Swann
Security Made Smarter

Professional HD Security System

INSTRUCTION MANUAL

Important Information

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

Important Notice: All jurisdictions have specific laws and regulations relating to the use of cameras. Before using any camera for any purpose, it is the buyer's responsibility to be aware of all applicable laws and regulations that prohibit or limit the use of cameras and to comply with the applicable laws and regulations.

FCC Regulation (for 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.

Warning: Changes or modifications made to this device not approved expressly by the party responsible for compliance could void the user's authority to operate the equipment.

Important Safety Instructions

· Do not operate if wires and terminals are exposed

· Do not cover vents on the side of your device and allow adequate space for ventilation

· Only use the power adapter supplied with your NVR

About this Instruction Manual

This instruction manual is written for the NVR-8580 series and was accurate at the time it was completed. However, because of our on-going efforts to constantly improve our products, additional features and functions may have been added since that time.

Important Password Information

This NVR does not have a default password. A password is created during the Startup Wizard. If password protection has been enabled and you have forgotten your password, your NVR's MAC address can be used to create a new password (see page 3 - Password Recovery).

Password Recovery
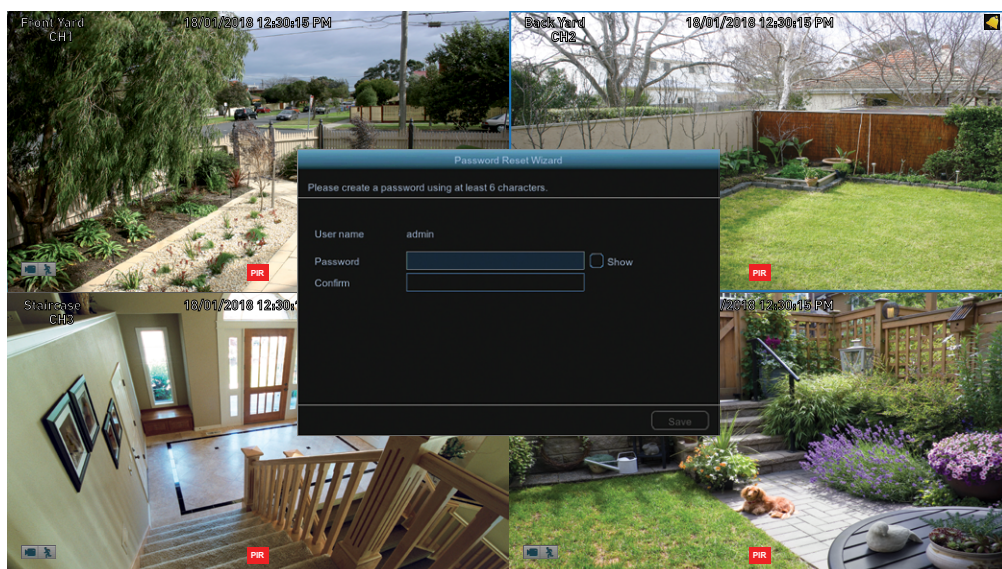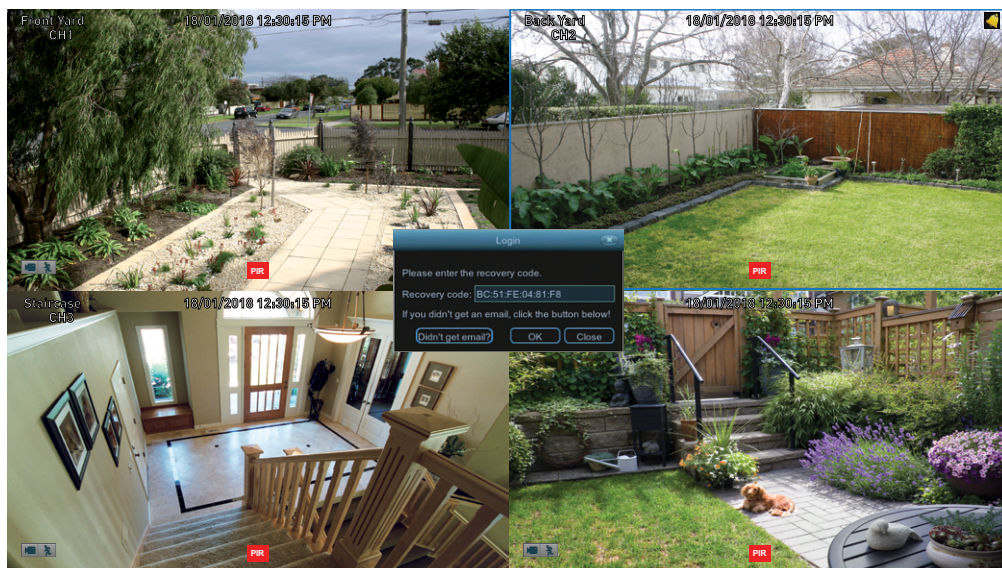
Forgotten your password? Please do the following:

1. Right-click the mouse on the Live View screen to display the Menu Bar then click "Main Menu".

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 including the semicolons (see left example) then click "OK".

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

6. Enter a new password (see bottom left example). 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 easily known to others.

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

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

Don't forget to write down your password: _____

I haven't created an email for my NVR, what can I do? Don't worry, you can use HomeSafe View to retrieve your recovery code (see page 106 - <u>Password Recovery using HomeSafe View</u>).
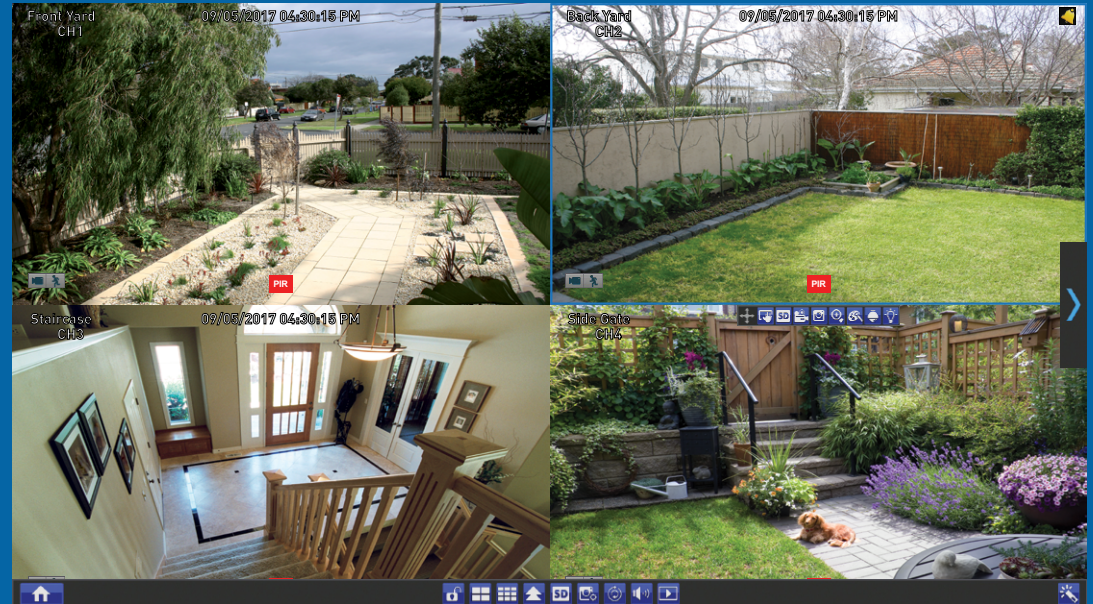
Contents

Contents

Live View

Live View is the default display mode for your NVR. Each camera 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.

Live View Mode

Live View mode is the default display for your NVR. Each camera connected will be displayed (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 is also displayed.

Status Icons

Menu Bar

Camera/Group

Camera Toolbar

Front Yard CH1 — 09/05/2017 04:30:15 PM
Back Yard CH2 — 09/05/2017 04:30:15 PM
Staircase CH3 — 09/05/2017 04:30:15 PM
Side Gate CH4

PIR
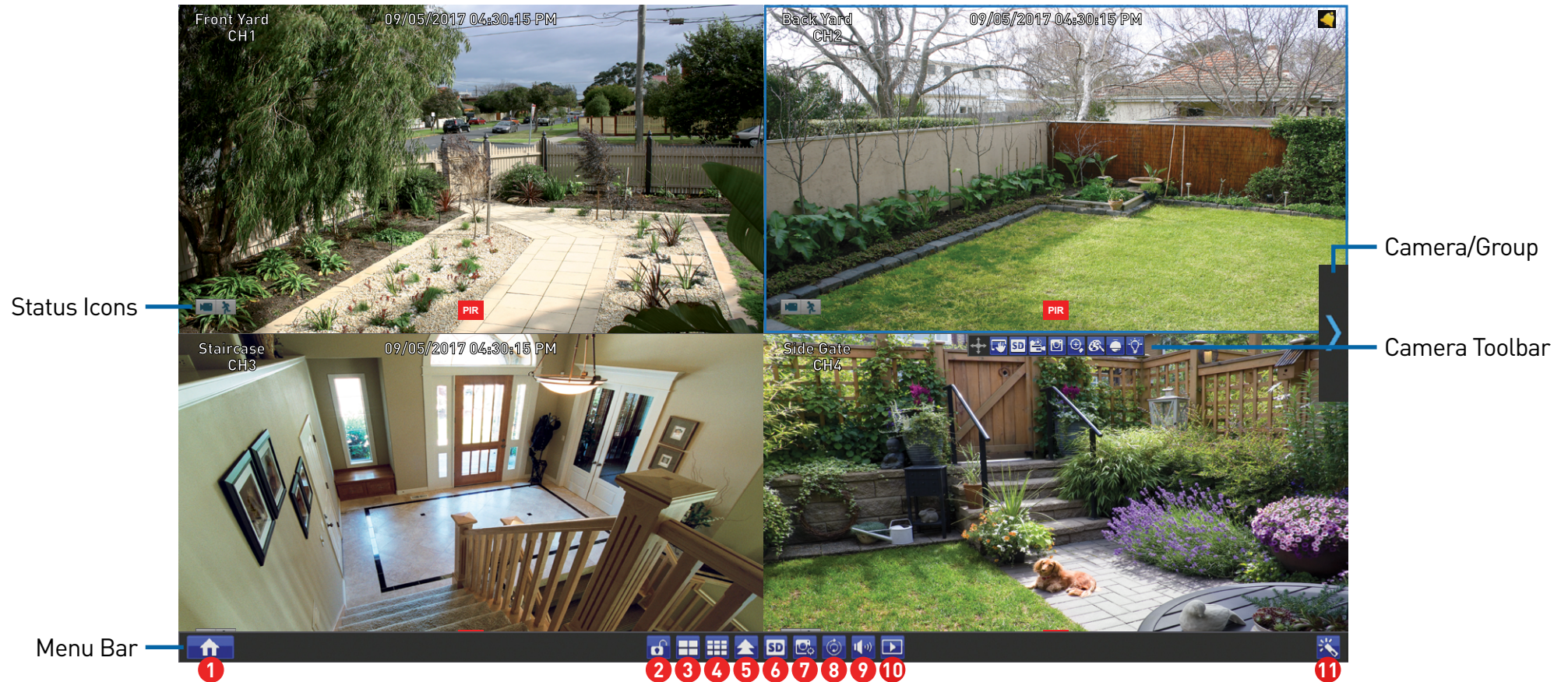
Double-click a live video channel to view full screen.	Click & drag a live video channel to reposition it.

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

Left-click a camera to access the Camera Toolbar. This provides access to functions such as instant playback and to change image settings.

Live View Icons & Controls

Menu Bar

1. Click this to open the Main Menu.

2. Lock your NVR to prevent access to the Main Menu when "Menu Timeouts" is turned off.

3. Four camera view.

4. Nine camera view (this will display eight cameras).

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

6. Click this to change from Mainstream to Substream when viewing the cameras in Live View mode. Click again to change to Mainstream.

7. Click this to change the bitrate and frame rate when viewing the cameras in Live View mode.

There are three profiles available - Real-time (high bitrate/high frame rate), Balanced (a balance between Real-time and Smooth), and Smooth (high frame rate/low bitrate).

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

9. Click this to change the volume or mute the audio (click the speaker icon to mute).

10. Click this to access the Search menu.

11. Click this to access the Startup Wizard.

Please note: The 16 channel model will have additional camera views available (twelve camera and sixteen camera views).

To ensure the integrity of your recordings, enter your password and click "Shutdown" when powering off your NVR.

Camera/Group: When viewing a single camera or a group of cameras, move the mouse to the far left or right to reveal the camera/group button. You can cycle through each camera or group of cameras.

Status Icons

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

This icon indicates that your NVR is detecting motion from the camera.

PIR This icon indicates that the camera has detected one or more warm objects.

S This icon indicates that an event has occurred via one of the analytic functions.

Click this icon to display the analytic event list (any analytic events that occur will be listed here).

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

If you have a Spotlight Security Camera connected to your NVR, you will see a "Spotlight" button on the Camera Toolbar. This allows you to manually turn on the spotlight and siren.
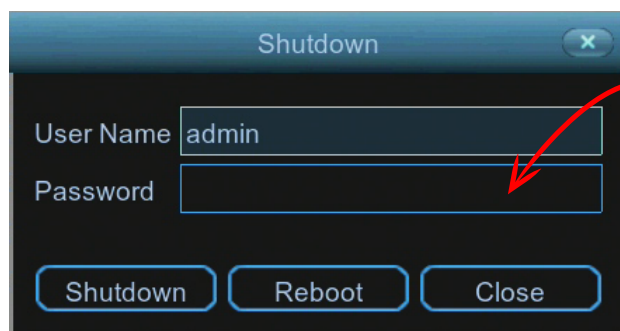
Main Menu

The "Main Menu" is where you control the various actions and options that are available on your NVR. You can also access previously recorded video for playback and to copy to a storage device such as a USB flash drive.

To maintain system integrity, a firmware upgrade can be performed when available and access to the "Shutdown" menu to restart or safely turn off your NVR.
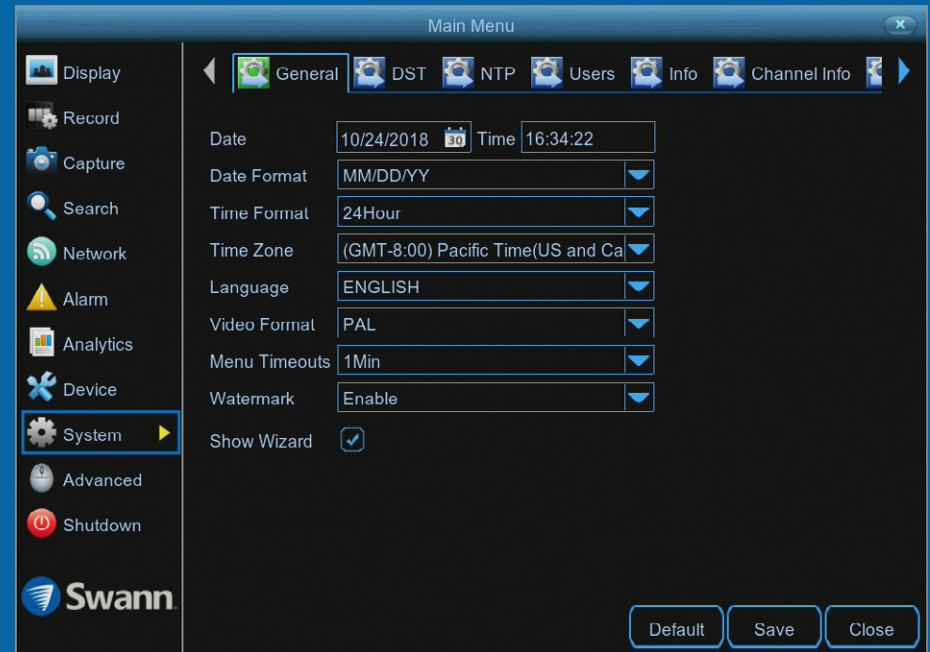
Menu Layout

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

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

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

Main Menu

| | General | DST | NTP | Users | Info | Channel Info |

Display
Record
Capture
Search
Network
Alarm
Analytics
Device
System
Advanced
Shutdown

Swann

Date	10/24/2018	Time	16:34:22
Date Format	MM/DD/YY
Time Format	24Hour
Time Zone	(GMT-8:00) Pacific Time(US and Ca
Language	ENGLISH
Video Format	PAL
Menu Timeouts	1Min
Watermark	Enable
Show Wizard	☑

Default   Save   Close

Save changes that have been made or restore default settings.

Please note: The "Analytics" function in the Main Menu, is only visible if one or more 4K cameras are connected to your NVR.

Camera Configuration

The camera configuration options are available in the "Display", "Record", "Alarm" and "Device" menus that are accessible from the Main Menu. You can change the resolution, bitrate, OSD (on-screen display) position as well as image settings for hue, brightness, contrast and saturation. 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 also have the ability to create one or more zones for privacy. If you have a Sensor Spotlight Camera connected, you can enable the spotlight and siren and change settings for both.

Display: Live

The configuration options available allow you to name each camera relevant to where it has been installed as well as the ability to adjust image settings such as brightness and contrast. You can also change how the date and time format are displayed in Live View mode.
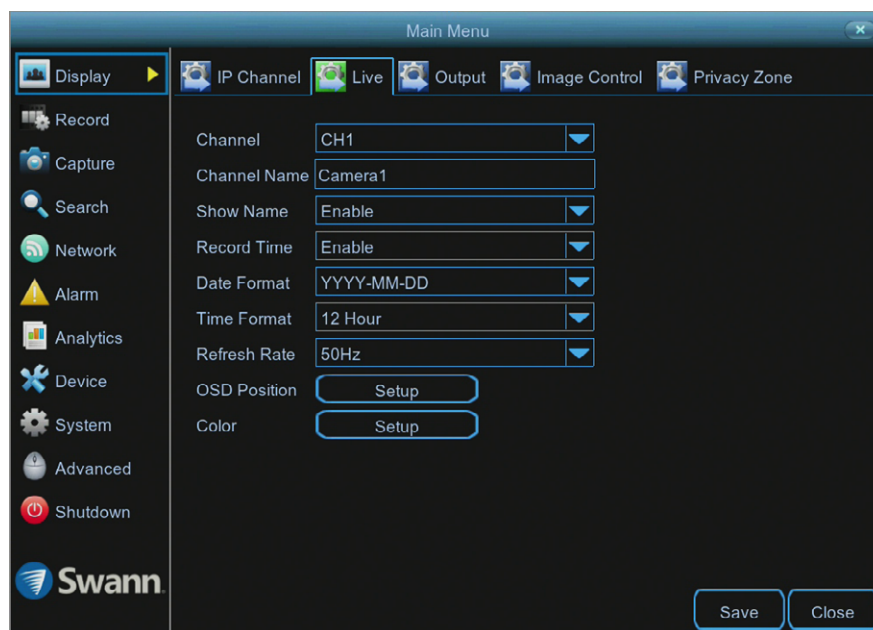
- Don't forget to click "Save" to apply settings.
- Click the "Close" button to exit the Main Menu.

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

Channel Name: Enter a name for the camera you've selected. It can be up to eight characters in length.

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

Record Time: It's recommended to leave this enabled, as a timestamp will be embedded on all video recordings. This allows you to easily identify when events have occurred. You can disable this if you wish.

Date Format: Select a preferred display format (this is independent to the date format selected for the NVR itself).

Time Format: Select a preferred display format (this is independent to the time format selected for the NVR itself).

Refresh Rate: This setting correlates to the "Video Format" selection in the Startup Wizard. When selecting "NTSC", 60Hz will be displayed. When selecting "PAL", 50Hz will be displayed.

OSD Position: Allows you to change the position of the on-screen display on the Live View screen. Click the "Setup" button then use the mouse to reposition. Right-click the mouse then click "Save".

Color: Click the "Setup" button to access the image adjustment tools:

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

→ **Hue:** This changes the color mix of the image.

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Display: Live
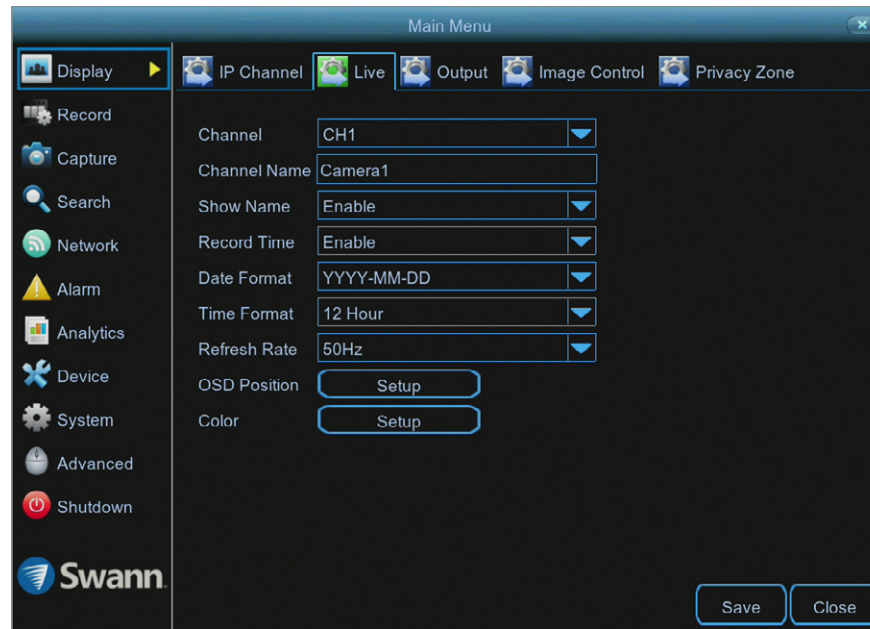
→ **Bright:** This changes how light the image appears to be.

→ **Contrast:** This increases the difference between the blackest black and the whitest white in the image.

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

Use the slider to adjust each setting. Click the "Default" button to reset all settings. When finished, click the "Save" button then click "Close" to exit.

Please note: Any changes made to the image settings available will affect your recordings.

Display: Image Control

The functions available enable you to control the appearance and characteristics of the image shown from each camera. Each function can be adjusted to obtain the best possible image quality, providing you the flexibility to install the camera in the most challenging of lighting situations.
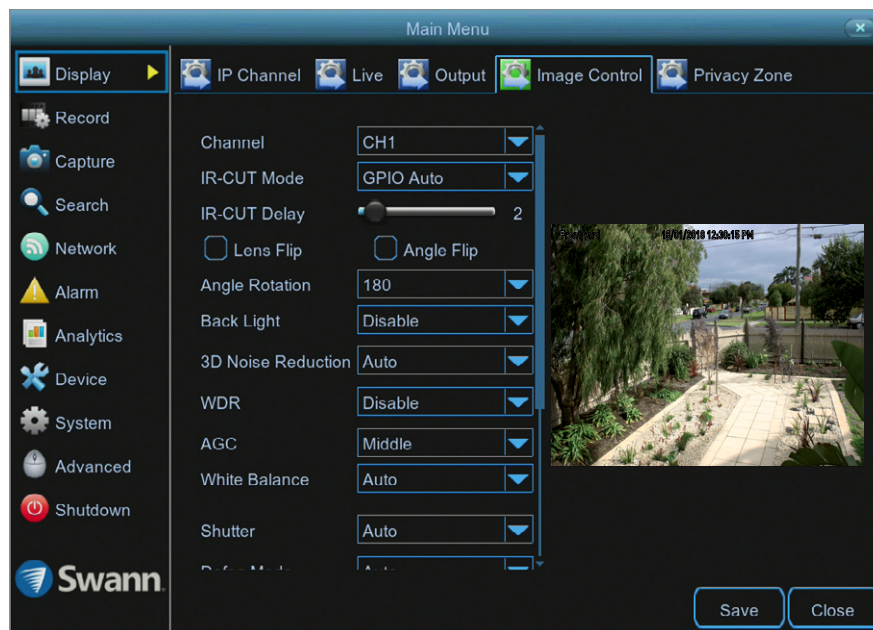
- Don't forget to click "Save" to apply settings.
- Click the "Close" button to exit the Main Menu.

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

IR-CUT Mode: Lets you 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.

IR-Cut Delay: Controls the delay of the IR cut filter when transitioning from daytime to night-time. The default setting will be suitable for most camera locations but can be adjusted if needed. Click and hold the slider left or right to change. The higher the number, the greater the delay.

Lens Flip & Angle Flip (4K camera): Turn the image upside down and/or horizontally reverse the orientation of the image.

Angle Rotation (4K camera): 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. If the camera is mounted in a location where this is required, click the drop down menu to enable:

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Display: Image Control
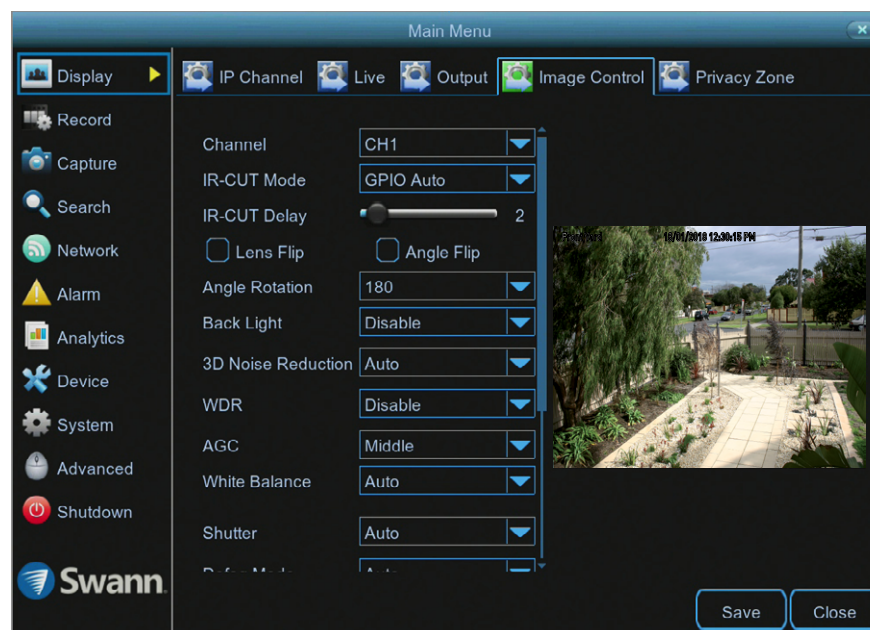
- Don't forget to click "Save" to apply settings.
- Click the "Close" button to exit the Main Menu.

→ **BLC (Back Light Compensation) Level:** If "Back Light" has been enabled, you will see this option available. Click the drop down menu to select the level of back light compensation that you would like to apply. Some experimentation is recommended to select the best settings.

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 adjusted if needed:

→ **Manual:** Click the drop down menu and select "Manual". Click and hold the slider left or right to change. Just be aware that setting the value too high, can cause a motion blur on moving objects appearing on-screen.

WDR (Wide Dynamic Range): This function will balance out images that have a large dynamic range. It does this by brightening dark areas and darken-

ing bright areas. An example of this situation would be if an indoor camera is pointing towards a window or building entrance. The image produced by the camera during the day would be extremely washed out due to the high brightness of the incoming light. If the camera is mounted in a location where 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.

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.

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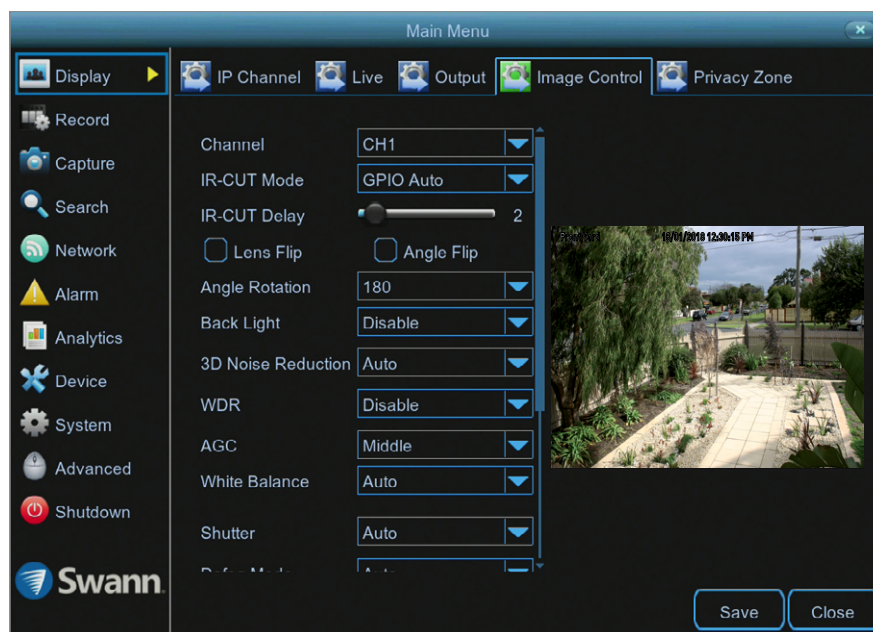
Display: Image Control

White Balance: This function adjusts for lighting in order to make white objects appear white in photos. One of the indicators for an improper white balance setting are dark colors which appear faded, shifted, or a completely different color altogether. If this is happening, click the drop down menu and change this to "Manual", otherwise leave the "Auto" setting:

→ **Manual:** When selecting this mode, click and hold the red, green and blue sliders left or right to change.

→ **Indoor:** Select this mode if the camera has been mounted inside a place of residence.

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 in order 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). Some experimentation is recommended to select the best settings.

Defog Mode: This function extends visibility and 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.

Volume: Click and hold the slider left or right to change the camera's built-in microphone volume level.

Display: Privacy Zone

This function can be used to obscure all or part of your image for privacy (up to four privacy masks can be created 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.
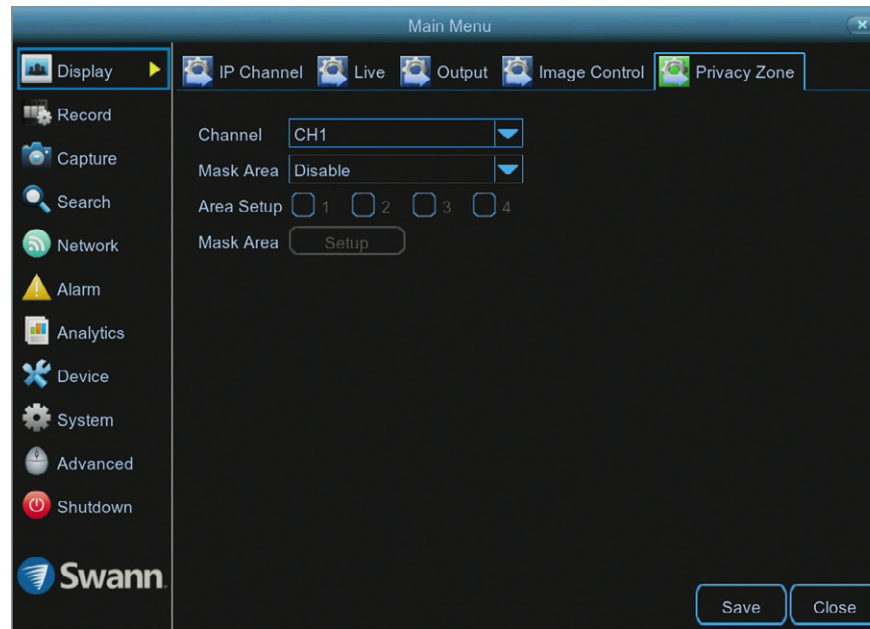
- Don't forget to click "Save" to apply settings.
- Click the "Close" button to exit the Main Menu.

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

Mask Area: To create a mask, click the drop down menu to enable.

Area Setup: Click the checkbox on the number of privacy masks that you want to create. Up to four privacy masks can be created per camera.

Mask Area: Click the "Setup" button to create one or more masks (see page 18 - Creating a Privacy Mask).

Creating a Privacy Mask

Front Yard   18/01/2018 12:30:15 PM

Click and hold here to reposition the mask to the desired location.

Click and hold here to resize the mask to the desired size.

