



PRO-SERIES HD

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 DVR

Password Information

This DVR does not have a default password. A password is created during the Setup Wizard. If password protection has been enabled and you have forgotten your password, your DVR's MAC address (without the colons) can be used to create a new password. Please contact Swann Technical Support (support.swann.com) for further assistance.

About this Manual

This instruction manual is written for the DVR-4500 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.

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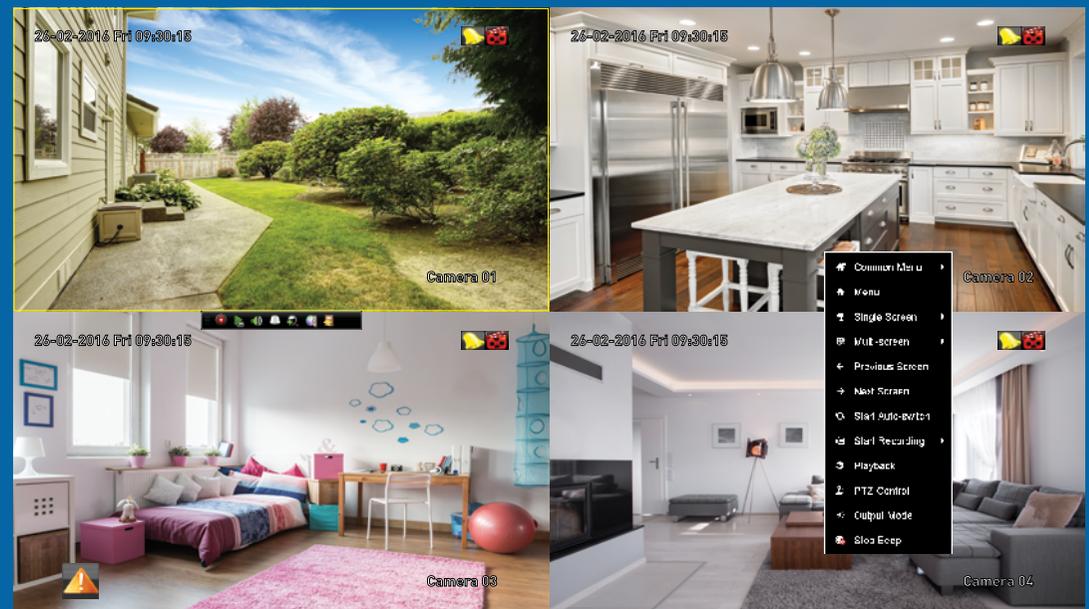
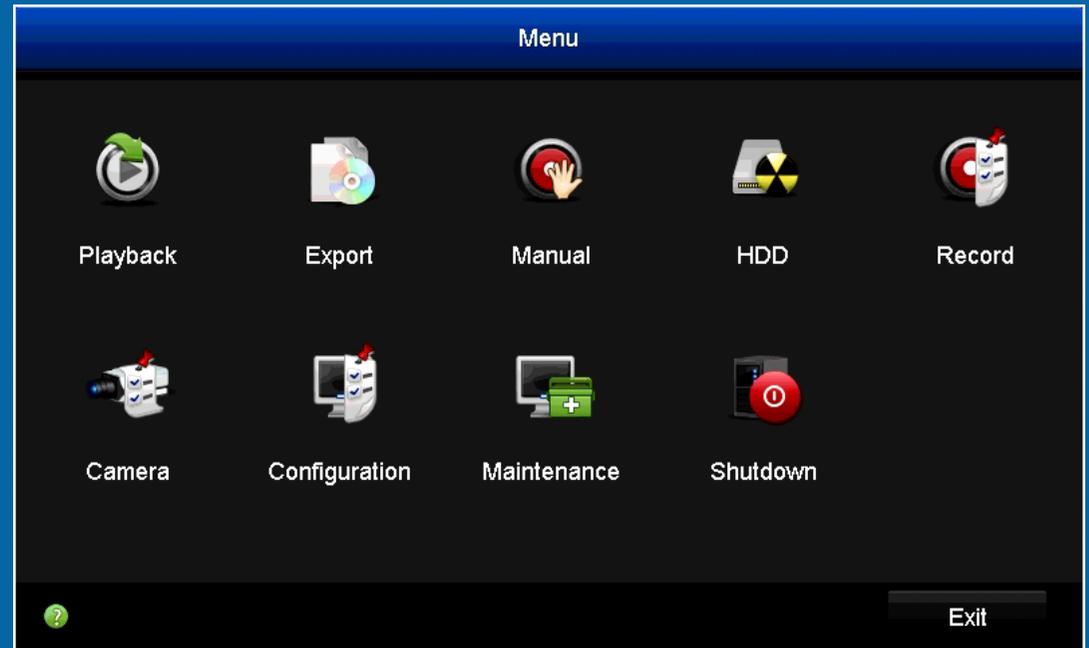
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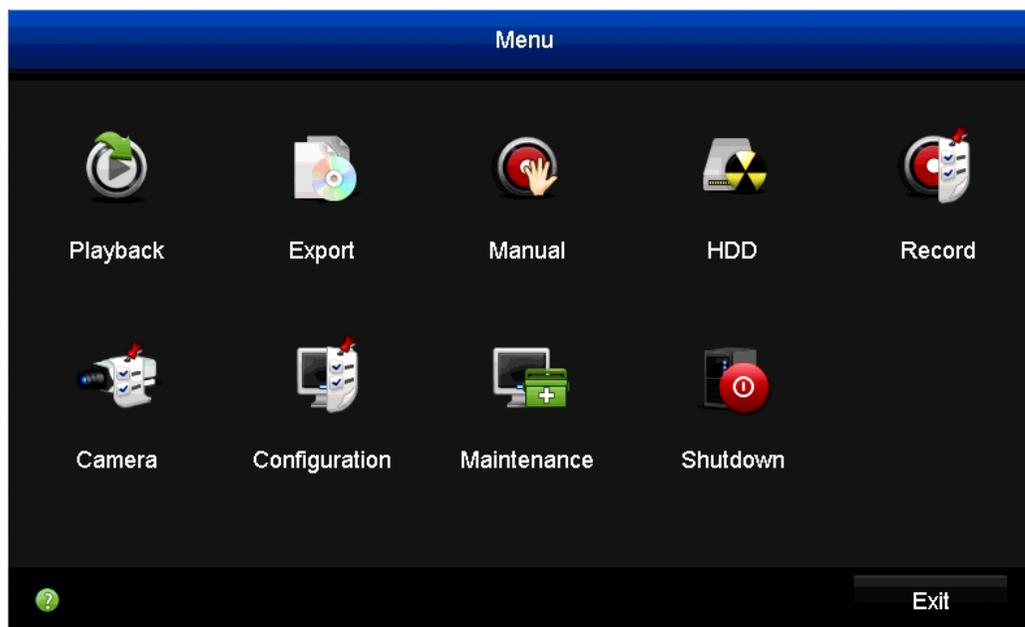
Menu

The Menu is where you control the various actions and options that are available on your DVR. You can also access previously recorded video for playback and to export 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 DVR.



Menu Layout

To access the Menu, right-click the mouse then select "Menu". Hover the mouse cursor over each button to display a description. To exit the Menu click "Exit" or right-click the mouse.



To shutdown or reboot your DVR, or simply log out of the current user account, click the "Shutdown" button. To ensure the integrity of your data and recordings, always select "Shutdown" when powering off your DVR.

Playback: Click this to access all normal and event recordings. There are several playback modes to choose from, such as Normal, Event, Tag, Smart and Sub-periods. You can also play video files that have been copied to a storage device such as a USB flash drive.

Export: Click this to copy footage from your DVR. You will need a compatible storage device such as a USB flash drive to copy the data.

Manual: Access manual controls for the recording functions of your DVR.

HDD: Where you'll be able to access information about and adjust the settings of your hard drive.

Record: Access recording options, such as quality, resolution, bitrate and the recording schedule.

Camera: Adjust image settings such as brightness and contrast and access to Video Quality Diagnostics to alert you to blurred images and abnormal brightness. Controls for PTZ, Motion, Privacy Mask, Video Tampering and VCA (Video Content Analysis) are also available here.

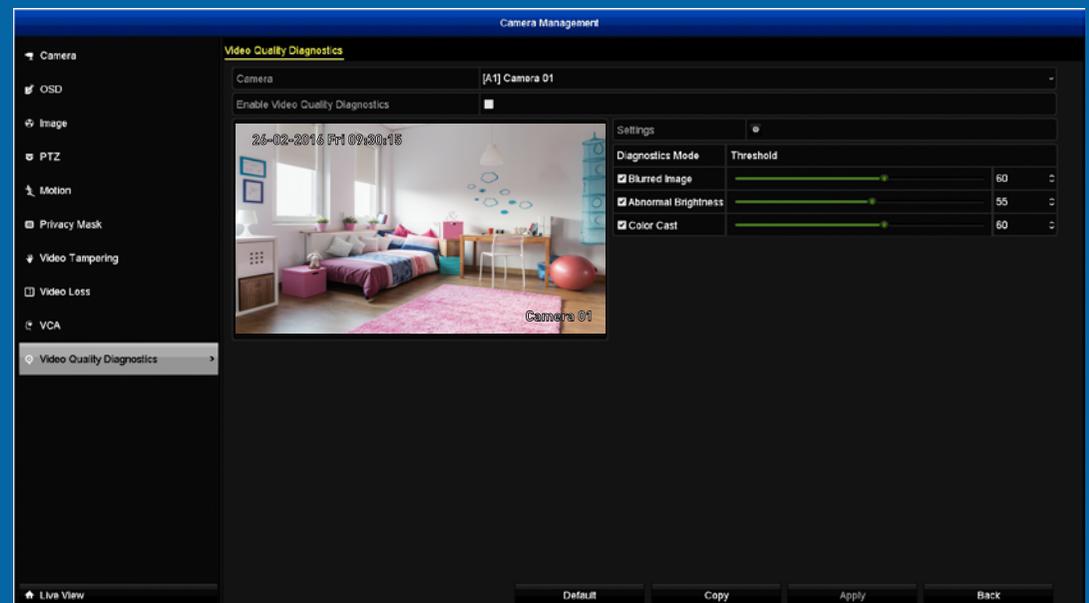
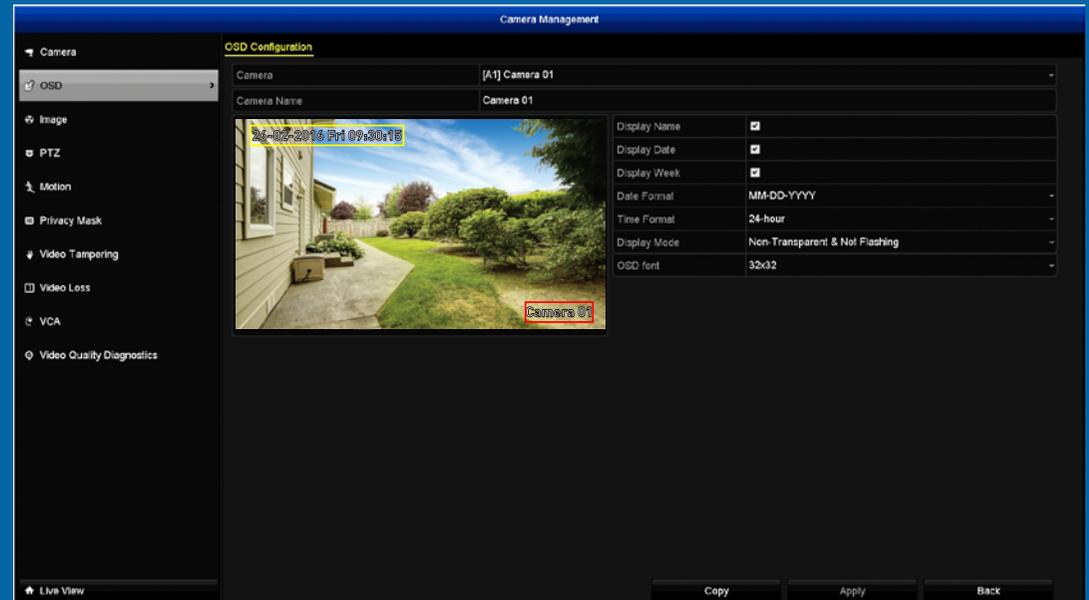
Configuration: Access and configure many settings of your DVR, including network settings, adjusting the time & date and creating or altering user accounts.

