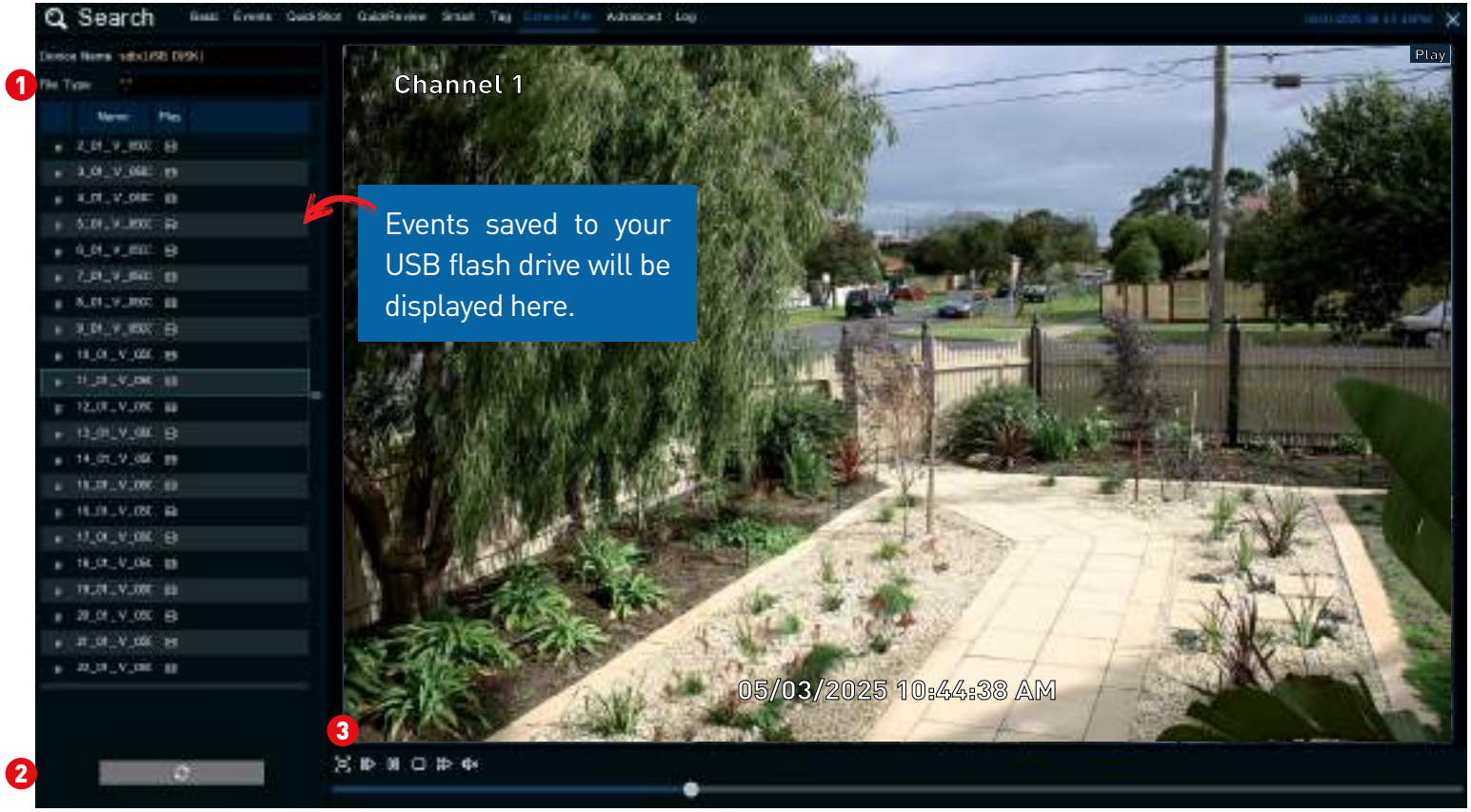
5 Select an event, then click this to play or double-click to play.

Edit: Click this to edit the tag name.

Delete: Click this to delete the tag.

See page 51 for an explanation of the controls on the timeline.

Search: External File



Use this function to play events copied to a USB flash drive.

1 If multiple USB flash drives are connected, click the drop-down menu to select the drive to read from.

2 Click this button to refresh the USB flash drive.

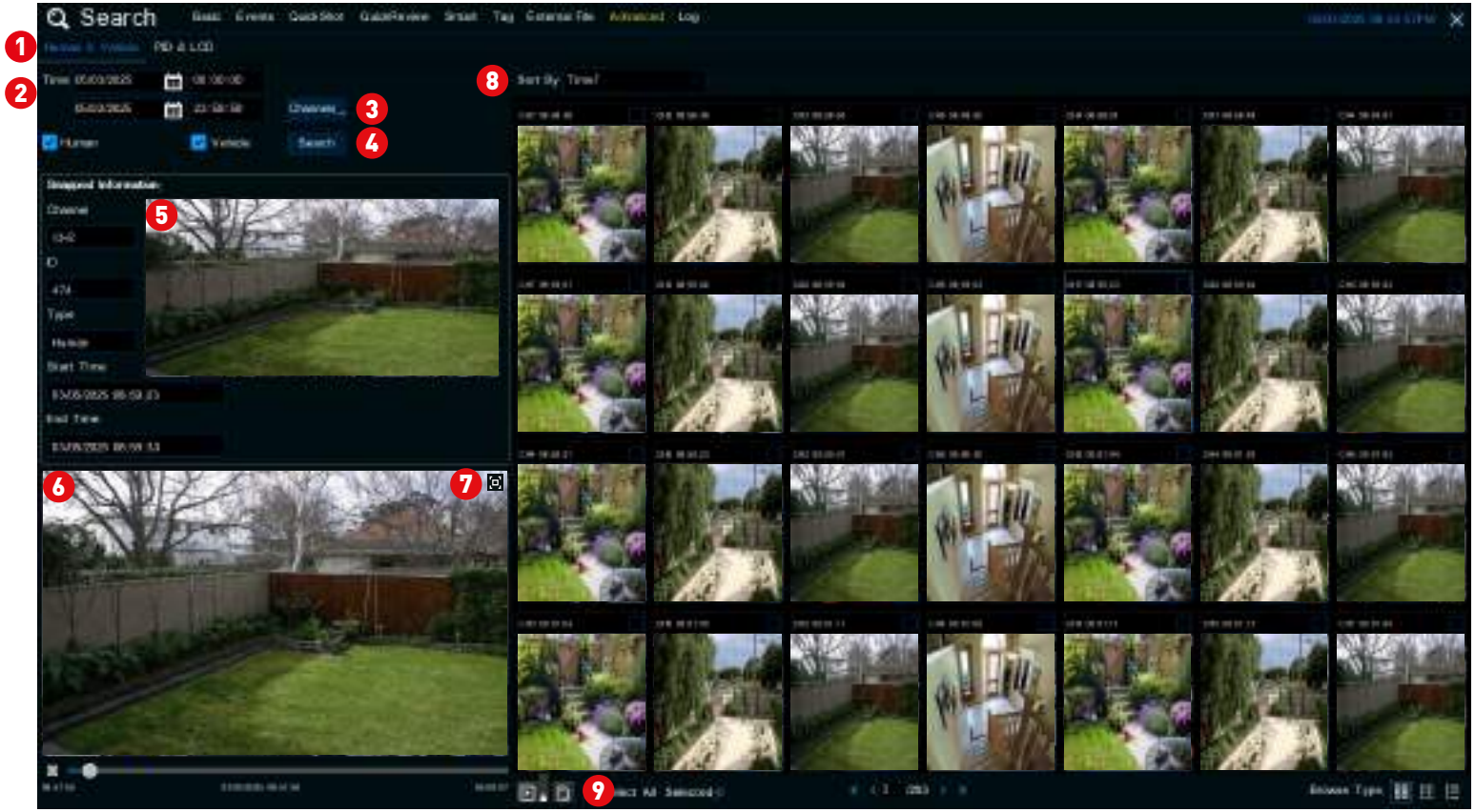
Double-click an event to play.

3 Click this to hide the playback interface so you can maximise your viewing area. Right-click to restore.

Only H.265 files are supported. For AVI and MP4 files, play these on your computer.

Click for contents

Search: Advanced

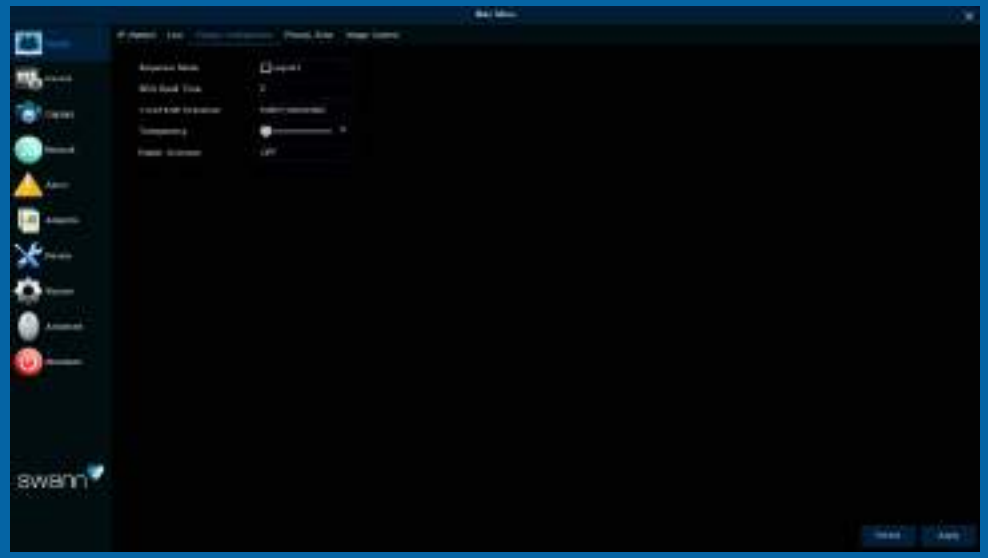


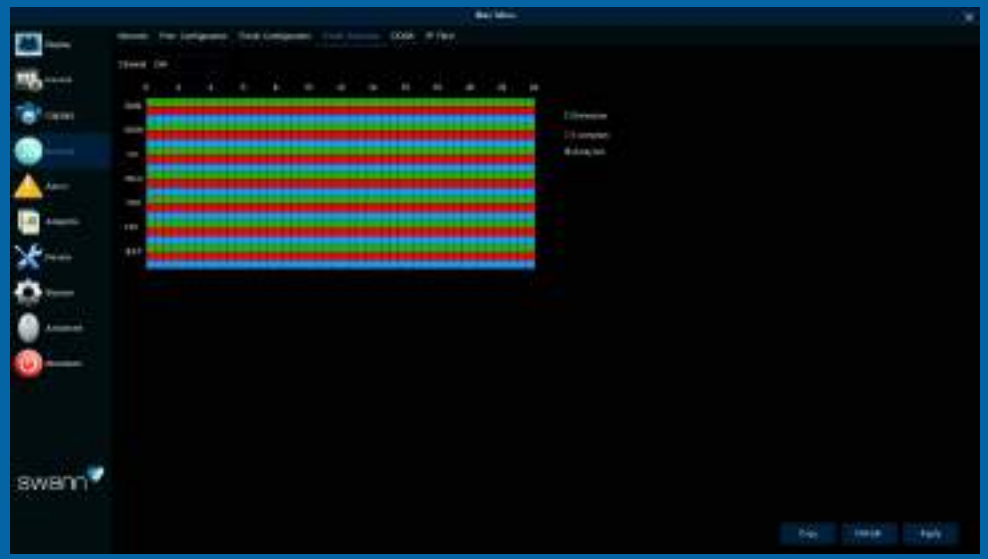
This function allows you to play events recorded using the PID and LCD analytic functions and objects detected such as humans and vehicles.