Front Yard
CH1   18/01/2018 12:30:15 PM
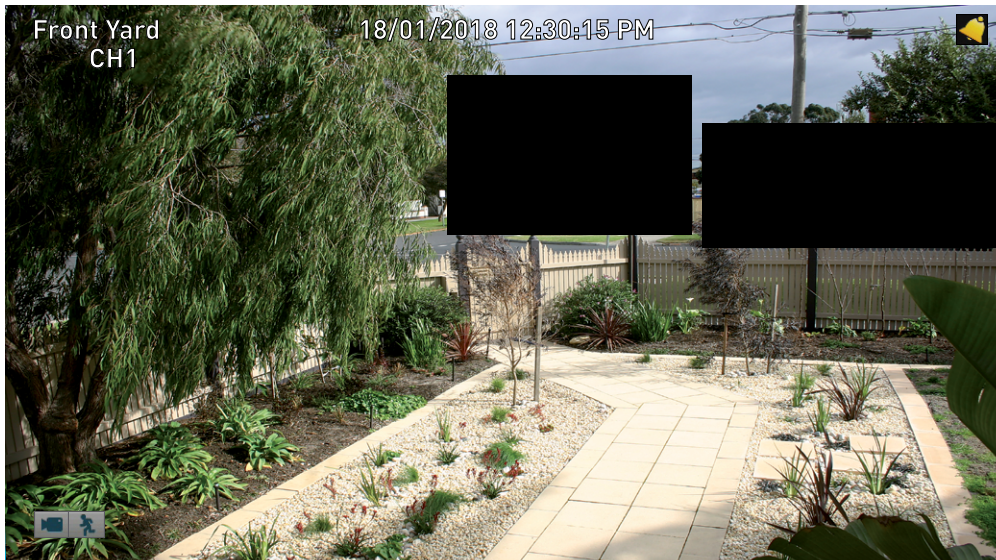
1. Depending on the number of masks that you want to create, each mask will be numbered. To reposition the mask, click and hold the mask number then move the mask to the desired location.

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 created 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, right-click to exit then click "Save" to apply. Areas obscured by a mask won't be shown live or recorded (see below left).

To remove a mask, uncheck the relevant checkbox next to "Area Setup" then click "Save" to apply.

Record: Mainstream (4K Camera)

The functions available allow you to change the resolution, frame rate and bitrate for each camera connected. By default the recording resolution, frame rate and bitrate are automatically selected to fit in with the capabilities of the provided cameras, however you can change them if required.

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Close" button to exit the Main Menu.

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

Resolution: By default the recording resolution is automatically selected to match the capabilities of the provided cameras. Lower resolutions are available to select if required.

FPS: The number of frames per second (fps) that your NVR will record. The default is 15fps, however you can change this if needed. In the HomeSafe View app, you can select "Mainstream" in Live mode to view your cameras. Lower the frame rate if you're having issues streaming to your mobile device (lowering the frame rate to 7fps for example, will reduce the bandwidth required without sacrificing image quality).

Video Encode Type: Your NVR utilizes two encoding methods to record video. The default method of compression is H.265. This will result in less hard

drive space used when recording (before older videos are automatically overwritten) and will consume less bandwidth when using the remote playback feature in the HomeSafe View app. The second method of compression is H.264. This is a commonly used format for recording and compressing video and is used in Blu-ray players and to broadcast TV signals. If visual quality is of importance, change this to H.264, otherwise leave the default selection.

Bitrate Control: 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 that will increase or decrease, depending on how complex the scene is, to record video.

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Record: Mainstream (4K Camera)

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

Which method should I choose? Scene complexity can vary significantly over several hours of recorded video, and the bitrate you select for recording will have an effect on image quality, bandwidth consumption, and hard drive storage. A complex scene with moving action, such as traffic on a city street, or a scene with a lot of contrasting colors, will affect image quality and bandwidth consumption more than a less complex scene with little action or movement.

CBR: This is the default method of control that your NVR will use to record video. If you have cameras placed in high traffic areas, CBR is the recommended control method. As the bitrate is fixed, the image quality will be consistent throughout the entire recording.

VBR: If you have cameras placed in low traffic areas, VBR is the recommended control method. As the bitrate is variable, your NVR can use a lower bitrate

if there is little to no movement detected. This will result in a lower recording size as well as a lower bandwidth requirement.

When choosing VBR, you can select the recording quality that will define the variable bitrate used. You can select from lowest to highest.

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

Bitrate: The amount of data that your NVR will use to record video. The higher the bitrate, the more space each recording will consume on the hard drive. The default bitrate is 6144Kbps. Change the bitrate if you're having issues streaming to your mobile device via the HomeSafe View app (when selecting "Mainstream" in Live mode to view your cameras).

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Record: Mainstream (4K Camera)

- · Don't forget to click "Save" to apply settings.

- · Use the "Copy" function to apply all settings to the other cameras.

- · Click the "Close" button to exit the Main Menu.

Decreasing this will consume less bandwidth when streaming.

Audio: By default, your NVR will record audio using the camera's built-in microphone. If this is not required, click the checkbox to disable.

Please note: Selecting the appropriate recording settings is dependent on camera location, lighting conditions and the level of quality required. Some experimentation is recommended to select the best settings.

Record: Mainstream (5MP Camera)

The functions available allow you to change the resolution, frame rate and bitrate for each camera connected. By default the recording resolution, frame rate and bitrate are automatically selected to fit in with the capabilities of the provided cameras, however you can change them if required.

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

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

Resolution: By default the recording resolution is automatically selected to match the capabilities of the provided cameras. Lower resolutions are available to select if required.

FPS: The number of frames per second (fps) that your NVR will record. The default is 15fps, however you can change this if needed. In the HomeSafe View app, you can select "Mainstream" in Live mode to view your cameras. Lower the frame rate if you're having issues streaming to your mobile device (lowering the frame rate to 7fps for example, will reduce the bandwidth required without sacrificing image quality).

Video Encode Type: Your NVR utilizes two encoding methods to record video. The default method of compression is H.265. This will result in less hard

drive space used when recording (before older videos are automatically overwritten) and will consume less bandwidth when using the remote playback feature in the HomeSafe View app. The second method of compression is H.264. This is a commonly used format for recording and compressing video and is used in Blu-ray players and to broadcast TV signals. If visual quality is of importance, change this to H.264, otherwise leave the default selection.

Bitrate Control: 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 that will increase or decrease, depending on how complex the scene is, to record video.

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Record: Mainstream (5MP Camera)

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

Which method should I choose? Scene complexity can vary significantly over several hours of recorded video, and the bitrate you select for recording will have an effect on image quality, bandwidth consumption, and hard drive storage. A complex scene with moving action, such as traffic on a city street, or a scene with a lot of contrasting colors, will affect image quality and bandwidth consumption more than a less complex scene with little action or movement.

CBR: This is the default method of control that your NVR will use to record video. If you have cameras placed in high traffic areas, CBR is the recommended control method. As the bitrate is fixed, the image quality will be consistent throughout the entire recording.

VBR: If you have cameras placed in low traffic areas, VBR is the recommended control method. As the bitrate is variable, your NVR can use a lower bitrate if there is little to no movement detected. This will result in a lower recording size as well as a lower bandwidth requirement.

When choosing VBR, you can select the recording quality that will define the variable bitrate used. You can select from lowest to highest.

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

Bitrate: The amount of data that your NVR will use to record video. The higher the bitrate, the more space each recording will consume on the hard drive. The default bitrate is 4096Kbps. Change the bitrate if you're having issues streaming to your mobile device via the HomeSafe View app (when selecting "Mainstream" in Live mode to view your cameras).

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Record: Mainstream (5MP Camera)

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Close" button to exit the Main Menu.

Decreasing this will consume less bandwidth when streaming.

Audio: By default, your NVR will record audio using the camera's built-in microphone. If this is not required, click the checkbox to disable.

💡 **Please note:** Selecting the appropriate recording settings is dependent on camera location, lighting conditions and the level of quality required. Some experimentation is recommended to select the best settings.

Record: Substream (4K Camera)

The functions available allow you to control how video is streamed to your mobile device and computer using the HomeSafe View app and software. You can also click "Stream switch" to change to Substream in Live View mode. You can change the resolution, frame rate, bitrate control and bitrate if you're having issues streaming live video from your NVR.

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

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

Resolution: The default resolution is 1280 x 720. You can select a lower resolution if you're having issues streaming to your mobile device via the Home-Safe View app (especially when viewing multiple cameras).

FPS: The number of frames per second (fps) that your NVR will process when streaming to your mobile device and computer via HomeSafe View. For most instances, the default frame rate (15fps) will be suitable. This is especially the case for cameras that monitor medium to high traffic areas and will result in smoother motion, but 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 encoding methods to record video. The default method of compression is H.264. This is a commonly used format

for recording and compressing video and is used in Blu-ray players and to broadcast TV signals. The second method of compression is H.265. This will result in less hard drive space used when recording (before older videos are automatically overwritten) and will consume less bandwidth when using the remote playback feature in the HomeSafe View app. If this is of importance, change this to H.265, otherwise leave the default selection.

Bitrate Control: Change this to VBR. This will result in a lower recording size as well as a lower bandwidth requirement. You can select the recording quality that will define the variable bitrate used, from lowest to highest.

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

Record: Substream (4K Camera)

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Close" button to exit the Main Menu.

Bitrate: The amount of data that your NVR will use to stream video to your mobile device. For cameras that monitor medium to high traffic areas, increase the bitrate to add more detail to the camera's image, but just be aware this will increase the bandwidth required. Increase the bitrate in small doses until you are satisfied with the image quality.

Audio: By default, your NVR will record audio using the camera's built-in microphone. If this is not required, click the checkbox to disable.

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

Record: Substream (5MP Camera)

The functions available allow you to control how video is streamed to your mobile device and computer using the HomeSafe View app and software. You can also click "Stream switch" to change to Substream in Live View mode. You can change the resolution, frame rate, bitrate control and bitrate if you're having issues streaming live video from your NVR.

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

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

Resolution: The default resolution is 640 x 480. You can select a lower resolution if you're having issues streaming to your mobile device via the HomeSafe View app (especially when viewing multiple cameras).

FPS: The number of frames per second (fps) that your NVR will process when streaming to your mobile device and computer via HomeSafe View. For most instances, the default frame rate (15fps) will be suitable. This is especially the case for cameras that monitor medium to high traffic areas and will result in smoother motion, but 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 encoding methods to record video. The default method of compression is H.264. This is a commonly used format for recording and compressing video and is used in Blu-ray players and to broadcast TV signals. The second method of compression is H.265. This will result in less hard drive space used when recording (before older videos are automatically overwritten) and will consume less bandwidth when using the remote playback feature in the HomeSafe View app. If this is of importance, change this to H.265, otherwise leave the default selection.

Bitrate Control: Change this to VBR. This will result in a lower recording size as well as a lower bandwidth requirement. You can select the recording quality that will define the variable bitrate used, from lowest to highest.

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: Substream (5MP Camera)

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

Bitrate: The amount of data that your NVR will use to stream video to your mobile device. For cameras that monitor medium to high traffic areas, increase the bitrate to add more detail to the camera's image, but just be aware this will increase the bandwidth required. Increase the bitrate in small doses until you are satisfied with the image quality.

Audio: By default, your NVR will record audio using the camera's built-in microphone. If this is not required, click the checkbox to disable.

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

Record: Mobilestream (4K Camera)

Mobilestream is the default control method used to stream video to your mobile device and computer using the HomeSafe View app and software. You can change the resolution, frame rate, bitrate control and bitrate if you're having issues streaming live video from your NVR.

- Don't forget to click "Save" to apply settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Close" button to exit the Main Menu.

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

Enable: It's strongly recommended leaving this option enabled as there is no benefit if it is disabled (if disabled, Substream will be used to stream video).

Resolution: The default resolution is 640 x 480. You can select a lower resolution if you're having issues streaming to your mobile device via the HomeSafe View app (especially when viewing multiple cameras).

FPS: The number of frames per second (fps) that your NVR will process when streaming to your mobile device and computer via HomeSafe View. For most instances, the default frame rate (10fps) will be suitable. This is especially the case for cameras that monitor medium to high traffic areas and will result in smoother motion, but 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 encoding methods to record video. The default method of compression is H.264. This is a commonly used format for recording and compressing video and is used in Blu-ray players and to broadcast TV signals. The second method of compression is H.265. This will result in less hard drive space used when recording (before older videos are automatically overwritten) and will consume less bandwidth when using the remote playback feature in the HomeSafe View app. If this is of importance, change this to H.265, otherwise leave the default selection.

Bitrate Control: Change this to VBR. This will result in a lower recording size as well as a lower bandwidth requirement. You can select the recording quality that will define the variable bitrate used, from lowest to highest.
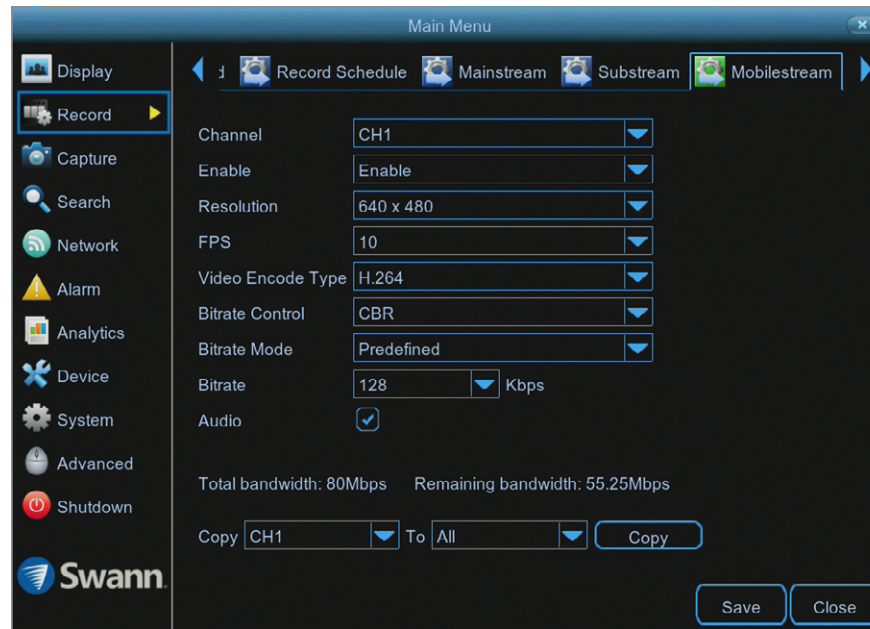
(continued on next page)

Record: Mobilestream (4K Camera)

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Close" button to exit the Main Menu.

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

Bitrate: The amount of data that your NVR will use to stream video to your mobile device. For cameras that monitor medium to high traffic areas, increase the bitrate to add more detail to the camera's image, but just be aware this will increase the bandwidth required. Increase the bitrate in small doses until you are satisfied with the image quality.

Audio: By default, your NVR will record audio using the camera's built-in microphone. If this is not required, click the checkbox to disable.

Please note: When streaming live video, the overall quality is dependent on your internet connection and the Mobilestream settings utilised. This is important to note when streaming multiple cameras at the same time.

Alarm: Motion

When motion has been detected by one or more cameras, your NVR will alert you to a potential threat at your home. It does this by sending you an email alert with an attached image from the camera to use as a reference (if this option is enabled) and/or sending push notifications via the HomeSafe View app.
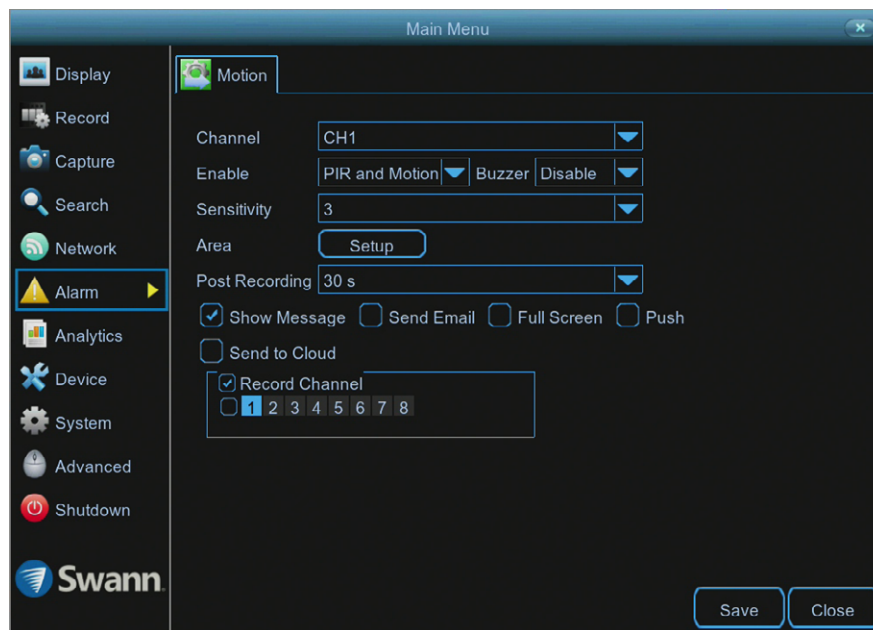
· Don't forget to click "Save" to apply settings.

· Click the "Close" button to exit the Main Menu.

If you have a Spotlight Security Camera connected to your NVR, you will see a "Deterrent" tab (see page 36 - Alarm: Deterrent" for further instructions.

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

Detection: By default, your NVR will record motion only if one or more objects have been detected by the camera <u>and</u> the camera's built-in PIR sensor. This provides more accurate motion detection by eliminating false triggers due to wind, leaves falling and rain (see page 35 - Thermal-Sensing Camera Tips). If you're monitoring an area that doesn't require objects to be detected by the camera's built-in PIR sensor, such as a busy walkway or a building entrance, change this to "Motion".

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

Sensitivity: This option allows you to change the sensitivity level. The higher the number, the more sensitive your NVR will be when detecting motion. For most instances, the default selection will be suitable, however it's recommended to conduct a test to see if the sensitivity level is correct for the camera's location (see page 34 - Motion Detection Tips).

Area: Click the "Setup" button to change the default motion detection area. The entire view of the camera is enabled for motion detection, however you can select certain areas if you wish (see page 33 - Motion Detection Setup).

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 has been detected, the motion icon will appear on-screen. Click the checkbox if you want to disable this.

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Alarm: Motion
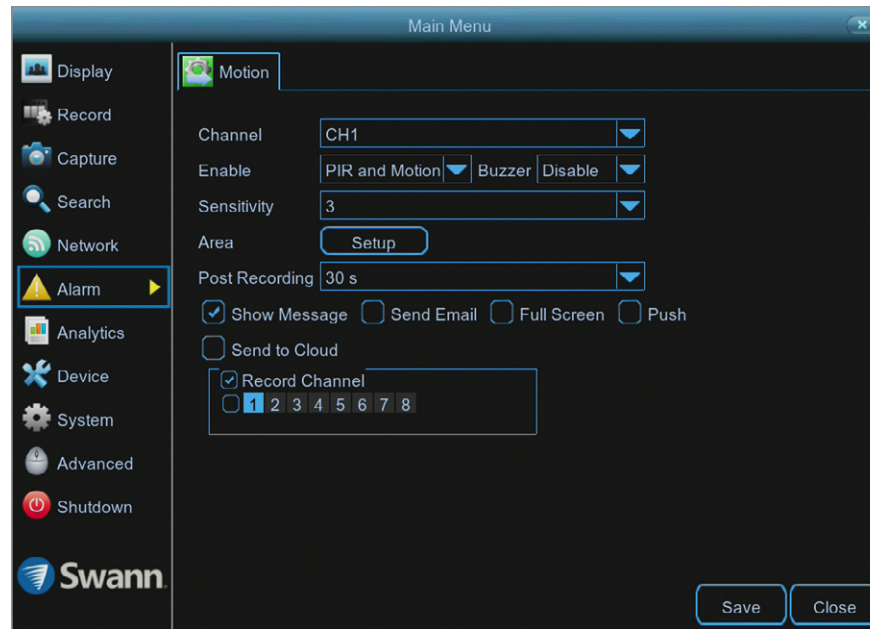
Send Email: Click the checkbox to enable your NVR to send an email alert when motion has been detected.

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Push: Click the checkbox to receive notifications via the HomeSafe View app (alarm notification has to be enabled within the app - see "Alarm Mode" in the HomeSafe View manual for more information).

Send to Cloud: Click the checkbox to copy snapshots to the cloud via Dropbox (see page 86 - Device: Cloud).

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number to trigger.

Please note: The "Push" and "Send to Cloud" options are only available when thermal-sensing cameras are connected to your NVR. When selecting "Motion" for the detection type, these two options are not available to select.

Motion Detection Setup
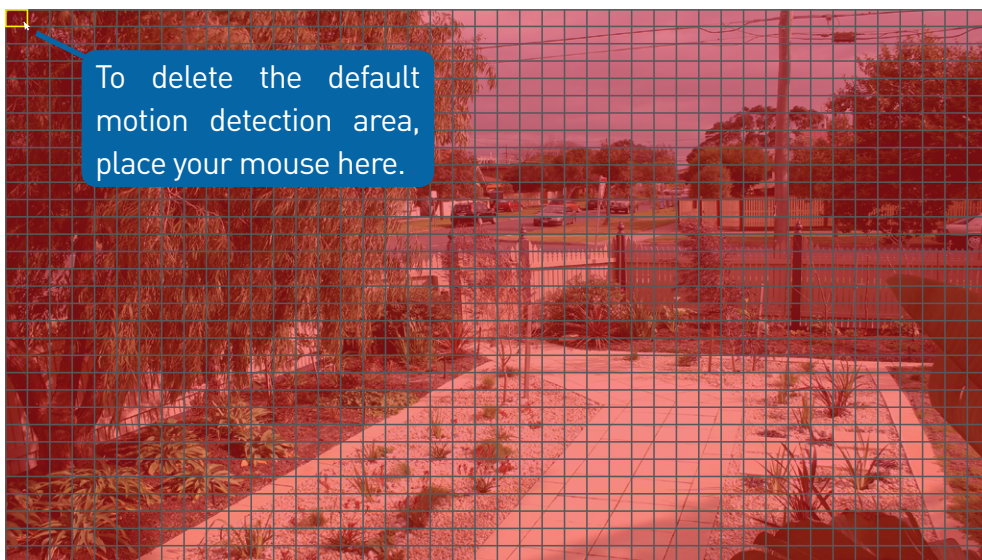
To delete the default motion detection area, place your mouse here.

Each individual cell or square can be enabled to detect motion.

1. Place the mouse inside the cell or square surrounded by a yellow border (as illustrated on the left). Press and hold the left mouse button, click and drag to the bottom right-hand corner then release the mouse. This will delete the default motion detection area.

2. To create a new motion detection area, select the cell or square that you want to start at. Press and hold the left mouse button, click and drag to select the area that you want to create then release the mouse.

3. Multiple areas can be created. Each individual cell or square can be enabled to detect motion. The same action also applies to delete an area that has been created.

In the example provided, a motion detection area has been created for the front yard but excludes objects such as trees as well as cars and pedestrians adjacent to the front yard of the house. Anyone who walks along the path via the front entrance and approaches the front door will be detected.

Movement outside of the motion detection areas will not be detected so will not trigger recordings or event notifications.

4. Right-click the mouse to exit. Adjust the sensitivity if required.

5. Click the "Save" button to save changes made.
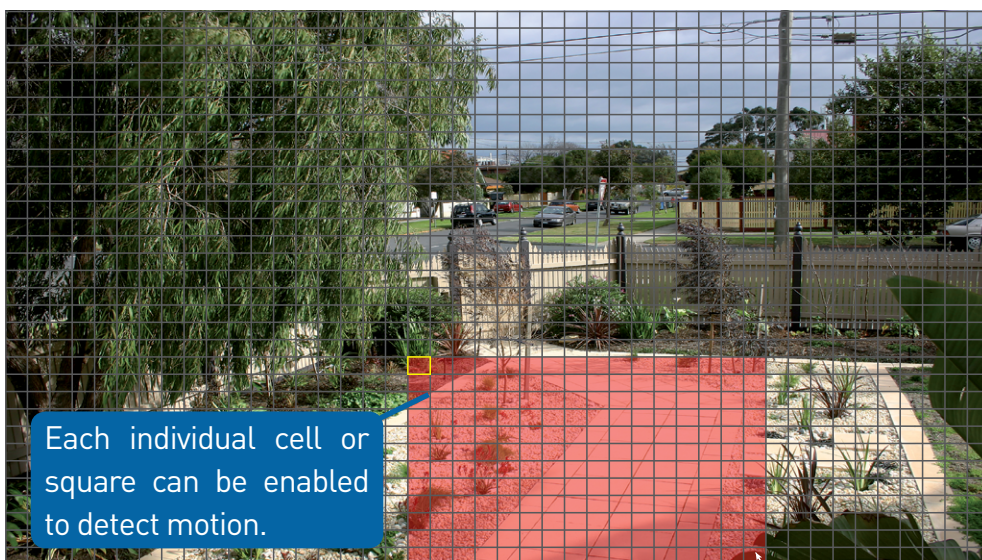
Motion Detection Tips

Placement of the cameras

1. Place cameras so they are facing areas where people have to walk through to approach your home regardless of where they are headed. A good idea is to place a camera overlooking your front door to capture an image of anyone approaching it for later reference. This is great if you have parcels delivered to your door or if the potential burglar knocks or rings the doorbell to see if anyone is home.

**2.** Walk around your house and assess where intruders are most likely to approach to enter, and what path they would take. Most burglars enter the home through a front or back door, so it's advisable to place the cameras near those areas so that you get the best amount of detail of anyone who approaches.

3. When installing cameras outside, it's important to keep your front and backyard as well-lit as possible for ideal night vision and the ability to detect motion. It's common for intruders to enter a home through an unlocked garage or by using a garage door opener in an unlocked car located in the driveway. Positioning your cameras to overlook cars in the driveway and similar locations can be very useful.

Avoiding False Triggers

1. A tree, shrub or foliage that is blown by the wind - angle the camera so wind-blown objects are out of the camera's view or use the camera motion detection area settings to exclude these areas from detection.

2. People moving along sidewalks or streets that are close to your home, aim your cameras and use the motion detection area settings to ensure only legitimate threats are triggering events.

3. Vehicles moving in the background - angle the camera so as to avoid movement in the background or use the motion detection area settings to stop detection of cars in the street.

4. Movement or light reflected off smooth surfaces such as glass - adjust the sensitivity level and/or avoid pointing the camera directly at glass surfaces.
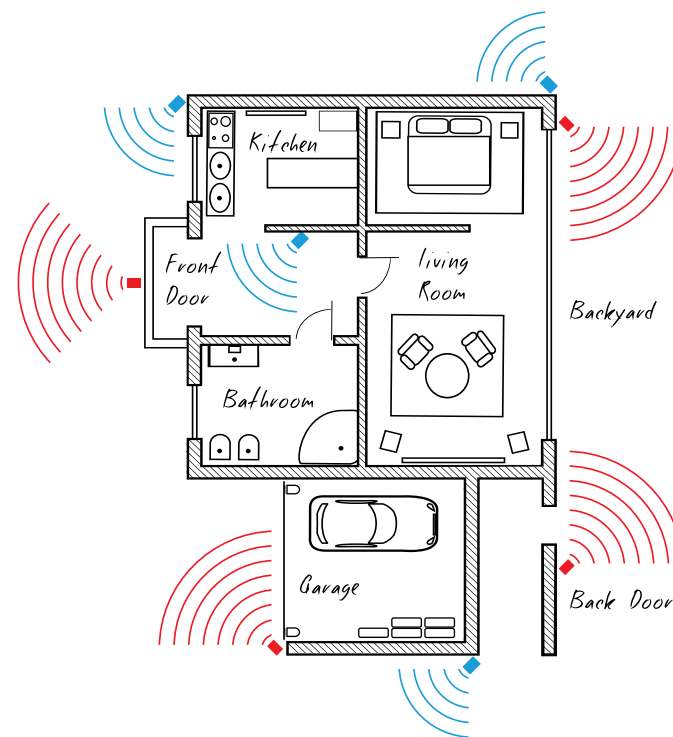
The **red cameras** illustrated (see above) are your primary locations. Place your cameras close to the front door, back door, garage entrance and overlooking the backyard.

The **blue cameras** illustrated are your secondary locations. If your NVR includes additional cameras, place these at the front entrance inside the home, the front of the house (this could overlook the front garden or driveway), a side gate or if you have multiple entrances to the backyard.

Thermal-Sensing Camera Tips

Your cameras have a built-in PIR (passive infrared motion detector) sensor. This means they can sense movement of warm objects including people, cars and animals. The advantage over cameras that don't have a PIR sensor, is they are very resistant to false triggers from changes in the image.

→ PIR sensors work best when an intruder walks parallel or is passing across their "field of view" as opposed to walking directly at them. For example, in a hallway or path around the house you tend to walk parallel to the walls, not directly toward them. Position your cameras so that anyone approaching your home will cross the camera's view and trigger an event.

→ For a recording to occur, the PIR must sense a warm object moving in front of it and the camera's image sensor must detect movement in the image. If either of these triggers has not occurred, no video will be recorded.

→ When the PIR is triggered, the PIR icon (red box) will flash on-screen. If PIR and motion are triggered, the "running man" icon will be shown on-screen indicating that an event has occurred and that a recording is happening.

→ The PIR can detect objects outside of the camera's field of view, so not everything that triggers the sensor will be visible on your camera.

→ The PIR can reliably detect movement up to 30ft/9m, movement beyond this range may or may not be detected.

→ Be aware that sudden changes in temperature of paths, roads, for example, can cause some minor false alerts to occur when there is also movement in the image such as trees and shadows.

→ If some false triggering is occurring, use the motion area setup to remove moving objects from being detected, and to further refine your alerts (see page 33 - Motion Detection Setup).

→ When used indoors, keep the cameras away from heating vents, heaters and other heat sources as they can trigger the PIR. However if there is no movement in the image, a false alert is unlikely.
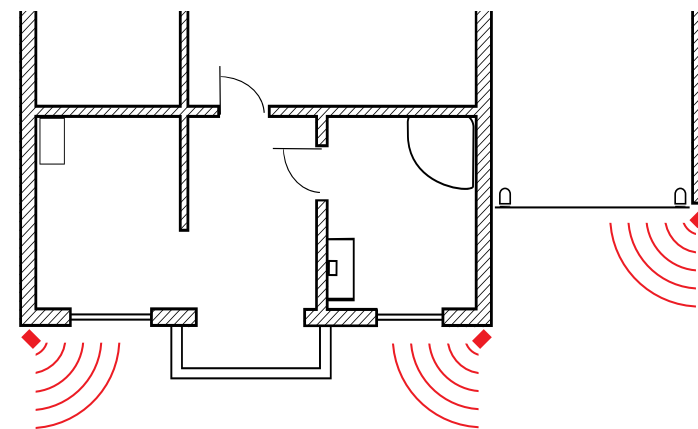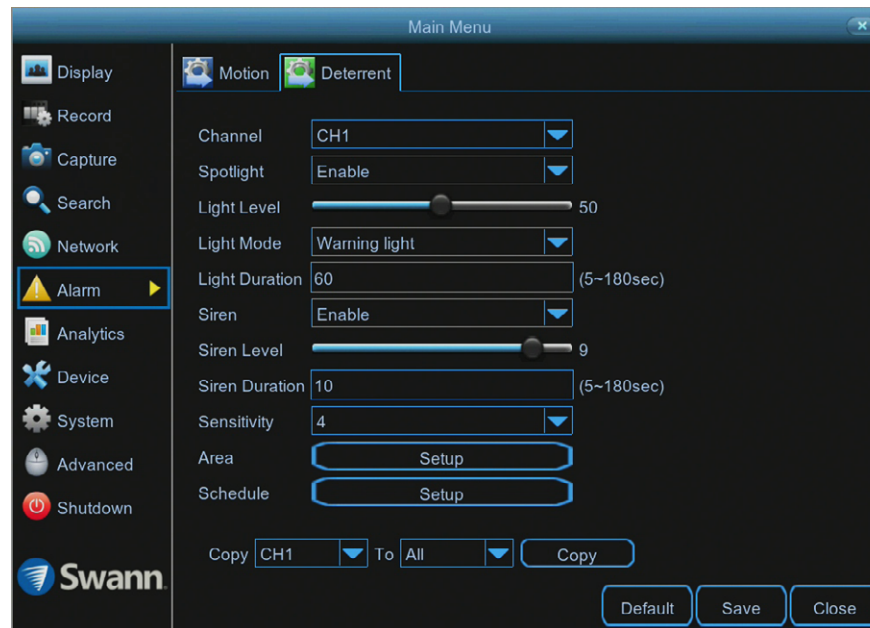

When installing cameras outside, mount them where intruders are most likely to enter (front & back doors, garage entrance). Angle the cameras so the intruder walks parallel to the sensor.
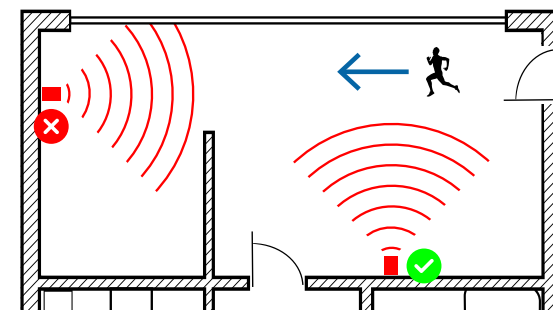
PIR sensors work best when an intruder walks parallel or is passing across their "field of view" as opposed to walking directly at them.