Maintenance: For accessing system information, log information and to upgrade the firmware.

Shutdown: To shutdown, reboot or log out of your DVR.

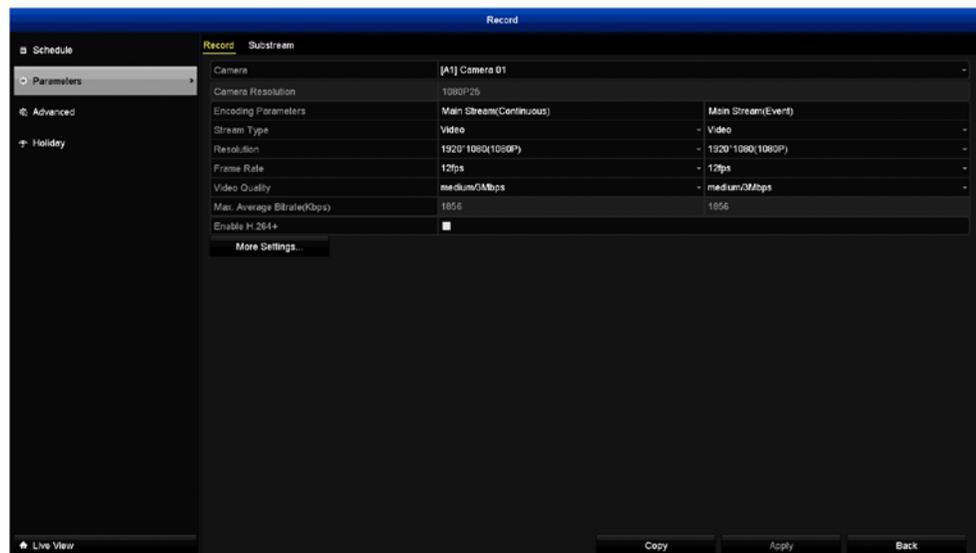
Camera Configuration

The camera configuration options are available in the “Record” and “Camera” menus that are accessible from the Menu. You can change the resolution and bitrate as well as image settings for brightness, contrast and saturation. Your DVR has several controls for Motion, Video Tampering, Video Loss, Video Quality Diagnostics and VCA (Video Content Analysis) as well as the ability to apply one or more masks for privacy.



Record: Parameters - Record

The Parameters function allows you to change the resolution and bitrate for each camera connected. By default the recording resolution is automatically selected to fit in with the capabilities of the provided cameras.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Camera Resolution: Displays the camera's resolution.

Encoding Parameters: You can change settings for both Continuous and Event recording (we recommend to have the same settings for both).

Stream Type: By default "Video" is selected. Select "Video & Audio" if you have an audio source connected to your DVR's audio input.

Resolution: By default the recording resolution is automatically selected to fit in with the capabilities of the provided cameras, however you can change to a lower resolution if needed.

Frame Rate: The number of frames per second (fps) that your DVR will record. The default is 12fps but can be changed to Full Frame when selecting a lower recording resolution.

Video Quality: The amount of data your DVR will use to record video.

Lowering the quality reduces the file size of each video saved.

Enable H.264+: Click this option to use less hard drive space when recording video while maintaining the same visual quality. This will also benefit remote playback when using SwannView Plus.

Click "More Settings" to reveal the following options:

Pre-record: This reduces the chance of an event not being recorded. We recommend changing this to 10 seconds (10s).

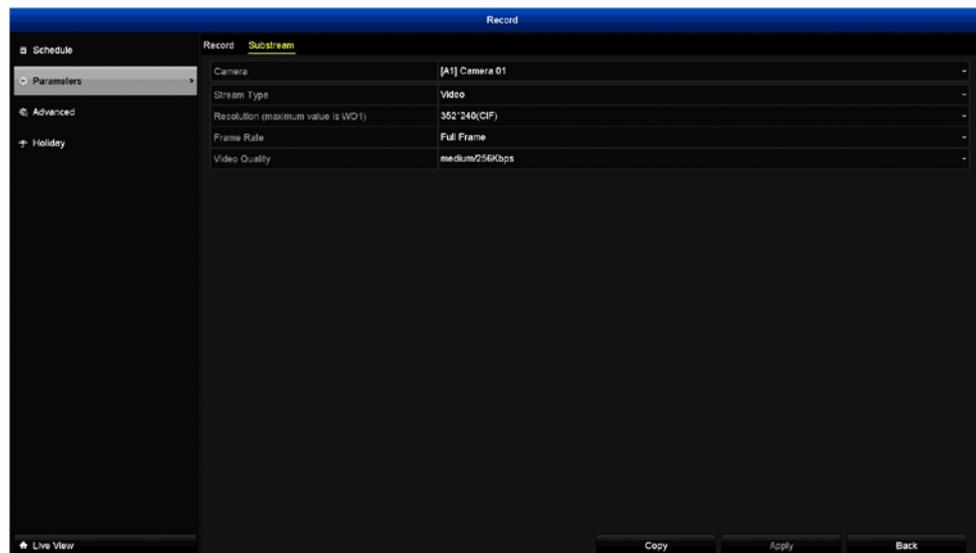
Post-record: Same as above but your DVR will continue recording after an event has occurred. 30 seconds (30s) is the recommended length.

Expired Time (day): Determines how long the video footage will remain on the hard drive without it being overwritten.

Record Audio: Click the checkbox to record audio when selecting "Video & Audio" for the stream type.

Record: Parameters - Substream

The Substream menu gives you control on how video is streamed to your mobile device or computer using the SwannView Plus app and Windows software. You can change the resolution and bitrate if you're having issues streaming live video from your DVR.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Stream Type: By default "Video" is selected. Select "Video & Audio" if you have an audio source connected to your DVR's audio input.

Resolution: The default streaming resolution is 352 x 240. You can select a higher resolution to increase the streaming quality (up to 960 x 480) or you can select a lower resolution (176 x 120 or 320 x 240) if you're having issues streaming live video from your DVR to your mobile device or computer via SwannView Plus.

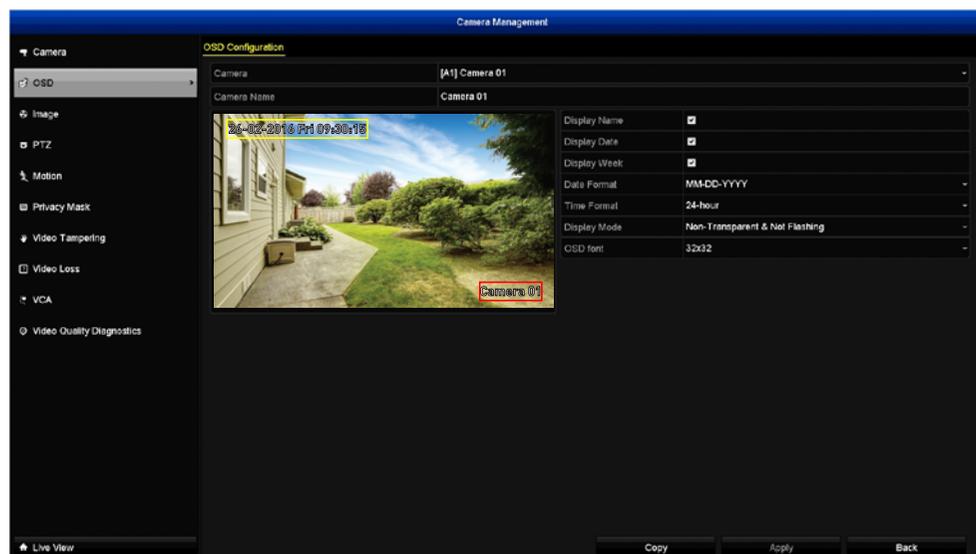
Frame Rate: The default frame rate for streaming is 30fps for NTSC and 25fps for PAL. You can change this to 15fps or 6fps to increase the video quality but overall movement may be more choppy.

Video Quality: The amount of data your DVR will use to stream live video. Lowering the quality reduces the amount of data required.



Please note: When streaming live video, the overall quality is dependent on your internet connection and the encoding settings utilised. This is especially important when streaming multiple cameras at the same time. Lowering the resolution, frame rate and video quality may help with this.

Camera: OSD



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Camera Name: Enter a name for the camera you've selected. It can be up to 32 characters in length.

Display Name: Click the checkbox if you don't want the camera name displayed. Click again to enable.

Display Date: Click the checkbox if you don't want the date displayed. Click again to enable.

Display Week: Click the checkbox if you don't want the day displayed. Click again to enable.

Date Format: Select how you would like the date to be displayed.

Time Format: Choose between "24-hour" and "12-hour" time.

Display Mode: Select how you would like the on-screen display to ap-

pear on-screen. It's worth having a look at the different settings available to see what best fits.

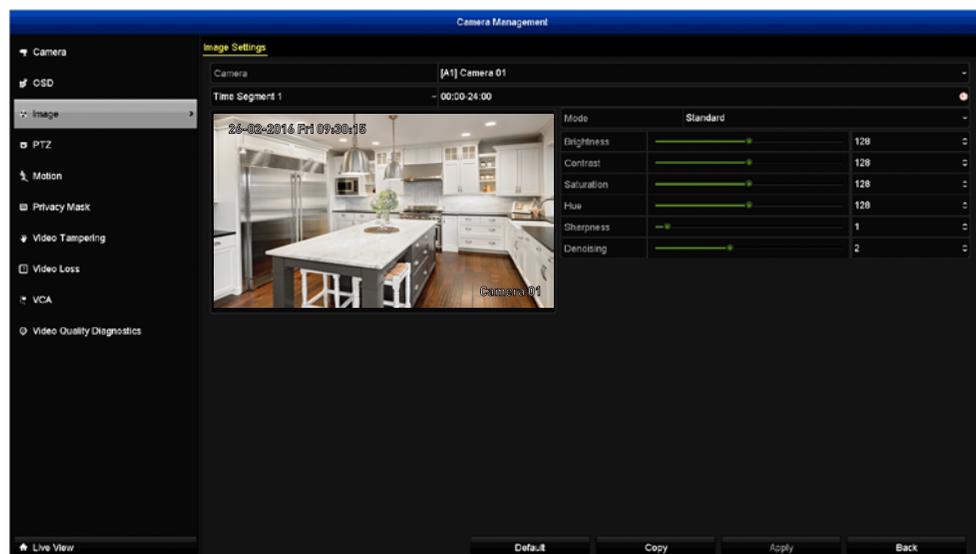
OSD Font: Select the desired font size for the on-screen display.