1. Select Human & Vehicle or PID & LCD events to search for.
2. Click the calendar icon to select a date to search on. A red underline on a date indicates recordings on those particular dates. For time, you can search over 24 hours or you can use the keypad to enter a specific start and end time.
3. Click to select which channels to search for.
4. Click to search for events matching your criteria.
5. A snapshot of the event will be shown here.
6. When you select an event, it will automatically play here.
7. Click this button to view the event full-screen.
8. Click this to sort by an earlier time or a later time.
9. Click the event's checkbox, then click this to save it to a USB flash drive.

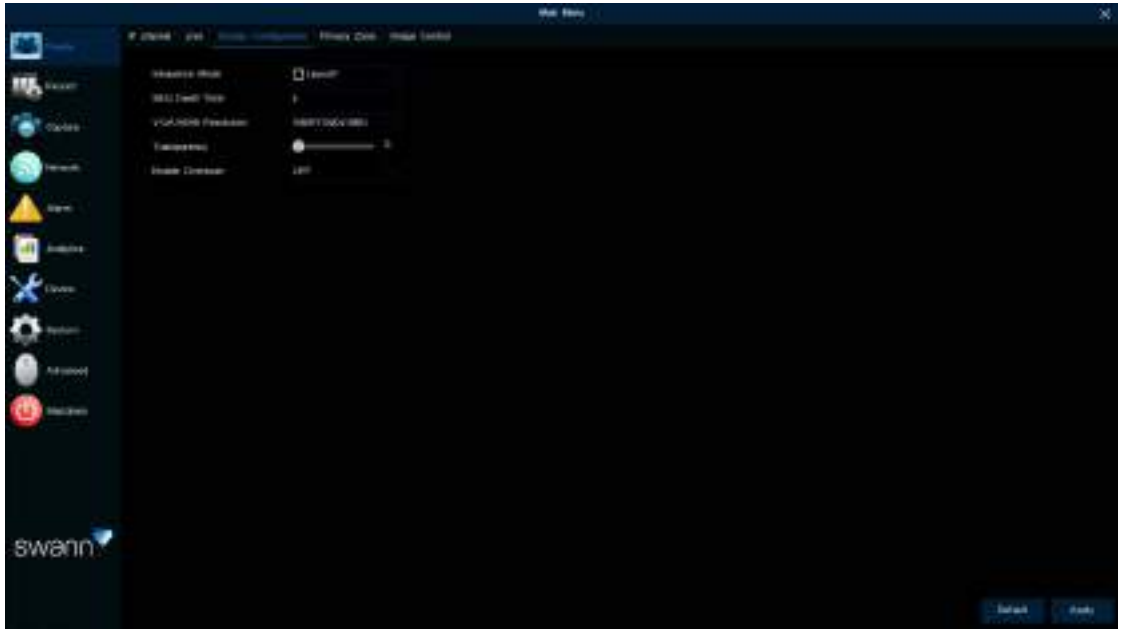
System Configuration

The options available give you complete control over how your NVR is configured and how it operates. Some of the options such as display resolution, time zone, email configuration, Daylight Saving, and password creation are configured during the Startup Wizard. For experienced network users, your NVR provides options that can be configured to suit your particular requirements. You can also perform a firmware upgrade when available.





Display: Display Configuration



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Sequence Mode: Select how many video channels you would like to display when your NVR is in sequence mode. You can select from one, four or six cameras to display at a time.

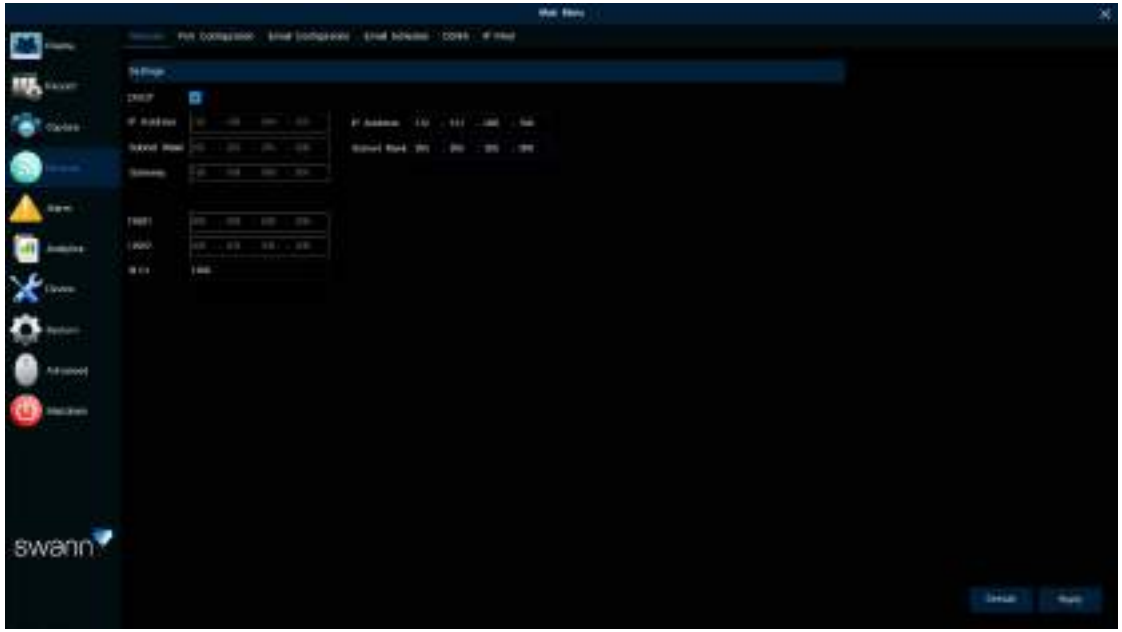
SEQ Dwell Time: Enter in seconds the maximum length of time you would like to display a video channel in sequence mode before displaying the next video channel (300 seconds is the maximum).

VGA/HDMI Resolution: Select a display resolution that is suitable for your TV.

Transparency: Click and hold the slider left or right to change how transparent the Menu Bar and Main Menu will appear on-screen. Adjust accordingly.

Enable Overscan: This is mainly used on older television sets to display the entire viewable area correctly on-screen. It does this by cutting off the edges of the picture. It's not required for modern Plasma and LCD TVs as the image is digitally processed to display the correct aspect ratio.

Network: Network



Your NVR employs peer-to-peer technology to facilitate communication between your network and mobile device, eliminating the need for manual network configuration. However, if you possess networking expertise and require specific settings, you have the option to adjust them as needed.

→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

DHCP (Dynamic Host Configuration Protocol): Your router will automatically assign an IP address to each device connected to your network. This is enabled by default and is the recommended method of connection.

When disabling DHCP, the following five options can be changed (this is for advanced users only):

IP Address: Each device on your network must have a unique IP address. A typical address might be "192.168.1.24" or something similar.

Subnet Mask: This allows the flow of network traffic between hosts to be segregated based on a network configuration. A typical address might be "255.255.255.0" or something similar.

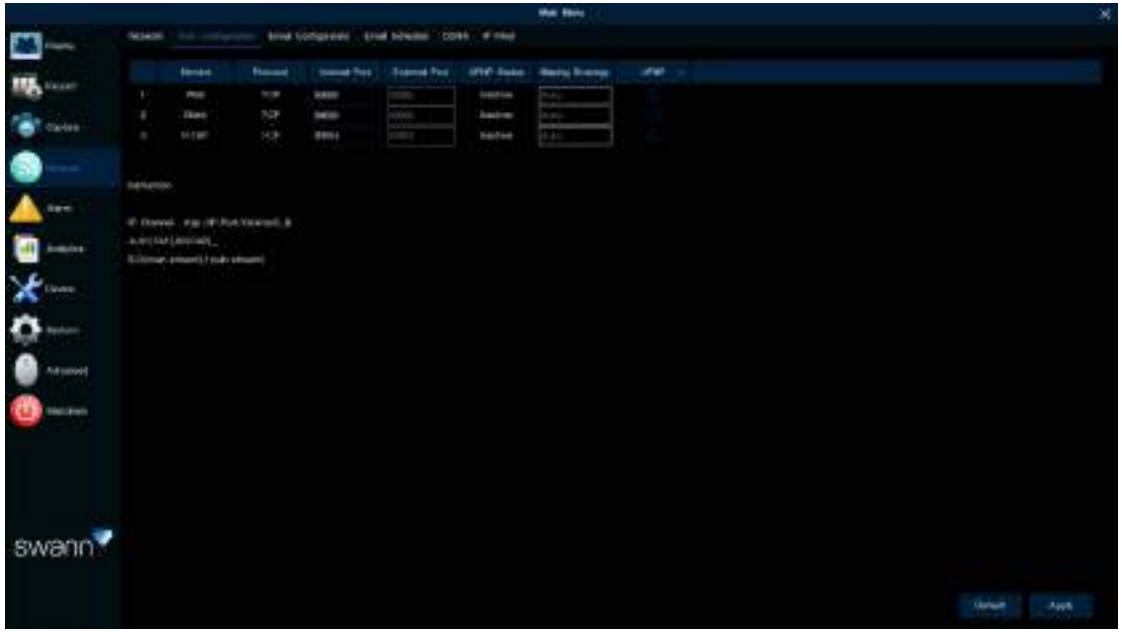
Gateway: This allows your NVR to connect to the internet and is typically the same IP address as your modem or router.

DNS (Domain Name System)1/2: Input the DNS settings for your internet service provider.

MTU (Maximum Transmission Unit): This dictates the maximum size for any packet of data sent from a device over a network. If you find that your internet connection speed when viewing your cameras on your mobile device isn't as fast as you would expect, changing the MTU size may improve this situation. We recommend clicking this link, which explains how to find the best MTU size for your home network and connected devices.

Click for contents

Network: Port Configuration & RTSP



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

The cog symbol (top right) indicates functions suitable for experienced users, and or some networking knowledge is required.

In most circumstances, there is no need to change the settings here. The following is for advanced users only.

Web: This port is used to log into your NVR via your network or remotely. The default port number (85) is seldom used by other devices, however, if you have another device using this port, you may need to change it. An alternative port number to use is 90.