Alarm: Deterrent (Spotlight Security Camera)

- · Don't forget to click "Save" to apply settings.
- · Click the "Default" button to revert back to default settings.
- · Click the "Close" button to exit the Main Menu.

WARNING: The "Strobe" function may trigger seizures for people with photosensitive epilepsy. User discretion is advised.

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

Enable: The camera's spotlight is enabled by default. If the spotlight is not required, click the drop down menu to disable.

Light Level: Click and hold the slider left or right to adjust the spotlight's light level. The higher the number, the brighter the spotlight will appear. Adjust accordingly.

Light Mode: Lets you choose how the spotlight operates when motion has been detected. By default, the spotlight will turn on and remain lit for the light duration selected (see below). The second option instructs the spotlight to flash continually (a strobe effect) for the light duration selected. Click the drop down menu to change.

Light Duration: Lets you change the length of time the spotlight will either

remain lit or flash continually when motion has been detected (depending on the light mode selected). Adjust accordingly.

Siren: The camera's siren is disabled by default. If the siren is required, click the drop down menu to enable. A warning message will appear on-screen. Click "OK" to continue.

Siren Level: Click and hold the slider left or right to adjust the siren's audio level. The higher the number, the louder the siren will be.

Siren Duration: Lets you change the length of time the siren will remain turned on when motion has been detected. Adjust accordingly.

(continued on next page)

Alarm: Deterrent (Spotlight Security Camera)
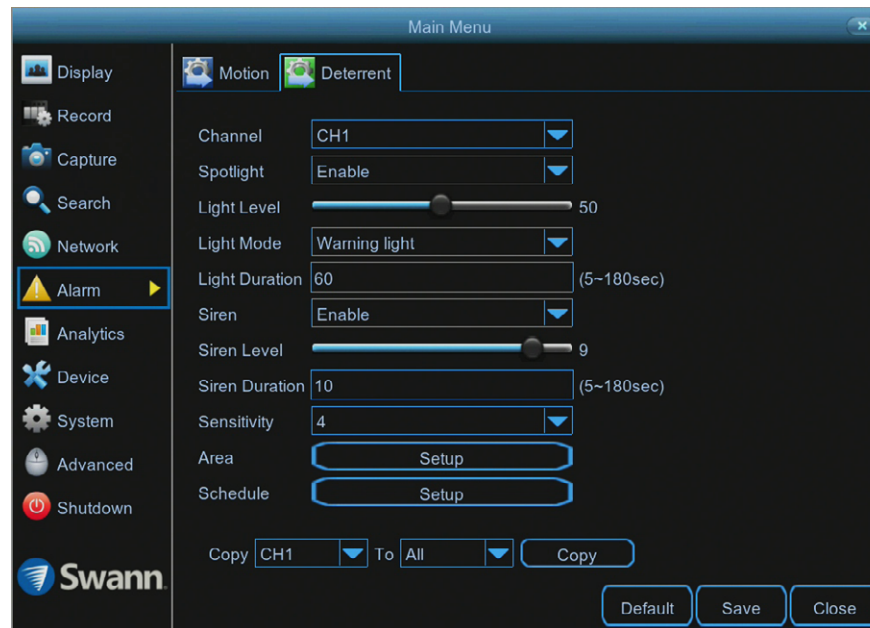
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

**WARNING:** The "Strobe" function may trigger seizures for people with photosensitive epilepsy. User discretion is advised.

Sensitivity: This option allows you to change how sensitive the spotlight and siren will be when your NVR has detected motion. This is independent of the camera's sensitivity for detecting motion. As an example, you may want to record movement that is 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. Some experimentation is recommended to select the best settings.

Area: Click the "Setup" button to change the default spotlight and siren detection area. The entire view of the camera is enabled, however you can select certain areas if you wish (see page 38 - Spotlight and Siren Detection Setup).

Schedule: Click the "Setup" button to change the default spotlight and siren trigger schedule (see page 39 - Spotlight and Siren Trigger Schedule).

Spotlight and Siren Detection Setup
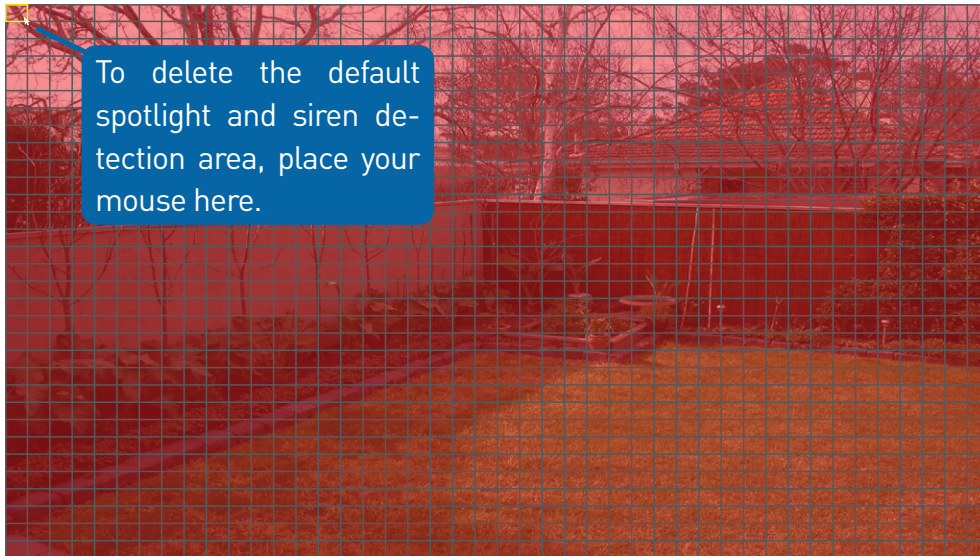
To delete the default spotlight and siren detection area, place your mouse here.

Each individual square can be enabled to trigger the spotlight and siren.

1. Place the mouse inside the cell or square surrounded by a yellow border (as illustrated on the left). Press and hold the left mouse button, click and drag to the bottom right-hand corner then release the mouse. This will delete the default spotlight and siren detection area.

2. To create a spotlight and siren motion detection area, select the cell or square that you want to start at. Press and hold the left mouse button, click and drag to select the area that you want to create then release the mouse.

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

In the example provided, a spotlight and siren detection area has been created for the backyard and will trigger the spotlight and siren when one or more objects gets closer to the rear of the house.
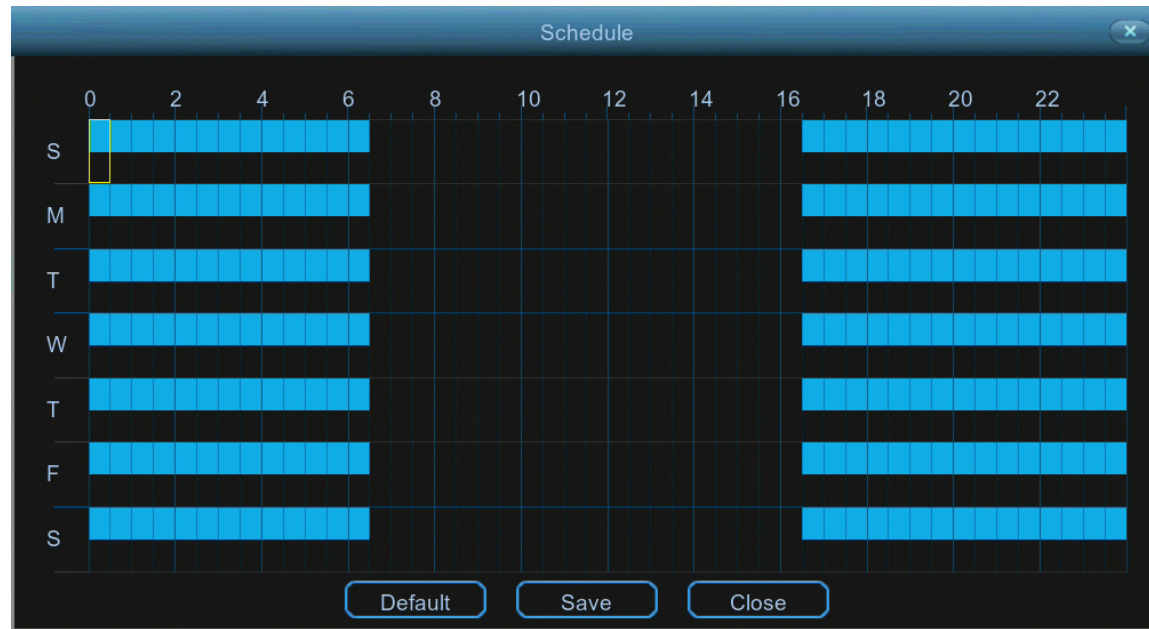
Movement outside of the spotlight and siren detection area will not trigger the spotlight and siren.

4. Right-click the mouse to exit. Adjust the sensitivity if required.

5. Click the "Save" button to save changes made.
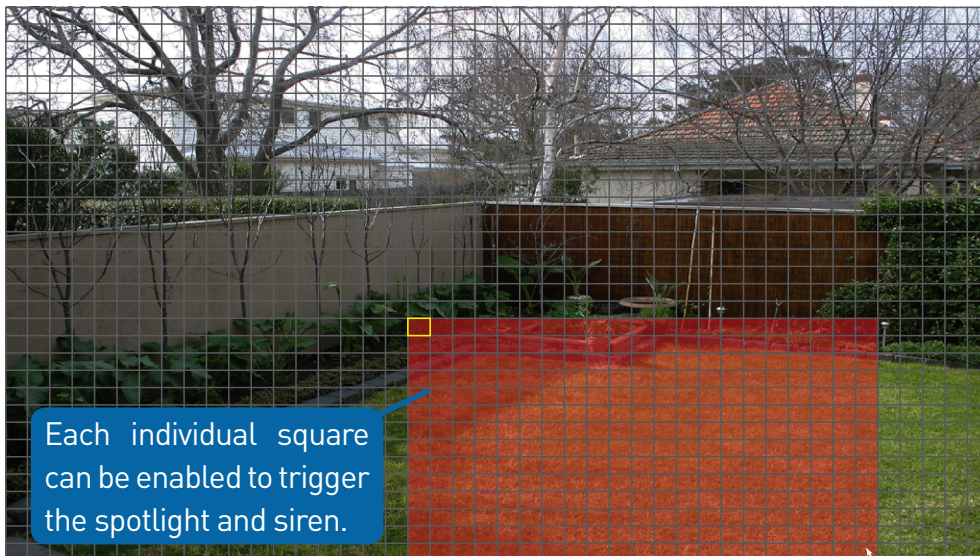
# Spotlight and Siren Trigger Schedule

By default, the spotlight and siren 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 time period.

Click the "Save" button to save changes made.

Device: PTZ
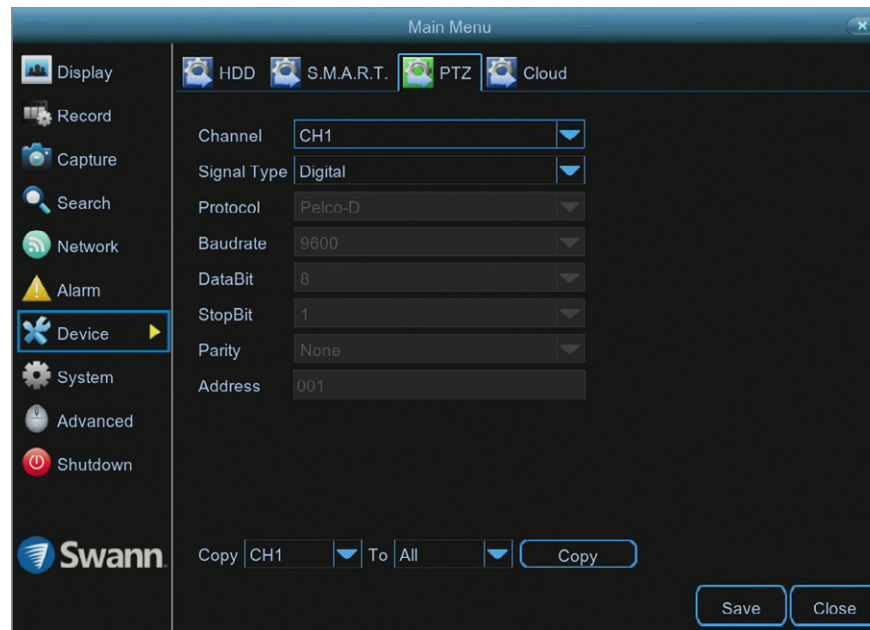
If you have a compatible PTZ camera connected to your NVR, you can use the PTZ controls to move the camera as well as the ability to zoom into an object and to control the level of focus (if available). You can create multiple preset positions, which can be recalled to focus the camera's view to a different position. Cruise mode can also be used to move the camera to different preset positions that have been created.

To configure your PTZ camera, consult the instruction manual included with your device then match those settings here.

For instructions on how to control your PTZ camera and creating preset positions (see page 41 - Controlling your PTZ Camera).

Controlling your PTZ Camera

Back Yard
CH2   18/01/2018 12:30:15 PM
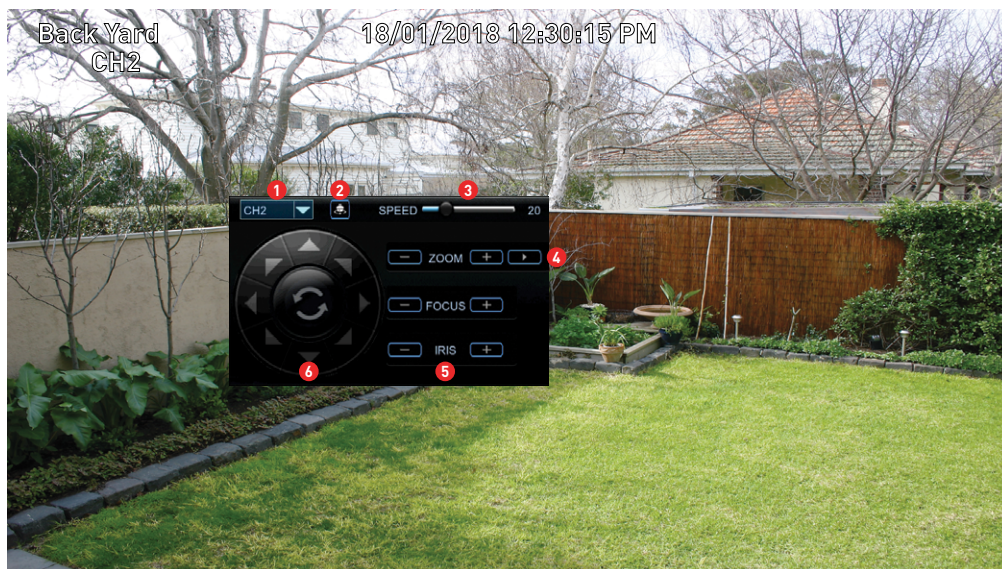
The 8580 series supports the Onvif protocol, allowing connection of non-Swann PTZ compatible cameras (some functions may not be available).
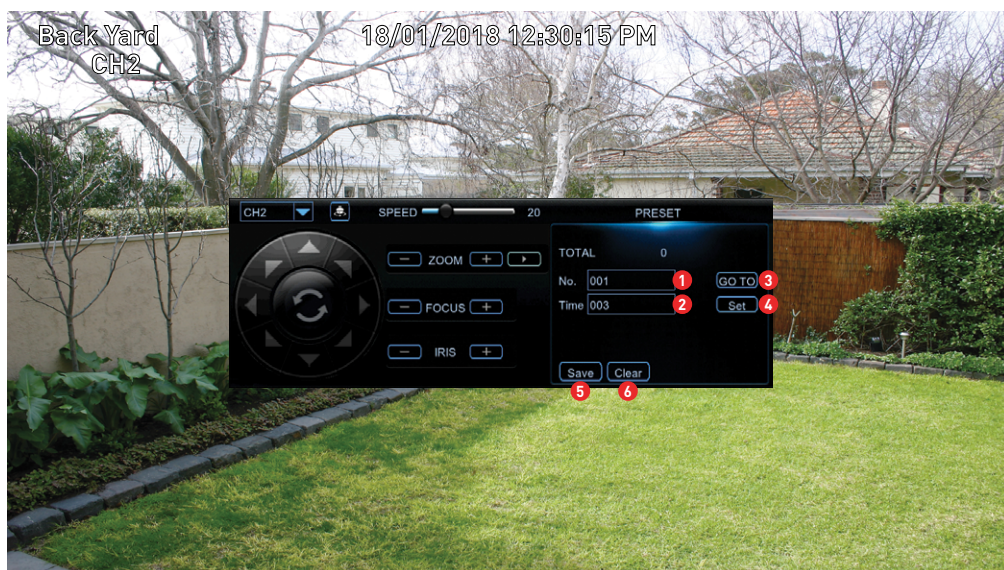
To control your PTZ camera, in Live View mode click on the channel the camera is connected to then click the "PTZ" button located on the camera toolbar. The channel will go full screen and the PTZ controls will be visible (as shown on the left).

1. If you have multiple PTZ cameras connected, click this to select a different camera.

2. Click this to start cruise mode (preset positions must be created first). Cruise mode instructs your NVR to automatically move the camera according to the preset positions that have been created. Click again to stop cruise mode.

3. Adjust the speed control to alter how fast or slow the camera will pan or tilt. Move the slider to decrease or increase the speed.

4. Click this to access the Preset panel. This allows you to create multiple preset positions and to access the camera's on-screen display. Click again to close.

5. This allows you to zoom into an object and to control the level of focus (depending on the camera you have, the iris control may not be available).

6. Click the directional buttons to move the camera in the direction selected (the middle button has no function).

For instructions on how to create a preset and to access the camera's on-screen display .

Creating a Preset

1. Each preset position will have a different number assigned to it. To recall a particular position, click the dialogue box, input a number then click "GO TO". The camera will then move to that particular position. When creating a preset position, you may want to make note which position is assigned to each number.

2. Click the dialogue box to change the length of time (in seconds) the camera will stay at a particular position, before moving to the next position.

3. Click this to go to a particular preset position.

4. Click this to create a preset.

5. Click this to save any changes made.

**6.** Click this to clear a preset.

Creating a Preset

→ To create a preset, use the PTZ controls to move the camera to the desired focal position. The zoom and focus controls can also be used. Use the speed control to alter how fast or slow the camera will move.

→ Change the length of time the camera will stay at this position.

→ Click the "Set" button to create the preset. You will notice that the preset position will increase each time a preset is created. The total number of presets created will also be displayed. Up to 255 different preset positions can be created.

→ Repeat these steps to create multiple preset positions. When finished, click the "Save" button to save. Right-click to exit.

→ Click the "Start Cruise" button to continually cycle through each preset created. Click again to stop.

Accessing your Camera's On-screen Display

→ Click the preset position dialogue box (1) then click the backspace button twice. Enter "95", click the enter button then click the "GO TO" button.

→ To navigate the on-screen display, click the up and down directional buttons. The hyphen indicates which option or setting has been selected.

→ Click the right directional button to confirm selection. Click the left and right directional buttons to change settings within sub-menus.

→ Consult the camera's instruction manual for information about the functions available in the on-screen display.

💡 **Please note:** If the above instructions don't work for your camera, try pressing the Iris "+" button to access the on-screen display.

Display: IP Channel
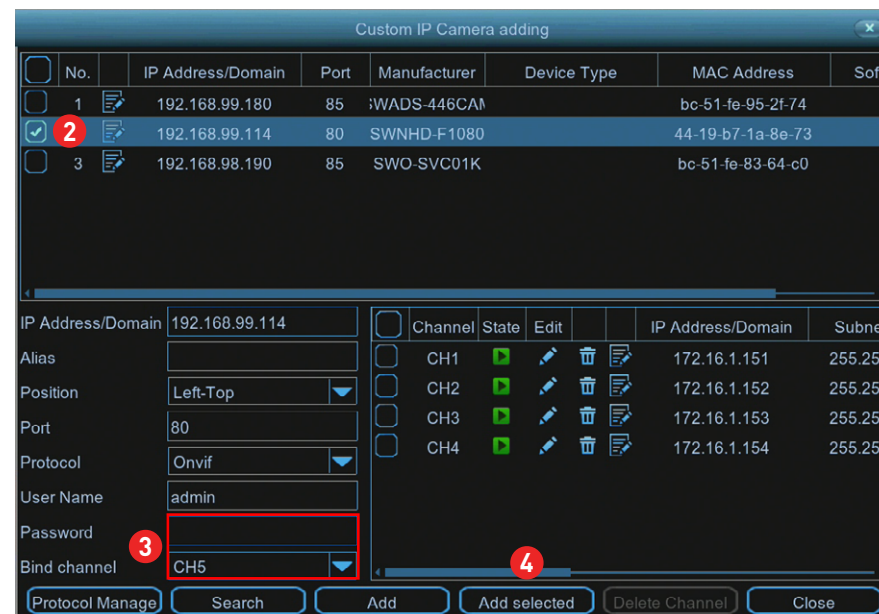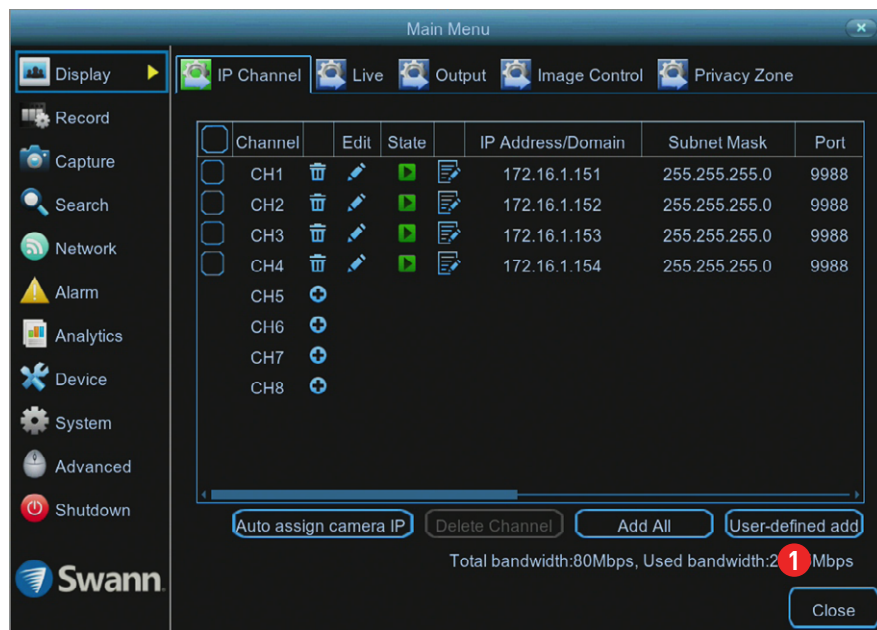
This function is an advanced feature that is used to manage the cameras connected directly to your NVR as well as compatible IP cameras connected to your router. In most circumstances, the functions available here will not be needed for general use of your NVR.

When adding one or more cameras connected to your router, you need to change Switch Mode to manual (see page 78 - Network: Switch).

1. Click this button "User-defined add" to add your network connected camera.

2. After a short moment, your NVR will detect the camera and it will appear as shown in the screenshot above-right. Click the checkbox to select.

3. Input the password (if required) and click the drop down menu to select the channel that you would like to add the camera to.

4. Click this button "Add selected" to add the camera. A green status button will appear indicating successful connection. Click the "Close" button to finish.

💡 **Please note:** If you see "Off-line" in Live View mode for the camera that you have added, this indicates that either a setting has changed (such as password), or it has been physically disconnected from your router.

Can I add additional cameras that are connected to my router, even though all the cameras inputs on my NVR are used?

When adding cameras that are connected to your router, it is assigned to an available channel on your NVR, therefore if all channels are being used, you cannot add additional cameras. You will have to disconnect one of the cameras connected to your NVR to add a router connected camera.

Analytics (4K Camera)

Analytics provides you with much greater control on how your NVR detects motion. You can enable face detection, be alerted if the camera detects static objects removed or left behind, and to count movement crossing a line that you draw on the image. By drawing a detection line, you can apply a rule on which direction your NVR detects motion, and you can also define specific intrusion areas that can alert you if one or more objects has stayed within a given time (especially helpful if people are loitering or if a car is parked where it shouldn't be).
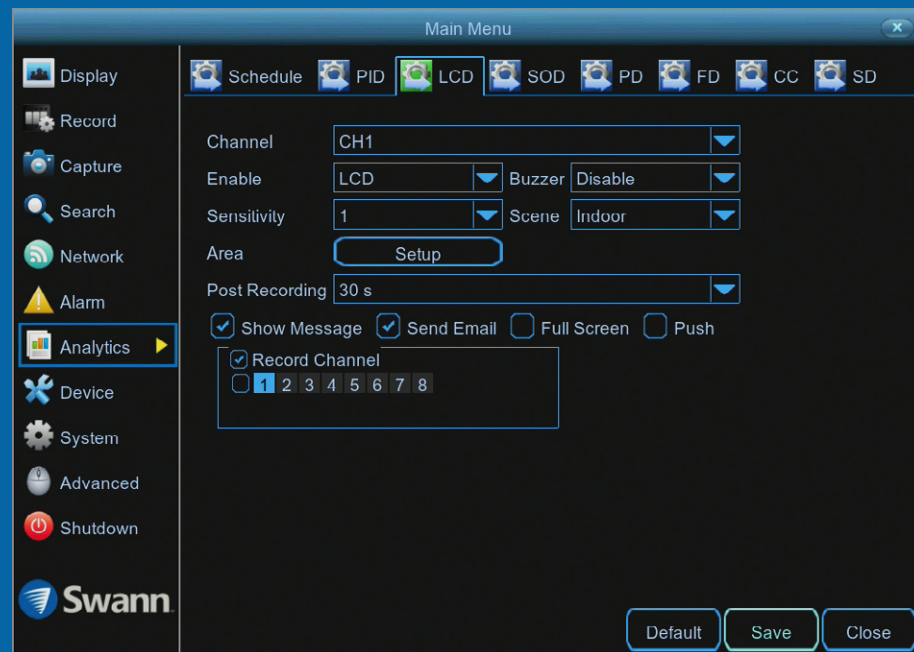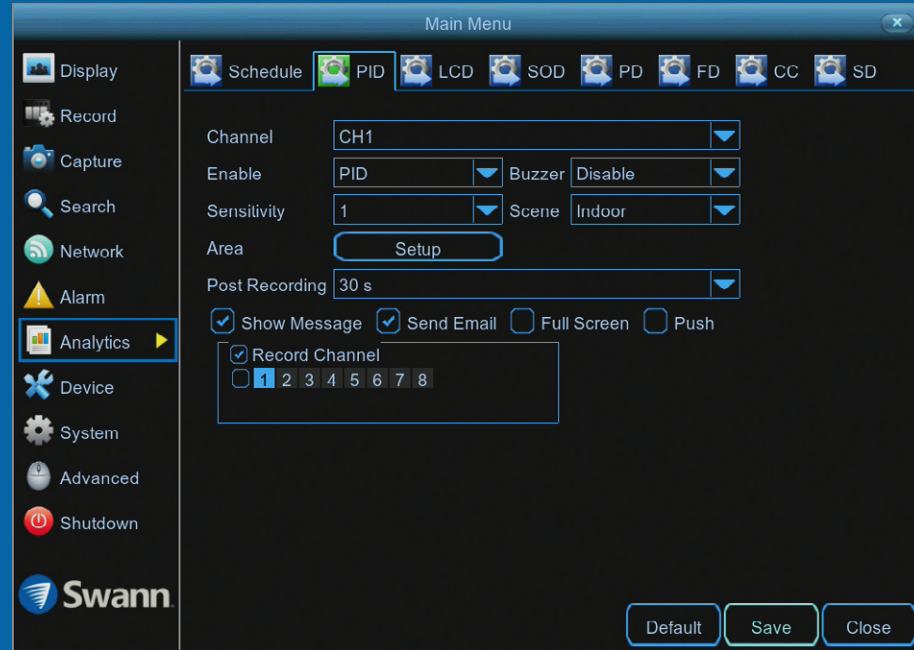
Analytics: PID (Perimeter Intrusion Detection)

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 the region defined.
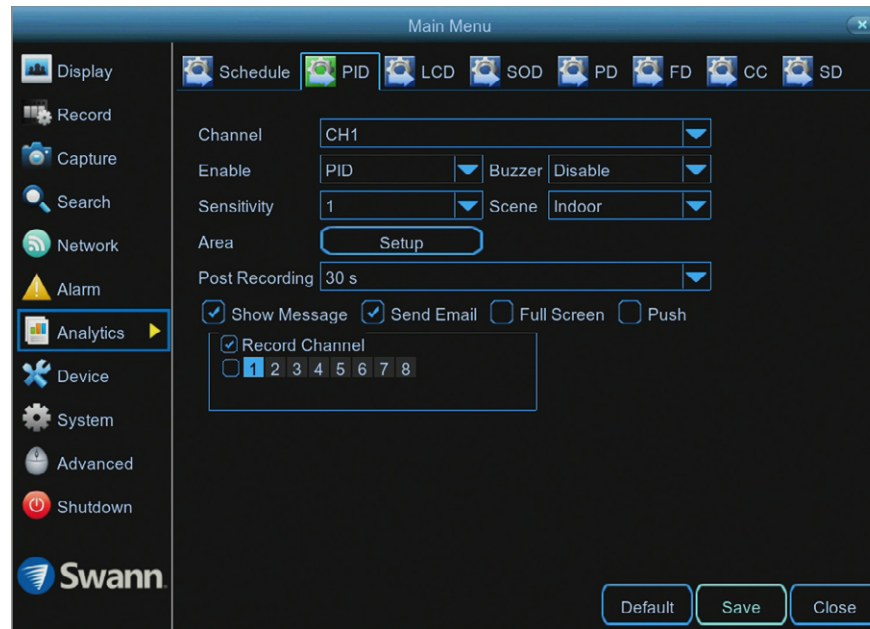
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

Enable: Two choices are available. Select "PID" to receive alerts when motion has been detected. Select "PIR+PID" to receive alerts when motion has been detected by the camera <u>and</u> the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

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

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw one or more perimeter intrusion regions (see page 46 - <u>Drawing a Perimeter Intrusion Region</u>).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.
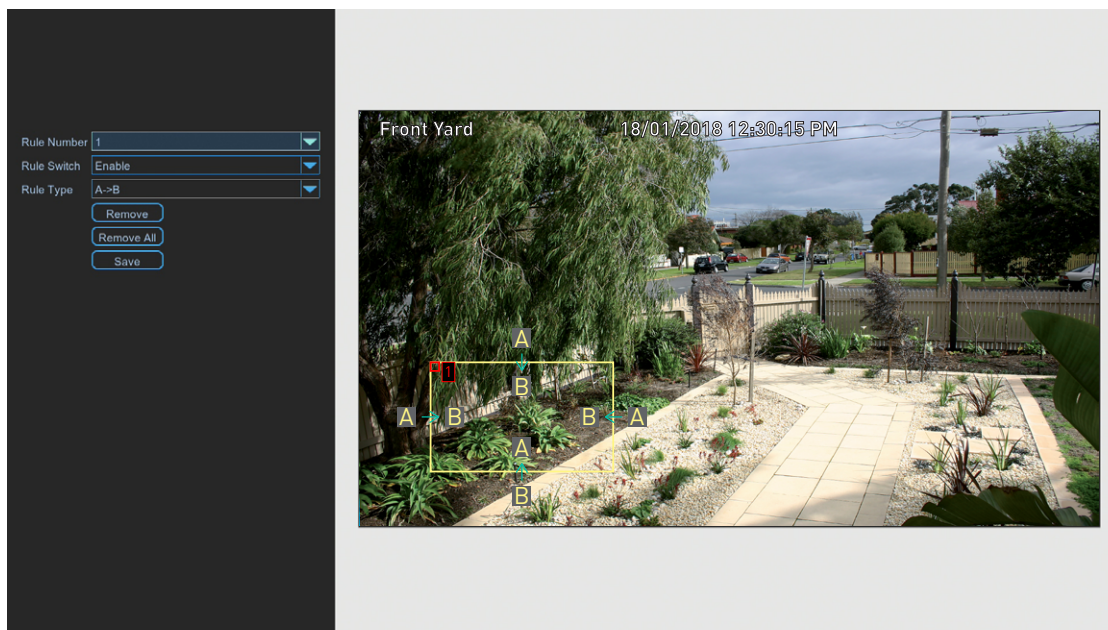
Show Message: When motion has been detected, the analytic icon will appear on-screen. Click the checkbox if you want to disable this.