Using the mouse, click & drag the on-screen camera name and date to the desired position.

Camera: Image

You can adjust the various settings available to help fine-tune the camera's overall image quality. At night, images that you see from the camera may have increased noise. By tweaking these settings, you can eliminate noise and increase image clarity.



- Don't forget to click "Apply" to save 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 "Back" button to go back to the Menu.

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

Time Segment 1 & 2: This function gives you the ability to assign a particular pre-set mode or customised settings for two time segments. For example, one time segment for day time and the second time segment for night time.

Mode: You can select from a number of different pre-set modes.

Brightness: 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. Don't set the contrast too high as it will degrade the image quality.

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

Hue: This changes the color mix of the image.

Sharpness: Increase or decrease the overall sharpness of the image. Increasing the sharpness will also increase the level of video noise that is visible.

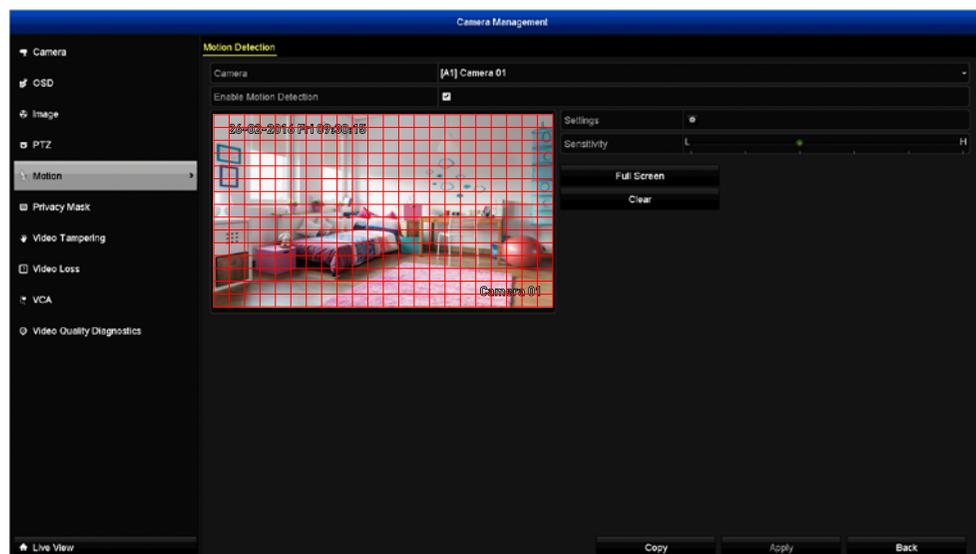
Denoising: Is a technique of reducing or removing image noise from a video signal. This is especially useful for night time or low light environments.



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

Camera: Motion

Whether you're waiting for an expected event, hoping you don't spot an unwelcome visitor, or just curious about what happens when you're not around, your DVR has been configured to record video and to alert you when motion is detected.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

By default, the entire view of the camera has been enabled to detect motion, however you can select certain areas within the image if you wish.

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

Enable Motion Detection: This is enabled by default. You can click the checkbox to disable.

Settings: Here you can define what will happen when the camera you've selected has detected movement.

Trigger Channel: Select additional cameras to start recording.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Linkage Action: Options available are full screen monitoring, enabling

your DVR's internal buzzer, send alerts to the SwannView Plus Windows software (software must be running to receive alerts) and to send an email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Sensitivity: This setting is controlled by a slider, allowing you to set a value between L (low) and H (high). The closer to H the slider is set, the more sensitive the detection will be.

 Using the mouse, click the "Clear" button then click & drag to select the area that you want to enable. To enable the entire view of the camera, click the "Full Screen" button.

Motion Detection Tips

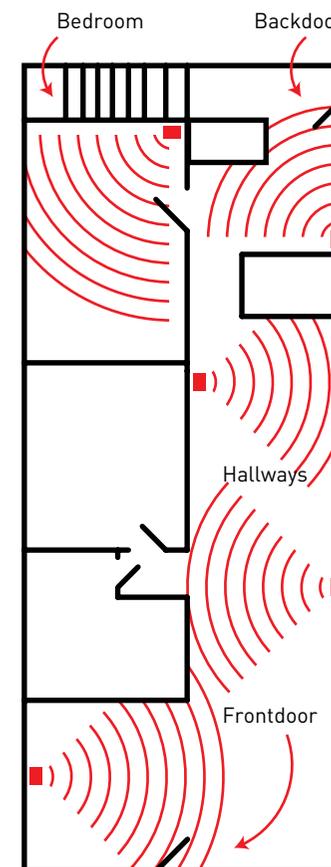
Motion Detection is an essential part of your security system and is the main method used to detect when someone is in your home. When motion has been detected, a signal is sent to your DVR that alerts you to a potential threat in your home. It does this in several ways such as activating its internal buzzer, sending an email and sending an alert to your mobile device or computer. You can also trigger the other cameras to start recording.

Placement of the cameras

1. Keep cameras 10 to 15 feet (3 to 4 metres) away from heating vents, where the sunlight shines in, and radiators. If a camera detects a swift change in motion, even that of a cloud passing quickly over direct sunlight shining into your living room, motion detection could be activated.
2. Place cameras in areas where people have to walk through, like the stairwell, main hallway or entry door. That way, an intruder will activate motion detection regardless of where they are headed. Intruders usually go right for the master bedroom, so put a camera near that room or other rooms where you have valuables, like the study.
3. Walk through your house and assess where intruders are most likely 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.
4. When installing cameras outside, it's important to keep your front and backyard well-lit for ideal night vision and motion detection. 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.

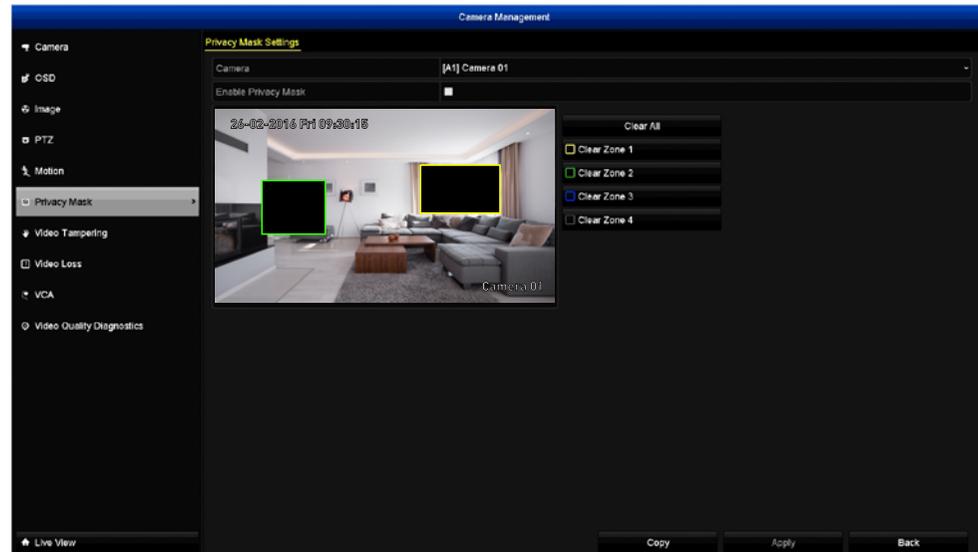
Avoiding False Triggers

1. A flag or foliage that is blown by the wind - angle the camera so wind-blown objects are out of the camera's view.
2. Pets moving in front of the camera - lower the sensitivity level and/or point the camera into areas that are not particular high-traffic for your pets.
3. Vehicles moving in the background - angle the camera so as to avoid movement in the background.
4. Moving air from a heater or air conditioner - angle the camera away from these sources.
5. Movement reflected off smooth surfaces - lower the sensitivity level and/or avoid pointing the camera directly at glass surfaces.



Camera: Privacy Mask

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



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

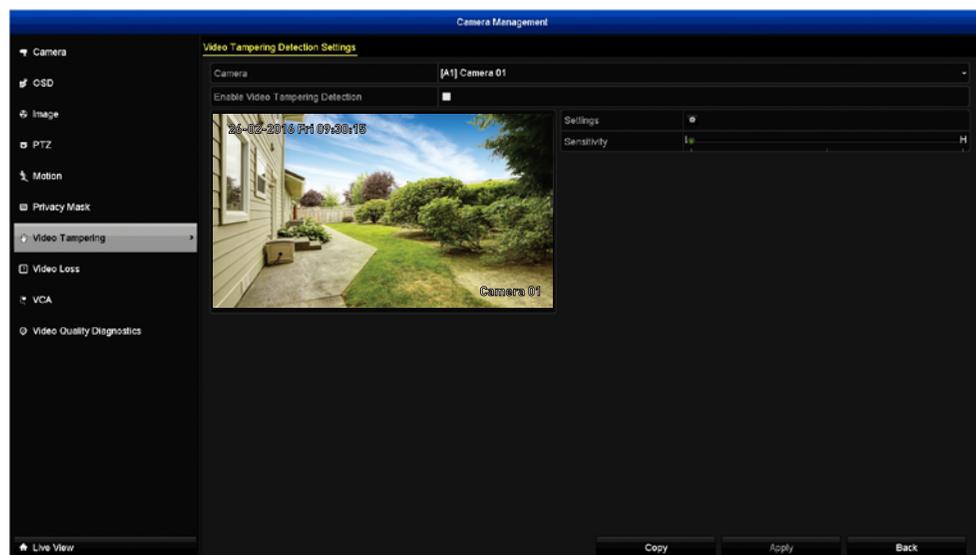
Enable Privacy Mask: Click the checkbox to enable.

 Using the mouse, click & drag to select the area that you want to enable for a mask (as shown above). Up to four masks can be created (each mask is color coded) per camera.

Click the "Clear All" button to clear all masks or click on a particular mask to clear.

Camera: Video Tampering

Any security system can be vulnerable to attack or image failure. This function can be used in scenarios where someone may cover up the camera's field of view or if they are attempting to disable or tamper with the video signal.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Enable Video Tampering Detection: Click the checkbox to enable.