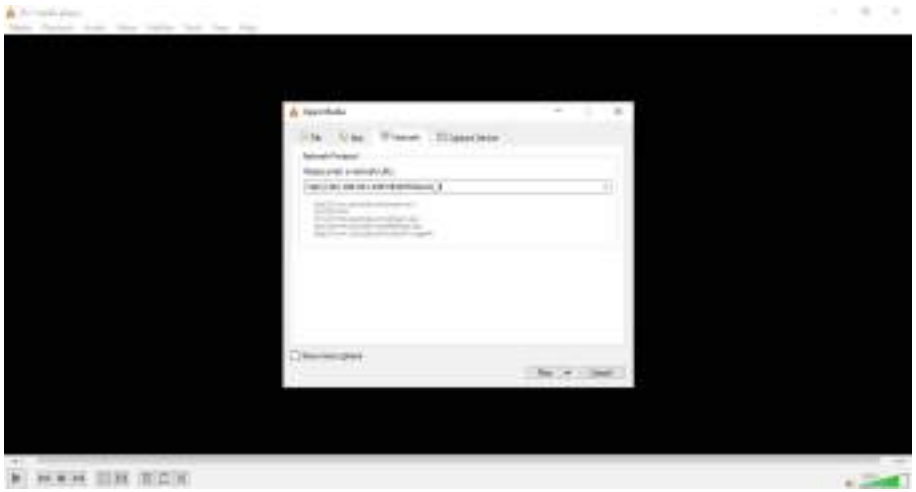
Client: This is the internal port that your NVR will use to send information through. This particular port number (9000) is not used by many devices, however, if you have another NVR-like device, you may need to change it.

RTSP: This port is used to stream a camera's live view image to your computer, using video streaming software such as VLC media player (see page 68 - Using RTSP for more information).

UPNP: A network protocol designed to allow network-connected devices to automatically configure the router for remote access. Click the checkbox to enable (not required to be enabled when using UID).

Click for contents

Using RTSP



The following instructions are for the VLC media player software (you can download a free copy from www.videolan.org). After download, double click the file then follow the on-screen instructions for installation.

1. On your computer, load the VLC media player software. Click "Media" then click "Open Network Stream" (as shown on the left).

2. Enter the IP address of your NVR (on your NVR click "Network" in the Main Menu to display the IP address) into VLC. The following is an example of what you need to enter - rtsp://192.168.201.239:554/CH04/av0_1.

rtsp://192.168.201.239: This is the IP address of your NVR.

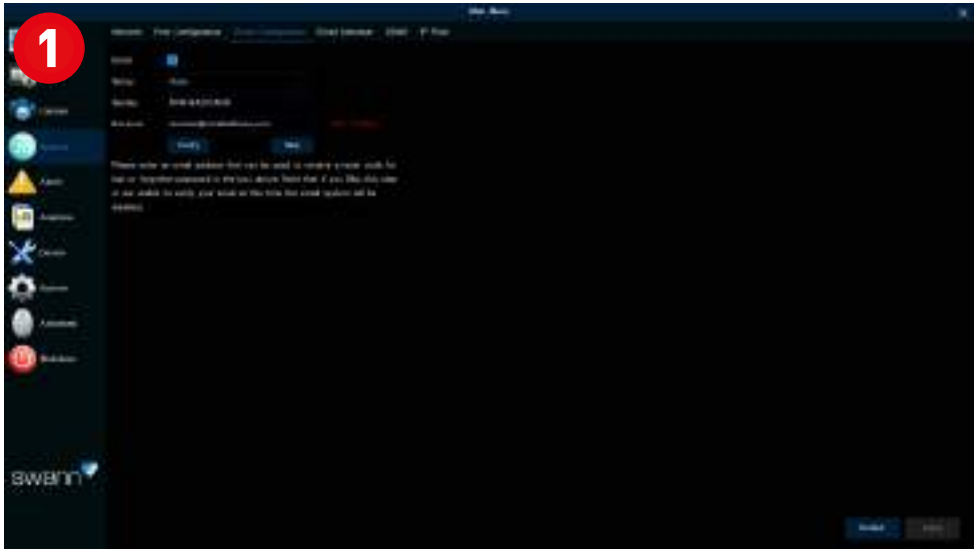
04: This represents channel 4. To display channel 1 enter 01, etc.

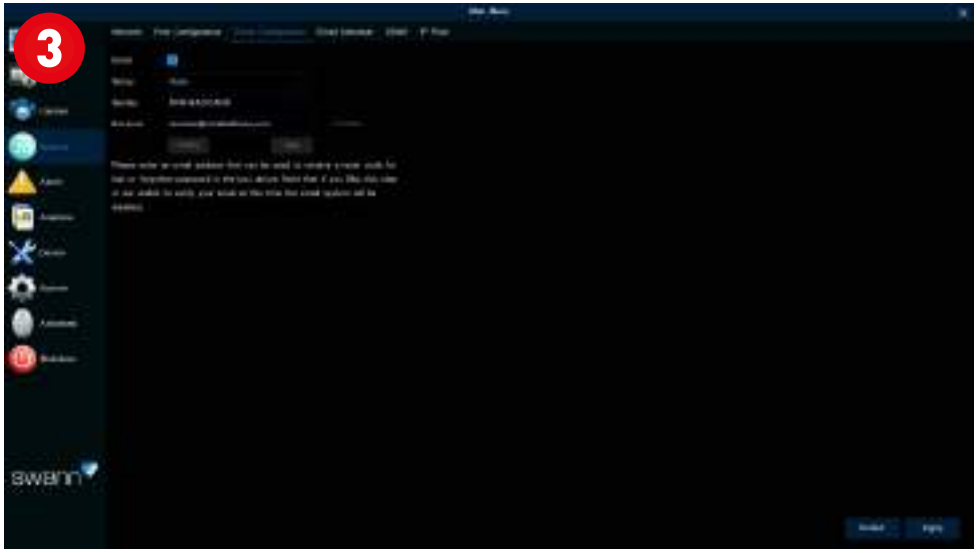
1: This represents Substream. For Mainstream enter 0 instead.

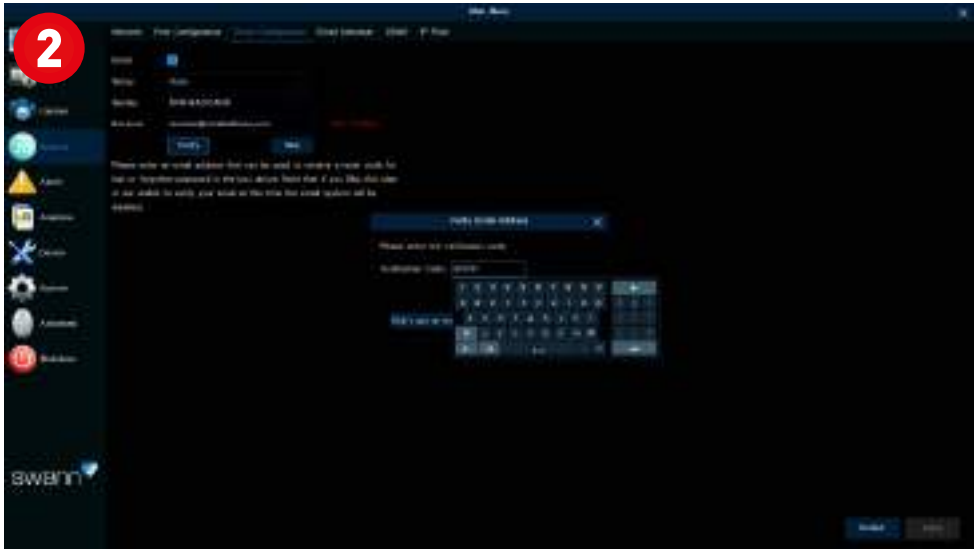
3. Click "Play", then enter the user name and password (if required). You will now see a live view image from the camera.

A direct connection can only be done to your NVR and not to the cameras. Also, be aware this may place an additional load on the connection which may affect the recording function.

Network: Email Configuration - Email Verification







Inputting an email address is a requirement so your NVR can send you a password reset request if you have forgotten your password. Both Gmail and Outlook are supported. Alerts are also sent to your email.

1. Click the checkbox to receive email alerts.

Sender: Input a name for your email account.

Receiver: Input the email address to send email alerts to.

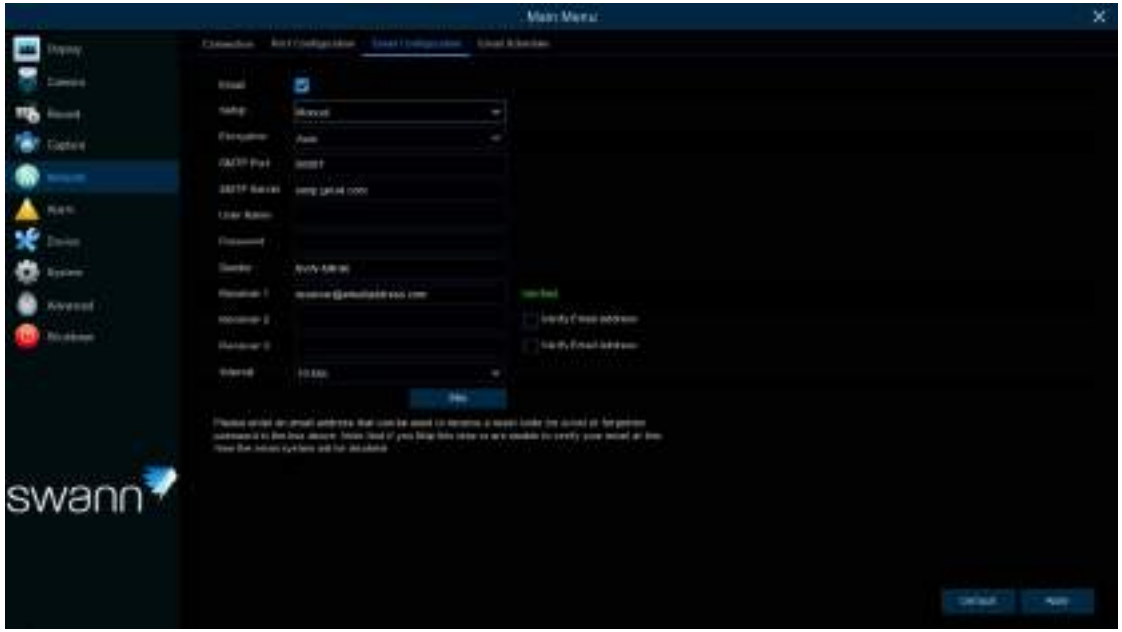
Verify: Click this to verify your email address, then click "OK".

2. A verification code will be sent to the email address. Enter the verification code, then click "Confirm". Please note the verification code is valid for 15 minutes.

3. You will see the word Verified in green. Click "Apply" to save settings.

Click for contents

Network: Email Configuration - Manual Setup



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Setup: Click the drop-down menu and select "Manual" to use the email from your service provider.