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

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing a Perimeter Intrusion Region

To remove a perimeter intrusion region, click the rule number checkbox to select then press the "Remove" button.

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 Switch: Leave this enabled.

Rule Type: There are three rule types that 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 above right example.

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

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

Right-click to exit.

Analytics: LCD (Line Crossing Detection)

By drawing a detection line (it can be drawn at any orientation, length or angle), you can apply a rule on which direction your NVR detects motion. As an example, this can be used to detect people jumping a fence or entering and or exiting a doorway.
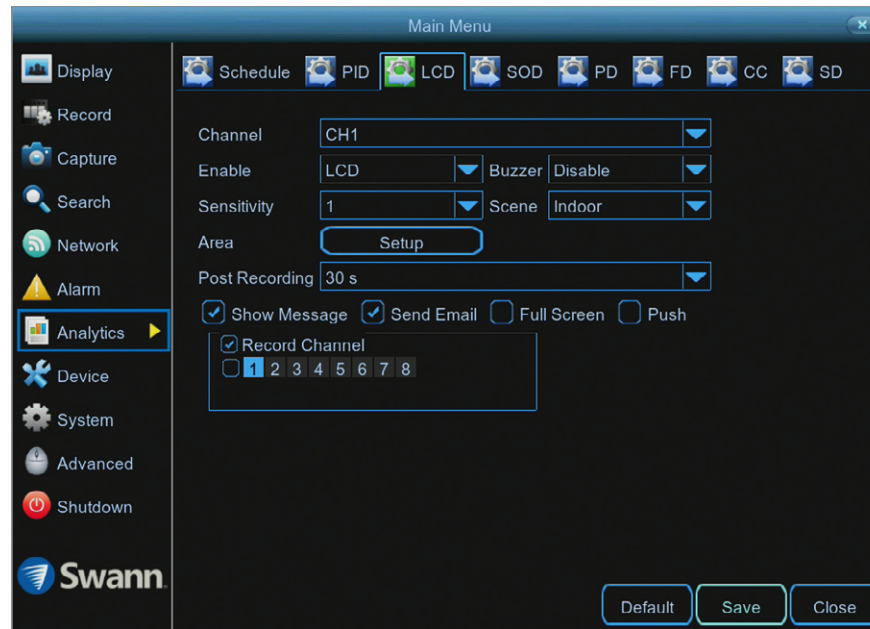
• Don't forget to click "Save" to apply settings.

• Click the "Default" button to revert back to default settings.

• Click the "Close" button to exit the Main Menu.

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

Enable: Two choices are available. Select "LCD" to receive alerts when motion has been detected. Select "PIR+LCD" to receive alerts when motion has been detected by the camera <u>and</u> the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

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

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw one or more detection lines (see page 48 - <u>Drawing a Detection Line</u>).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.

Show Message: When motion has been detected, the analytic 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 has been detected.

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing a Detection Line
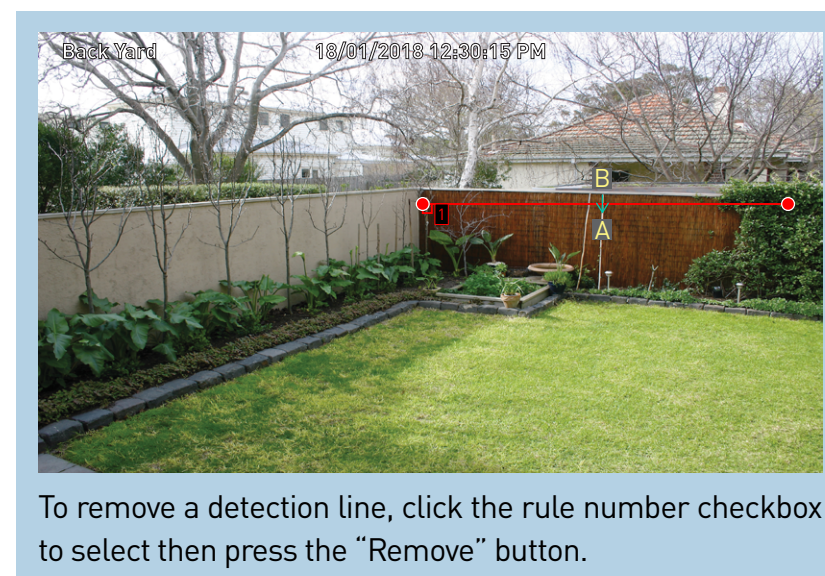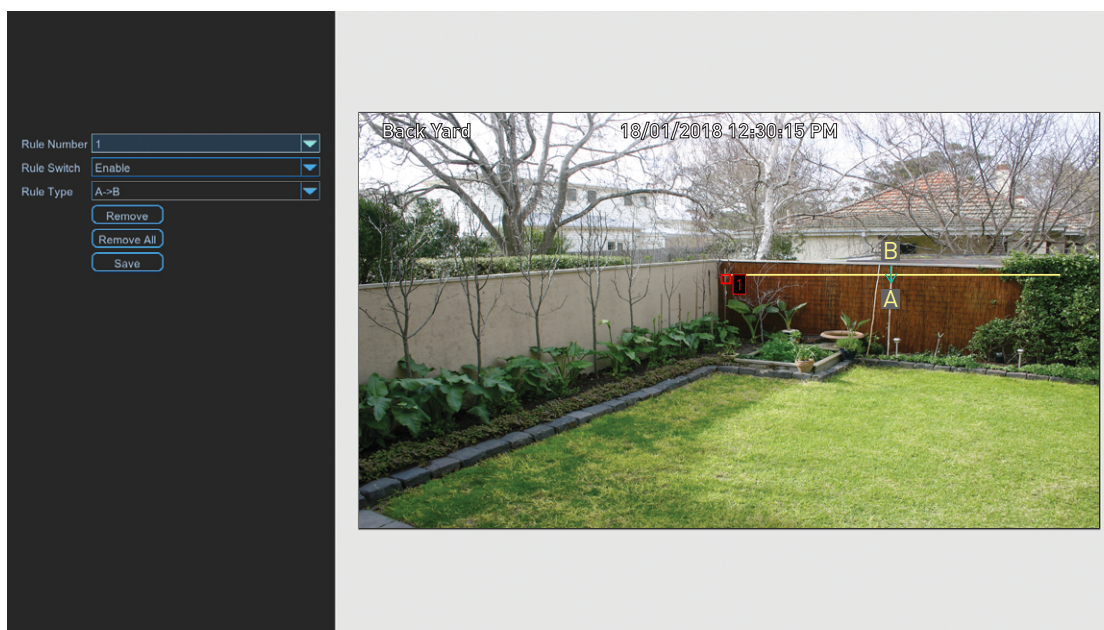
To remove a detection line, click the rule number checkbox to select then press the "Remove" button.

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 Switch: Leave this enabled.

Rule Type: There are three rule types that can be selected. Select the appropriate rule for the line drawn (each line 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, 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 above right example.

**Remove All:** Click this to remove all detection lines.

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

Right-click to exit.

Analytics: SOD (Stationary Object Detection)

This function can be used to monitor static objects in and around your home. By drawing an area around an object, if that object is removed, your NVR will trigger recording and alert you to an event. Protect valuables or use it on your porch to detect a parcel delivered.
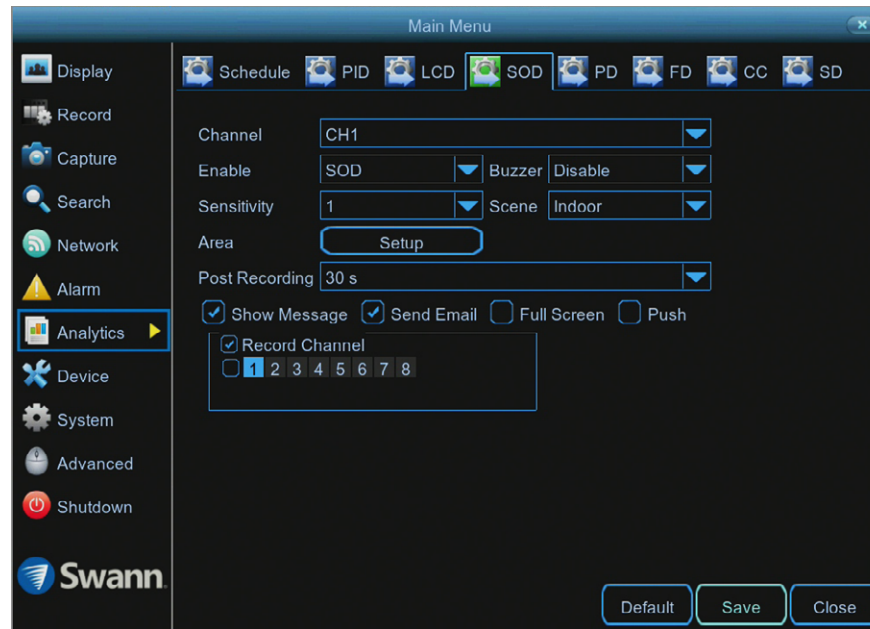
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

Enable: Two choices are available. Select "SOD" to receive alerts when motion has been detected. Select "PIR+SOD" to receive alerts when motion has been detected by the camera <u>and</u> the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

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

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw one or more detection lines (see page 50 - <u>Drawing an Object Detection Region</u>).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.

Show Message: When motion has been detected, the analytic 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 has been detected.

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing an Object Detection Region
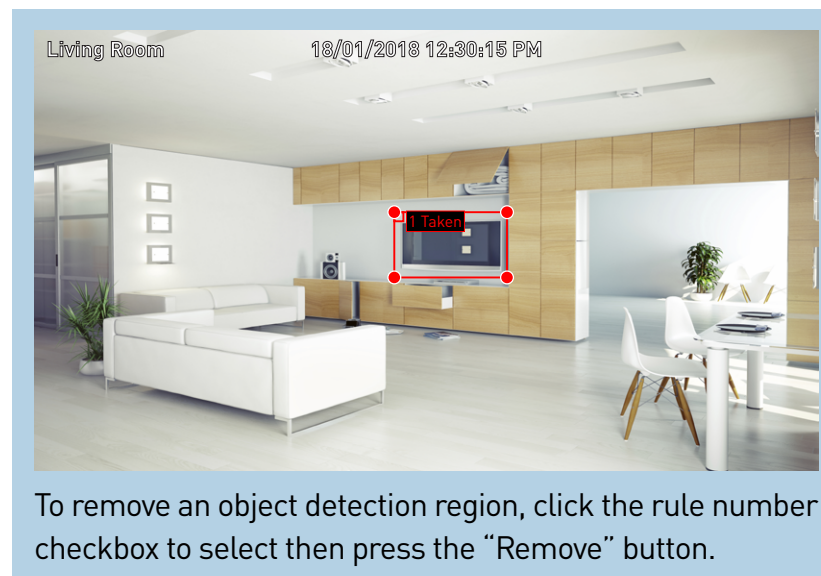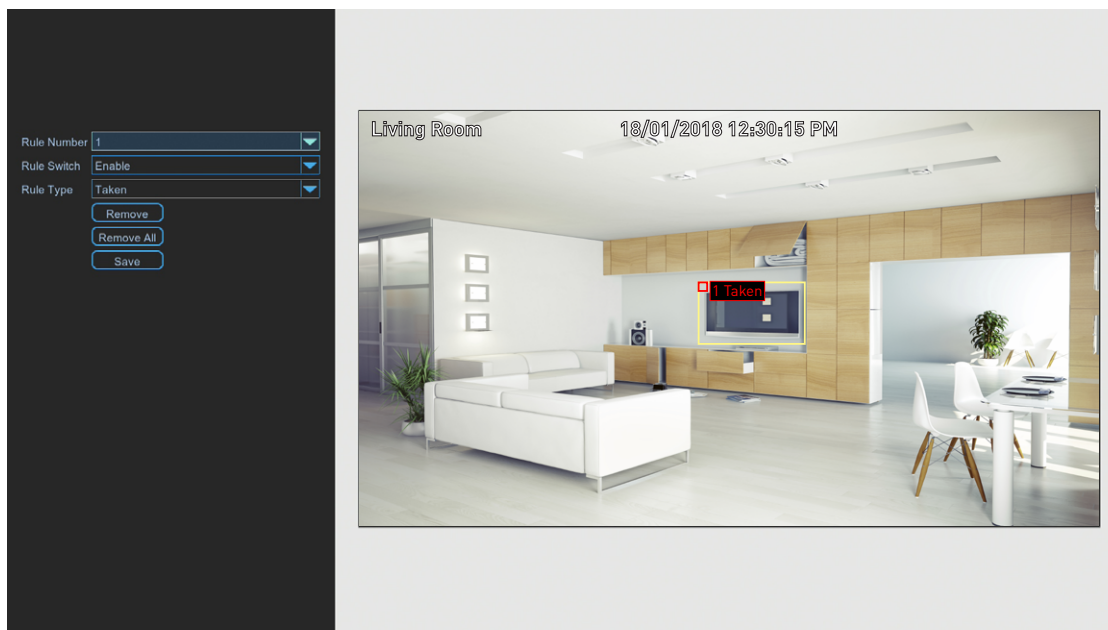
To remove an object detection region, click the rule number checkbox to select then press the "Remove" button.

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

Rule Switch: Leave this enabled.

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

Left: An event will occur when an object has been left within the object detection region.

Taken: An event will occur when an object has been taken or removed from within the object detection region.

Taken & Left: An event will occur when an object has been taken or removed <u>and or</u> when an object has been left within the object detection region.

Using the mouse, you need to create four points to draw an object detection region (it can be drawn at any size). Your NVR does not allow lines to be crossed when drawing a detection region. Make sure the detection region is greater than or equal to the size of the detected object.

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 above right example.

Remove All: Click this to remove all object detection regions.

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

Right-click to exit.

Analytics: PD (Pedestrian Detection)

This function distinguishes movement of person-shaped objects. When detected, your NVR will activate recording, and it will also send an alert. Use it to detect anyone walking towards your property or residence.
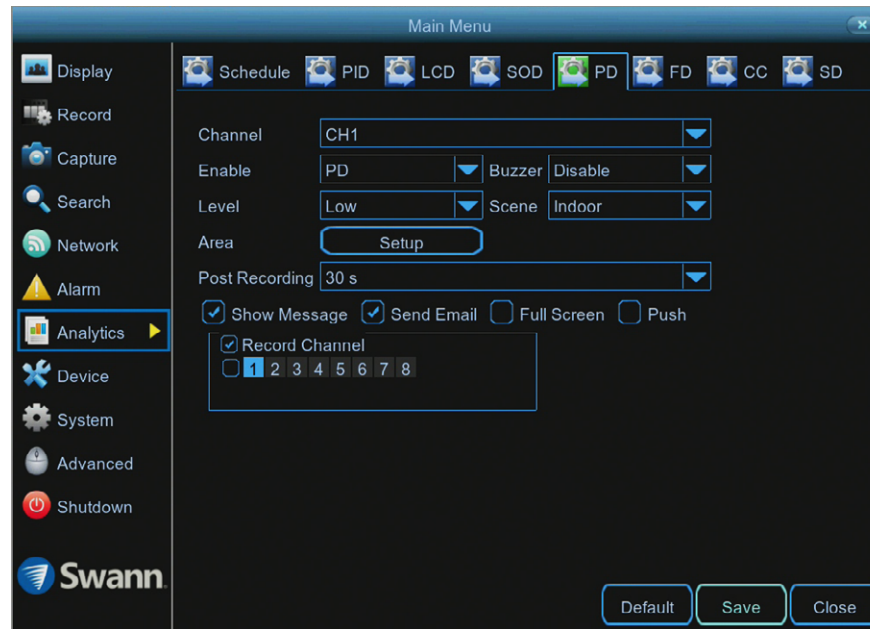
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Please note: This function can only be used if the PID, LCD and SOD analytic functions are disabled.

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

Enable: Two choices are available. Select "PD" to receive alerts when motion has been detected. Select "PIR+PD" to receive alerts when motion has been detected by the camera <u>and</u> the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

Level: "Small" is recommended to detect objects that are further in the distance. "Big" is recommended to detect objects that are closer to the camera.

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw a pedestrian detection region (see page 52 - <u>Drawing a Pedestrian Detection Region</u>).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.
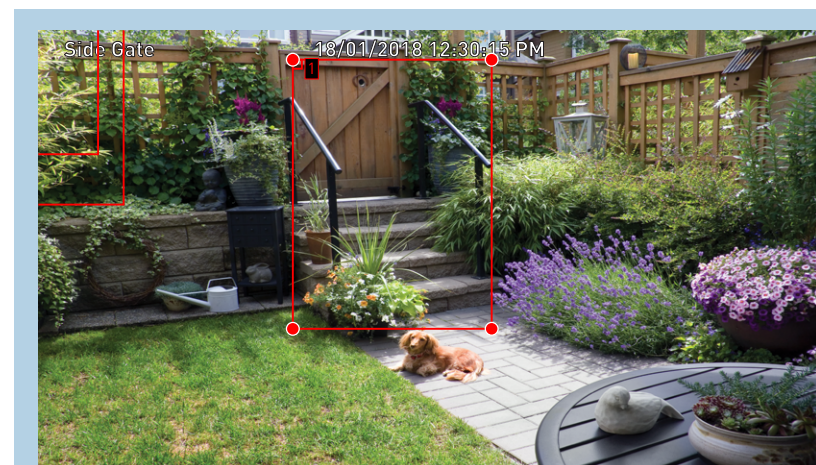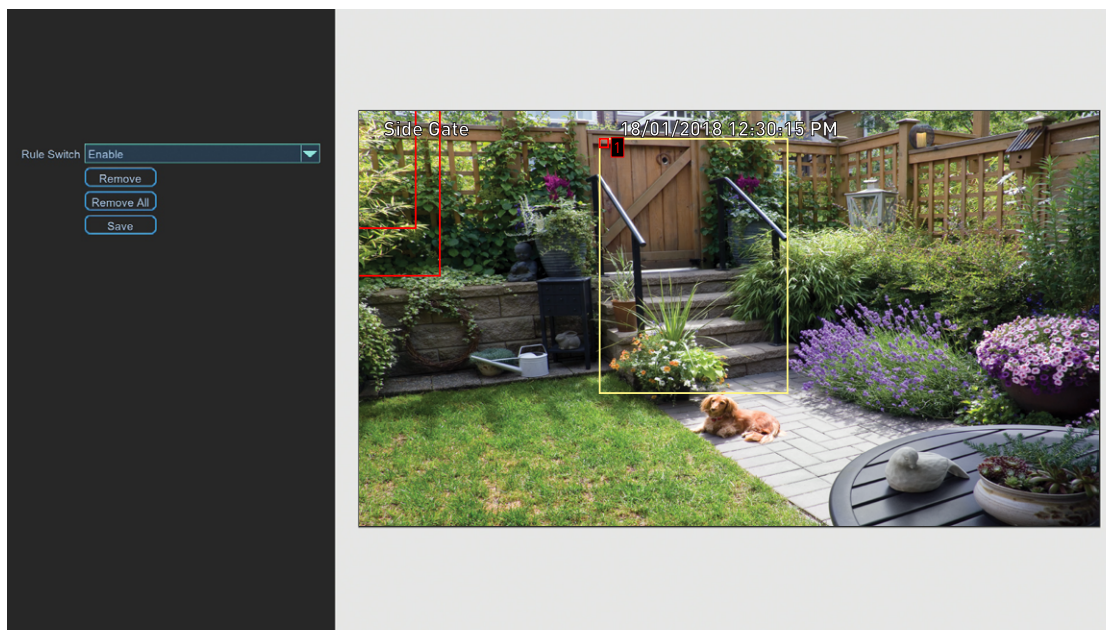
Show Message: When motion has been detected, the analytic icon will appear on-screen. Click the checkbox if you want to disable this.

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

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing a Pedestrian Detection Region

To remove a pedestrian detection region, click the rule number checkbox to select then press the "Remove" button.

Rule Switch: Leave this enabled.

Using the mouse, you need to create four points to draw a pedestrian detection region (it can be drawn at any size). Your NVR does not allow lines to be crossed when drawing a detection region. Make sure the detection region is greater than or equal to the size of the detected object.

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 above right example.

Remove All: Click this to remove all pedestrian detection regions.

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

Right-click to exit.

Analytics: FD (Face Detection)

Enabling this function is a great way to improve how you monitor the different areas that you want to keep an eye on. When human faces are detected, your NVR will activate recording, and it will also send an alert. This makes it ideal for restricted places where there shouldn't be people roaming around at particular times.
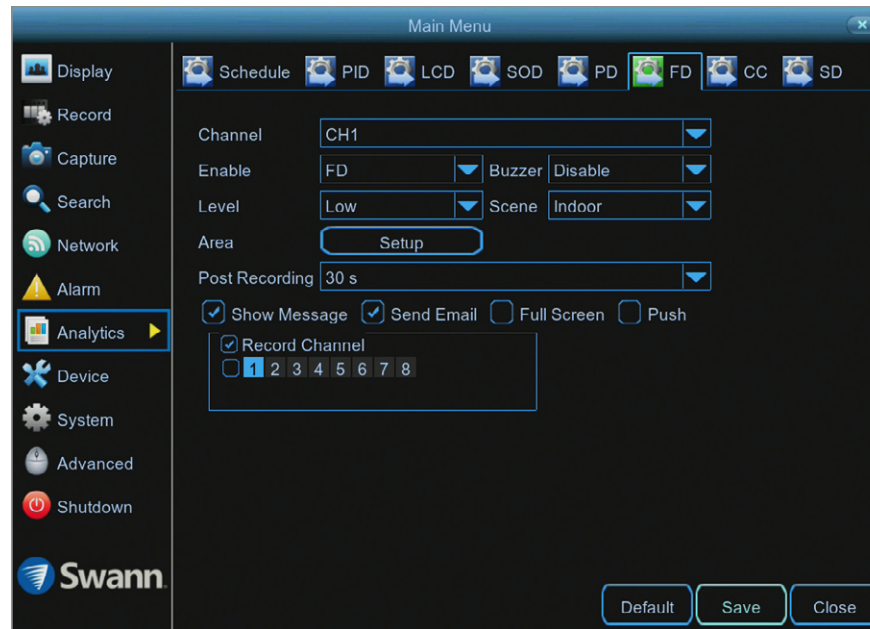
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Please note: This function can only be used if the PID, LCD and SOD analytic functions are disabled.

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

Enable: Two choices are available. Select "FD" to receive alerts when motion has been detected. Select "PIR+FD" to receive alerts when motion has been detected by the camera and the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

Level: "Small" is recommended to detect objects that are further in the distance. "Big" is recommended to detect objects that are closer to the camera.

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw a face detection region (see page 54 - Drawing a Face Detection Region).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.

Show Message: When motion has been detected, the analytic 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 has been detected.

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing a Face Detection Region

To remove a face detection region, click the rule number checkbox to select then press the "Remove" button.
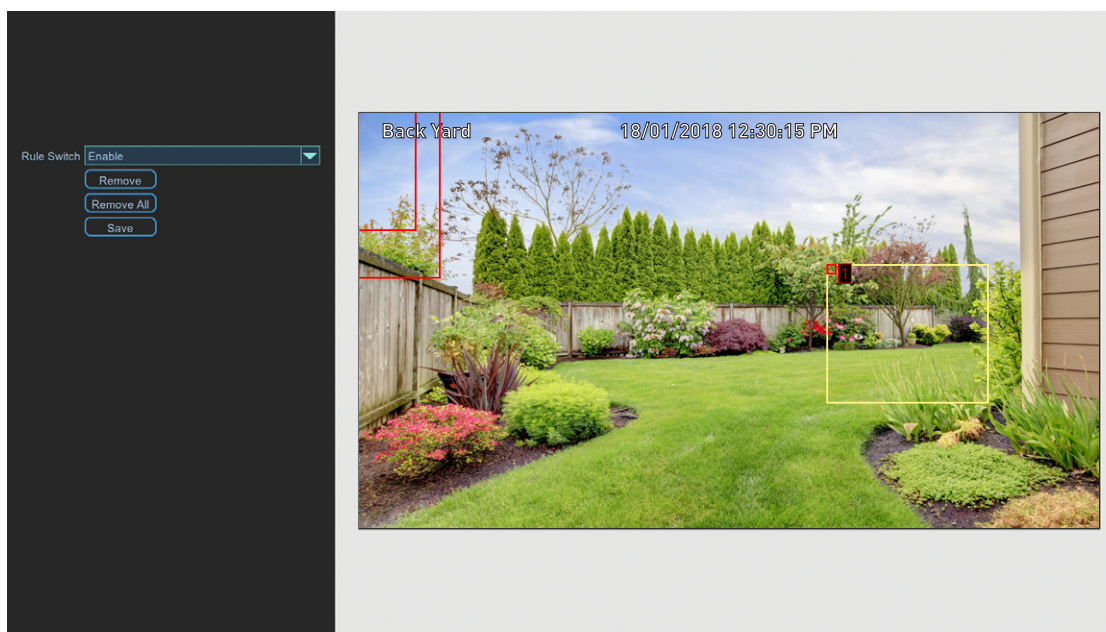
Rule Switch: Leave this enabled.

Using the mouse, you need to create four points to draw a face detection region (it can be drawn at any size). Your NVR does not allow lines to be crossed when drawing a detection region. Make sure the detection region is greater than or equal to the size of the detected object.

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 above right example.

Remove All: Click this to remove all face detection regions.

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

Right-click to exit.

Analytics: CC (Cross Counting)

This function will count the times an object or person has crossed a counting line from both directions. It will display this in Live View mode for the camera that has been enabled. This is especially useful for businesses to count customers entering and exiting the premises.
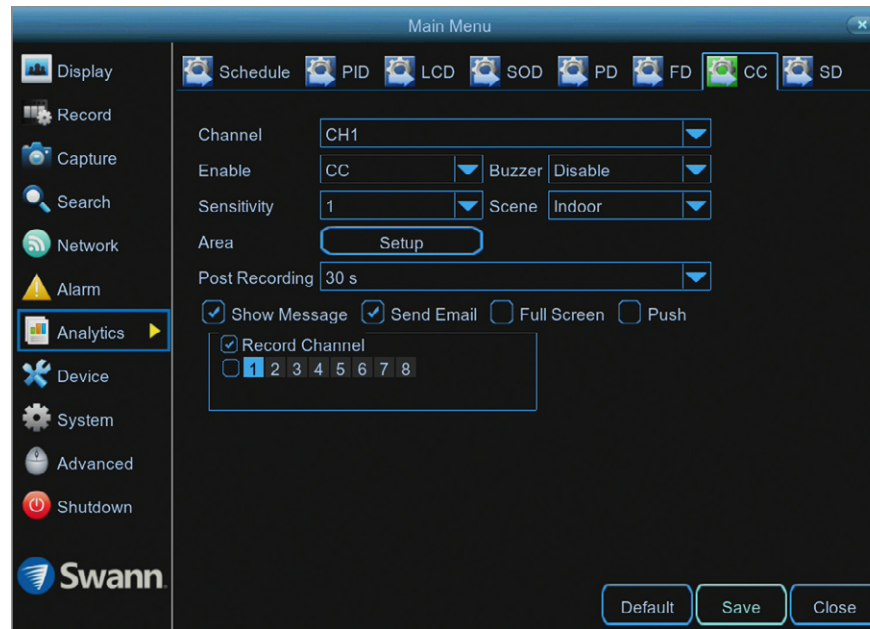
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Please note: This function can only be used if the PID, LCD and SOD analytic functions are disabled.

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

Enable: Two choices are available. Select "CC" to receive alerts when motion has been detected. Select "PIR+CC" to receive alerts when motion has been detected by the camera <u>and</u> the camera's built-in PIR sensor.

Buzzer: When motion has been detected, you can enable the NVR's buzzer to alert you for a predetermined amount of time.

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

Scene: Select the appropriate setting for where the camera is located.

Area: Click the "Setup" button to draw a counting line (see page 56 - <u>Drawing a Counting Line</u>).

Post Recording: This option instructs your NVR to record for a set period of time after an event has occurred.

Show Message: When motion has been detected, the analytic 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 has been detected.

Full Screen: Click the checkbox if you would like to view the camera full screen in Live View mode when motion has been detected.

Record Channel: This option instructs your NVR to trigger additional cameras to start recording when motion has been detected. Click the checkbox to select all cameras or click on the individual camera number that you want to trigger for recording.

Drawing a Counting Line
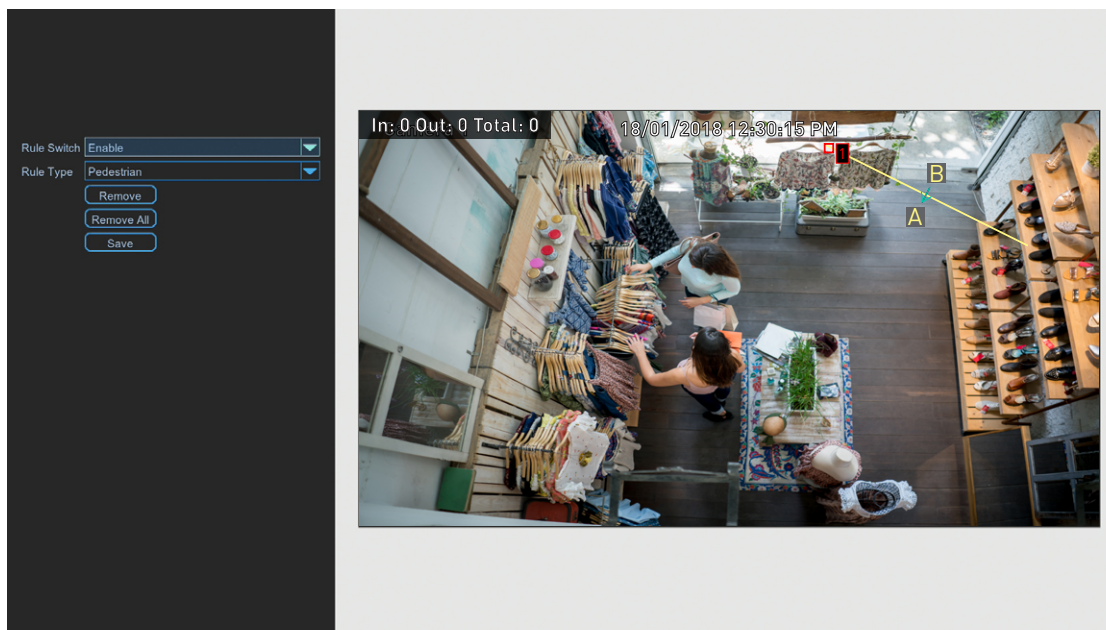
To remove a counting line, click the rule number checkbox to select then press the "Remove" button.

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 Switch: Leave this enabled.

Rule Type: Select the appropriate rule for the line drawn. The two rules available will change the in/out counting direction.

Using the mouse, click once at the start point then click again at the end point. A counting 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 counting line. A counting line can be drawn at any orientation, length or angle.

As illustrated above left, a counting line has been drawn across the shop entrance. When selecting "Pedestrian", the In counter will increase when a person has entered and the Out counter will increase when they leave.

Remove: See above right example.