Settings: Here you can define what will happen when the camera you've selected is being tampered with.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

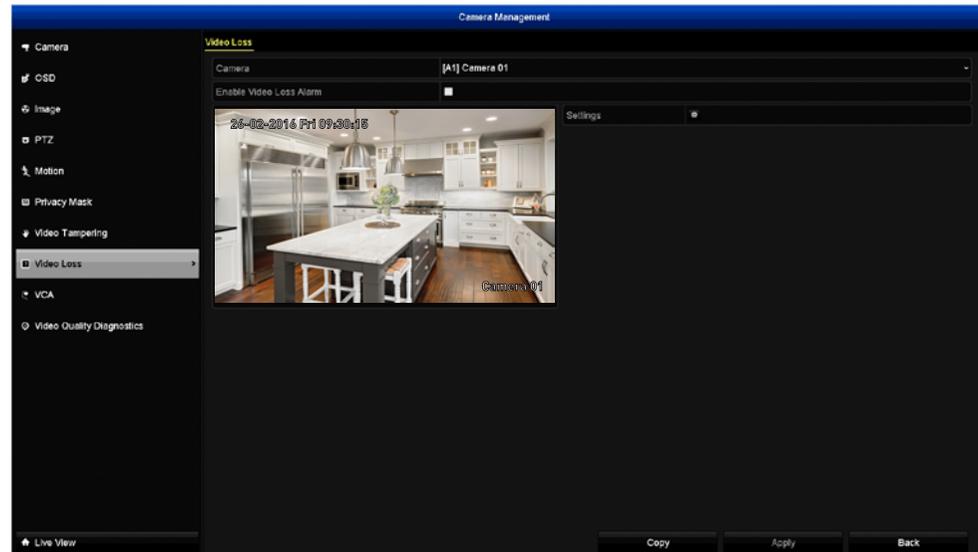
Linkage Action: Options available are full screen monitoring, enabling your DVR's internal buzzer, send alerts to the SwannView Plus Windows software (software must be running to receive alerts) and to send an email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Sensitivity: This setting is controlled by a slider, allowing you to set a

value between L (low) and H (high). The closer to H the slider is set, the more sensitive it will be.

Camera: Video Loss

If your DVR doesn't receive an active video signal from one or more cameras, this is regarded as a potential alarm event. When a video input has no incoming signal, a "NO VIDEO" message will appear on-screen.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Enable Video Loss Alarm: Click the checkbox to enable.

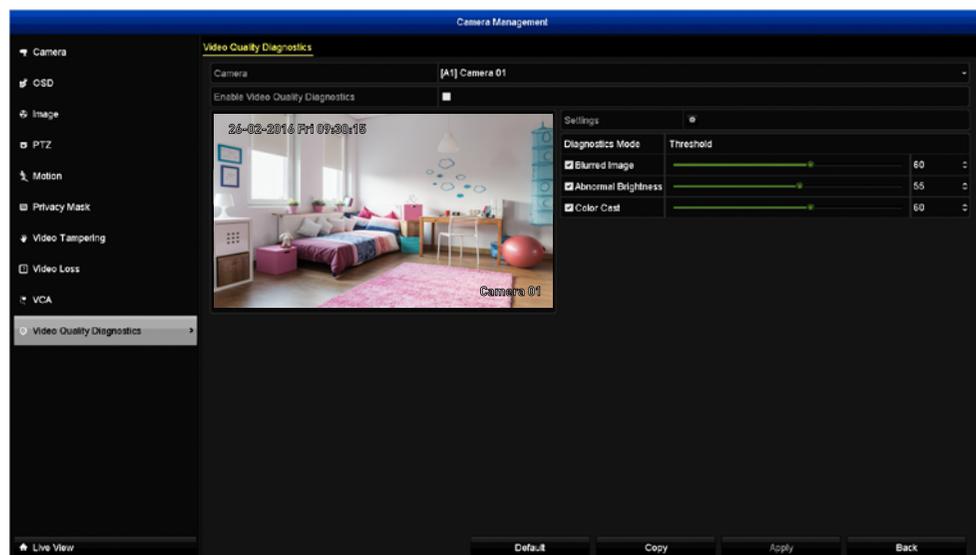
Settings: Here you can define what will happen when the camera you've selected has no incoming video signal.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Linkage Action: Options available are full screen monitoring, enabling your DVR's internal buzzer, send alerts to the SwannView Plus Windows software (software must be running to receive alerts) and to send an email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Camera: Video Quality Diagnostics

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



- Don't forget to click "Apply" to save 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 "Back" button to go back to the Menu.

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

Enable Video Quality Diagnostics: Click the checkbox to enable.

Handling: Click this to instruct your DVR on how to alert you when there is an error or notification and to set an arming schedule.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Linkage Action: Options available are full screen monitoring, enabling your DVR's internal buzzer, send alerts to the SwannView Plus Windows software (software must be running to receive alerts) and to send an email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Blurred Image: Your DVR will alert you if the overall image is blurred.

This can happen if an object is too close to the camera or if someone is intentionally obscuring the image.

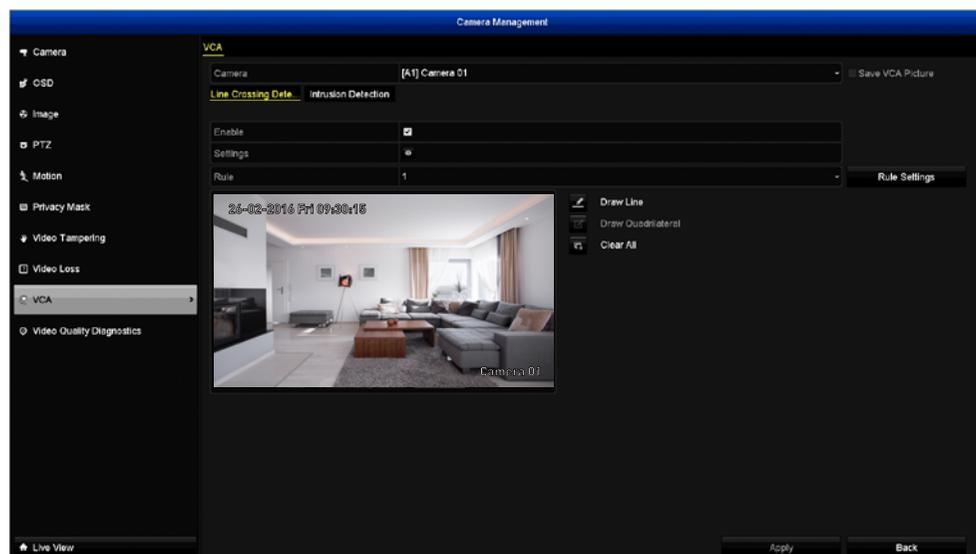
Abnormal Brightness: Your DVR will alert you if the camera detects a bright source of light such as a torch or headlights.

Color Cast: Your DVR will alert you if the camera detects an unwanted tint in the image which is caused by a change to the lighting, white balance and if one or more color channels is strong or weak.

Use the slider to increase or decrease the threshold. The higher the number, the more sensitive the setting will be. You can also press the up and down arrow buttons to change sequentially.

Camera: VCA - Line Crossing Detection

VCA (Video Content Analysis) provides you with much greater control on how your DVR detects motion. By drawing a detection line, you can apply a rule on which direction your DVR detects motion. You can also define specific areas for Intrusion Detection.



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

Camera: Select a camera that you would like to edit. VCA can be applied to a single camera only.

Type: Line Crossing Detection is selected by default. You can also select Intrusion Detection - see [page 20](#) for more information.

Enable: Click the checkbox to enable.

Settings: Define what will happen when motion has been detected.

Trigger Channel: Select additional cameras to start recording.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Linkage Action: Options available are full screen monitoring, enabling your DVR's internal buzzer, send alerts to the SwannView Plus Windows

software (software must be running to receive alerts) and to send an email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Rule: Up to four detection lines can be enabled.

Click "Rule Settings" to reveal the following options:

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

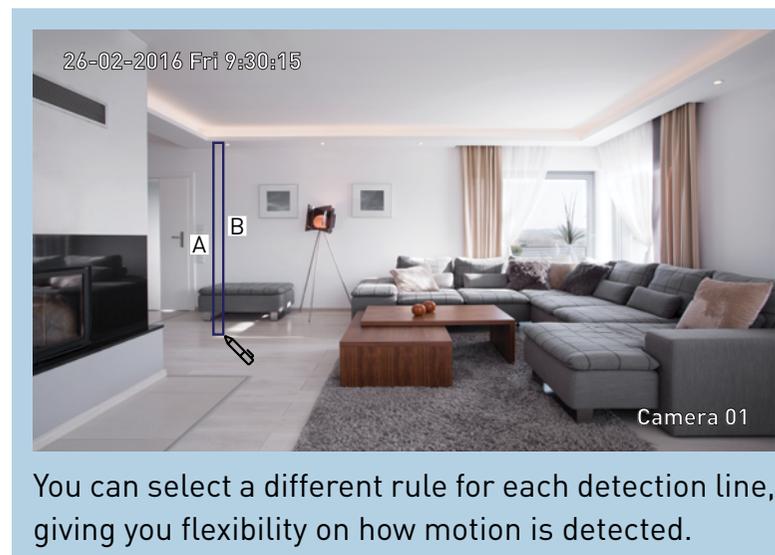
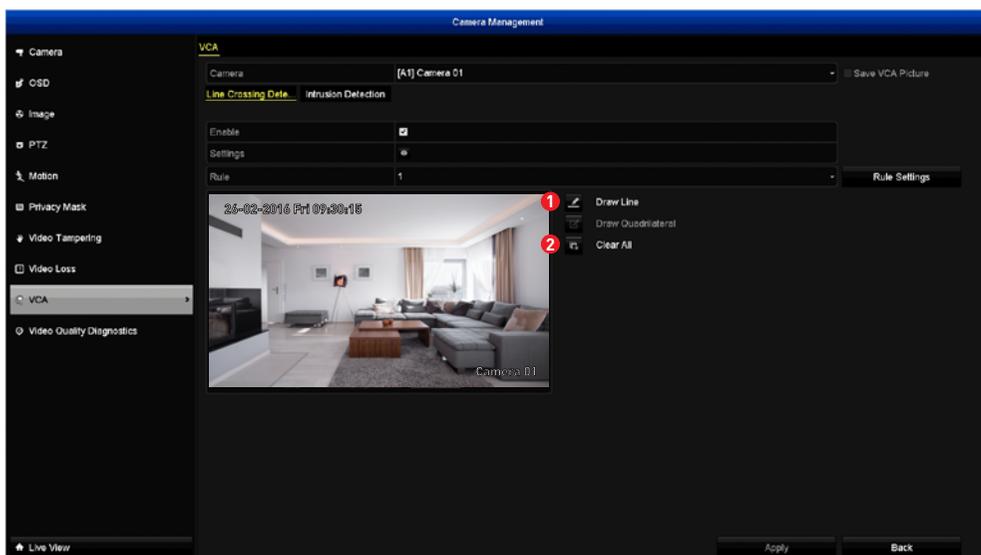
Direction A->B: Motion is detected when an object has crossed the line from direction A only.

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

Sensitivity: Adjust the sensitivity level of the detection line.

See [page 19](#) for instructions on how to draw a detection line.

Camera: VCA - Line Crossing Detection (cont.)



You can select a different rule for each detection line, giving you flexibility on how motion is detected.

1. Draw Line: The pen tool is used to draw a detection line. Click this button then 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 length and angle within the image.

In the above right example, a detection line has been drawn towards the left next to the front door entrance. When selecting rule A->B, motion is detected when an object has crossed the line from direction A only. You can apply a different rule to a detection line without having to redraw it.

2. Clear All: Click this button to clear the selected detection line.

After drawing a detection line, click "Rule Settings" then move the slider to increase or decrease the sensitivity level according to your needs. The higher the number, the more sensitive the detection line will be.

Some experimentation may be needed to get the correct sensitivity level. When finished, click the "Apply" button to save settings.