Encryption: Leave this on "Auto" to ensure your NVR will use the correct encryption for your email provider.

SMTP Port: Enter the port number, for example, 00587.

SMTP Server: Enter the email server, for example, mail.iinet.net.au.

User Name: Input the email user name for your account.

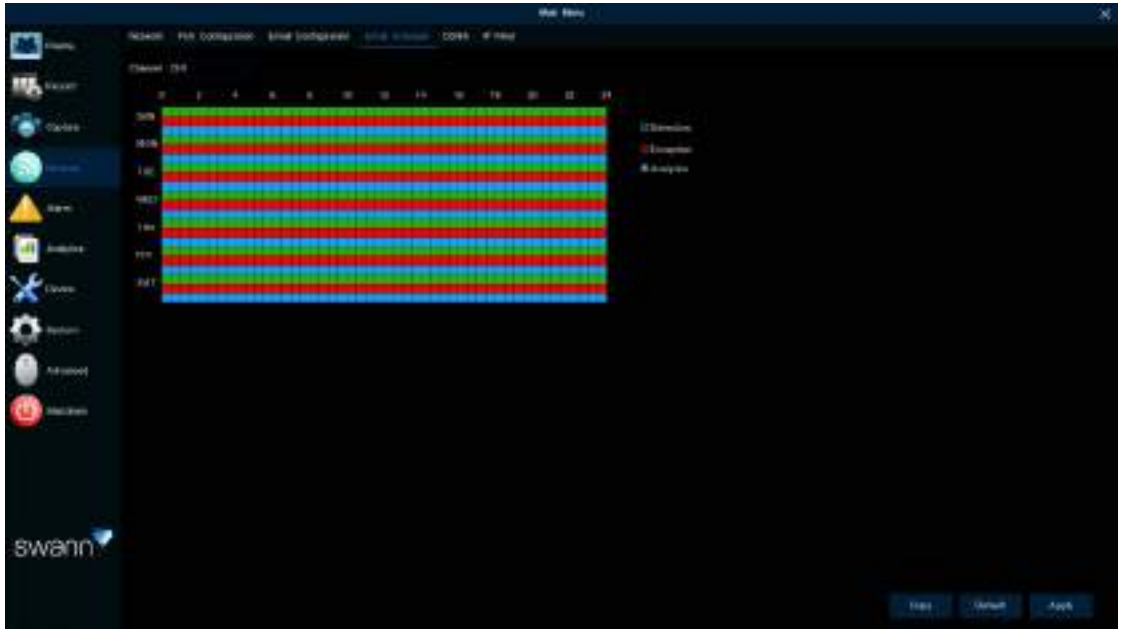
Password: Input the email password for your account.

Receiver 2/3: If needed, input an additional email address to send email alerts to. Click the "Verify Email Address" checkbox to verify the email address and follow the instructions on the previous page.

Interval: This is the length of time that must elapse after your NVR sends an email alert before it will send another. Adjust accordingly.

Various steps have to be performed to use Gmail as a sender for email alerts. Click here for instructions.

Network: Email Schedule



- → Use the "Copy" function to apply all settings to the other cameras connected.
- → Click "Default" to revert to default settings.
- → Click "Apply" to save settings.

Channel: Select a camera that you would like to edit.

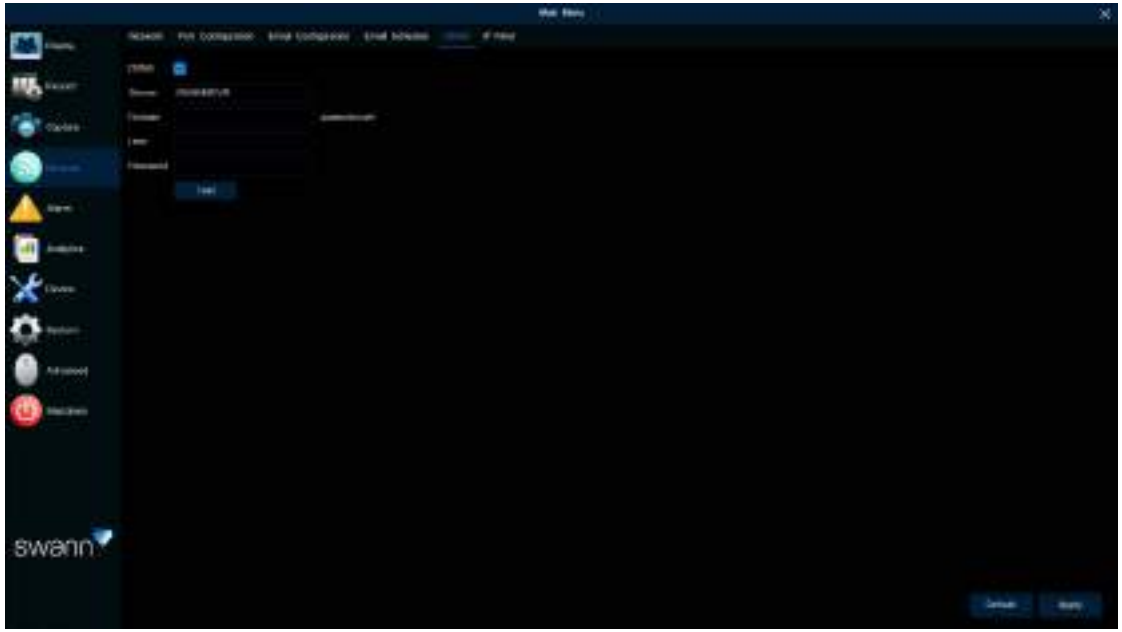
Detection: If email alerts are enabled for motion detection, you can change the schedule when your NVR can send those alerts. For example, you may only want to receive alerts during the day but not in the evening. An alternative schedule can be created for each camera.

Exception: There are three event types that your NVR will detect as an exception - no space left on the hard drive, a hard drive error and if one or more channels has lost the feed from its camera (see page 81 - Advanced: Event). We recommended leaving the default schedule in place just in case there is an exception that you need to be alerted to.

Analytics: If one or more analytic functions are enabled, an email alert will automatically send when motion is detected. An alternative schedule can be created for each camera.

Each square represents 30 minutes. Using the mouse, click on a square to change or click and drag the mouse over the squares corresponding to your desired period.

Network: DDNS



Prior to developing our peer-to-peer technology, our SwannDNS service was used to connect to your NVR remotely. This service is still active, and we recommend creating an account as a backup.

→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Go to www.swanndvr.com and click the "Registration" button. Follow the prompts to create your account.

DDNS: Click the checkbox to enable.

Server: SWANNDVR is automatically selected.

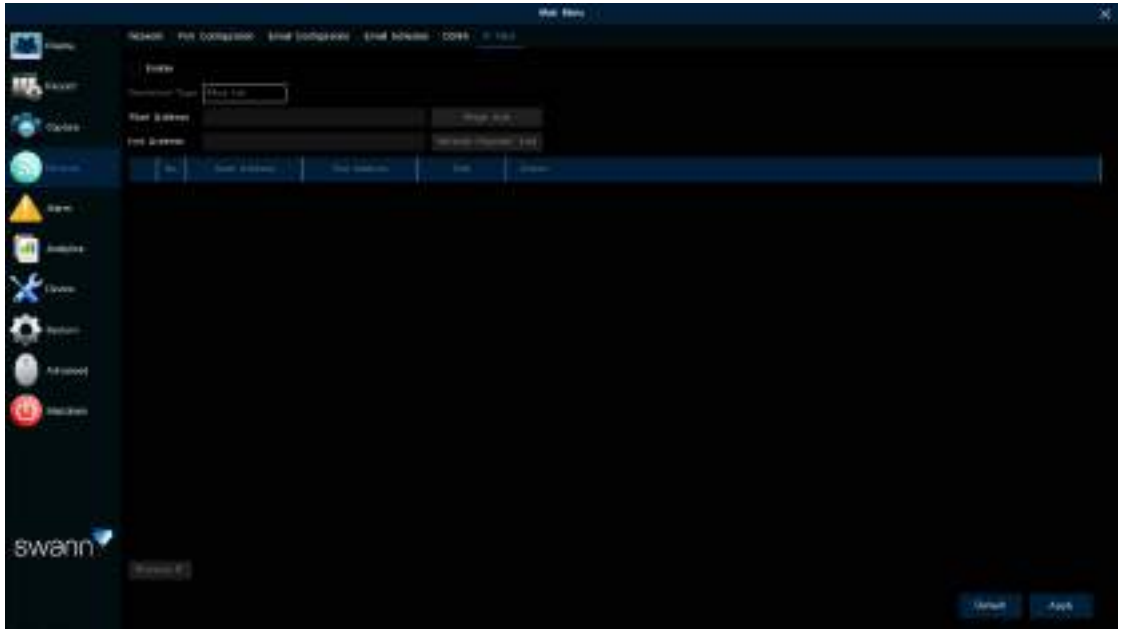
Domain: Enter the domain name that is hosted on your account. For example - (username.swanndvr.net).

User: Enter the username (hostname) for your account.

Password: Enter the password for your account.

Test: Click this button then click "OK" to confirm your account details. After a short moment, you will see "DDNS test is successful!". Click "OK" to close.

Network: IP Filter



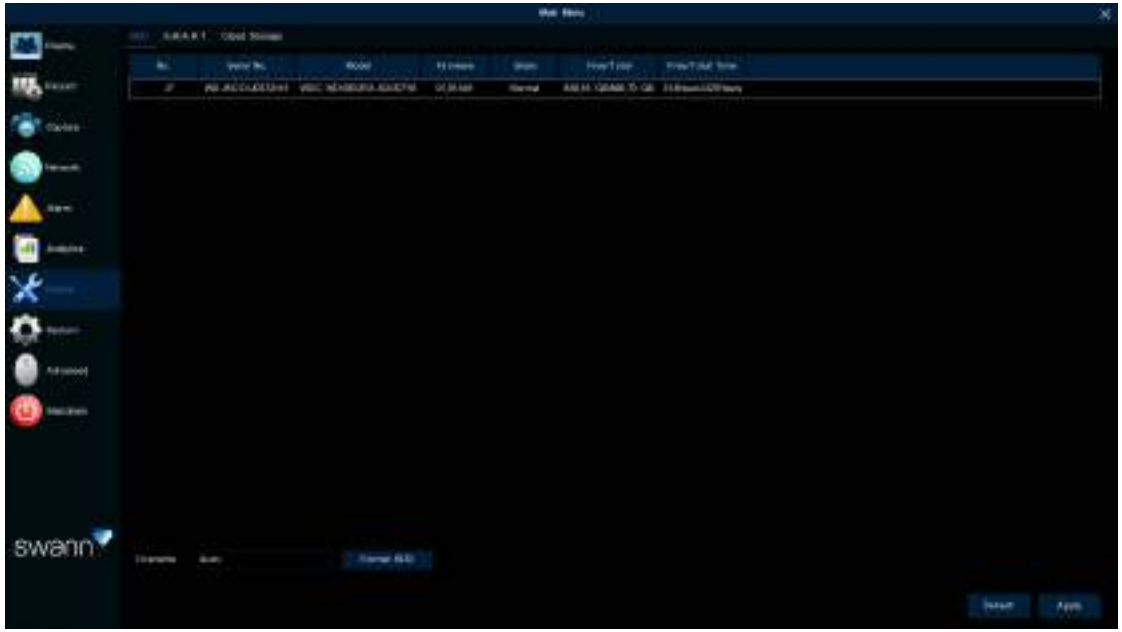
→ Click “Default” to revert to default settings.