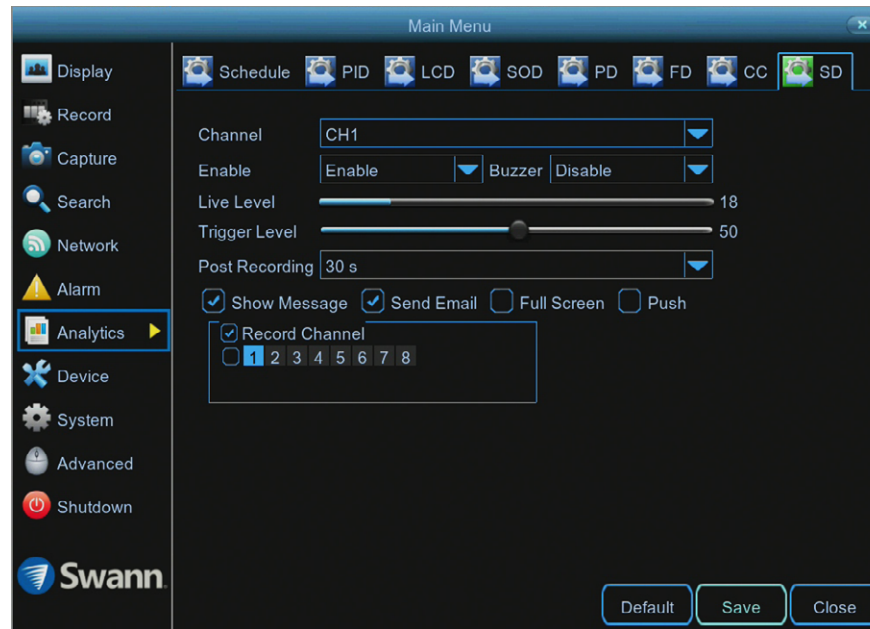**Remove All:** Click this to remove all detection lines.

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

Right-click to exit.

Analytics: SD (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.

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

Enable: Click the drop down menu to enable.

Buzzer: When your NVR detects audio that matches or exceeds the set trigger level, you can enable your NVR's buzzer to alert you for a predetermined amount of time.

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

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.

Post Recording: This instructs your NVR to record for a set period of time after an event has occurred.

Show Message: The analytic icon will appear on-screen when an event has occurred. Click the checkbox if you want to disable this.

Send Email: Click the checkbox to enable your NVR to send an email alert when audio matches or exceeds the set trigger level.

Full Screen: Click the checkbox to view the camera full screen in Live View mode when audio matches or exceeds the set trigger level.

**Push:** Click the checkbox to receive notifications via the HomeSafe View app.

Record Channel: This instructs your NVR to trigger additional cameras to start recording when audio matches or exceeds the set trigger level. Click the checkbox to select all cameras or click on the individual camera number.

Recording Configuration

The recording configuration options are available in the "Record", "Capture" and "Analytics" menus that are 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. A separate schedule is available for the analytic functions available, that can be changed to suit your needs.
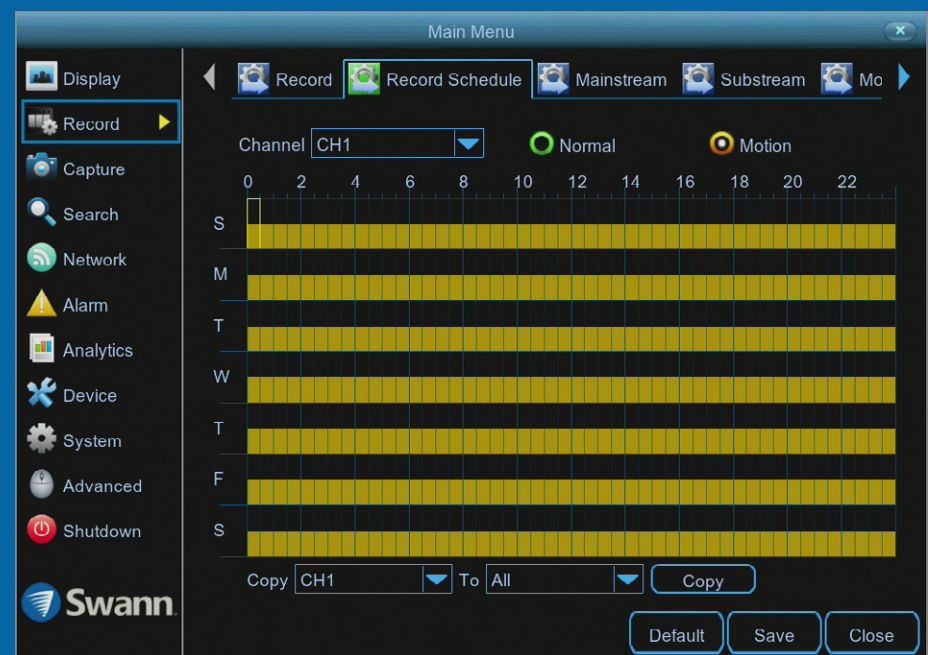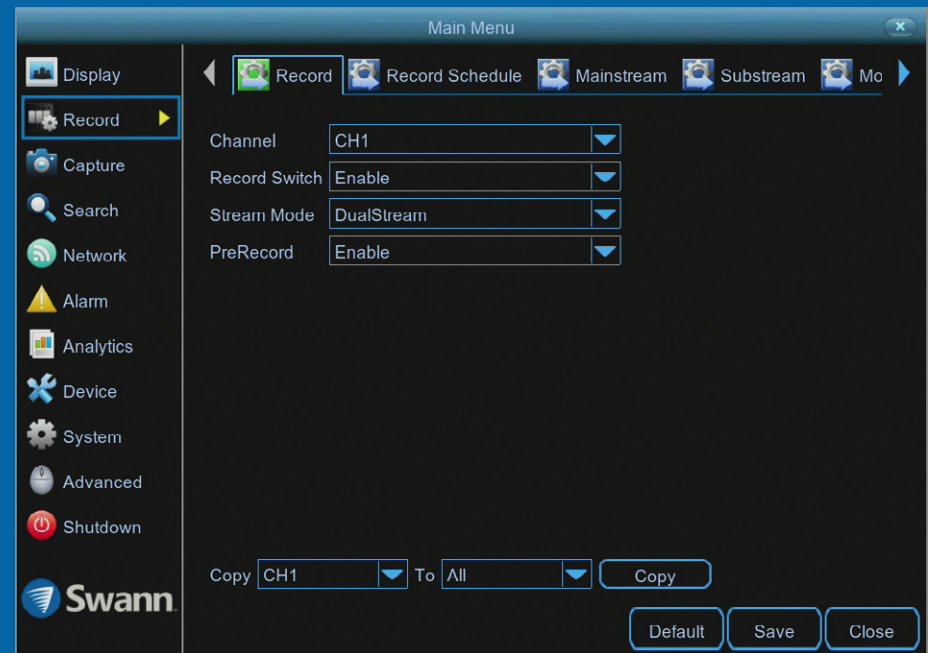
Record: Record
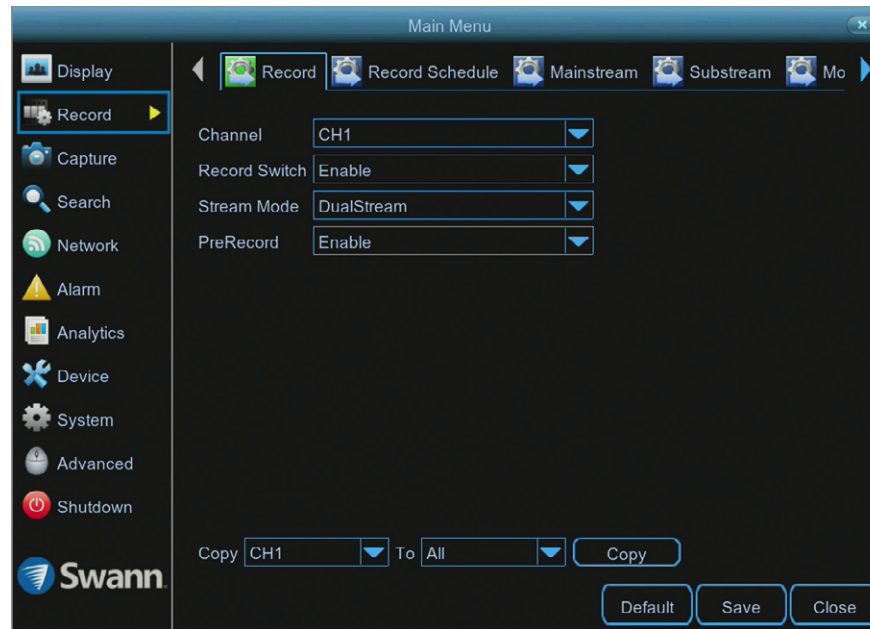
- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

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

Record Switch: 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). This is especially useful when using "Playback" mode via the HomeSafe View app, as Substream can be selected. This requires less bandwidth to stream the video from your NVR to your mobile device. Mainstream video is used for playback when using your NVR directly. If remote playback is not required, you can select Mainstream recording only.

PreRecord: Allows your NVR to record for a number of seconds before an event occurs. It's recommended to leave this enabled.

Record: Schedule

By default, a Motion schedule has been enabled for each camera connected, however you can change the schedule to suit your needs. The schedule is presented as a 24-hour 7 days a week grid and is color coded to represent the event type.
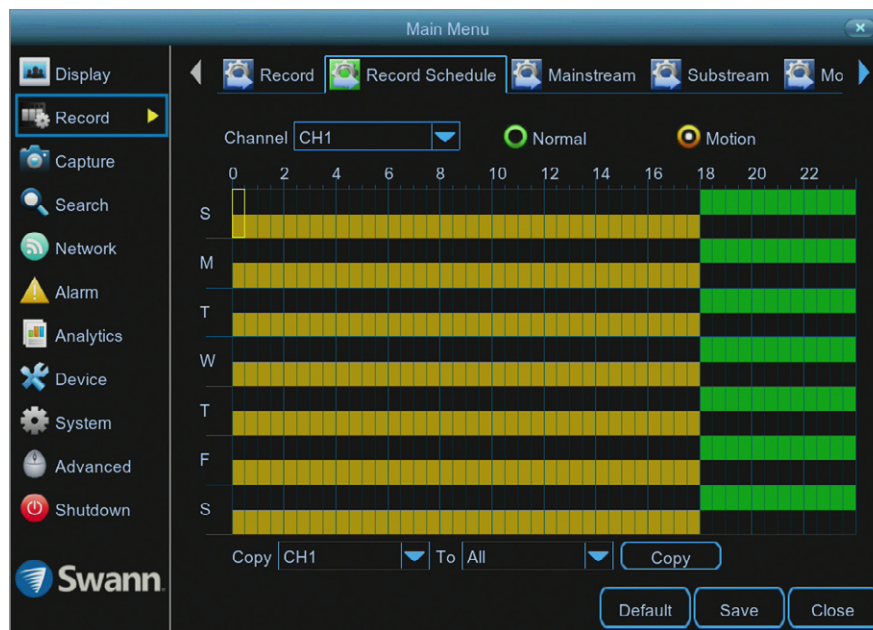
- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

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

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

Motion: Your NVR will only record when motion has been 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 and Motion recording is not required on one or more sections that have recording enabled.

In the above example, a Motion recording schedule has been created for 12:00 a.m. to 06:00 p.m. and a Normal recording schedule for 06:00 p.m. to 12:00 a.m. Sunday to Saturday.

To search for and play previous Normal and Motion recordings (see page 65 - <u>Search: General</u>).

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. This is particularly useful for finding motion events quickly and can also be used for different purposes such as time lapse photography.
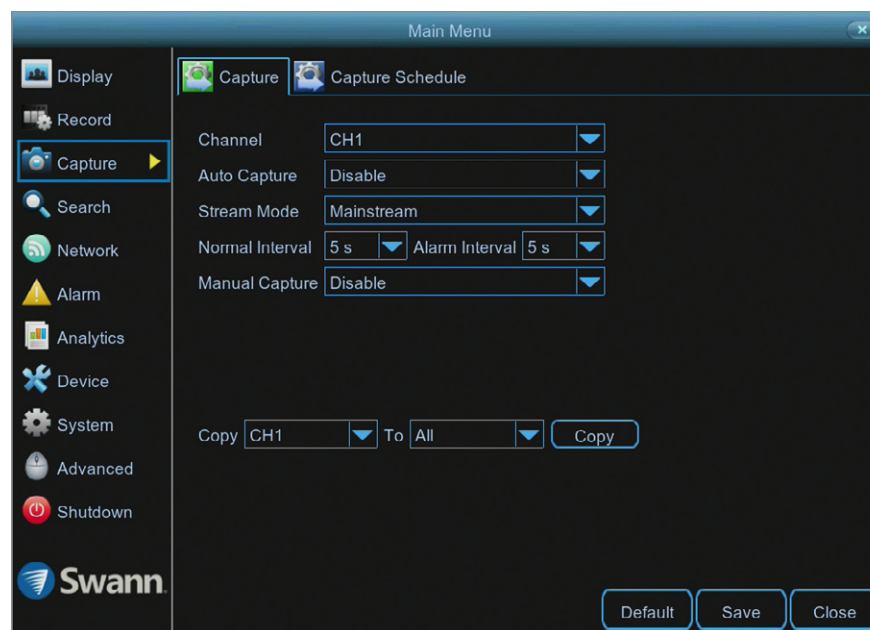
- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

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

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

Stream Mode: Leave the default selection. This will save each snapshot at the camera's native resolution.

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

Alarm Interval: When setting a Motion capture schedule, a snapshot will be taken each time motion has been detected according to the interval selected. Adjust accordingly.

Manual Capture: Enable this feature if you would like to manually take a snapshot using the Manual Capture button on the camera toolbar.

As this is an added feature, a capture schedule is not enabled by default. To enable this (see page 62 - <u>Capture: Schedule</u>).

Please note: The Capture Schedule, Normal Interval and Alarm Interval options are not available on the 4 channel model. Snapshots will be automatically taken when enabled.

Capture: Schedule
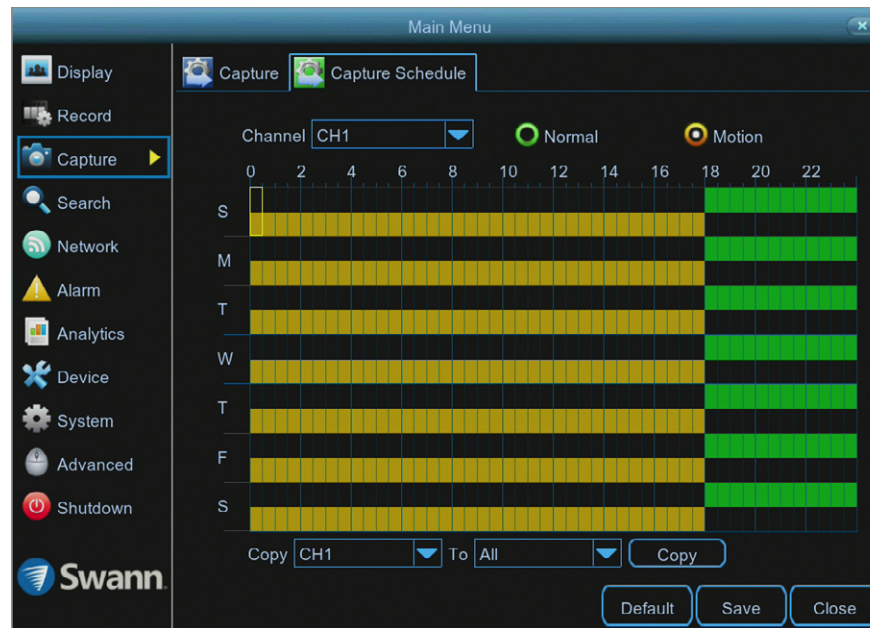
- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

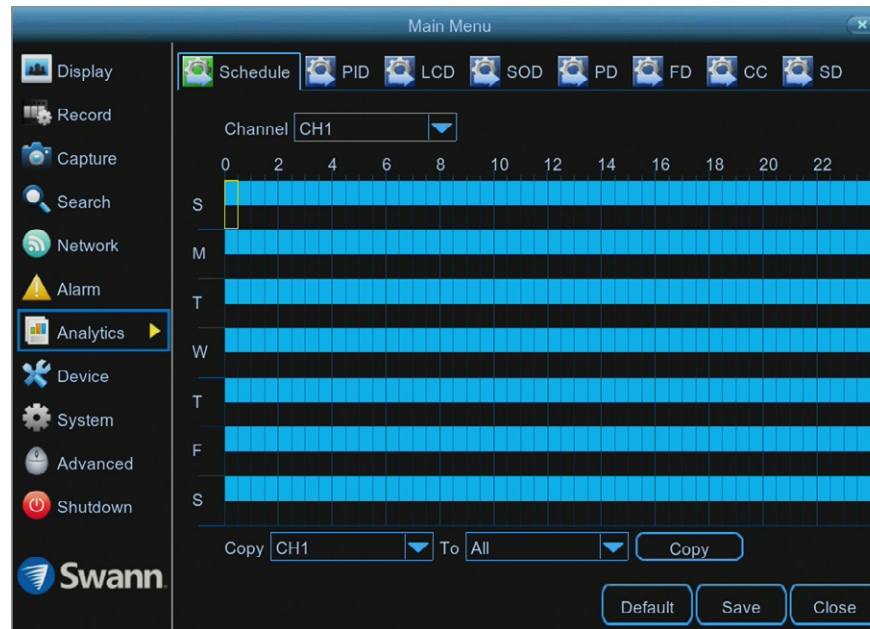- Click the "Close" button to exit the Main Menu.

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

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 time period. The same action can also be applied if Normal, Motion or Alarm capture mode is not required on one or more sections that have been enabled.

In the above example, a Motion capture schedule has been created for 12:00 a.m. to 06:00 p.m. and a Normal capture schedule for 06:00 p.m. to 12:00 a.m. Sunday to Saturday.

Analytics: Schedule (4K Camera)

By default, an Analytic schedule has been enabled for each camera connected, however you can change the schedule to suit your needs. When one or more analytic functions have been enabled, they will automatically be scheduled to record and to send alerts.

· Don't forget to click "Save" to apply settings.

· Use the "Copy" function to apply all settings to the other cameras.

· Click the "Default" button to revert back to default settings.

· Click the "Close" button to exit the Main Menu.

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 time period. The same action can also be applied if recording and alerts are not required on one or more sections that have been enabled (when an analytic event occurs, a green "S" icon will appear in Live View mode, indicating that a schedule has not been enabled).

To search for and play previous Normal and Motion recordings (see page 65 - <u>Search: General</u>).

Playback & Backup

The Search function gives you the ability to search for and play previously recorded videos as well as snapshots that are stored on your NVR's hard drive. You have the choice of playing video that matches your recording and analytic schedules, manual recordings or motion events only. The Backup function gives you the ability to save important events (both video and snapshots) to a USB flash drive.
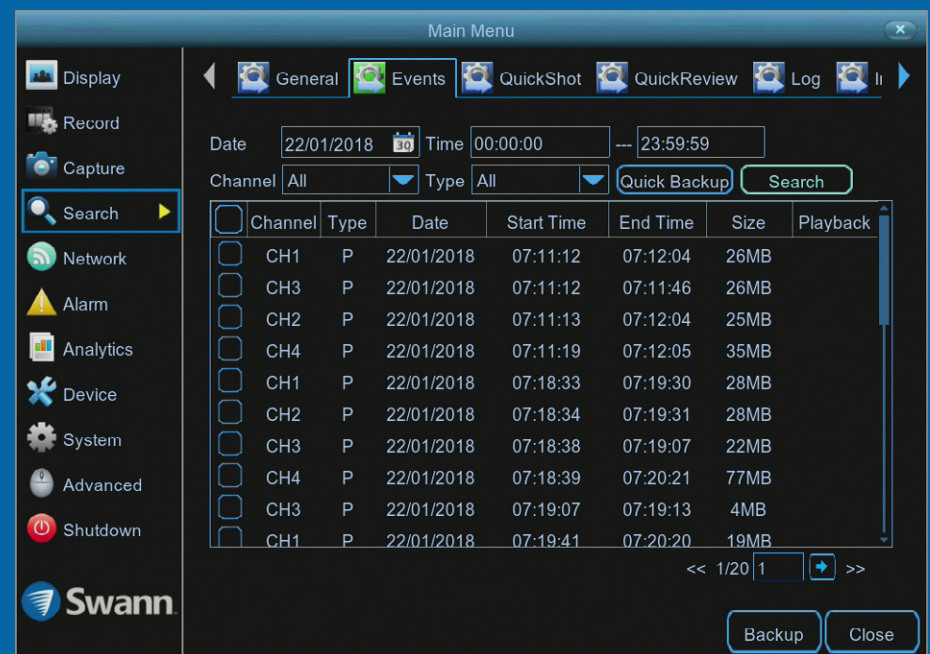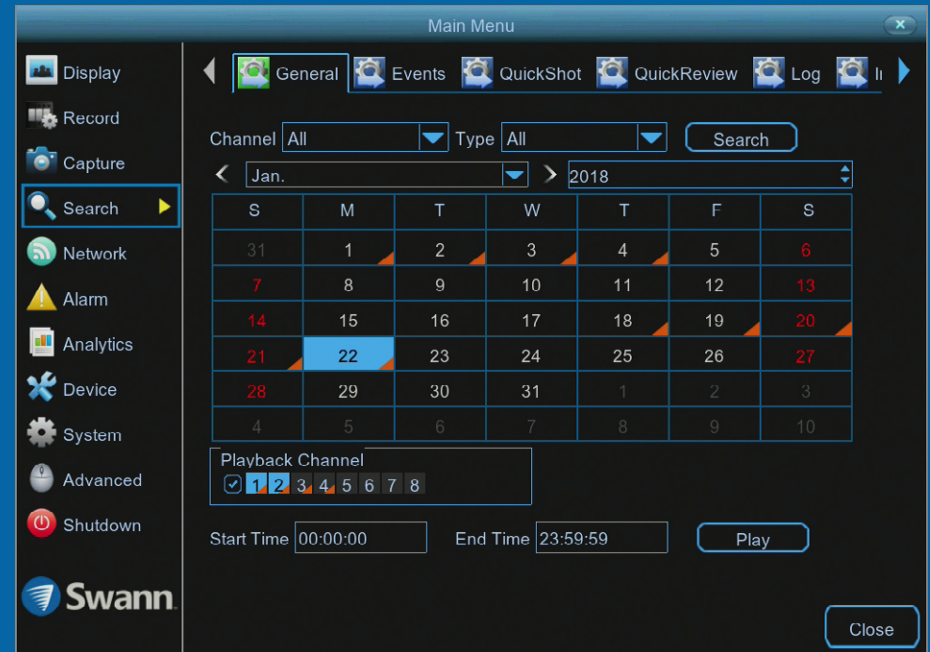
Search: General
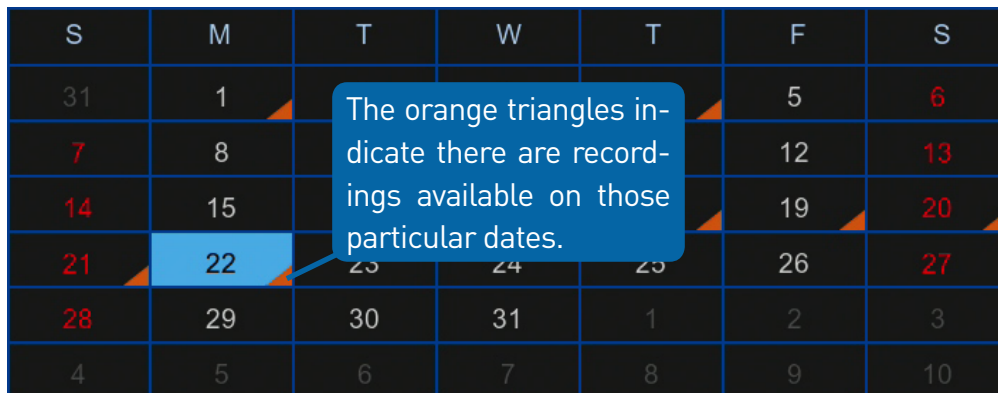
The orange triangles indicate there are recordings available on those particular dates.

1. Click the drop down menu to select the month to search on.

2. Click the drop down menu to select the year to search on.

3. Click the drop down menu to select from one or all cameras that you would like to search on and display for playback.

4. Click the drop down menu to select the video type that you want to search on. For events triggered by one of the analytic functions, select "Smart". For motion events, select "PIR" or leave this on "All" if you want to search for all video types. Adjust accordingly.

5. Click the "Search" button to filter your search criteria.

6. The orange triangles indicate there are recordings on those particular dates that match your search criteria. Click on a date that you want to select for playback.

7. When selecting all cameras for playback, this will indicate the channels that match your search (each channel will be marked with an orange triangle). You can leave the default selection or you can select specific cameras for playback. For the 8 channel model, a maximum of two cameras can be selected for playback. For the 16 channel model, a maximum of four cameras can be selected for playback.

8. You can leave the default selection or you can click the dialogue box to enter a specific start time.

9. You can leave the default selection or you can click the dialogue box to enter a specific end time.

10. Click the "Play" button to start playing.

You will now see the playback interface (see page 66 - Playback Interface).

Playback Interface

Click to close

Calendar

Playback Mode

Camera List

Click on a camera to select it (a surrounding blue square is shown).

The orange lock icon represents cameras that can be selected for playback.

Click and hold the timeline then drag left or right to the desired time period.

Timeline

Time Period

Video Type

Calendar: You can select a different date without exiting to the previous screen.

Playback Mode: You have the option of selecting a different playback mode (a message will appear on-screen when changing modes).

Camera List: Click the checkbox next to the camera currently enabled then select a different camera for playback.

Time Period: This represents the time period that is visible. Click on a different time period to zoom in for precise control or to zoom out.

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

2. From left to right, these are your reverse, slow motion, play, pause, stop and fast forward con-

trols. Subsequent presses of the reverse, slow motion and fast forward buttons will increase the speed of each action.

3. Select a camera, 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.

(continued on next page)

Playback Interface

Calendar

Playback Mode

Camera List

Timeline

Time Period

Click to close

Double-click a camera to view full screen. Double-click again to return.

Video Type

4. 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, press this button at the mark in point and press it again at the mark out point. For the backup type, leave the default selection or change to AVI or MP4 for wider playback compatibility on your computer (we recommend VLC media player

software, you can download a free copy from www.videolan.org). Insert a USB flash drive to your NVR then click "Save". You can format the flash drive or create a new folder if required. Click "OK" to save then click "Close" when finished.

5. Click this button to mute or unmute the audio.

6. Click and hold the slider left or right to change the volume level.

Video Type: Indicates the video type on the timeline.

Search: Events (copy motion events to a USB drive)
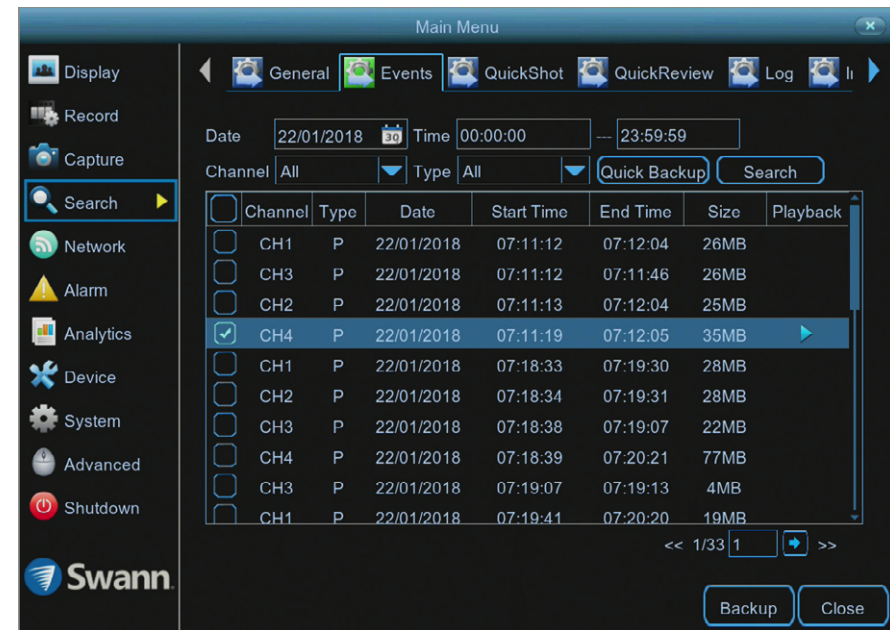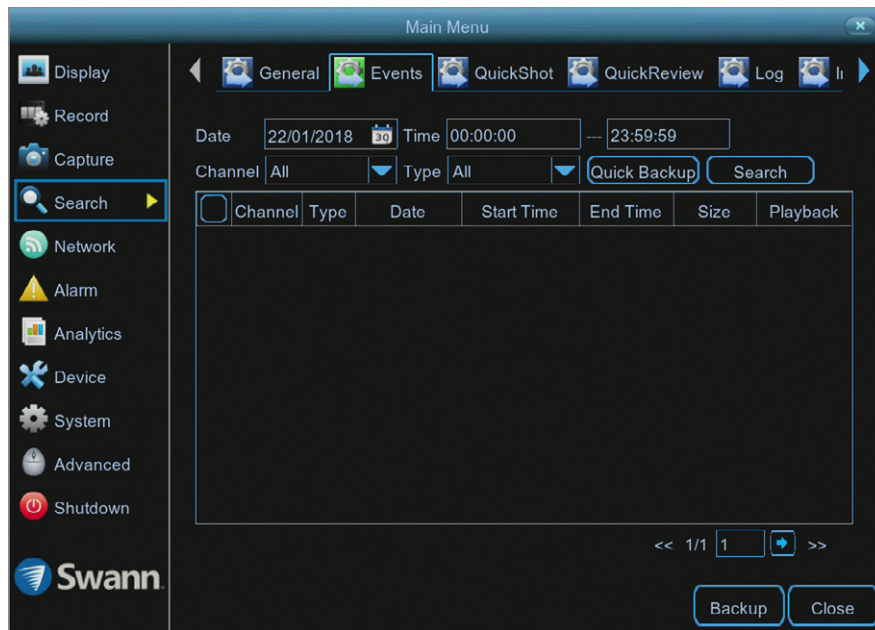
This function can be used to search, play and copy events to a USB flash drive.

Date: Click the calendar icon to select the month, year and date that you would like to search on.

Time: You can leave the default selection or you can click the dialogue box to enter a specific start and end time.

Channel: Click the drop down menu to select from one or all cameras that you would like to search on.

Type: Leave the default selection or click the drop down menu to select the event type.

Quick Backup: Click this to copy all or selected events that match your search criteria.

Search: Click this to display a list of events that match your search criteria (as shown above). Double-click an event to play (the event will play full screen). Click the checkbox next to each event to select it.

Backup: Click this to copy selected events. For the backup type, leave the default selection or change to AVI or MP4 for wider playback compatibility on your computer (we recommend VLC media player software, you can download a free copy from www.videolan.org). Insert a USB flash drive to your NVR then click "Save". You can format the flash drive or create a new folder if required. Click "OK" to save then click "Close" when finished.

Close: Click this to exit.