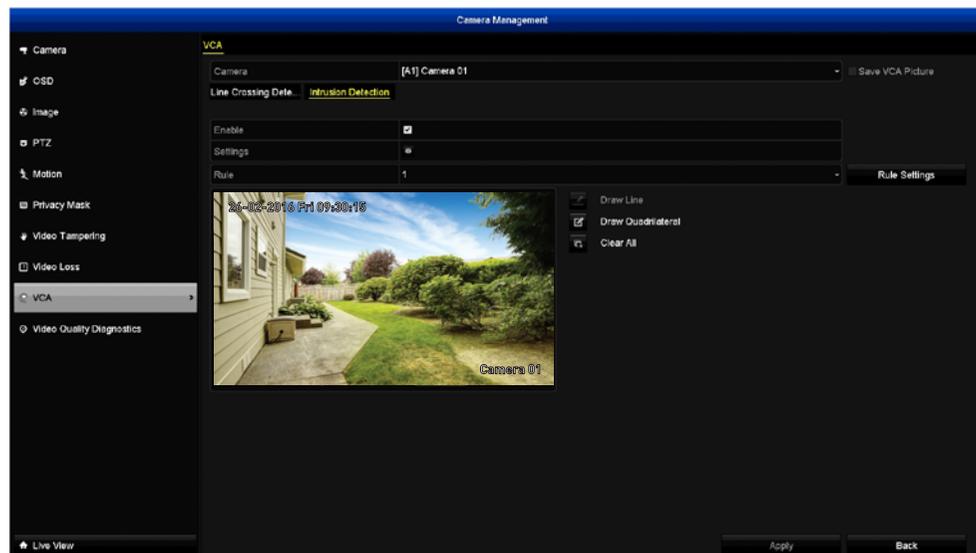


Please note: It's very important that you change the recording schedule for the camera you've selected, otherwise VCA motion events will not be recorded - see [page 26](#) for more information.

- Click the "Back" button to go back to the Menu.

Camera: VCA - Intrusion Detection

Intrusion Detection can be used to define specific areas that you want to monitor for motion. For example, a rule can be defined so that your DVR will alert you if one or more objects have stayed within the intrusion region for a particular time.



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

Camera: Select a camera that you would like to edit. VCA can be applied to a single camera only.

Type: Select "Intrusion Detection".

Enable: Click the checkbox to enable.

Settings: Define what will happen when motion has been detected.

Trigger Channel: Select additional cameras to start recording.

Arming Schedule: Adjust your arming schedule by selecting a start day and a time period (24-hour time). Click the "Copy" button to apply all settings to the other cameras. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Linkage Action: Options available are full screen monitoring, enabling your DVR's internal buzzer, send alerts to the SwannView Plus Windows software (software must be running to receive alerts) and to send an

email. Don't forget to click "Apply" to save settings. Click "OK" to exit.

Rule: Up to four intrusion regions can be enabled.

Click "Rule Settings" to reveal the following options:

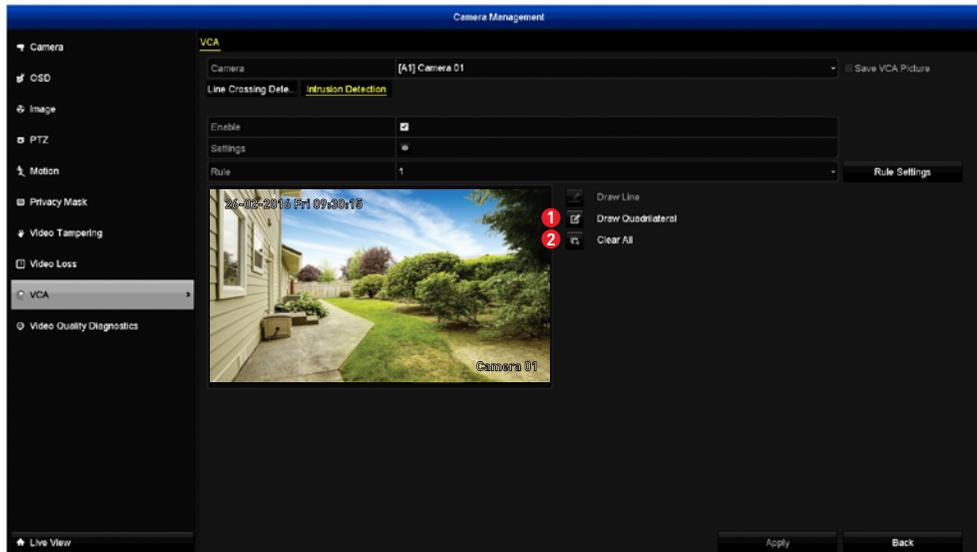
Time Threshold(s): Increase or decrease the time an object has to stay within the intrusion region, before your DVR alerts you.

Sensitivity: Adjust the sensitivity level of the intrusion region. The higher the number, the more sensitive the intrusion region will be. Some experimentation may be needed to get the correct sensitivity level.

Percentage: Increase or decrease the total coverage area. Some experimentation may be needed to get the desired percentage level.

See [page 21](#) for instructions on how to draw an intrusion region.

Camera: VCA - Intrusion Detection (cont.)



Up to four intrusion regions can be drawn at any size, giving you flexibility on how motion is detected.

1. Draw Quadrilateral: A quadrilateral is a polygon with four sides and four corners (basically a square shape). Click this button then using the mouse, you need to create four points to draw an intrusion region (it can be drawn at any size within the image). Your DVR does not allow lines to be crossed when drawing an intrusion region.

As an example, 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 (see above right example).

2. Clear All: Click this button to clear the selected intrusion region.

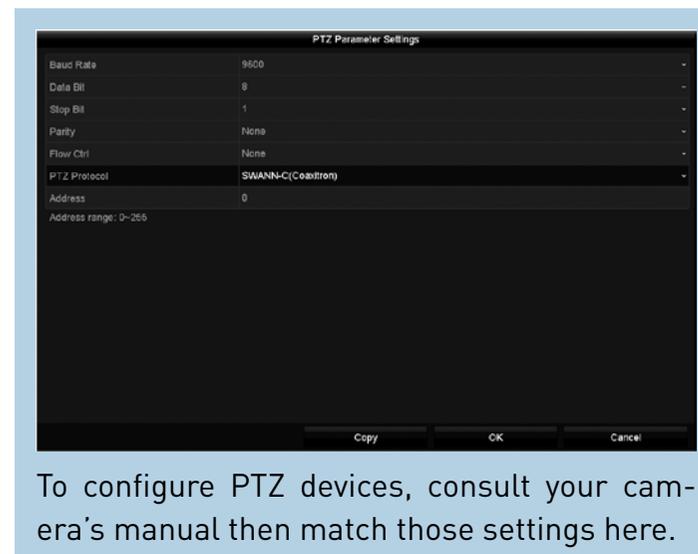
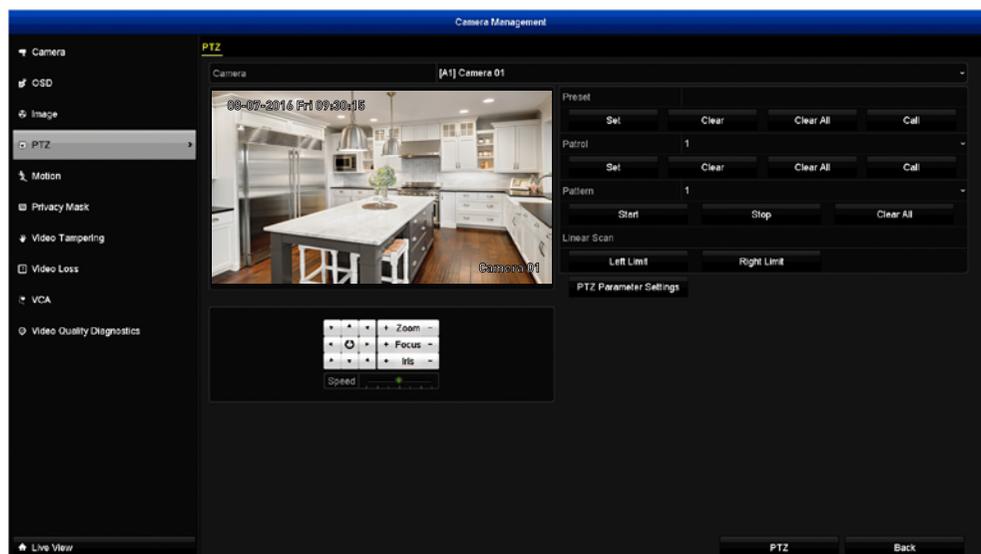
After drawing an intrusion region, click “Rule Settings” then move the sliders to increase or decrease the options available. When finished, click the “Apply” button to save settings.



Please note: It's very important that you change the recording schedule for the camera you've selected, otherwise VCA motion events will not be recorded - see [page 26](#) for more information.

- Click the “Back” button to go back to the Menu.

Camera: PTZ



To configure PTZ devices, consult your camera's manual then match those settings here.

If you have a compatible PTZ camera connected to your DVR, 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 within the image. A patrol can also be used to move the camera to different preset positions that have been created.

Preset: A preset is a particular position within the image that you would like the camera to focus on. Up to 255 different preset positions can be created - see [page 23](#) for more information.

Patrol: Patrol mode instructs your DVR to automatically move the camera according to the preset positions that have been created. You can increase or decrease the duration before moving to the next preset position - see [page 24](#) for more information.

Pattern: This option has no function on this model DVR.

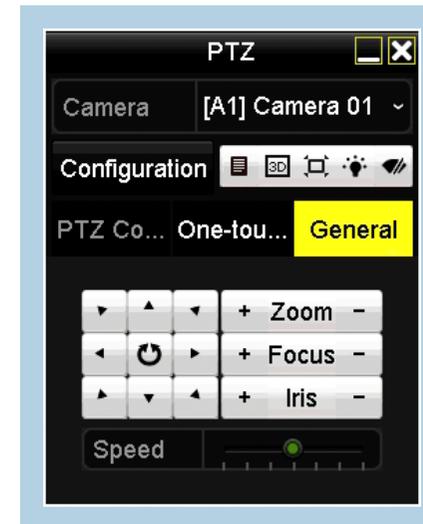
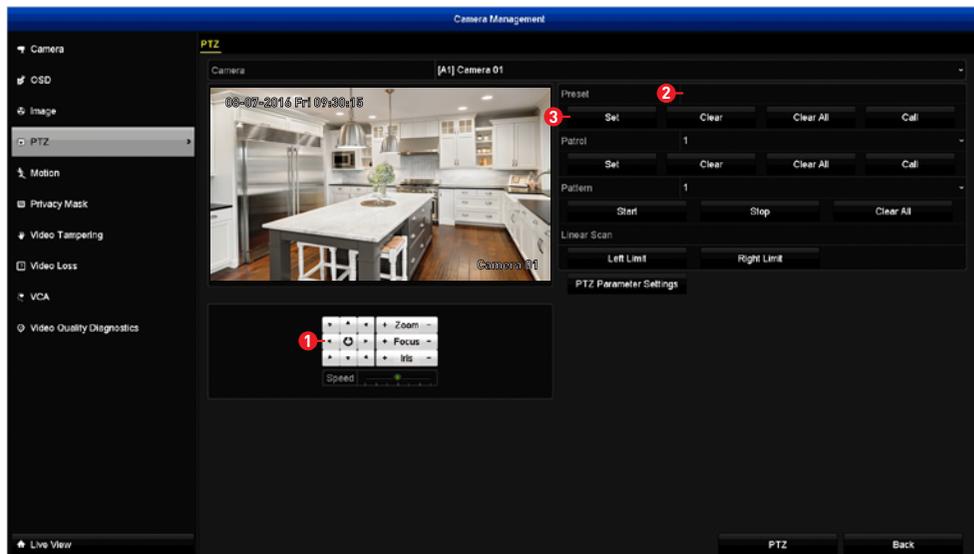
Linear Scan: This option has no function on this model DVR.