→ Click “Apply” to save settings.

The cog symbol (top right) indicates functions suitable for experienced users, and or some networking knowledge is required.

IP Filtering is a great way to limit access to your network devices for specific groups of IP addresses. For example, if you had a malicious user attacking your network, you could add a filter to prevent access to your devices from a single IP address or a block of IP addresses. For the day-to-day function of your NVR, this function isn’t required.

Device: HDD



This function gives you the option of formatting your NVR's hard drive, and it will be listed here for selection (if a new hard drive has been installed inside your NVR, you need to format the drive before it can be used).

→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Overwrite: This instructs your NVR to overwrite the oldest video files as the hard drive becomes full. You also have the option of disabling this or selecting the amount of days events are kept before they are overwritten. We recommended leaving the default selection as this prevents your NVR from running out of storage space.

Format HDD: Click the checkbox to select the hard drive then click this button to format. You have three options to select from:

1. Format the entire hard disk. All data will be erased: As stated, all data including events, log files and analytic information will be erased.

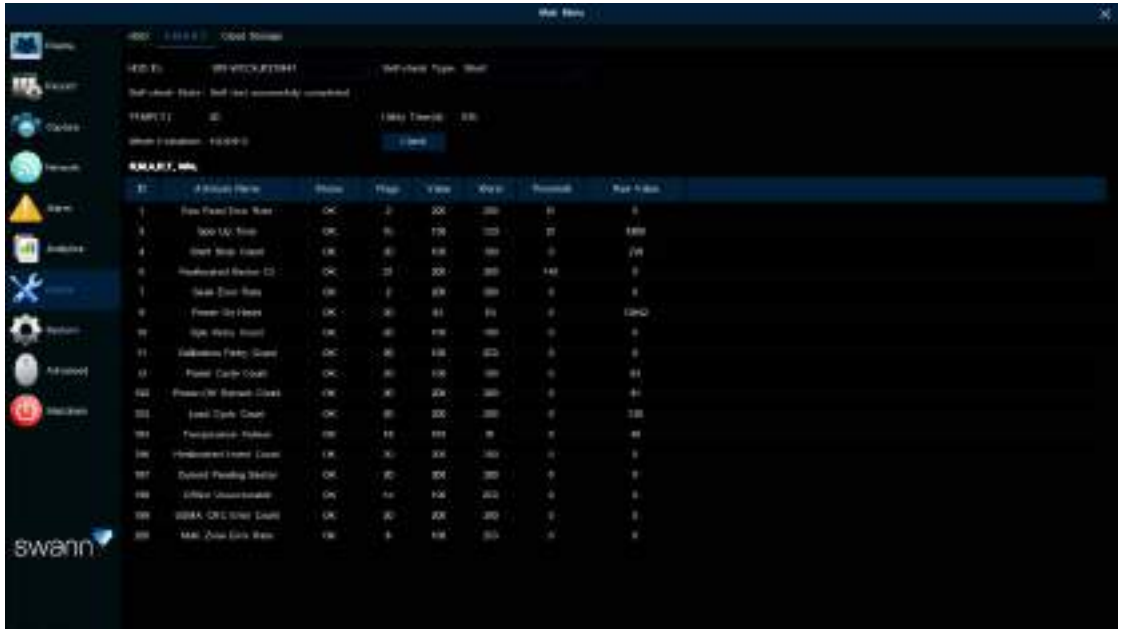
2. Only format the record partition. All record data will be erased: Only data such as events, snapshots and log files will be erased. All analytic information will be kept.

3. Only format the general partition. All AI related data may be erased: Only analytic information will be erased. Events, snapshots and log files will be kept on the hard drive.

Select the relevant option, then click "OK". Input your password, then click "Authenticate". A message will appear noting the data that will be erased. Click "OK" to continue.

From time to time, we recommend that you format the hard drive. This ensures that your NVR maintains system integrity. Connect a USB flash drive to copy events that you want to save.

Device: S.M.A.R.T



This function is used to display technical information on the hard drive installed inside your NVR. You can also perform a test (there are three types available) to evaluate and detect potential drive errors.

Self-check Type: There are three types available:

Short: This test verifies major components of the hard drive such as read/write heads, electronics and internal memory.

Long: This is a longer test that verifies the above as well as performing a surface scan to reveal problematic areas (if any) and forces bad sector relocation.

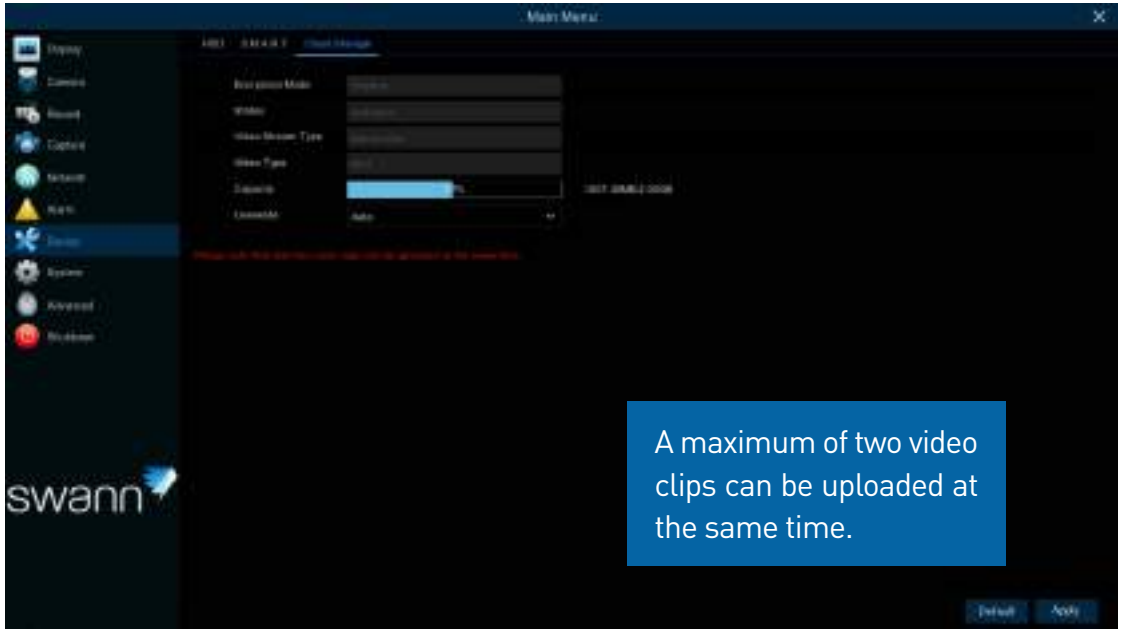
Conveyance: This is a very quick test that verifies the mechanical parts of the hard drive are working.

When performing a test, your NVR will continue to work as normal.

In most circumstances, the information here will not be needed for general use of your NVR, however, one of our Swann Helpdesk & Technical Support staff may ask you to access this if you call for assistance.

Right-click the mouse to exit.

Device: Cloud Storage - Dropbox Activation



If you have subscribed to one of the Secure+ Plans in the Swann Security app, your snap-shots and videos are uploaded automatically to the cloud. Subscribers are not required to have a Dropbox account. For non-subscribers, follow the instructions below to activate the cloud function using your Dropbox account.

→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Before activating, it's best to create a Dropbox account first. Visit www.drop-box.com, provide your name, email address, and password, agree to the terms & conditions, and then click or tap the sign-up button. If you already have a Dropbox account, you can skip this step.

Encryption Mode: Please use the Swann Security app to activate.

Status: This will change to Activated when active. If you see Network Blocked, check that your NVR has internet access.

Video Stream Type: Mainstream (high-quality) video is copied to the cloud.

Video Type: MP4 video format is used for wider playback compatibility when copied to the cloud.

Capacity: When activated, this will display how much free space you have on your Dropbox account.

Overwrite: The default setting will overwrite the oldest files first. Click the drop-down menu if you would like to select a particular time instead.

To activate the cloud function:

1. On your mobile device, sign in to your Dropbox account first (skip this step if you have already done this).

2. In the Swann Security app, tap "Menu" (top left), then tap "Dropbox".

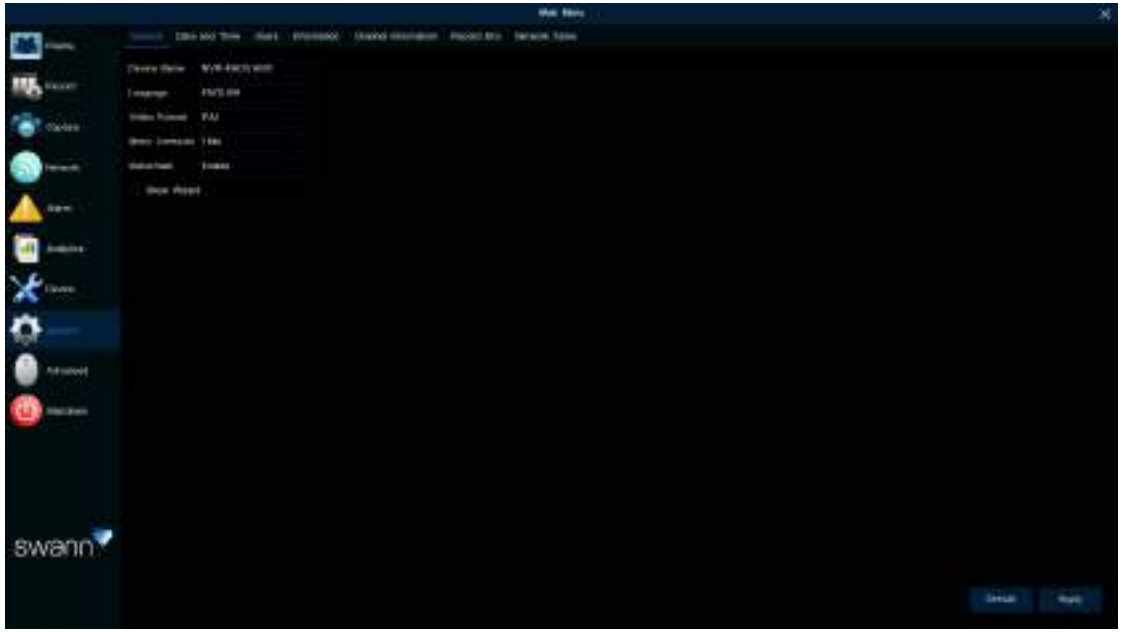
3. Tap "Authorize", then tap "Allow". Repeat the above step, then tap "Link".