Search: QuickShot (copy snapshots to a USB drive)
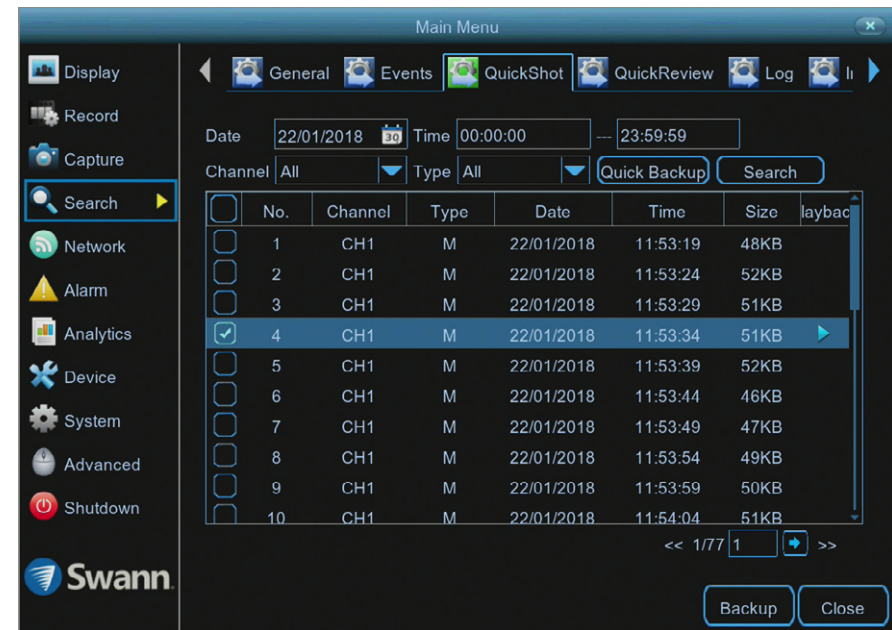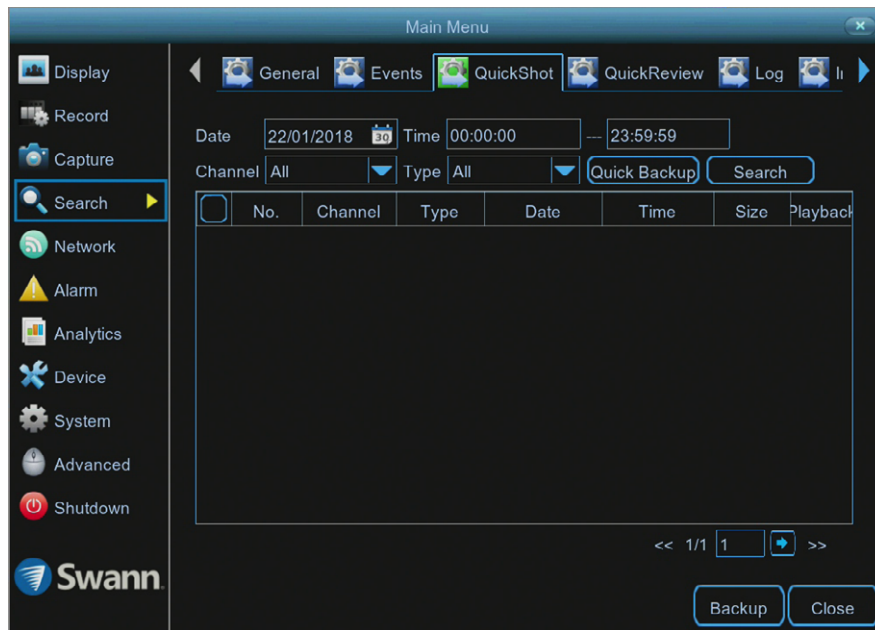
This function can be used to search, play and copy snapshots to a USB flash drive.

Date: Click the calendar icon to select the month, year and date that you would like to search on.

Time: You can leave the default selection or you can click the dialogue box to enter a specific start and end time.

Channel: Click the drop down menu to select from one or all cameras that you would like to search on.

Type: You can leave the default selection or you can click the dialogue box to select the type of snapshot you would like to search on.

Quick Backup: Click this to copy all snapshots matching your search criteria.

Search: Click this to display a list of snapshots that match your search criteria (as shown above). Double-click a snapshot to display it full screen. You can also play a slideshow (see page 70 - Playing a Slideshow). Click the checkbox next to each event to select it (a maximum of 5000 snapshots can be displayed at any one time).

Backup: Click this to copy selected snapshots. Insert a USB flash drive to your NVR then click "Save". You can format the flash drive or create a new folder if required. Click "OK" to save then click "Close" when finished.

Close: Click this to exit.

Playing a Slideshow
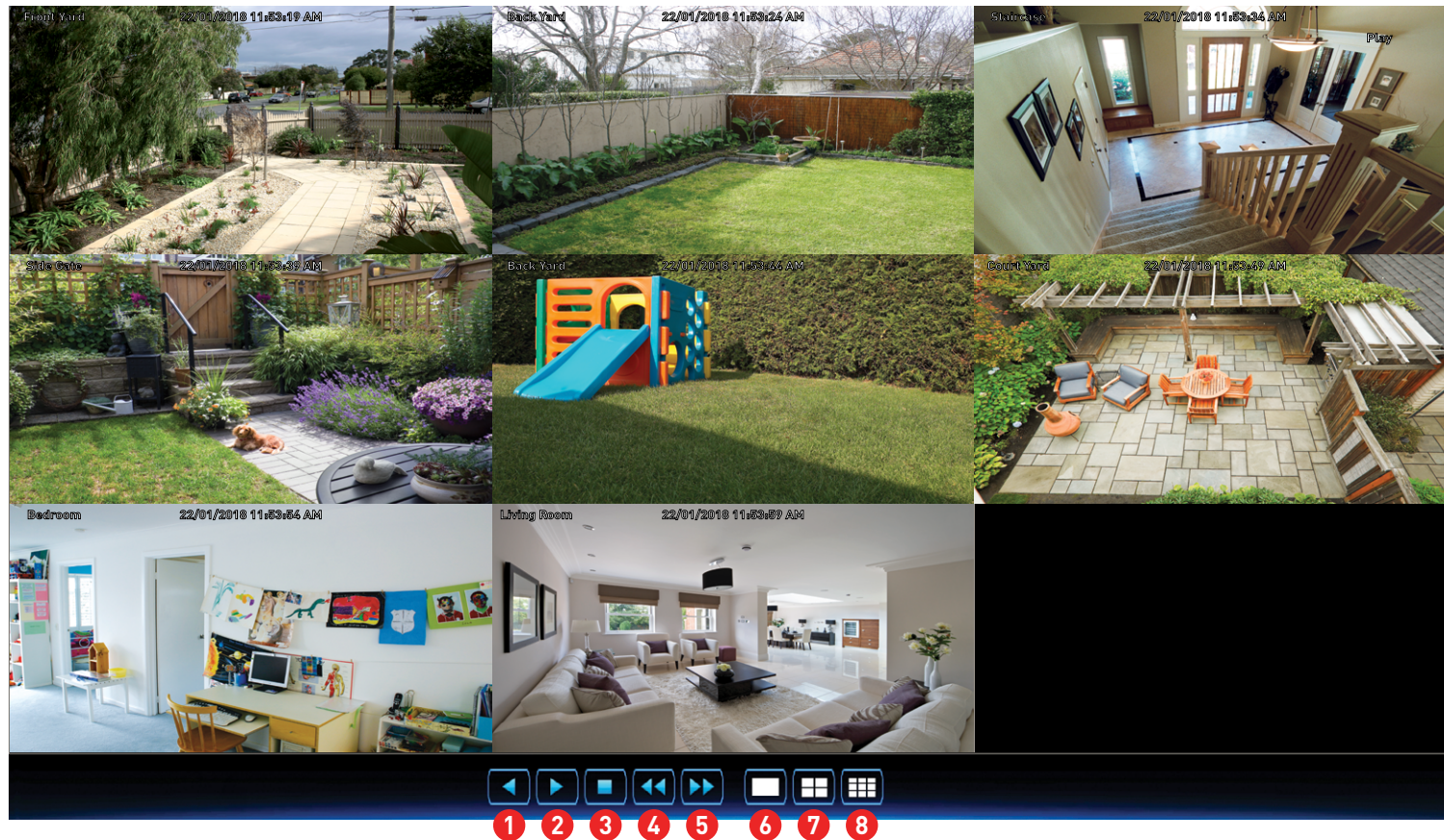
1. Click this to play the slideshow in reverse.
2. Click this to play the slideshow.
3. Click this to stop the slideshow.
4. Click this to display the previous snapshot or group of snapshots.
5. Click this to display the next snapshot or group of snapshots.

6. Click this to view a single snapshot at a time.
7. Click this to view four snapshots at a time.
8. Click this to view eight snapshots at a time (16 channel model only).

Right-click to exit.

Search: QuickReview

QuickReview allows you to play multiple normal recordings and motion events simultaneously from a single channel. With normal and event recordings, the video is divided evenly depending on the split-screen mode that has been selected. For example, if the video is an hour long and you have selected Split-screens x 2, each split-screen will play for 30 minutes.

1. Click the drop down menu to select the month to search on.

2. Click the drop down menu to select the year to search on.

3. Click the drop down menu to select the camera that you would like to display for playback (only one camera can be selected).

4. Click the drop down menu to select the video type to search on. In most circumstances "Motion" would be selected but you can leave this on "All" if you want to search for all video types. Adjust accordingly.

5. Click the "Search" button to filter your search criteria.

6. The orange triangles indicate there are recordings on those particular dates that match your search criteria. Click on a date that you want to select for playback.

7. You can leave the default selection or you can click the dialogue box to enter a specific start time.

8. You can leave the default selection or you can click the dialogue box to enter a specific end time.

9. For the 8 channel model, a maximum of two split-screens can be enabled. For the 16 channel model, a maximum of four split-screens can be enabled.

10. Click the "Play" button to start playing.

Click to close

Split-screens

Click on a split-screen to select it (a surrounding blue square is shown).

Within the split-screen selected, you can select a different time period on the timeline.

Timeline

Time Period

Video Type

Split-screens: Click the drop down menu to select the preferred split-screen mode for playback.

Time Period: This represents the time period that is visible. Click on a different time period to zoom in for precise control or to zoom out.

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

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

3. Select a camera, 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.

(continued on next page)

Click for contents

QuickReview Playback

Click to close

Split-screens

Timeline

Time Period

Video Type

4. 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, press this button at the mark in point and press it again at the mark out point. For the backup type, leave the default selection or change to AVI or MP4 for wider playback compatibility on your computer (we recommend VLC media player

software, you can download a free copy from <u>www.videolan.org</u>). Insert a USB flash drive to your NVR then click "Save". You can format the flash drive or create a new folder if required. Click "OK" to save then click "Close" when finished.

5. Click this button to mute or unmute the audio.

6. Click and hold the slider left or right to change the volume level.

Video Type: Indicates the video type on the timeline.

System Configuration

The options available give you complete control on 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.
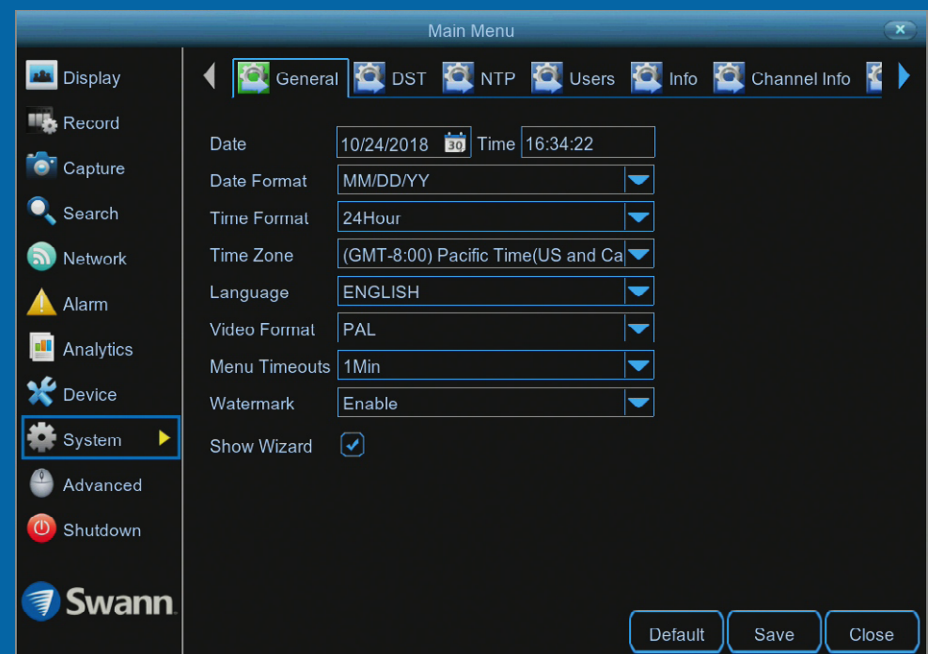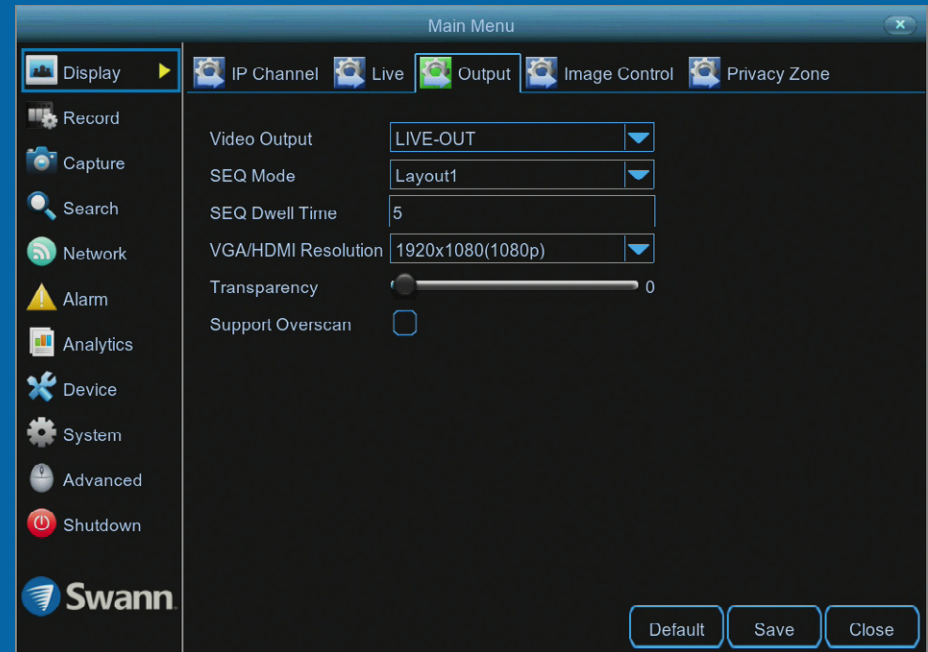
Display: Output
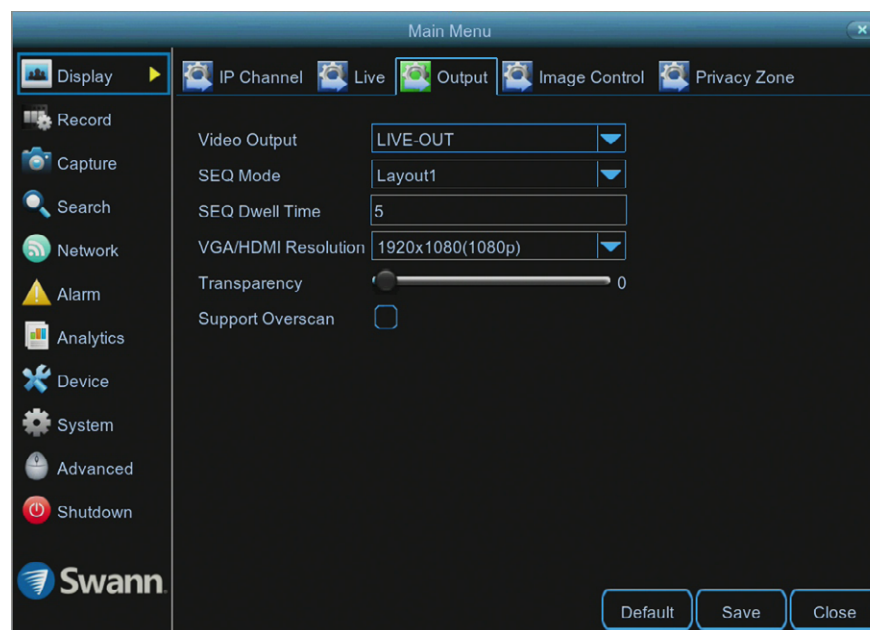
- Don't forget to click "Save" to apply settings.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

Video Output: This option cannot be changed.

SEQ 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. 1920 x 1080 will suit most TVs. If you have a 4K capable TV, you can select either 2K (2560 x 1440) or 4K (3840 x 2160) to take advantage of the higher resolution that your TV provides.

Transparency: Click and hold the slider left or right to change how transpar-

ent the Menu Bar and Main Menu will appear on-screen. Adjust accordingly.

Support Overscan: 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. This is not required for modern TVs as the image is digitally processed to display the correct aspect ratio.

Network: Network

As SwannLink Peer-to-Peer technology is utilised to communicate with your network and mobile device, configuration of the network settings is not required. If you have networking expertise and require specific settings for your network, you do have the ability to change them.
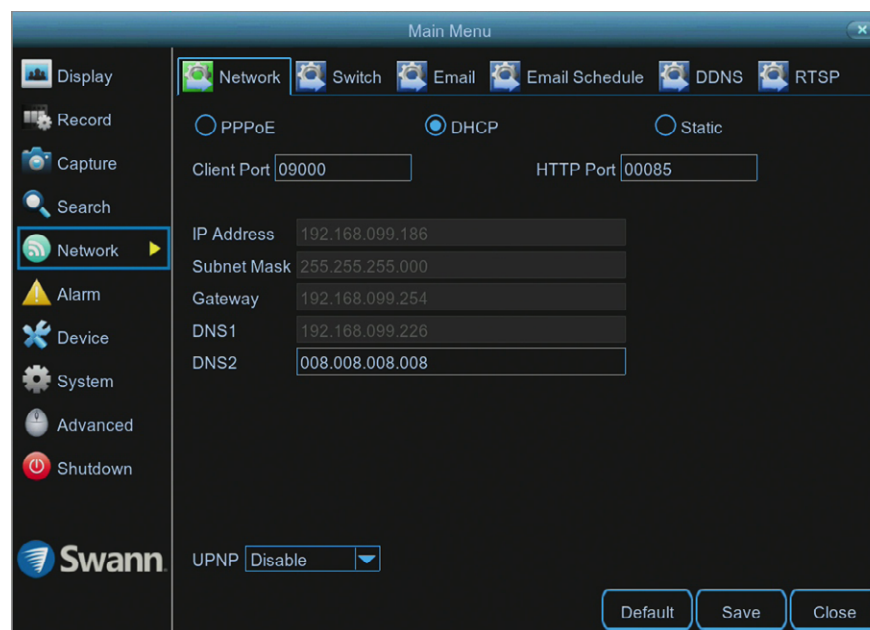
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

PPPoE: Allows your NVR to be directly connected to a DSL modem. When selecting this option, you need to input the user name, password and DNS settings for your internet service provider.

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.

Static: All devices on your network have their IP address manually defined.

Server Port: This port number is used by your NVR to send information through. The default number will work in most situations.

HTTP Port: This port number is used to log into your NVR from a remote location. The default number will work in most situations.

The following five options can be changed when selecting Static:

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. This 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.

(continued on next page)

Network: Network
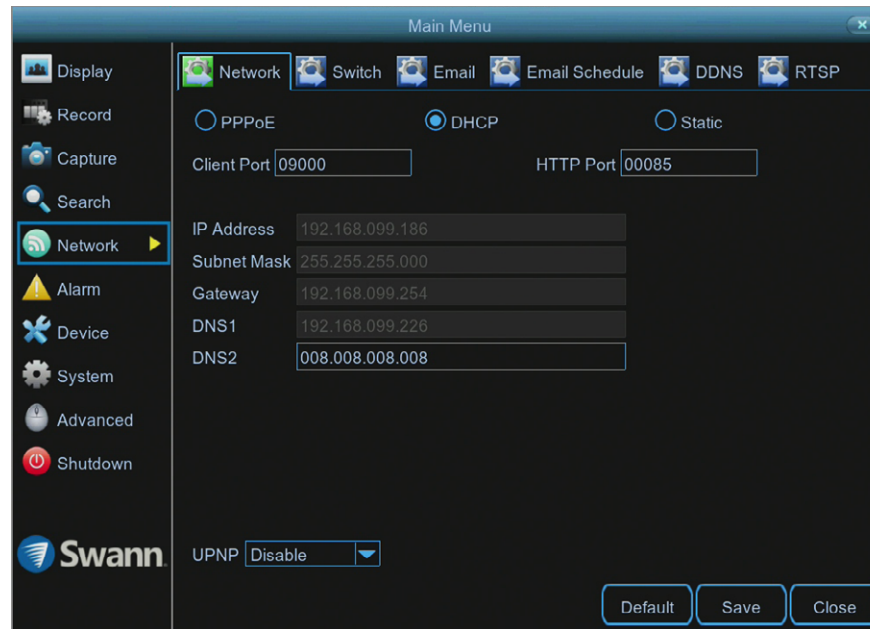
- Don't forget to click "Save" to apply settings.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

UPNP: A network protocol designed to allow network connected devices to automatically configure the router for the purposes of remote access. This is not required when using UID to access your NVR via the HomeSafe View app. You can enable UPNP if required.

Network: Switch

- Don't forget to click "Save" to apply settings.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

Switch Mode: When adding one or more cameras connected to your router, you need to change this to Manual Mode. Click the drop down menu and adjust accordingly.

Please note: When changing back to Auto Mode, any camera or cameras that you have added in Manual Mode, will be deleted. Do not change the IP Address, Subnet Mask and Gateway settings as your cameras may stop working.

Network: Email

The following email providers are supported - Gmail gmail.com and Outlook outlook.com. On your computer or mobile device, go to the relevant website to create an account. When finished, input those details here.
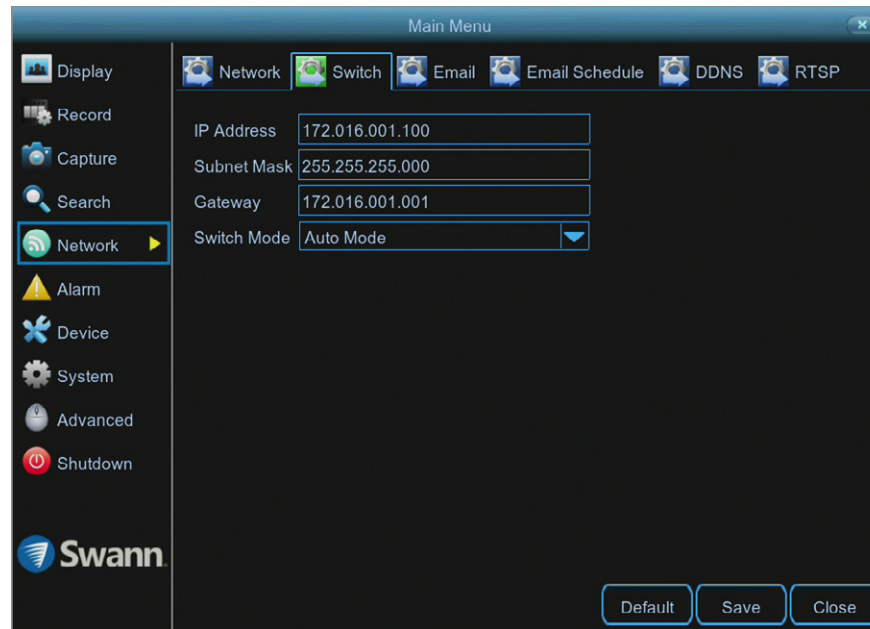

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Why do I need to create an email for my NVR? So your NVR can send you email alerts and to send you a password reset request if you have forgotten your password.

Email: Click "Enable" to input your email details.

Encryption: Leave this on "Auto". This ensures your NVR will always use the correct encryption for your email provider.

SMTP Port: Gmail input 00587. Outlook input 00587.

SMTP Server: Gmail input "smtp.gmail.com". Outlook input "smtp.live.com".

User Name: Input the email user name for the account you created.

Password: Input the email password for the account you created. Click the "show" checkbox if you would like to hide your password.

Sender: Input a name for your email account, for example NVR8-8580.

Receiver1: Input the email address that you want to send email alerts to.

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

Test Email: Click to verify the information is correct then click "OK". A message will appear if the test has been successful. Click "OK" to continue.

If the test email is not in your inbox, check your junk or spam folder.

Email not working? Please try the following:

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 router.

3. Search "less secure apps" at support.swann.com.

Network: Email Schedule (4K Camera)

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

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

Motion: If email alerts have been enabled for motion detection, you can change the schedule on when your NVR can send those alerts. For example, you may only want to receive motion alerts during the day but not in the evening. A different 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 93 - Advanced: Events). It's recommended to leave the default schedule in place.

Analytics: If any of the analytic functions have been enabled, an email alert will automatically be sent when motion has been detected. A different schedule can be created for each camera.

Each square represents 30 minutes. Using the mouse, click the schedule's checkbox (Motion, Exception or Analytics) then click on a particular square to change or click and drag the mouse over the squares corresponding to your desired time period.

Network: Email Schedule (5MP Camera)

- Don't forget to click "Save" to apply settings.

- Use the "Copy" function to apply all settings to the other cameras.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

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

Motion: If email alerts have been enabled for motion detection, you can change the schedule on when your NVR can send those alerts. For example, you may only want to receive motion alerts during the day but not in the evening. A different schedule can be created for each camera.
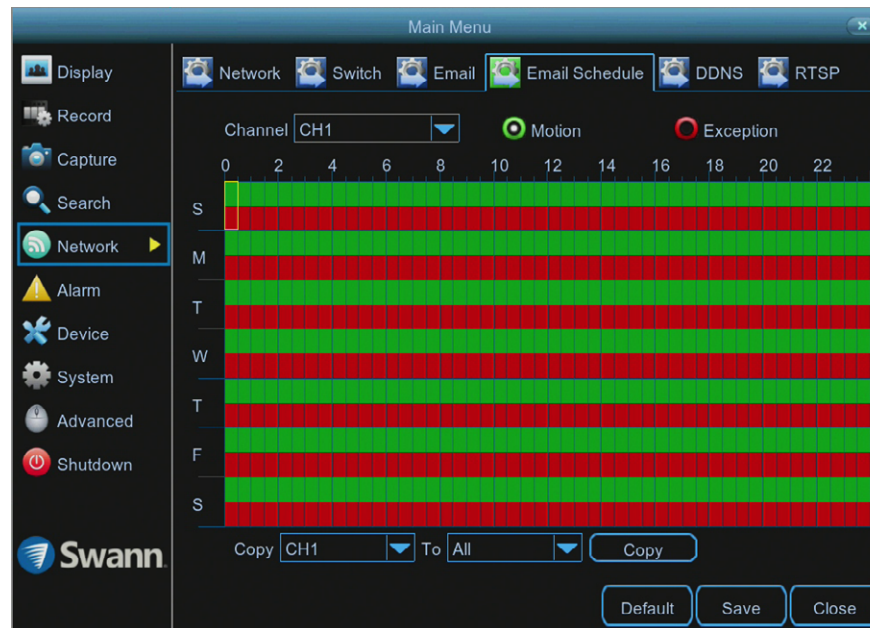
Exception: There are three event types that your NVR will detect as an exception - no space left on the hard drive, a hard drive error and if one or more channels has lost the feed from its camera (see page 93 - <u>Advanced: Events</u>). It's recommended to leave the default schedule in place.

Each square represents 30 minutes. Using the mouse, click the schedule's checkbox (Motion or Exception) then click on a particular square to change or click and drag the mouse over the squares corresponding to your desired time period.

Network: DDNS

Prior to developing our SwannLink 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 means of backup.
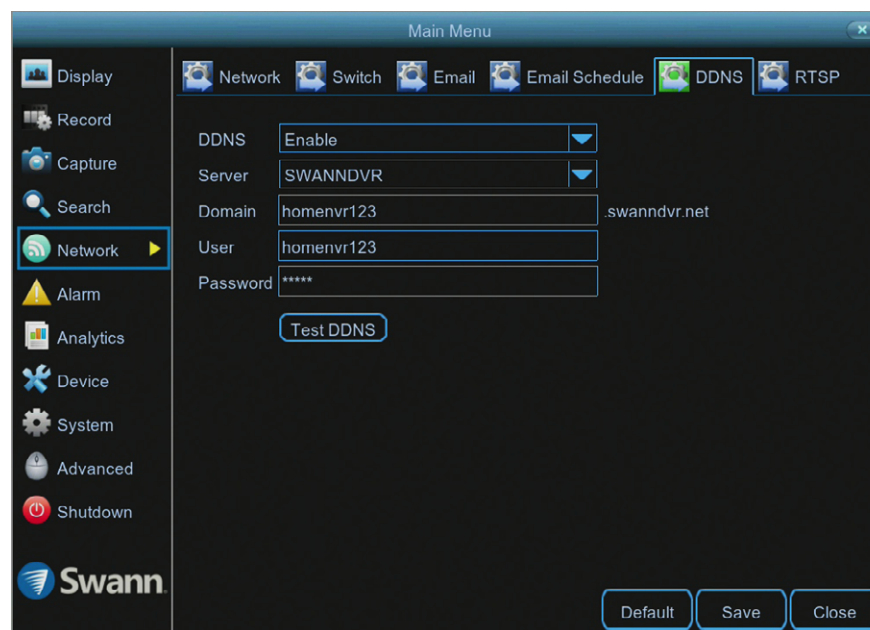
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

DDNS: Click the drop down menu 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 (host name) for your account.

Password: Enter the password for your account.

Test DDNS: 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: RTSP

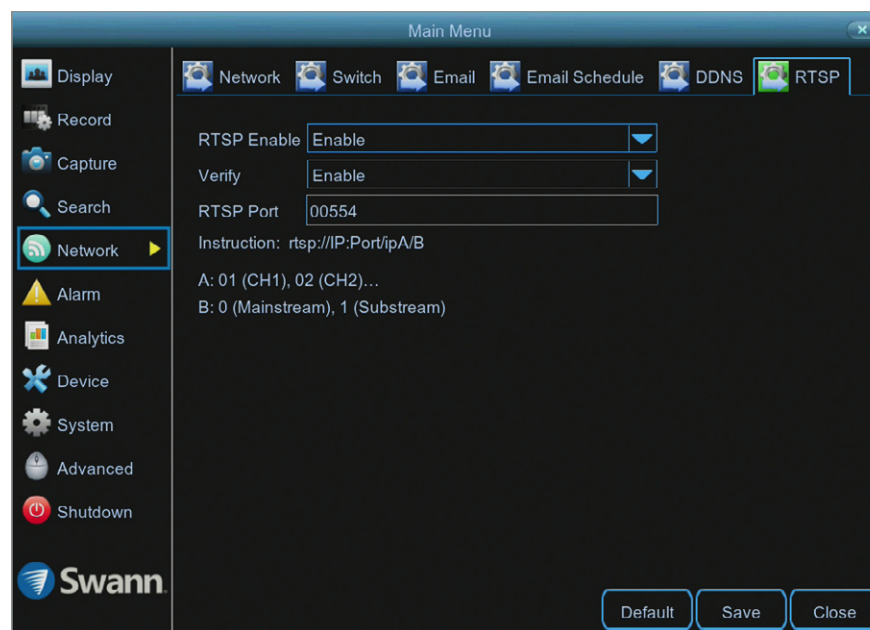The RTSP function can be used to stream a camera's live view image to your computer, using video streaming software such as VLC media player. Multiple cameras can be streamed at the same time. You can also record each stream if required.

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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.

RTSP Enable: Click the drop down menu to enable.

Verify: Leave the default selection if you would like VLC to verify your username and password for access, otherwise click the drop down menu to disable.

RTSP Port: The default port number will work in most circumstances.

1. On your computer, load the VLC media player software. Click "Media" then click "Open Network Stream".

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://192.168.99.160:554/ch01/0).

rtsp://192.168.99.160: This is the IP address of your NVR.
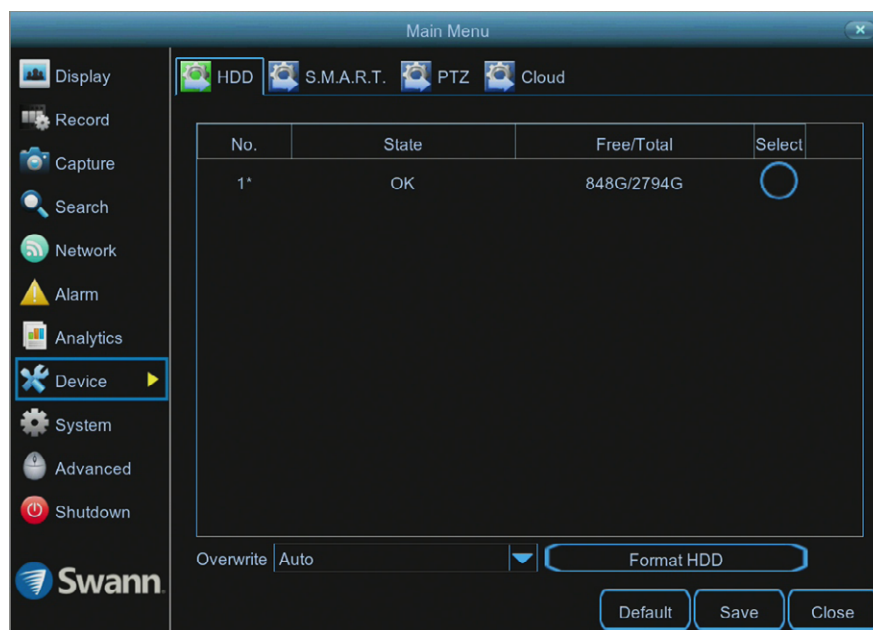
554: This is the RTSP port of your NVR.

ch01: This represents channel 1. To display channel 2 enter ch02, etc.