PTZ Parameter Settings: Click this to configure the settings for your PTZ camera. Your DVR supports a number of different PTZ protocols. Consult the user manual included with your camera then match those settings here. Just be aware, the PTZ functions are dependent on the capabilities of your camera and the protocol that it supports. Not all the functions available will be compatible.

PTZ: Click this button to access the full PTZ controls available.

- Click the "Back" button to go back to the Menu.

Camera: PTZ - Creating a Preset



1. Use the PTZ controls to move the camera to the desired focal position. The zoom and focus controls can also be used. You can use the speed control to determine how fast or slow the camera will move.

2. Each preset position must be assigned a different number. Click the "Preset" dialogue box as illustrated, input a number then click "Enter". You may want to make note which preset position is assigned to each number.

3. Click the "Set" button to save. Repeat these steps to create multiple preset positions.

Clear: Click this button to delete a preset position.

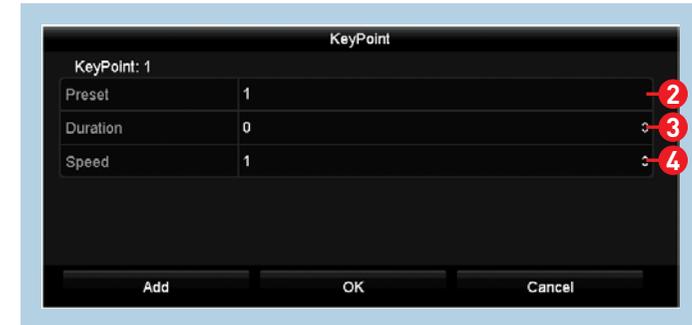
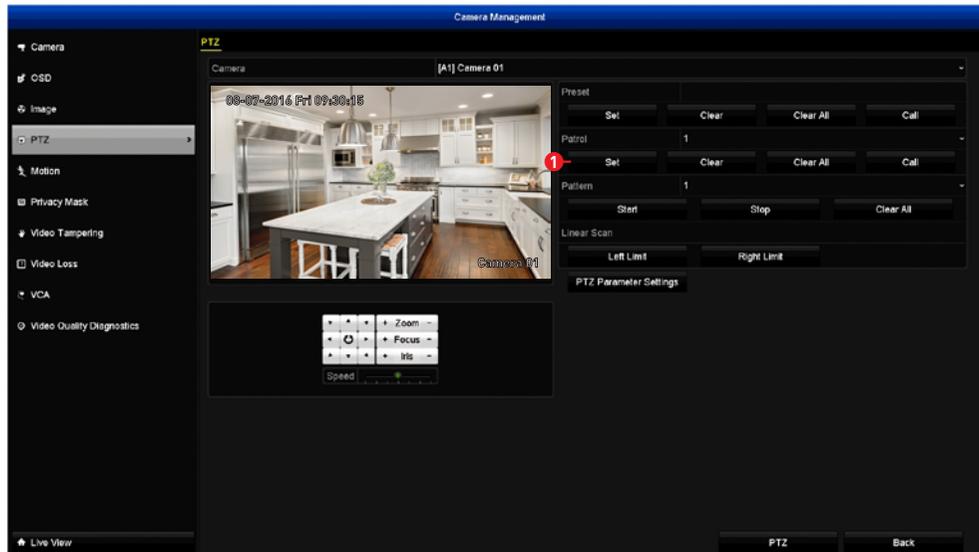
Clear All: Click this button to delete all preset positions.

PTZ: Click this button to access the full PTZ controls available. To access the preset positions, click the "General" tab (as shown above right).

Input a preset number (click the dialogue box) then click "Call Preset". The camera will move to the preset position assigned to that number.

Click the "X" button to close the PTZ controls when finished.

Camera: PTZ - Creating a Patrol



When creating multiple patrol groups (group 1 is the default), click the “Patrol” dialogue box and change accordingly. Up to 4 different patrol groups can be created.

1. Click the “Set” button to create a patrol.
2. Select a preset position that you would like to add to the patrol. The preset position will determine the order at which the camera will cycle through the patrol.
3. The duration refers to the time span (in seconds) the camera will stay at the corresponding preset position. Change accordingly.
4. This defines the speed at which the camera will move from one preset position to the next.

Add: Click this button to add your preset position to the patrol. The key-point will increase each time you add a preset position.

OK: Click this button to finish.

Cancel: Click this button to cancel.

Clear: Click this button to delete the selected patrol group.

Clear All: Click this button to delete all patrol groups.

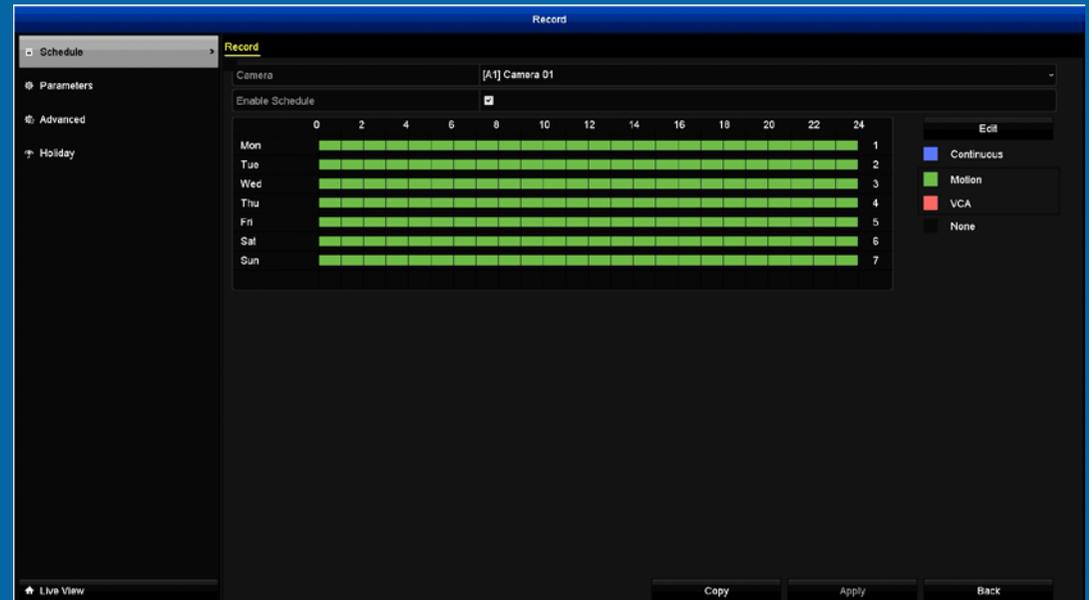
PTZ: Click this button to access the full PTZ controls available. To start a patrol, click the “General” tab. Select a patrol group then click “Call Patrol” to start. The camera will move to the first preset position and then move to the subsequent positions repeatedly.

Click “Stop Patrol” to stop.

Click the “X” button to close the PTZ controls when finished.

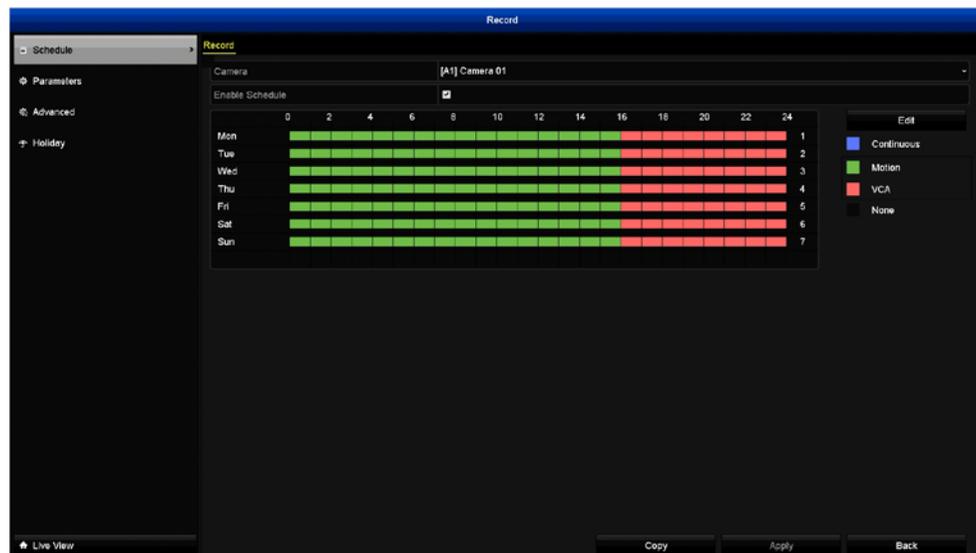
Recording Configuration

The recording configuration options are available in the “Record” menu that is accessible from the 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 as well as enabling a schedule when holidays are taken.



Record: Schedule

By default, a Motion schedule has been enabled for each camera connected, however you 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 "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

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

Enable Schedule: This is enabled by default. You can click the checkbox to disable.

There are two ways that you can edit the schedule. You can click the "Edit" button or you can use the mouse to drag the pen tool over segments that you want to change.

Edit: Click this button to edit. You can edit the schedule for one or more days and different starting and ending times. You can select Continuous, Motion or VCA for the recording type.

Continuous: Your DVR will continuously record regardless of what is happening.

Motion: Your DVR will only record when motion is detected.

VCA: Select this mode when using Line Crossing Detection and or Intru-

sion Detection for the camera that you've selected to edit.

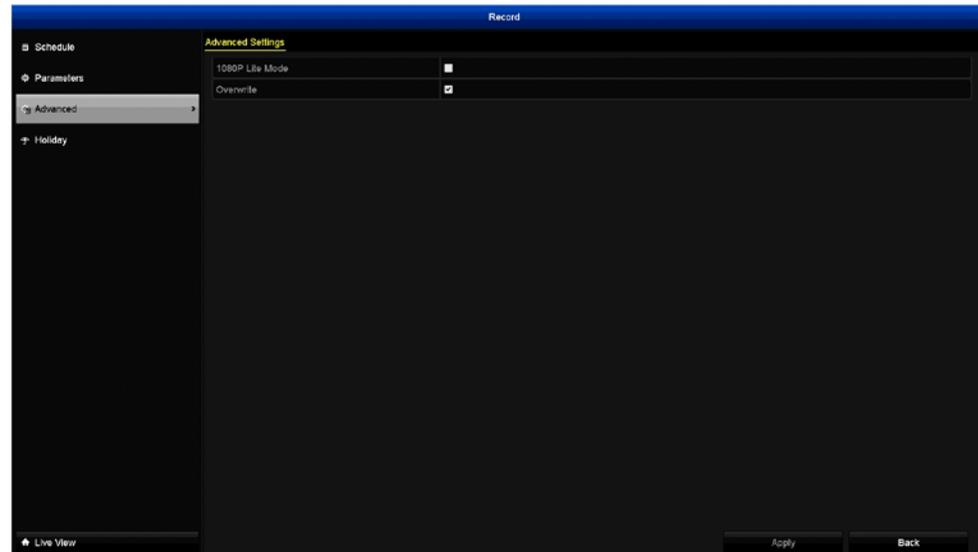
None: As the name suggests, your DVR will not record anything.