4. Your NVR is now authorized to use your Dropbox account.

5. With the cloud function enabled, you need to instruct your NVR to send alerts to the cloud (see page 29 - Alarm: Detection - Actions).

Click for contents

System: General



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Device Name: Click the dialogue box to rename your NVR (if required).

Language: Select a language you would like the system menus to be displayed in. Multiple languages are available.

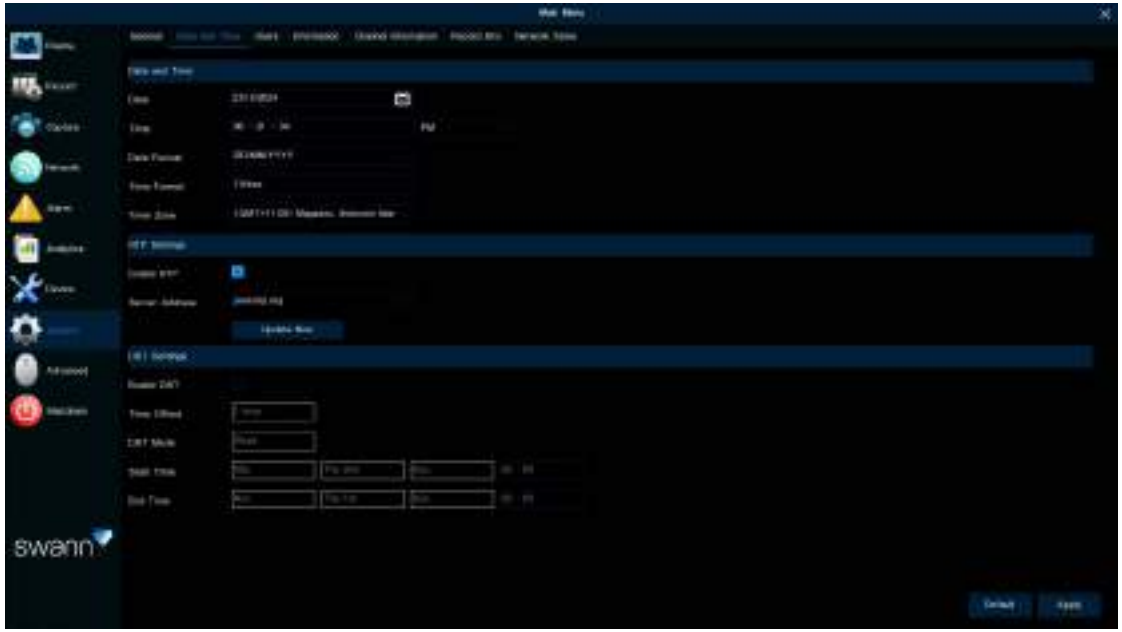
Video Format: Select the correct video standard for your country. USA and Canada are NTSC. UK, Australia and New Zealand are PAL.

Menu Timeouts: Click the drop-down menu to select the time your NVR will exit the Main Menu when idle. You can also disable this by selecting "OFF" (password protection will be temporarily disabled).

Watermark: By default, the Swann logo is overlaid as a watermark for each camera. If this isn't required, click the drop-down menu to disable it.

Show Wizard: Click the checkbox if you would like to display the Startup Wizard each time you turn on or reboot your NVR.

System: Date and Time



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Date and Time

If the date, time and, time zone are incorrect, click the relevant dialogue boxes and drop-down menus to change.

NTP Settings

The NTP (Network Time Protocol) function gives your NVR the ability to automatically sync its clock with a time server. This ensures that the date and time are accurate and ensures correct time stamping when events occur.

1. Click the "Update Now" button to automatically synchronize your NVR's internal clock with the time server instantly.

2. A message will appear on-screen stating that the time has been successfully updated. Click "OK" to continue.

DST Settings

Enable DST: If Daylight Saving applies to your time zone or region, click the drop-down menu to enable it.

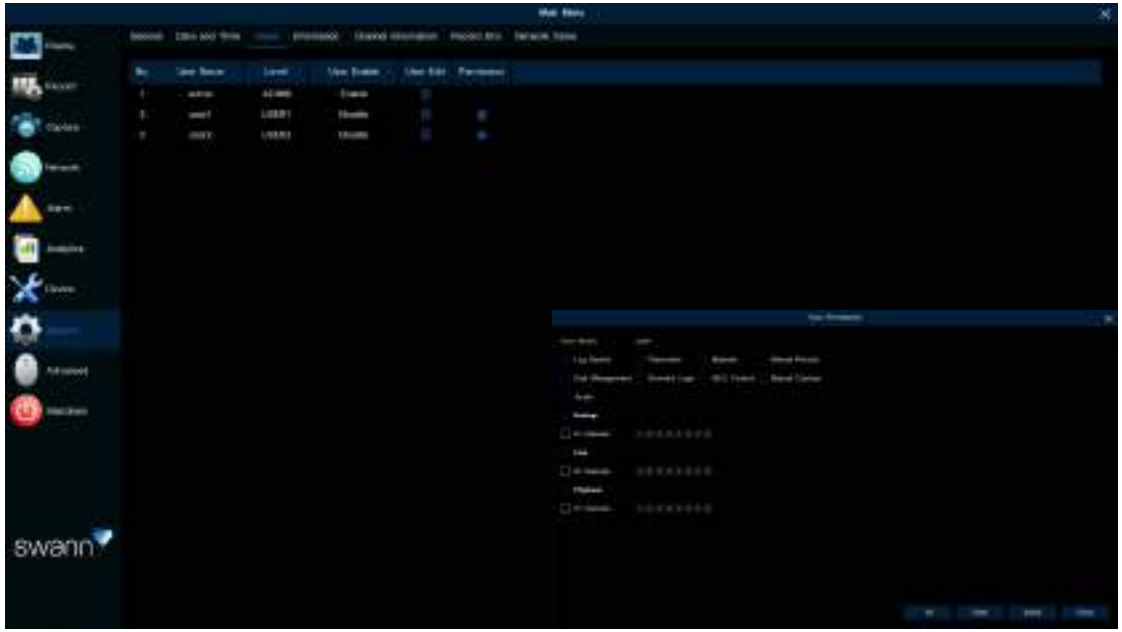
Time Offset: Select the amount of time that Daylight Saving has increased by in your time zone. This refers to the difference in minutes, between Coordinated Universal Time (UTC) and the local time.

DST Mode: You can select how Daylight Saving starts and ends:

Week: Select the month, a particular day, and time when Daylight Saving starts and ends. For example, 2 a.m. on the first Sunday of a particular month.

Date: Select the start date (click the calendar icon), end date, and time when Daylight Saving starts and ends.

System: Users



→ Click “Default” to revert to default settings.

→ Click “Apply” to save settings.

To change your NVR’s password, click the “Edit” button. The password has to be a minimum of six characters and can contain a mixture of numbers and letters. Enter your new password again to confirm.

Additional user accounts can also be enabled:

1. Select “user1” then click the “Edit” button.

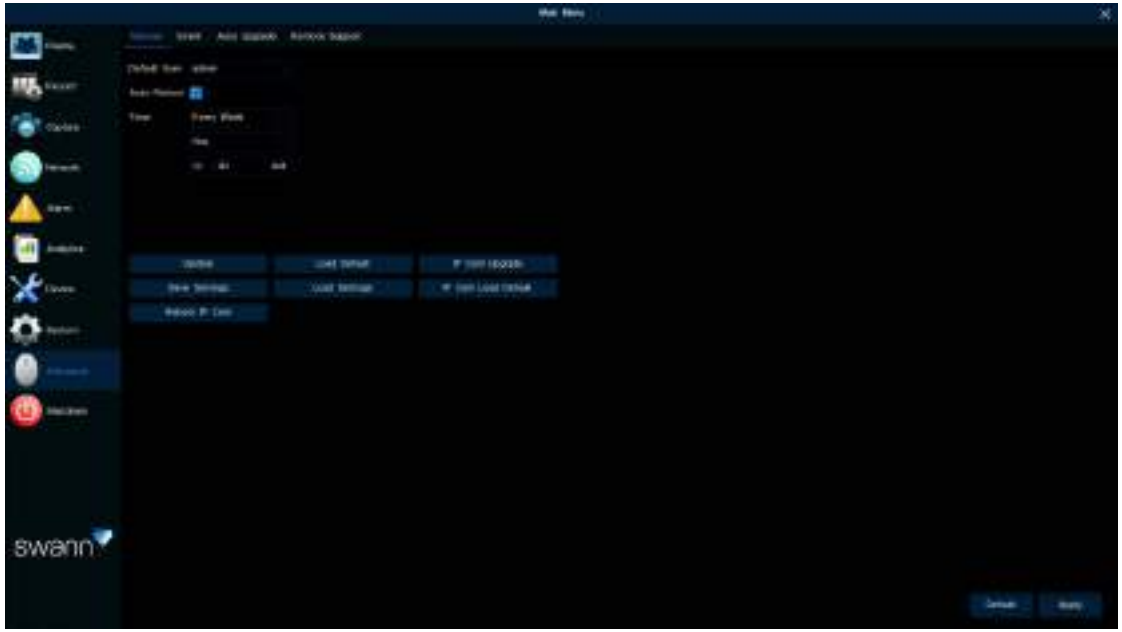
2. Click the drop-down menu to enable.

3. Enter a user name and password.

4. Click the “Save” button, enter the admin password, then click “OK” to confirm.

To change permissions, click the “Permission” button then select which options you would like to enable. Click the “All” button to select all options. Click the “Save” button then click “OK” to confirm.

Advanced: Maintain



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

Default User: Admin is the default user account. If multiple user accounts have been created, click the drop-down menu to turn this off.

Auto Reboot: We recommend leaving this enabled, as it maintains the operational integrity of your NVR.

Time: Choose an appropriate day and time to reboot your NVR.

Update: Click this button to update the firmware from a USB flash drive. Select the firmware file then "OK" to confirm. When the firmware update has been completed, your NVR will reboot automatically.

Save Settings: Click this button to export a configuration file containing all the settings that you have customized.

IP Cam Load Default: Click this button to restore factory default settings for each camera.