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

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

Device: HDD

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

This function gives you the option of formatting your NVR's hard drive, and it will be listed here for selection.

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. It's recommended to leave 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. A message will appear noting that all data will be erased. Click "OK" to continue.

Please note: 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. Remember, formatting the hard drive erases <u>all</u> your recordings.

*If a new hard drive has been installed inside your NVR, you need to format the drive before it can be used.

Device: S.M.A.R.T.

This function can be 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.

- Don't forget to click "Save" to apply settings.
- Click the "Close" button to exit the Main Menu.

Whole Evaluation not passed, continue to use the disk: If for some reason the hard drive has developed a fault (such as one or more bad sectors), you can instruct your NVR to continue saving to the drive.

Self-check Type: There are three types available:

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

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.

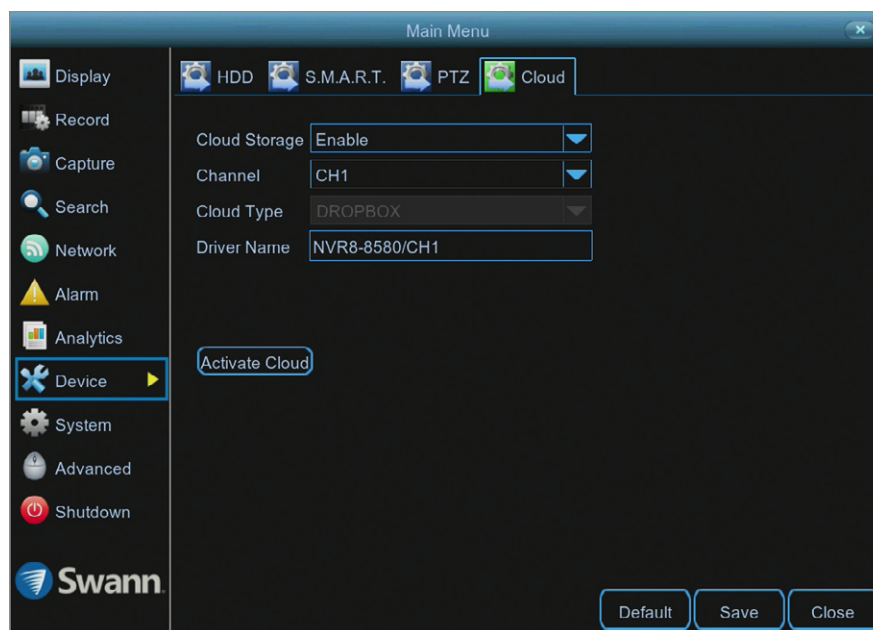When performing a test, your NVR will continue to work as normal.

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.

Device: Cloud

> Your NVR has the ability to copy snapshots to the cloud via Dropbox™. Dropbox™ is a service that allows you to store and share snapshots and always have them on hand when you need them.

Click the YouTube logo to watch our tutorial video.

Main Menu

Display
Record
Capture
Search
Network
Alarm
Analytics
Device ▶
System
Advanced
Shutdown

Swann

HDD   S.M.A.R.T.   PTZ   Cloud

Cloud Storage   Enable
Channel   CH1
Cloud Type   DROPBOX
Driver Name   NVR8-8580/CH1

Activate Cloud

Default   Save   Close

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Please note: When browsing your files in Dropbox, you will see a "NVR8-8580" or "NVR16-8580" folder. Your snapshots will be saved here. Click a snapshot to display.

Before activating the cloud function, we recommend that you create a Dropbox account using the same email address and password used for your NVR. On your computer go to www.dropbox.com, input your name, email address and password, agree to the terms & conditions then click the sign up button (don't log out of your account after sign up).

Cloud Storage: Click the drop down menu to enable.

Channel: Leave the default selection (all cameras will be activated).

Activate Cloud: Click this to activate then click "OK" to confirm.

1. After a short moment, you will see a message on-screen. An activation link has been sent to your email (the email address used to receive email alerts).

2. On your computer, check your email then click the link within to activate.

3. Open the HomeSafe View app on your mobile device, tap the "Menu" button (top left) then tap "Cloud". Tap your device shown then scan the QR code displayed on your computer. A code will be displayed within the app, tap "Authorize". A message will appear stating authorization successful. Tap "OK" to finish.

With the cloud function enabled, you need to instruct your NVR to send alerts to the cloud:

1. In the Main Menu, click "Alarm".

2. Select the camera that you want to send to the cloud.

3. Click the "Send to Cloud" checkbox then click "Save".

Use the "Copy" function to apply cloud alerts to the other cameras available.

System: General
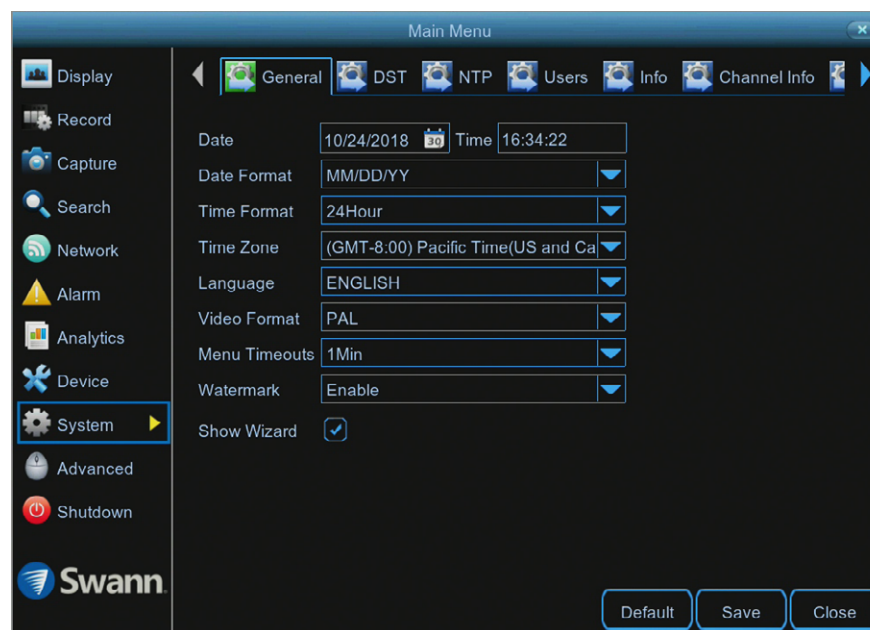
- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Date: Click the calendar icon to change the date.

Time: Click the dialogue box to change the time. Click the drop down menu to select AM or PM.

As NTP is enabled by default, the date and time should always remain accurate.

Date Format: Click the drop down menu to select the preferred date format.

Time Format: Click the drop down menu to select the preferred time format (the playback interface will display in 24-hour time only).

Time Zone: Select a time zone relevant to your region or city.

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 connected. If this isn't required, click the drop down menu to disable.

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

System: DST

The DST (Daylight Saving Time) function allows you to select the amount of time that Daylight Saving has increased by in your particular time zone or region.
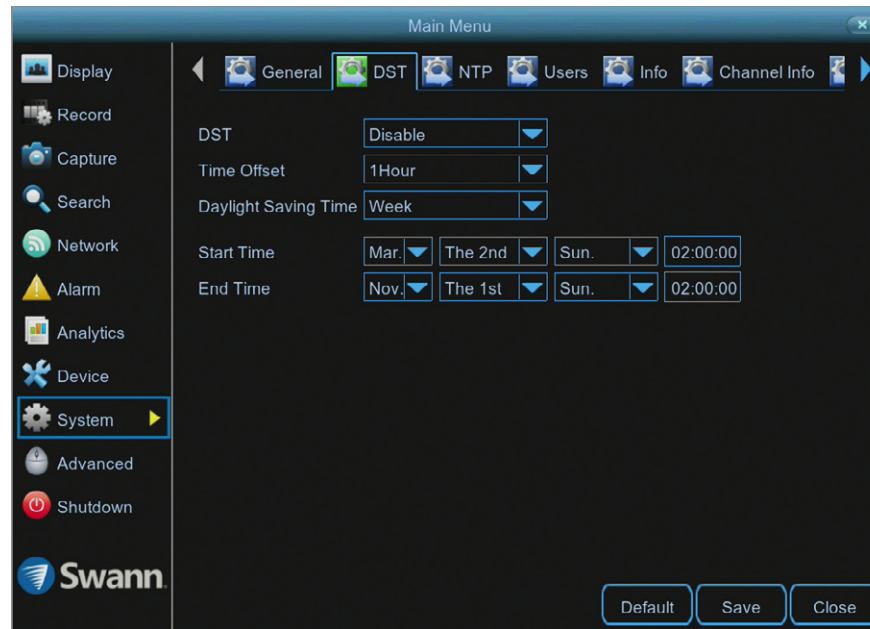
Main Menu

- Display
- Record
- Capture
- Search
- Network
- Alarm
- Analytics
- Device
- System ▶
- Advanced
- Shutdown

◀ General DST NTP Users Info Channel Info ▶

DST	Disable ▼
Time Offset	1Hour ▼
Daylight Saving Time	Week ▼

| Start Time | Mar. ▼ | The 2nd ▼ | Sun. ▼ | 02:00:00 |
| End Time | Nov. ▼ | The 1st ▼ | Sun. ▼ | 02:00:00 |

Default   Save   Close

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

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.

Daylight Saving Time: 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: NTP

The NTP (Network Time Protocol) function allows your NVR to automatically sync its clock with a time server. This gives it the ability to constantly have an accurate time setting (your NVR will periodically sync automatically).
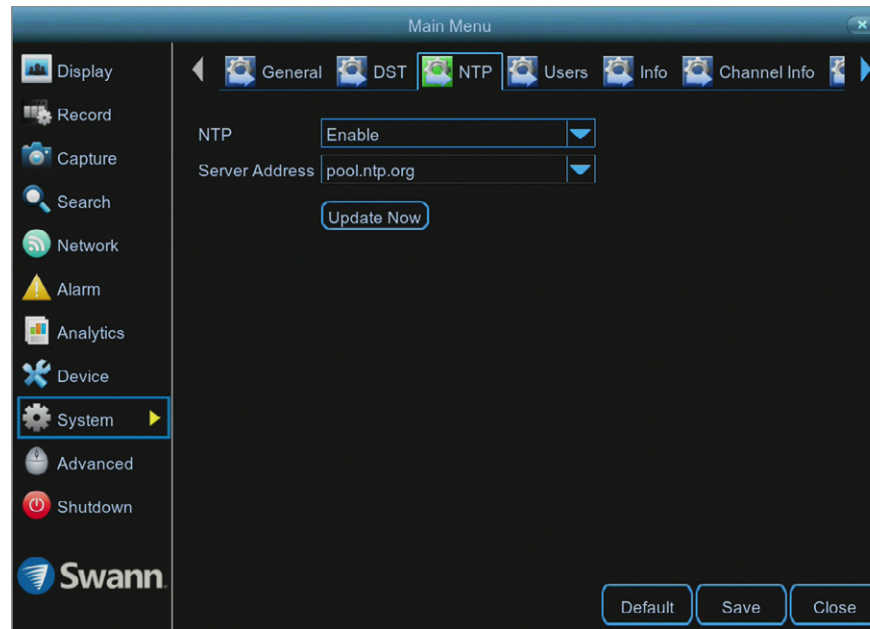

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

NTP: This is enabled by default.

Server Address: The default time server will work in most circumstances. If for some reason the NVR's clock is not syncing, select a different time server.

Update Now: If for some reason the date and time are not correct, click this button to update then click "OK" to continue.

System: Users
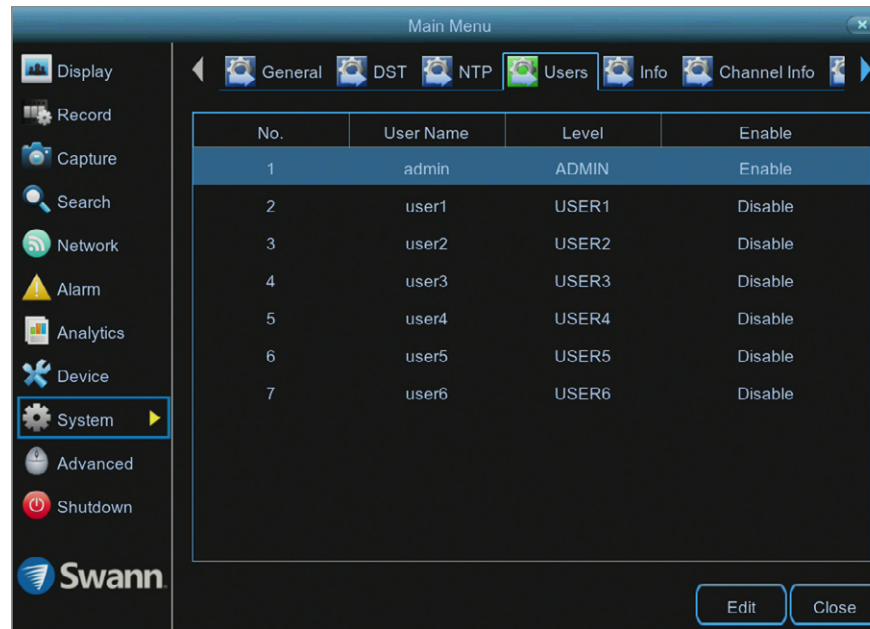
To change your NVR's password, click the "Edit" button. The password has to be a minimum of six characters and can contain a mixture of numbers and letters. Enter your new password again to confirm.

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.
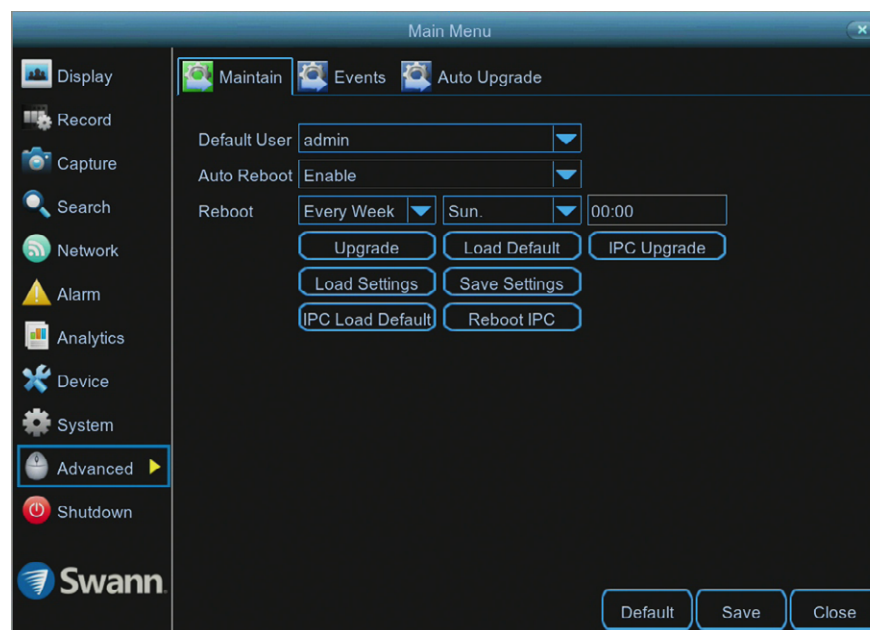
Advanced: Maintain

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

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

Auto Reboot: It's recommended leaving this option enabled, as it maintains the operational integrity of your NVR.

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

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

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

IPC Load Default: Click this button to restore the camera's default settings.

Click the checkbox for the camera that you want to restore or click "Select All" to select all cameras. Click "OK" to continue. A message will appear on-screen and the camera will momentarily reset. Click "Exit" to close.

Load Default: Click this button to restore your NVR's default settings. Click "All" then click "Save". The Startup Wizard will appear on-screen after reboot.

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

Reboot IPC: Click this button to reboot the camera. Click the checkbox for the camera that you want to reboot or click "Select All" to select all cameras. Click "OK" to continue. A message will appear on-screen and the camera will momentarily reset. Click "Exit" to close.

(continued on next page)
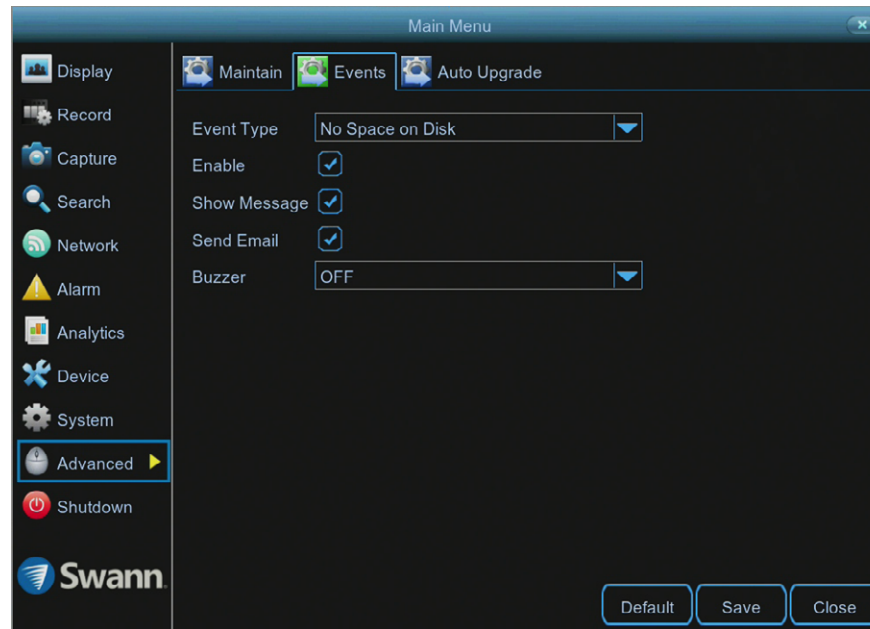
Advanced: Maintain
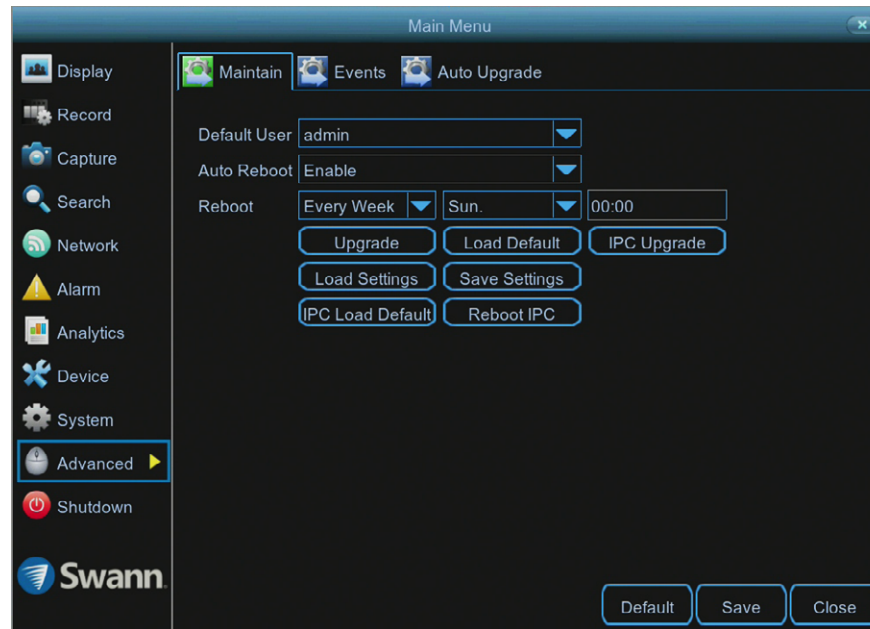
- Don't forget to click "Save" to apply settings.

- Click the "Default" button to revert back to default settings.

- Click the "Close" button to exit the Main Menu.

IPC Upgrade: Click this button to upgrade the camera's firmware from a USB flash drive. Select the firmware file, click the checkbox for the camera that you want to upgrade or click "All" to select all cameras then click "OK" to confirm. When the firmware upgrade has completed, the camera will momentarily reset. Click "OK" to close. It's recommended to reboot your NVR to maintain operational integrity.

Please note: To restore <u>all</u> default settings on your NVR, you need to restore your NVR <u>and</u> camera (changes to image settings are stored on the camera).

Advanced: Events

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

- Don't forget to click "Save" to apply settings.
- Click the "Default" button to revert back to default settings.
- Click the "Close" button to exit the Main Menu.

Event Type: Select the event type that you would like to change.

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

Show Message: Click the checkbox if you like to disable the on-screen message for the event selected.

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

Alarm Out: Click the checkbox to enable the alarm output for the event selected.

Please note: When your NVR detects an exception, it will automatically send an alert to the HomeSafe View app (alarm notification has to be enabled within the app - see "Alarm Mode" in the HomeSafe View manual for more information).

Advanced: Auto Upgrade
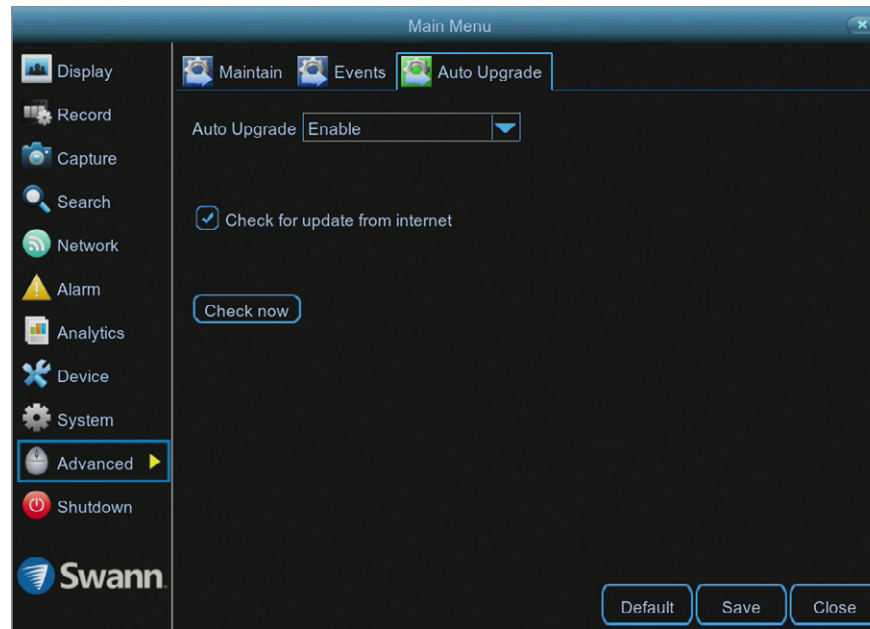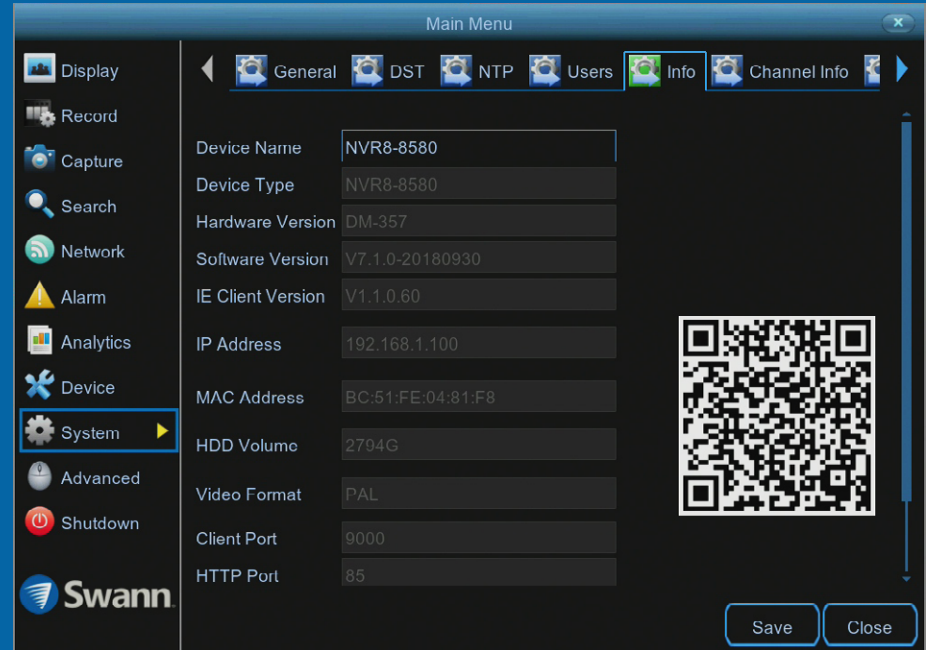
Auto Upgrade: By default, your NVR will automatically download and install new firmware when available. Click the drop down menu if you would like to disable this feature.

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.

System Status
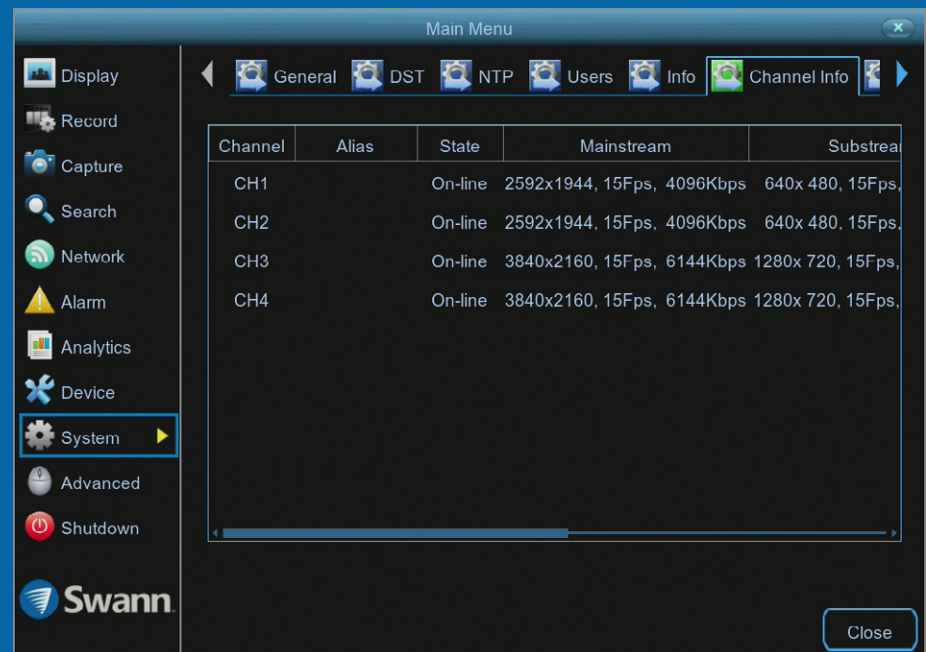
The various status tabs give you an overview of the various settings and options that have been selected for your NVR to function. Each action that your NVR performs as well as events detected are logged, which you can search and view. If you call our helpdesk for assistance, our staff may ask you to access these tabs to assist them in solving any technical issues that you may be having.

Search: Log

Each action that your NVR performs as well as events detected are logged. These log files can be searched, viewed and copied to a USB flash drive for safe keeping.
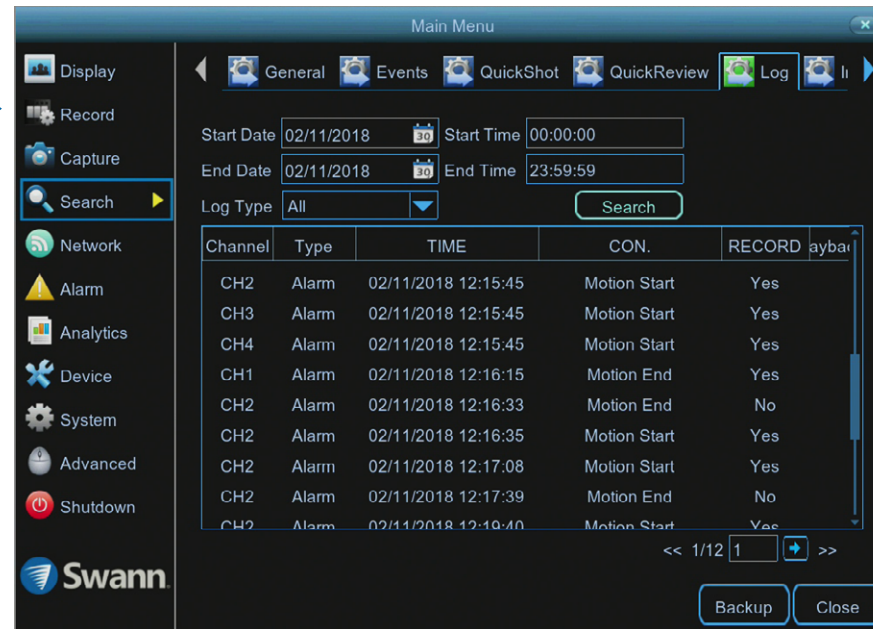
Start/End Date: Click the calendar icon to select the month, year and date that you would like to search on.

Start/End Time: You can leave the default selection or you can click the dialogue box to enter a specific start and end time.

Log Type: Leave the default selection or click the drop down menu to select a specific action that you would like to search for.
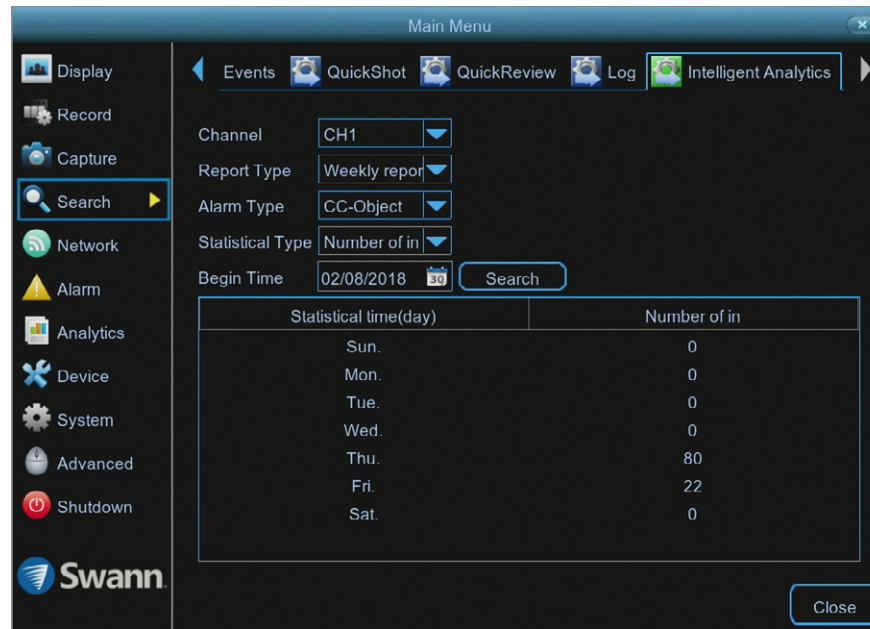
Search: Click this to display a list of log files that match your search criteria. Double-click a file to display information about that log.

Backup: Click this to copy the log files that match your search criteria. Insert a USB flash drive to your NVR then click "Save". You have the choice of formatting the flash drive or creating a new folder if required. Click "OK" to save then click "Close" when finished.

Search: Intelligent Analytics

With the Cross Counting analytic function enabled, you can perform a daily, weekly, monthly or yearly report, showing objects and pedestrians that have crossed a counting line.

Channel: Select a camera that has the Cross Counting function applied.

Report Type: Select the report type that you want to display. You can perform a daily, weekly, monthly or yearly report.

Alarm Type: Select the alarm type that you want to display (this will depend on the rule type that has been applied to a counting line).

Statistical Type: Select the counting direction that you want to display.

Begin Time: Click the calendar icon to select the month, year and date that you would like to search on.

Search: Click this to display the search results.