To edit using the pen tool, select the recording type (Continuous, Motion or VCA) then move the pen tool over the schedule. Click and hold the mouse then drag the pen tool over the time segments that you want to change. You can also edit each time segment individually.

In the above example, Motion has been enabled for 12:00 a.m. to 04:00 p.m. and VCA has been enabled for 04:00 p.m. to 12:00 a.m. Monday to Sunday.

Record: Advanced



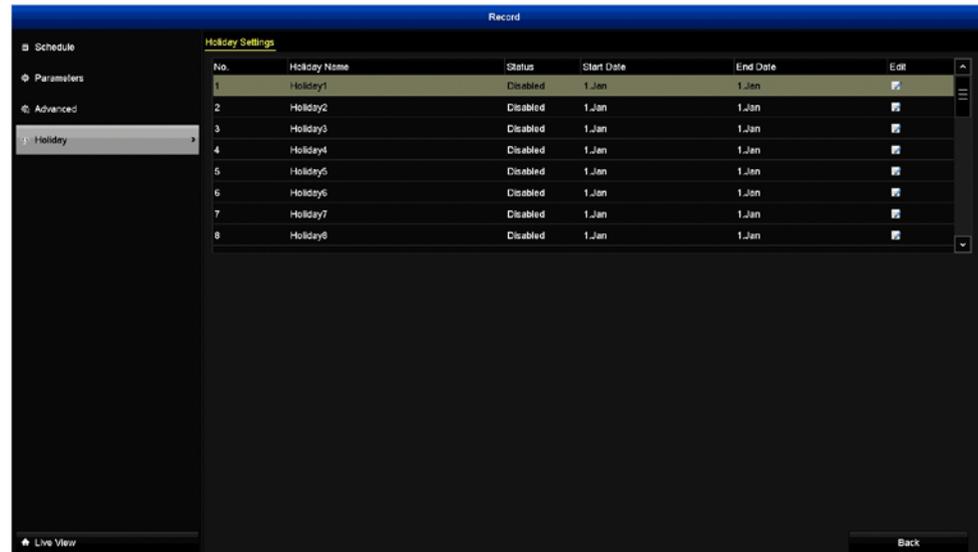
- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

1080P Lite Mode: This option changes the camera's resolution from 1920 x 1080 to 960 x 1080. It effectively halves the horizontal resolution. This means your DVR will record for much longer before it will overwrite the oldest video files on the hard drive.

Overwrite: This option allows your DVR to overwrite the oldest video files on the hard drive when recording. This prevents your DVR from running out of storage space. It's recommended to leave this option enabled and to copy important events to a USB flash drive before they are overwritten.

Record: Holiday

There are times when you don't want your DVR to record using its regular schedule. Perhaps you require it to record more, or less, or at different times. This function allows you to define periods of time where your DVR will employ an alternative recording schedule.



The screenshot shows the 'Record' interface with 'Holiday Settings' selected. A table lists 8 holiday entries, each with a number, name, status, start date, end date, and an edit icon.

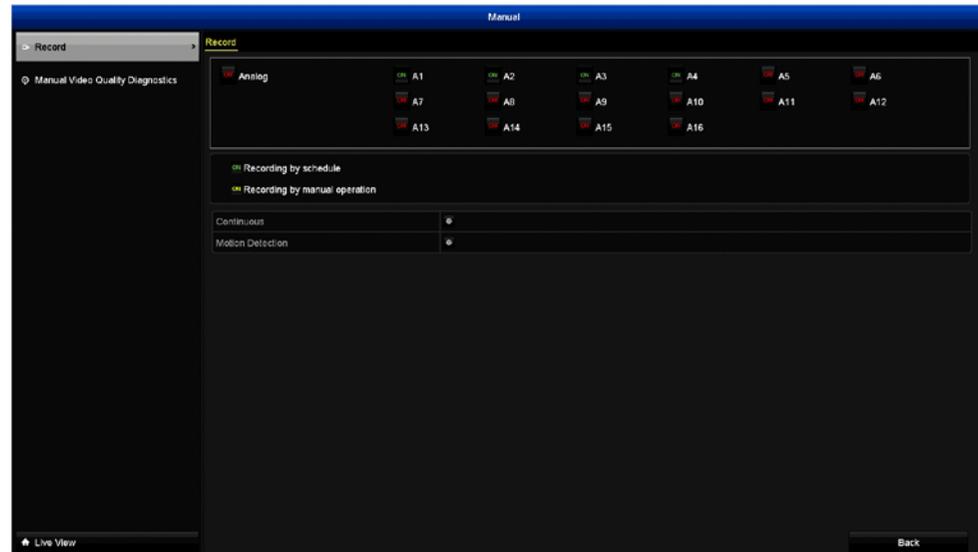
No.	Holiday Name	Status	Start Date	End Date	Edit
1	Holiday1	Disabled	1-Jan	1-Jan	
2	Holiday2	Disabled	1-Jan	1-Jan	
3	Holiday3	Disabled	1-Jan	1-Jan	
4	Holiday4	Disabled	1-Jan	1-Jan	
5	Holiday5	Disabled	1-Jan	1-Jan	
6	Holiday6	Disabled	1-Jan	1-Jan	
7	Holiday7	Disabled	1-Jan	1-Jan	
8	Holiday8	Disabled	1-Jan	1-Jan	

Holiday schedules (up to 32) can be created by date, week or by the month. When creating multiple schedules, the holiday period with the highest priority must be created first.

- 1. Edit:** Click this to begin.
- 2. Holiday Name:** Enter a title for the holiday period in question.
- 3. Enable:** Click the checkbox to enable.
- 4. Mode:** Select by date, week or month.
- 5. Start Date:** Select a start date.
- 6. End Date:** Select an end date.

When finished, click the "Apply" button to save settings then click "OK" to continue.

Manual: Record



If you need to override the recording schedule in place, you can use this function for each camera connected.

The green “ON” button indicates that each camera has a recording schedule enabled. The red “OFF” button indicates that each camera has no recording schedule enabled and the yellow “ON” button indicates that each camera is recording manually. Click the button next to each camera to change the recording status.

Continuous: Your DVR will constantly record for any given period.

Motion Detection: This is the default recording schedule. Your DVR will only record when it detects something moving in front of one or more cameras.

When finished, click the “Back” to exit.

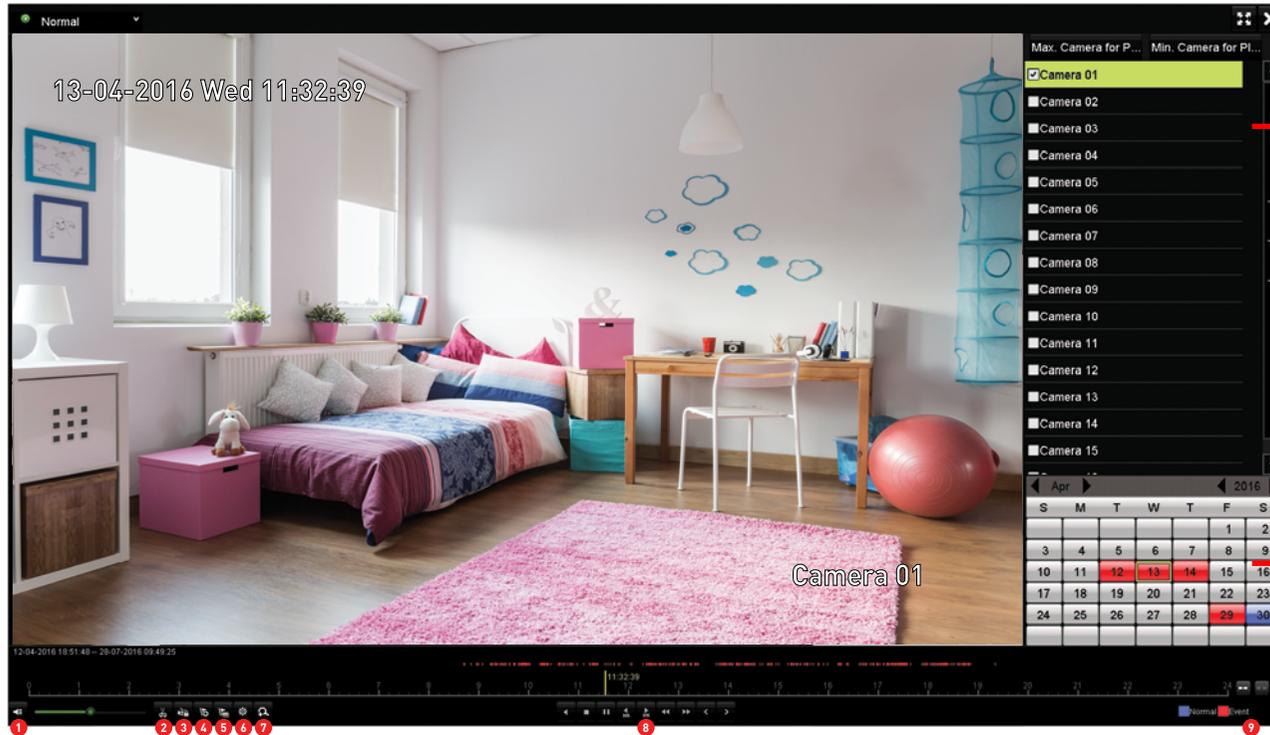
Playback

This function gives you the ability to search and play previously recorded videos that are stored on your DVR's hard drive or if you have copied important events to a USB flash drive. You have the choice of selecting from a number of different playback modes such as Normal, Event, Tag, Smart and Sub-periods. When playing videos, you can add tags to help you identify people or objects and you can then do a search on those tags.



Playback: Normal

Normal mode gives you the ability to play video from one or more camera(s) on a given day. The blue segments located on the timeline (underneath the video) indicate a normal recording and the red segments indicate an event recording.



Select from one or more camera(s) that you would like to display for playback.

The colored dates indicate video that is recorded on those particular days. Click the “Play” button or double-click a date to play.

1. Mute: Mutes audio playback. Click and hold the slider to change the volume level.

2. Start clipping: This button allows you to set mark in and out points on your video which you can then export to a USB flash drive. When you have selected a video to play, press this button at the mark in point and press it again at the mark out point.

3. Save clip(s): Click this to save your clip(s) to a USB flash drive. Select the save location then click “Export”. Click “OK” to confirm.

4. Add default tag: Tagging allows you to record information such as location or people within the video. Multiple tags can be added.