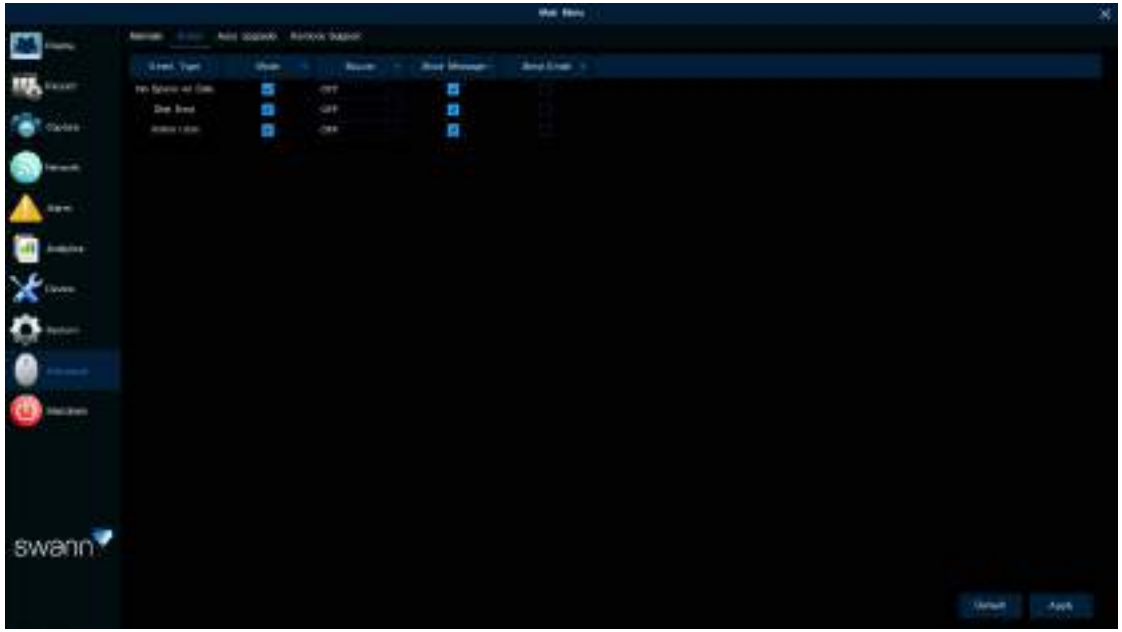
Load Default: Click this button to restore factory default settings. Click "All" then click "Save". Your NVR will reboot, and the Startup Wizard will appear on-screen.

Load Settings: Click this button to import a configuration file containing all the settings that you have customised.

Reboot IP Cam: In case of any issues, click this button to reboot each camera.

IP Cam Upgrade: Click this button to update the cameras' firmware from a USB flash drive. Go to support.swann.com to check for available updates.

Advanced: Event



Whenever there is an event or if your NVR displays unusual behaviour, you can be alerted in multiple ways, such as receiving an email, displaying a message on-screen, receiving an alert in the Swann Security app and activating its internal buzzer. There are three event types that your NVR will detect as an exception.

→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

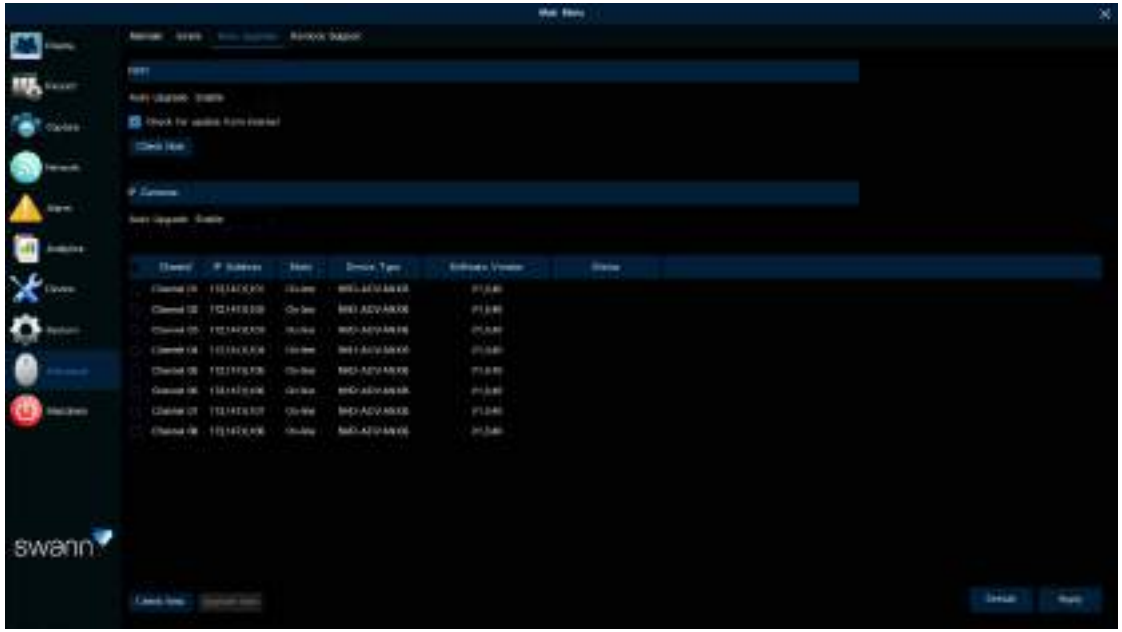
Enable: Click the checkbox if you would like to disable alerts for the event available.

Buzzer: Click the drop-down menu and select the period for the internal buzzer to activate for the event available.

Show Message: Click the checkbox to disable the on-screen message for the event available.

Send Email: Click the checkbox if you would like to disable email alerts for the event available.

Advanced: Auto Upgrade



→ Click "Default" to revert to default settings.

→ Click "Apply" to save settings.

NVR

Auto Upgrade: By default, your NVR will automatically check and alert you if new firmware is available for download. Click the drop-down menu if you would like to disable this feature.

Check for update from internet: By default, your NVR will automatically check and alert you if new firmware is available for download. Click the checkbox if you would like to disable this feature.

Check now: Click this button to check if new firmware is available. If new firmware is available, follow the on-screen instructions.

IP Cameras

Auto Upgrade: Click the drop-down menu to enable your NVR to automatically check and alert you if new firmware is available for the paired cameras.

Click the checkbox on one or more of the cameras paired to check for a firmware update.

Check Now: Click to check for a camera firmware update.

If a firmware update is available, click the "Upgrade Now" button and follow the on-screen instructions.

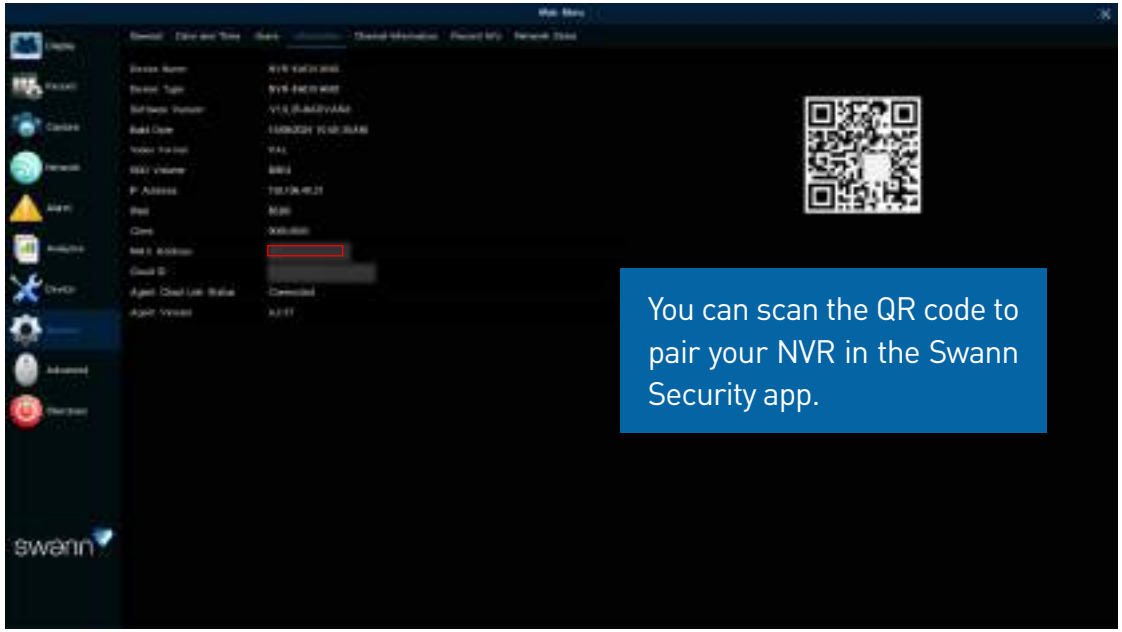
Advanced: Remote Support

When calling for assistance, the Remote Support function can be used by our Swann Helpdesk & Technical Support staff, to remotely connect to your NVR. This will assist them in diagnosing any issues that you may be having. This function is not used in the day-to-day operation of your NVR.

System Status

The various status tabs give you an overview of the settings and options that have been selected for your NVR to function. Actions performed by your NVR and events detected are logged, which you can search and view. When calling our helpdesk for assistance, our staff may ask you to access these tabs to assist them in solving any technical issues that you may be having.

System: Information



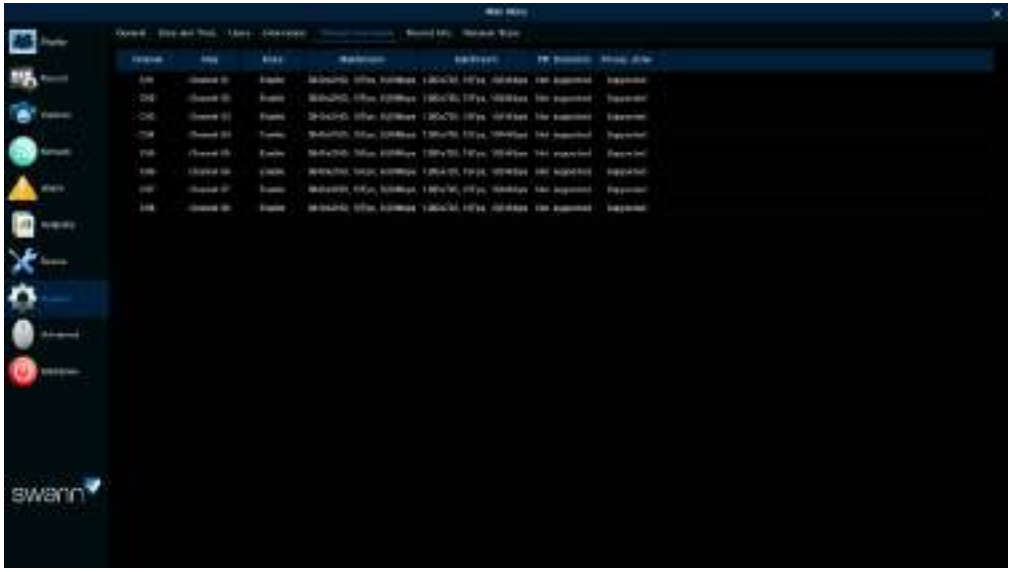
This tab displays technical information about your NVR as well as your device Cloud ID and QR code. When calling our helpdesk for assistance, our staff may ask you to access this tab to assist them in solving any technical issues that you may be having.