System: Info

This tab displays technical information about your NVR as well as your device ID and QR code. If you call 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.
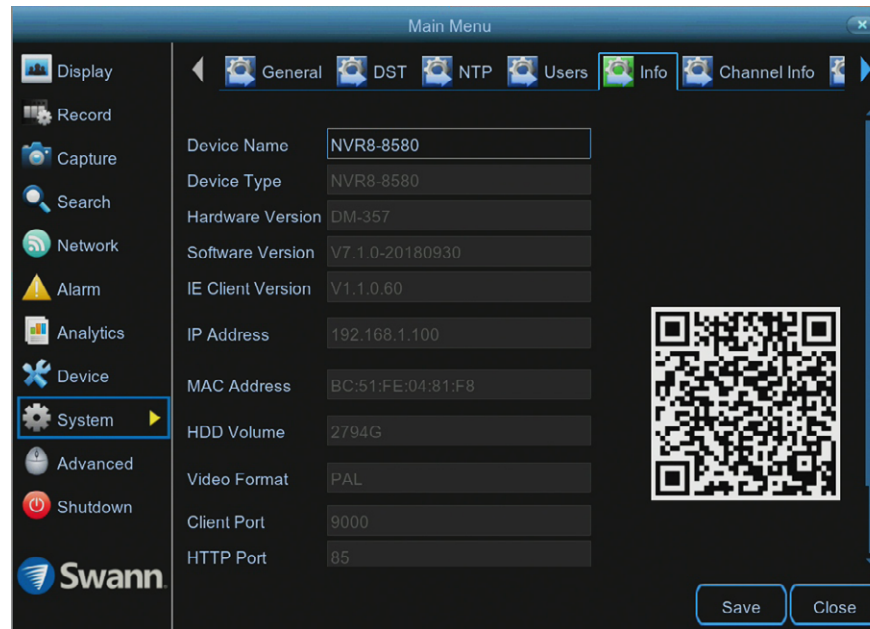
Device Name: Click the dialogue box to rename your NVR (if required).

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

If you call 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.

System: Channel Info
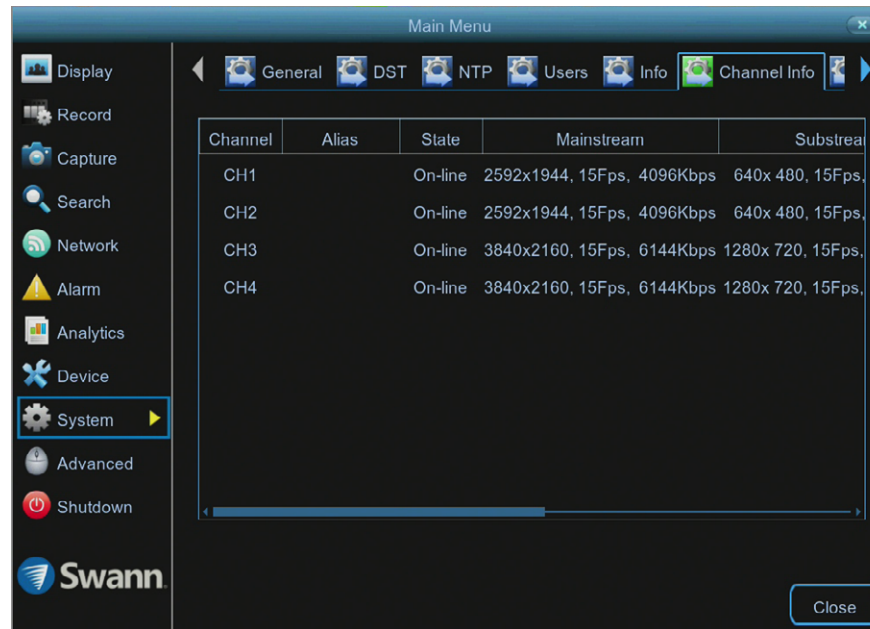
Displays the Mainstream, Substream and Mobilestream settings used for each camera connected.

If you call 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.

· Click the "Close" button to exit the Main Menu.

System: Record Info
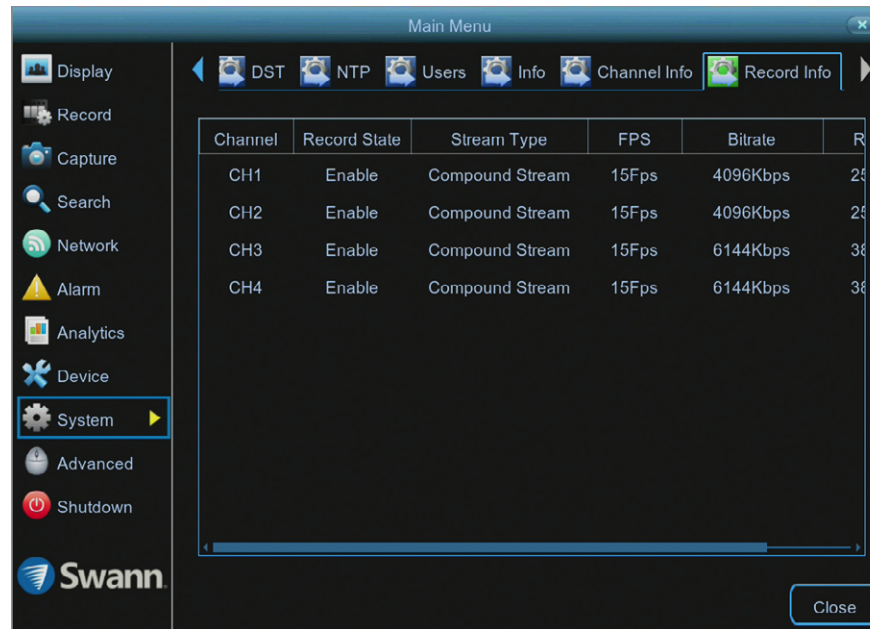
Displays the recording settings for each camera connected.

If you call 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.

- Click the "Close" button to exit the Main Menu.

Glossary

3D-Noise Filter: Is an enhanced form of digital noise reduction. The advancement in technology enables noise to be filtered even more effectively from the image, even in low light conditions.

50Hz: Is the mains frequency used in the UK, Australia and most European countries.

60Hz: Is the mains frequency used in the United States, Canada and some Latin American countries.

AGC (Automatic Gain Control): In low light conditions, the camera will automatically boost the gain control so that people and objects can be seen more clearly. The advantage of this technique is that your camera will produce images in much lower light conditions. The downside is that the amplification will increase the video noise visible.

**AHD:** Is an analogue high definition closed-circuit television video surveillance standard that uses coax cable to transmit HD video from security cameras to DVRs. AHD supports 720p and 1080p HD video resolutions.

Anti-flicker: As fluorescent lighting operates at the same frequency as your mains power, this will cause luminance flicker when viewed through the camera. Enabling the anti-flicker options available can reduce or eliminate the flicker that is visible.

Anti-smearing: A smear effect means that a bright vertical line originating from a bright light source appears in the image. This happens especially with back lighting. Enabling this allows people and objects to be seen correctly against a very bright background.

Auto DNS (Domain Name System): A service that stores domain names and translates them into internet protocol addresses. For example, www.google.com will have a DNS server address that is equivalent to 74.125.224.72. The DNS server is automatically provided by your internet service provider.

Auto-focus: Will adjust the lens of your camera to focus on an object being viewed.

Bandwidth: In computer networks, bandwidth is used as a synonym for data transfer rate, the amount of data that can be carried from one point to another in a given time period (usually a second). Network bandwidth is usually expressed in bits per second (bps).

Bitrate: The amount of data that your DVR or NVR will use to record video. The higher the bitrate, the more space each recording will consume on the hard drive. Increasing this will also consume more bandwidth when streaming. Unit of measurement is either Mbps (megabits per second) or kbps (kilobits per second).

BLC (Back Light Compensation): Improves exposure of an object that is in front of a light source. It does this by splitting the whole image into different regions, and then applying separate exposure levels to those regions.

Brightness: This changes how light the image appears to be. Its value is different in darkness to that in daylight. For example, the lights from car headlights appears to be brighter at night.

CDS: This allows the image to be set by the camera's light sensor. A CDS sensor is basically a resistor that changes its resistive value (in ohms) depending on how much light is shining onto the sensor.

Cloud: Cloud computing is a model for delivering information technology services in which resources are retrieved from the internet through web-based tools and applications rather than a direct connection to a server. Services such as Dropbox, Google Drive and Microsoft OneDrive are just some of the examples of cloud computing.

Glossary

Compound Stream: Indicates that your DVR or NVR is recording video and audio at the same time.

Contrast: This increases the difference between the blackest black and the whitest white in the image. Without contrast you wouldn't have an image because there wouldn't be any differentiation between light and dark.

Covert: The camera will detect motion and trigger your DVR or NVR to record, but you will not see an image of the camera in Live View mode.

DDNS (Dynamic DNS): Is a service that converts IP addresses into host names (a host name is a lot easier than trying to remember an IP address). It also supports dynamic IP addresses, such as those assigned by a DHCP server. This makes DDNS a good fit for home networks, which normally receives an IP address from the ISP that will change occasionally.

DHCP (Dynamic Host Configuration Protocol): Uses an appropriate server or router to enable dynamic assignment of an IP address to a device connected to the network.

Display Resolution: Is the number of pixels supported by your TV or VGA monitor or the output signal of a viewing device, e.g. your DVR or NVR.

DNS Server: Is a standard technology for managing public names of web sites and other internet domains. DNS technology allows you to type names into your web browser which your computer will automatically find the address on the internet.

DST (Daylight Saving Time): Is the period of the year when clocks are moved one hour ahead.

DualStream: A process where your DVR or NVR will record both Mainstream and Substream video at the same time.

Format: Is a command that prepares a storage device such as a USB flash drive or hard drive to hold data.

Firmware: The software that operates a discrete device (e.g. your smartphone). It is referred to in this way rather than software as it is integral to the operation of the device.

Frame Rate: The measurement of the rate that pictures are displayed to create a video feed. The unit of measurement is frames per second (fps).

Gateway: Is a node or router that routes traffic from a device on your home network to the outside network that is providing access to the internet.

H.264+: Mass video data requires increased storage capacity. To resolve this issue, video compression technologies are used to reduce the data while maintaining image quality. H.264+ is an innovative encoding technology aimed at surveillance video.

H.265: Is a video compression standard and one of several potential successors to the widely used H.264. It offers double the data compression ratio at the same level of video quality.

Hardware: A physical device such as your DVR or NVR.

HDD (Hard Disk Drive): Is a storage device located inside your DVR or NVR. It is where all data is kept, saved and stored.

HTTP Port (Hypertext Transfer Protocol): This port is used to log into the web browser interface of your DVR or NVR (if available) using a web client, such as Internet Explorer.

Hue: Is somewhat synonymous to what is usually referred to as colors. By altering the hue, you can change the color mix of the image.

IP Address: The address of a device attached to the network. Each device on the network must use a unique address.

Glossary

Live View: Is the default display mode for your DVR or NVR. Each camera connected will be displayed on-screen.

MAC Address: Is a unique identifier for network hardware. Can also be used as a super password if you have forgotten your current password.

Mainstream: Is the video stream that your DVR or NVR will display and record.

Mask: Is used to obscure part of your image for privacy. It can also be used to minimise false triggers when your DVR or NVR detects motion. Any area obscured won't be shown live or recorded.

Menu: Is where you control the various actions and options that are available on your DVR or NVR.

Motion Detection: Is the main method used by your DVR or NVR to detect motion and is an essential part of your security system. It does this by comparing one frame of video with the next. A certain amount of difference between these two frames is interpreted as motion.

NAS (Network Attached Storage): A network device with one or more HDDs that other network devices can use as if the storage was connected directly.

NIC (Network Interface Controller): The hardware component that allows a device to connect to a network. Both wired and wireless NICs exist for these respective purposes.

NTP (Network Time Protocol): Is used to synchronize your DVR or NVR's clock automatically with a network time server. Most time servers are on the internet.

NTSC: Is the video system used in North America, Canada and some Latin American countries. In NTSC, 30 frames are transmitted each second.

Optical Zoom: Is a true zoom feature. It allows you to zoom in (or out) on an object to get a closer view by using the camera's lens.

OSD (On-screen Display): Display information from the camera such as time, date and camera name on-screen.

Overscan: 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. This is not required for modern Plasma and LCD TVs as the image is digitally processed to display the correct aspect ratio.

Pack Duration: Instructs your DVR or NVR to split recordings into discrete units. Each unit can be a maximum of 60 minutes in length. Your DVR or NVR will play these as one continual video.

PAL: Is the video system used in the United Kingdom, Australia and most European countries. In PAL, 25 frames are transmitted each second.

Post-record: Instructs your DVR or NVR to record for a set period of time after an event has occurred.

PPPoE (Point-to-Point Protocol over Ethernet): Is the most common method that your router uses to login to your ISP to enable your internet connection. This setting also exists on the DVR or NVR, but is only for advanced users as the configuration required is difficult to complete and requires a modem-only device (or a modem/router set to modem-only).

Pre-record: Allows your DVR or NVR to record for a number of seconds before an event occurs.

Privacy Zone: See Mask for information.

Resolution: The measure of detail that can be seen in an image. The higher the number, the greater the detail available.

Glossary

RTSP (Real Time Streaming Protocol): A network protocol designed to transmit video and audio information over networks and the internet in real time.

Saturation: This alters how much color is displayed in the image. The higher the saturation, the more bright and vivid colors will appear.

Server Port: Is a logical connection place and specifically, using the internet protocol TCP/IP, the way a client program specifies a particular server program on a computer in a network.

SEQ: Puts the DVR or NVR in sequence mode. This will repeatedly cycle through each video channel for a predetermined time in Live View mode.

S.M.A.R.T. (Self-Monitoring, Analysis & Reporting Technology): This is an automatic system on modern HDDs and SSDs to detect potential drive errors before they occur.

SMTP (Simple Mail Transfer Protocol): This is used to send an outbound email (e.g. from you DVR or NVR to an email address).

SMTP Port: Is the port number used by a SMTP server to listen for email send requests. This is specified by your email provider.

SMTP Server: This is the address of the server used for SMTP. Usually in the form of a web address (e.g. smtp.gmail.com).

Software: A set of instructions that runs on a computing device.

SSID: Is the technical term for a wireless network name. When you setup a wireless network, you give it a name to distinguish it from other networks in your neighbourhood.

SSL (Secure Socket Layer): A secure method for connecting to servers. In the context of the DVR or NVR, primarily used for email server connections.

Static: When referring to IP addresses, this is where a device's IP address has been manually entered. Sometimes used on older devices without UIDs to prepare for internet access.

Static DNS: In some circumstances, your internet service provider may require you to use a static DNS instead of an auto DNS on your router.

Substream: Is the video stream that your DVR or NVR will send to remote devices via the network or internet. Video quality is reduced to make it easier to send.

Subnet Mask: Used to define which part of the IP address refers to the network location.

Time Server: Is a server that reads the actual time from a reference clock and distributes the information to its clients on the network.

Time Zone: Is a region that observes a uniform standard time for legal, commercial, and social purposes. It is convenient for areas in close communication to keep the same time.

Timestamp: Is a sequence of characters or encoded information identifying when a certain event occurred, usually giving date and time of day, sometimes accurate to a small fraction of a second.

TVI: Is a digital signal processing and transport technology for video used in HD security cameras. TVI cameras currently support 1080p video resolution using the same coaxial cabling techniques used by traditional analogue CCTV cameras.

UID (Unique Identifier): Is an alphanumeric string that is associated with a single entity within a given system. By entering your UID into the mobile app or computer software, this allows you to communicate with your DVR or NVR without having to remember IP addresses or port numbers.

Glossary

UPnP (Universal Plug and Play): A network protocol designed to allow network connected devices to automatically configure the router for the purposes of remote access. Not required to be enabled when using UID.

VCA (Video Content Analysis): Is a new method for triggering recording and events. This uses the image processing system of the DVR or NVR & camera to set specific triggers for recording (such as line crossing or intrusion). This system does use more processing power, therefore it may not be available on all devices.

Video Loss: Is regarded as a potential alarm event and is considered to occur any time your DVR or NVR doesn't receive an active video signal from any one of its video inputs.

Video Quality Diagnostics: Enables your DVR or NVR to alert you if the camera has a blurred image, abnormal brightness or unwanted tint in the image due to the lighting and white balance of the camera (known as Color Cast).

Video Stream: Indicates that your DVR or NVR is recording a video stream only.
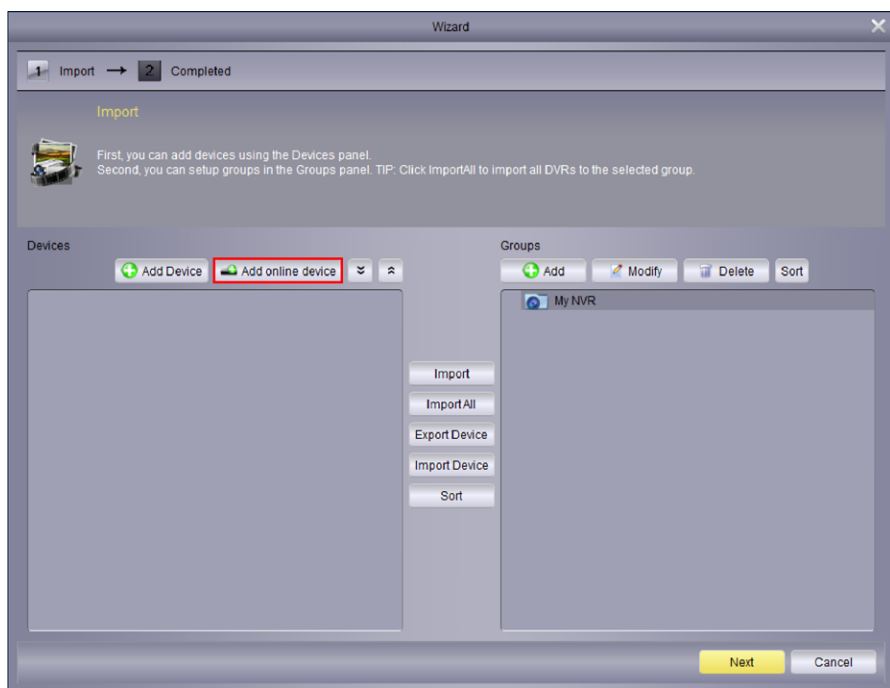
WDR (Wide Dynamic Range): Is technology to balance out images that have a large dynamic range. An example of this situation would be if an indoor camera were pointing towards a window or building entrance. The image produced by the camera during the day would be extremely washed out due to the high brightness of the incoming light.

Password Recovery using HomeSafe View

1. When you first run HomeSafe View, you will see an introduction screen. Click "Next" to continue. You will see the following screen:


2. To display your NVR connected to your router, click the "Add online device" button as shown above (if your NVR does not appear, check that your device is connected to your router using the supplied Ethernet cable).
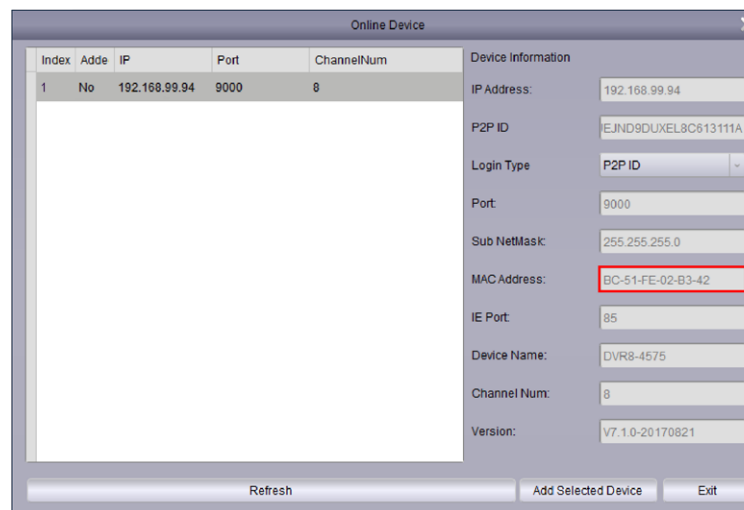
3. You will see this screen as shown above. Click your NVR to display its MAC Address. This is your recovery code that is used to reset the password. Write this down and replace the dashes (-) with colons (:).
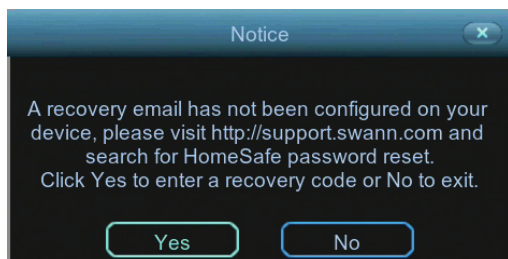
4. Now it's time to enter the recovery code on your NVR. Right-click the mouse on the Live View screen to display the Menu Bar then click "Main Menu". The login prompt will appear on-screen:
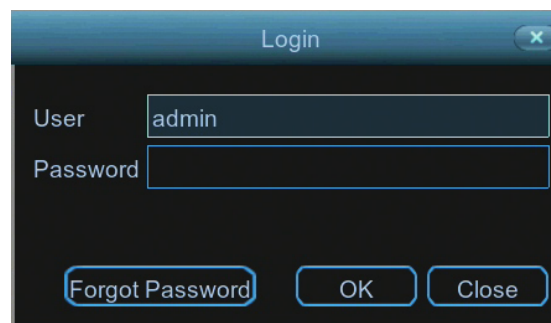

(continued on next page)
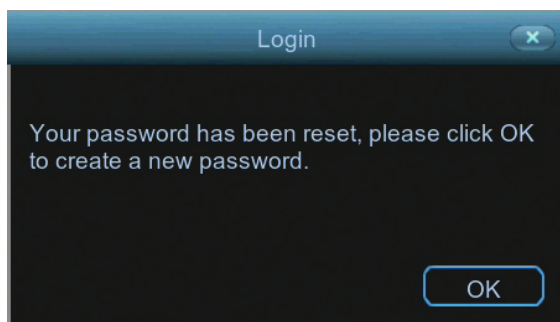
Password Recovery using HomeSafe View

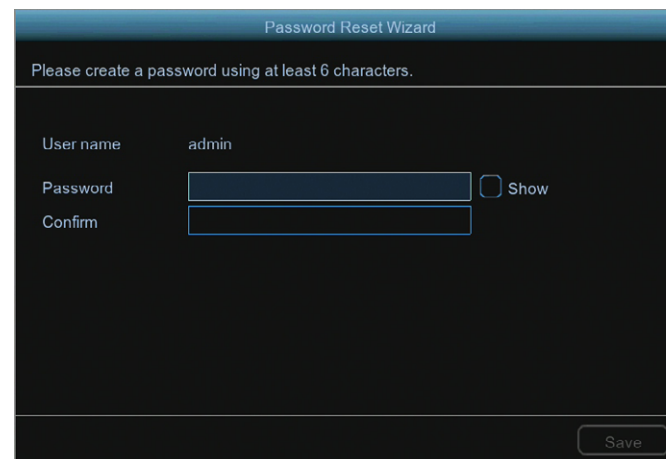**5.** Click "Forgot Password". A message will appear on-screen:

Notice

A recovery email has not been configured on your device, please visit http://support.swann.com and search for HomeSafe password reset.
Click Yes to enter a recovery code or No to exit.

Yes   No

Click "Yes" to continue. The recovery code prompt will appear on-screen:

Login

Please enter the recovery code.

Recovery code:

OK   Close
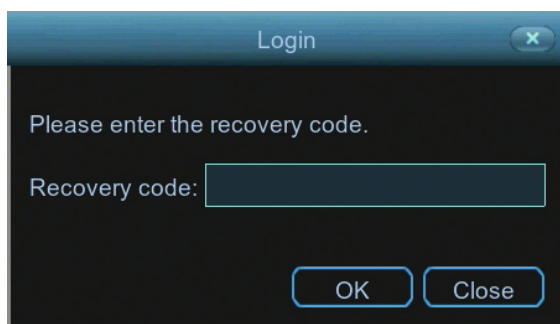
Click the dialogue box, enter the recovery code (MAC Address), for example BC:51:FE:05:36:63 then click "OK". A message will appear on-screen stating that the password has been reset. Click "OK" to continue.

Login

Your password has been reset, please click OK to create a new password.

OK

6. You will now be prompted to enter a password:

Password Reset Wizard

Please create a password using at least 6 characters.

User name   admin

Password   [   ]   ☐ Show

Confirm   [   ]

Save

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 easily known to others. Write down your password for safe keeping. When finished click "Save". You will now see the following screen:
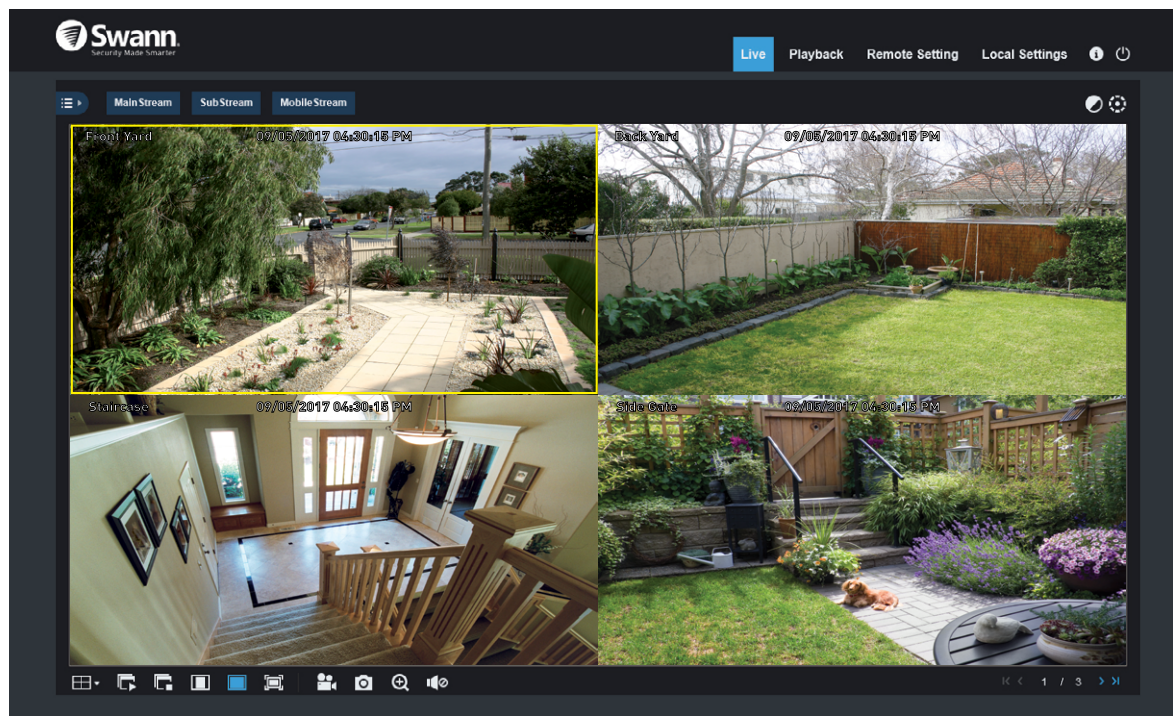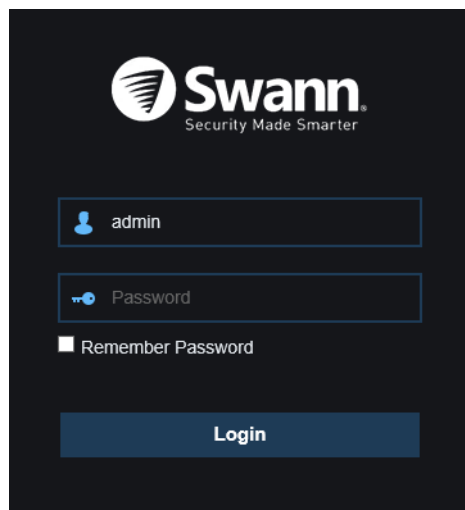
Notice

Are you sure you want to Save and Close the Password reset wizard?

OK   Cancel
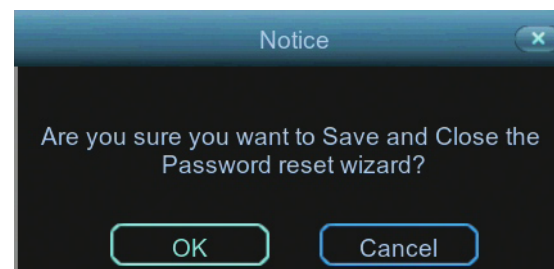
Click "OK" to finish.

Don't forget to write down your password: _____

If you prefer to watch our tutorial video, click this <u>link</u>.

Use Internet Explorer to connect to your NVR

When connected to your home network, you can use Internet Explorer to connect to your NVR. From here you can access Live View mode, change some camera and system settings and to search/play previously recorded videos.

1. To launch Internet Explorer, click the search option in Windows and type "internet explorer". Click the icon to run.

2. In the address bar, input your NVR's IP address along with the port number, for example http://192.168.0.2:85. A plug-in request will be shown on-screen, click the "download" link then click "Run" to commence installation. After a short moment, the plug-in setup will appear on-screen. Close Internet Explorer then click "Install" to install the plug-in.

3. Open Internet Explorer again and input your NVR's address along with the port number. Your NVR's login screen will appear (as shown above left). Input your NVR's password then click "Login".

4. Live View mode is the default display (as shown above). The look and feel is very similar to your NVR's user interface. The tabs on the top right allow you to access Playback mode and to change camera and system settings. The controls on the bottom mimic the functions on your NVR's Menu Bar and Camera Toolbar.

Please note: Browsers such as Google Chrome, Firefox and Microsoft Edge are not supported.

Frequently Asked Questions

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

No, your NVR doesn't have the option to play video(s) from a USB flash drive. You will have to play them on your computer or mobile device.

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

The largest hard drive you can install is 6TB (terabyte). We recommend that you purchase a drive that is surveillance rated such as the Western Digital Purple™ and Seagate Skyhawk™ 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 68).

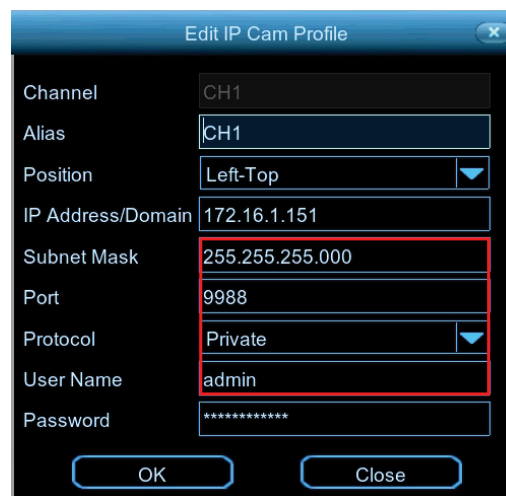**Can I use my own email address and server instead of creating a new one?**

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.

One or more cameras display "Off-line" in Live View mode.

The reason this is happening is because your NVR cannot verify the camera that is connected to the camera input. Either a setting has changed (such as

password) or if you have added a camera that is connected to your router, it may have been accidentally disconnected from your router. Try the following:

1. Right-click the mouse in Live View mode then click "Main Menu".

2. On the "IP Channel" tab, click the "Edit" button for the channel that is displaying the "Off-line" message.

3. You will see the following screen:

4. Make sure the settings highlighted above match what you see on-screen. Input the default password - admin then click the "OK" button.

5. A green status button will appear indicating successful connection.

For cameras connected directly to your router, check cables and connections to make sure they are not disconnected.

Can I change the camera's default password?

Yes you can, go to our support center support.swann.com to download our Device Configuration Tool. Search for - 7450/8580 Camera Configuration.

Warranty Information

USA

Swann Communications USA Inc.

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Santa Fe Springs CA 90670

USA

Australia

Swann Communications

Unit 13, 331 Ingles Street

Port Melbourne Vic 3207

Australia

United Kingdom

Swann Communications LTD.

Stag Gates House 63/64 The Avenue

SO171XS

United Kingdom

Warranty Terms & Conditions

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from its original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centres. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of your device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

For Australia: Our goods come with guarantees which cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to major failure.

Help & Resources

Visit Swann Support Center at support.swann.com. You can register your product for dedicated customer support, download guides, find answers to commonly asked questions, and more.

Product Registration

Customer Support

Product Manuals

Frequently Asked Questions

Support Community

Tell us what you think!

We are constantly working to improve the quality of our documentation, and we would appreciate your feedback. Click here to complete a short survey.

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Security Made Smarter

Firmware Version: V7.1.0-20180930

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