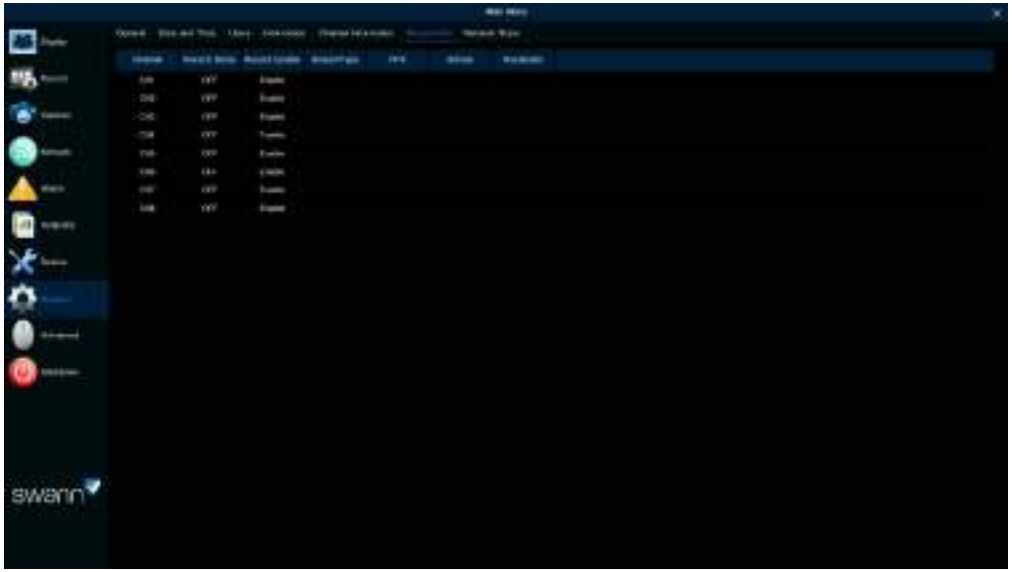
MAC Address: You can use this as a recovery password if you have forgotten your current password.

When calling our helpdesk for assistance, our staff may ask you to access this tab to assist them in solving any technical issues that you may be having.

Write down your MAC Address: _____

System: Channel Information & Record Info



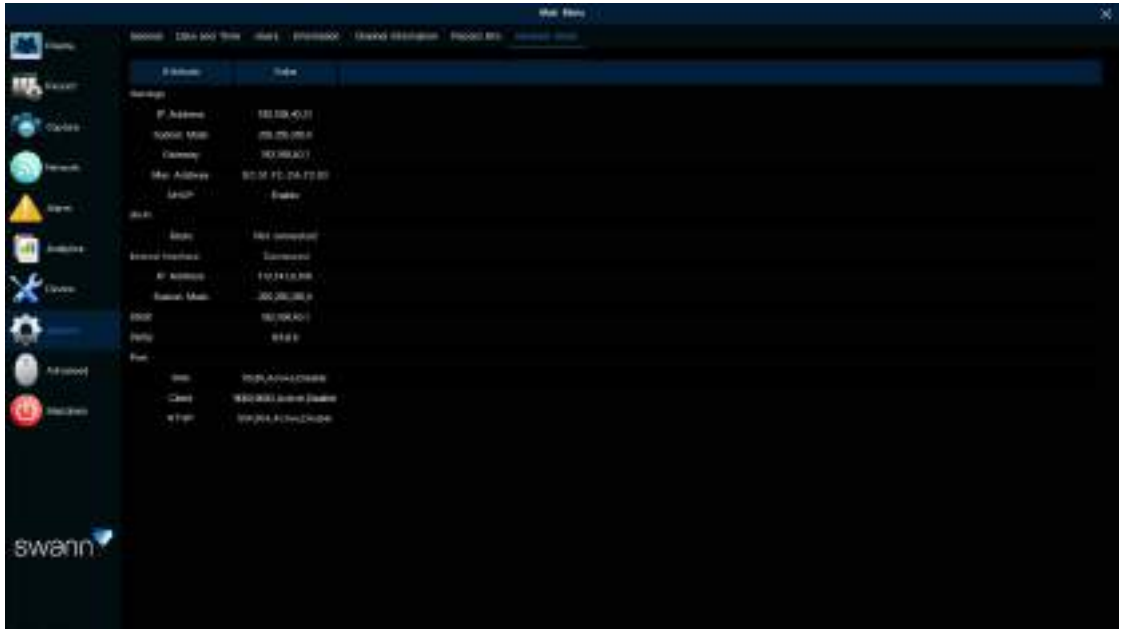


Displays the Mainstream, Substream and the recording settings used for each camera connected (for Record Info, the settings will only be shown when one or more cameras are recording).

When calling our helpdesk for assistance, our staff may ask you to access this tab to assist them in solving any technical issues that you may be having.

Right-click the mouse to exit.

System: Network State

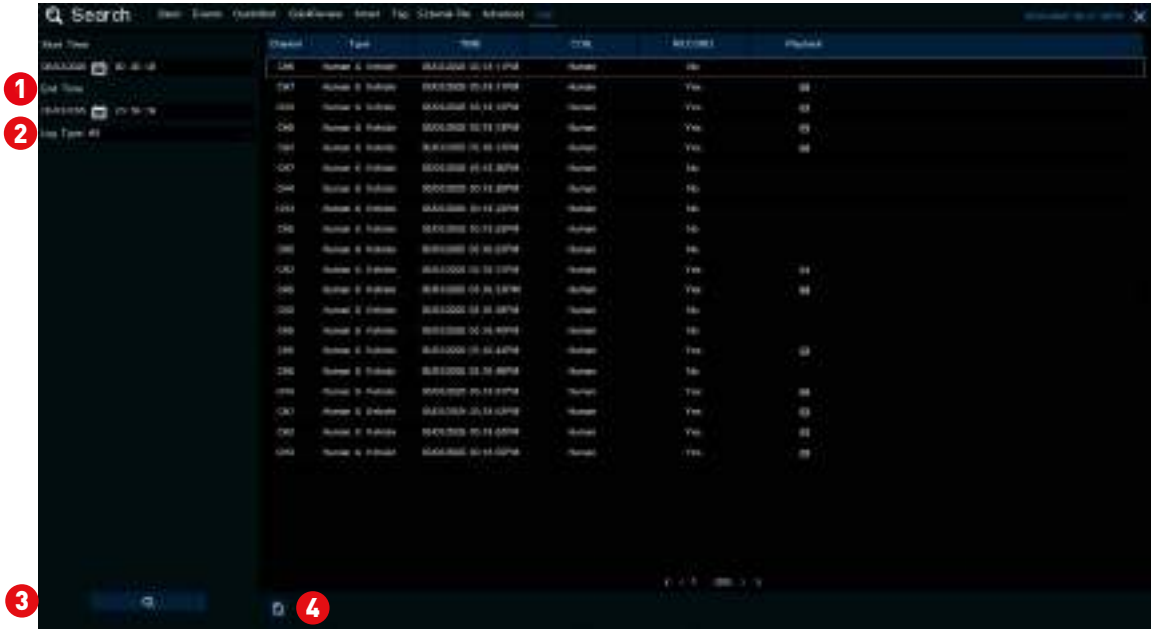


Displays the network settings used by your NVR.

When calling our helpdesk for assistance, our staff may ask you to access this tab to assist them in solving any technical issues that you may be having.

Right-click the mouse to exit.

Search: Log



All actions and events that your NVR performs and detects are logged. These log files can be searched, viewed and copied to a USB flash drive for safekeeping.

1 **Start/End Time:** Click the calendar icon to select the month, year and date that you would like to search on. Click the dialogue box to enter a specific start and end time.

2 **Log Type:** Leave the default selection or click the drop-down menu to select a specific action that you would like to search for.

3 **Search:** Click this to display a list of log files that match your search criteria. Double-click a file to display information about that log.

4 **Backup:** Insert a USB flash drive into your NVR, then click this to copy the log files that match your search criteria. You have the choice of formatting the flash drive or creating a new folder if required. Click "OK" to save, then click "OK" again to close.

Frequently Asked Questions

Can I play video(s) on my NVR that I have copied to a USB flash drive?

Yes, you can use the Search: External File function (see page 62).

What is the largest hard drive that I can install inside my NVR?

The largest hard drive you can install is 8TB (terabyte). We recommend that you purchase a drive that is surveillance rated such as the Western Digital Purple™, Seagate Skyhawk™ and Toshiba range of drives.

Can I connect and record to a portable USB hard drive?

No, your NVR will only record to the internal hard drive that is installed.

Can I connect and copy videos to a portable USB hard drive?

Due to the nature of how portable USB hard drives operate, there is no guarantee that your drive, when connected to the NVR's USB port, will work. You'll have to give it a try. For backup purposes, we recommend using a USB flash drive.

How do I save video recordings that are on my NVR?

To copy video recordings to a USB flash drive, use the Search: Events function (see page 54).

How do I save snapshots that are on my NVR?

To copy snapshots to a USB flash drive, use the Search: QuickShot function (see page 56).

Can I use my own email address and server instead of creating a new one?

You can providing you have the settings required for the SMTP port and server. If you don't have this, you will have to contact your internet service provider to get this information.

I have saved recordings to a USB flash drive to play on my Windows computer but it won't play in Windows Media Player, how can I play these?

Windows Media Player doesn't have the required codecs to play recordings from your NVR. We recommend using VLC media player as it has the required codecs to play a variety of different video formats. It's free to download from www.videolan.org.

Email alerts aren't working, what can I do?

1. Check that your email user name and password are correct.

2. Located at the back of your NVR, you should see one or two flashing LEDs (above the Ethernet port). If you don't see this, disconnect then reconnect the Ethernet cable or try a different port on your modem or router.

3. Search "less secure apps" at support.swann.com (if using Gmail).

At night, objects tend to ghost or blur. How can I overcome this?

Go to Setup > Display > Image Control > Setup on the relevant camera input.

3D Noise Reduction > Change from Auto to Manual and increase to 255.

Shutter > Change from Auto to Manual.

Time Exposure > Change this to a faster shutter speed, for example, 1/500 or faster. Faster shutter speeds capture movement more sharply, which reduces motion blur, but also limits the amount of light entering the camera, potentially darkening the image.

Nighttime scenes generally require longer exposures to gather enough light, so it's best to balance between reducing blur and maintaining sufficient visibility. To balance between sharpness and brightness, try around 1/100 or 1/250 and adjust upwards as needed.

FCC Verification

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

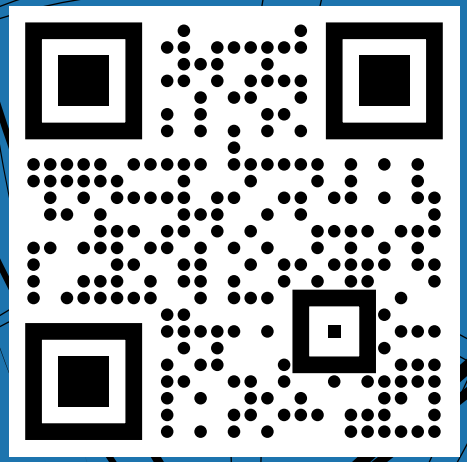
These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- These devices may not cause harmful interference
- These devices must accept any interference received, including interference that may cause undesired operation

FCC Regulation (for the USA): Prohibition against eavesdropping

Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

Need some help?



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