5. Add customized tag: As above but you can choose your own tag name.

6. Tag management: This allows you to edit or delete tags that you have added to the video.

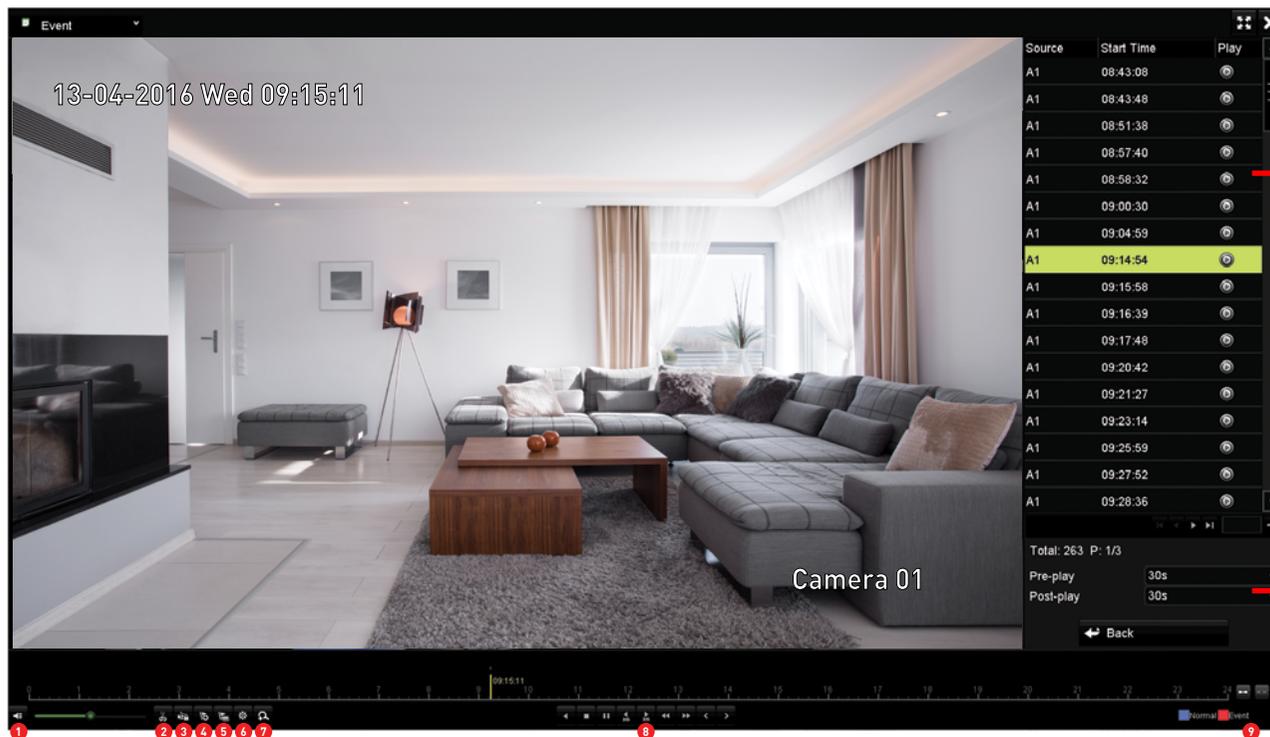
7. Zoom In: Click this to enter digital zoom mode. Click the video then use the PIP (picture-on-picture) screen on the bottom right to select a different area to zoom in to. Right-click to exit.

8. Play controls: These are your play, pause, rewind, forward, previous day and next day controls.

9. Zoom In/Out: Zoom in and out of the timeline for precise control.

Playback: Event

Event mode gives you the ability to search for video footage that has one or more events over a set period of time. For example, from October to November with a start and end time of your choice.



Select from one or more camera(s) that you would like to search on. Select a start time & date and end time & date then click the “Search” button. Your DVR will start searching and will then display videos fitting your search criteria. Double-click a file to play.

You can change the Pre-play and Post-play times according to your needs. Click “Back” to commence a new search.

1. Mute: Mutes audio playback. Click and hold the slider to change the volume level.

2. Start clipping: This button allows you to set mark in and out points on your video which you can then export to a USB flash drive. When you have selected a video to play, press this button at the mark in point and press it again at the mark out point.

3. Save clip(s): Click this to save your clip(s) to a USB flash drive. Select the save location then click “Export”. Click “OK” to confirm.

4. Add default tag: Tagging allows you to record information such as location or people within the video. Multiple tags can be added.

5. Add customized tag: As above but you can choose your own tag name.

6. Tag management: This allows you to edit or delete tags that you have added to the video.

7. Zoom In: Click this to enter digital zoom mode. Click the video then use the PIP (picture-on-picture) screen on the bottom right to select a different area to zoom in to. Right-click to exit.

8. Play controls: These are your play, pause, rewind, forward, previous day and next day controls.

9. Zoom In/Out: Zoom in and out of the timeline for precise control.

Playback: Tag

Tag mode isolates events based on the Tag information that has been applied to a particular video. In both Normal and Event modes, you can apply Tags to what is happening on-screen. For example, each time a particular person appears within the video, you can add a Tag to make it easier to search and find videos with that person.



Select from one or more camera(s) that you would like to search on. Input the name for the Tag (be careful as it is case sensitive), select a start time & date and end time & date then click the "Search" button. A list of videos fitting your search criteria will be shown. Double-click a file to play. Click the "Back" button to search again.

1. Mute: Mutes audio playback. Click and hold the slider to change the volume level.

2. Start clipping: This button allows you to edit the video by setting mark in and out points which you can then export to a USB flash drive. When you have selected a video to play, press this button at the mark in point and press it again at the mark out point.

3. Lock File: Click this to lock the video. Locking the video prevents it from being deleted which you can then export to a USB flash drive.

4. File Management: This allows you to edit or delete tags that you have added to the video.

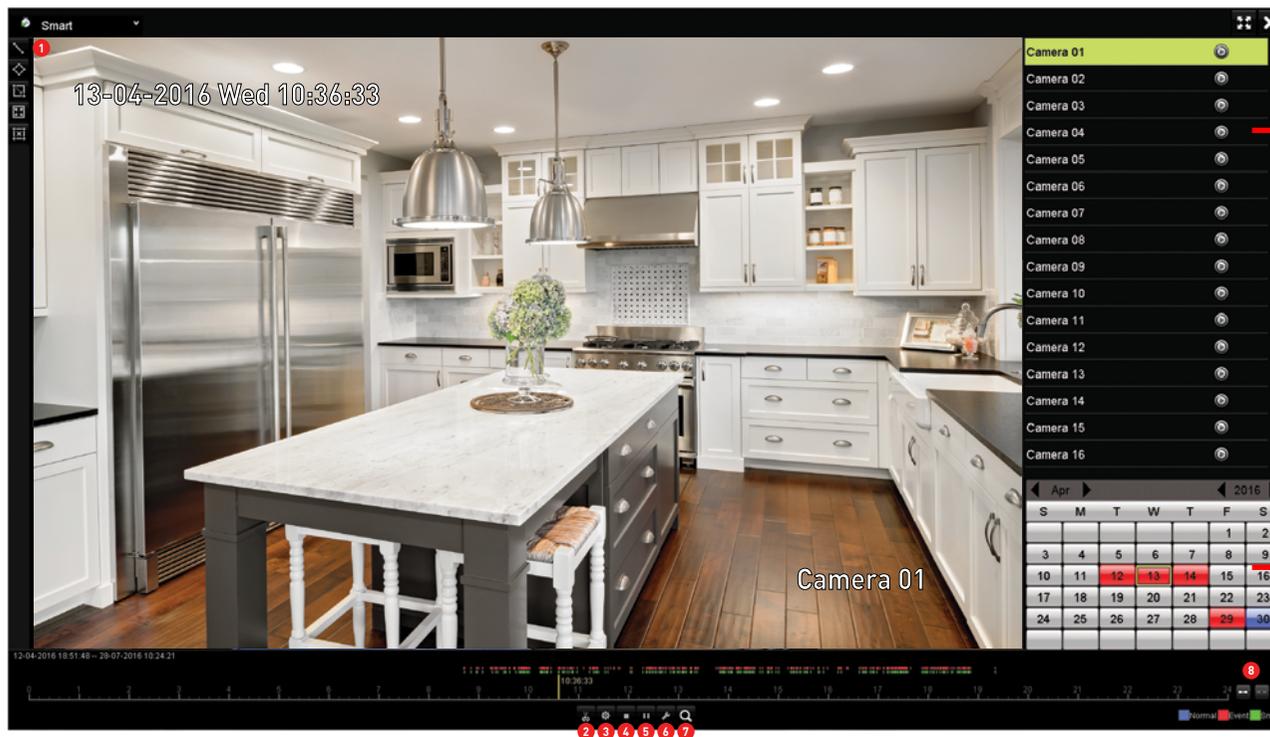
5. Zoom In: Click this to enter digital zoom mode. Use the PIP (picture-on-picture) screen on the bottom right to select a different area to zoom in to. Right-click to exit.

6. Play controls: These are your play, pause, rewind, forward, previous day and next day controls.

7. Zoom In/Out: Zoom in and out of the timeline for precise control.

Playback: Smart

Smart mode allows you to define a specific area of the video which then makes it easier to find what you are searching for. For example, you may have movement on the left-hand side of a room, but you want to see what is happening on the right-hand side. Define an area where required then search to play video based on the defined area.



Select from one or more camera(s) that you would like to display for playback.

The colored dates indicate video that is recorded on those particular days. Click the “Play” button or double-click a date to play.

The green segments located on the timeline (underneath the video), indicate sections that match your smart search criteria.

1. Select the desired detection type then create the area that you want to define for Smart mode - see [page 35](#) for more information.

2. Start clipping: This button allows you to edit the video by setting mark in and out points which you can then export to a USB flash drive. When you have selected a video to play, press this button at the mark in point and press it again at the mark out point.

3. File Management: This allows you to edit or delete tags that you have added to the video.

4. Stop: Click this to stop playing the video.

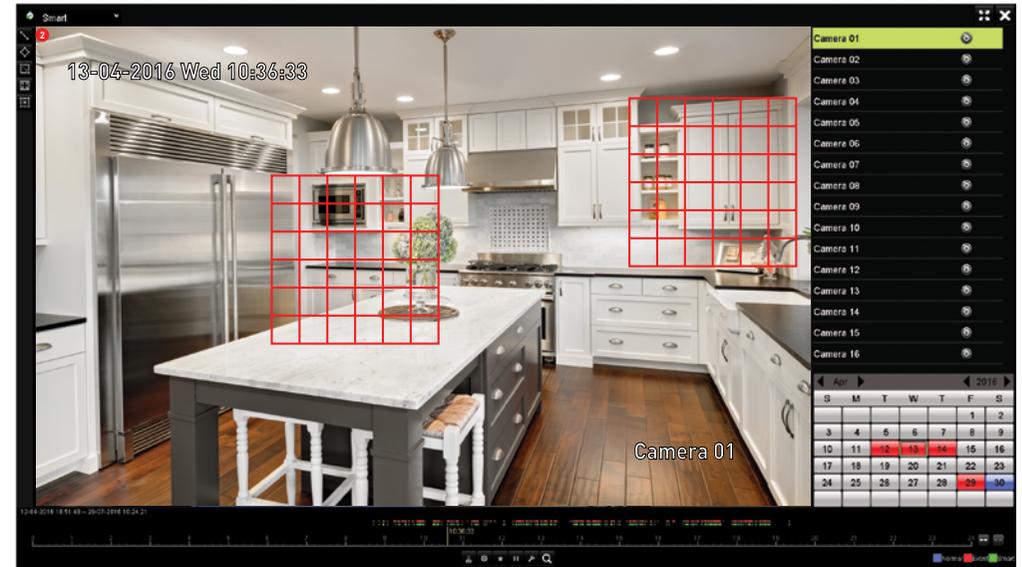
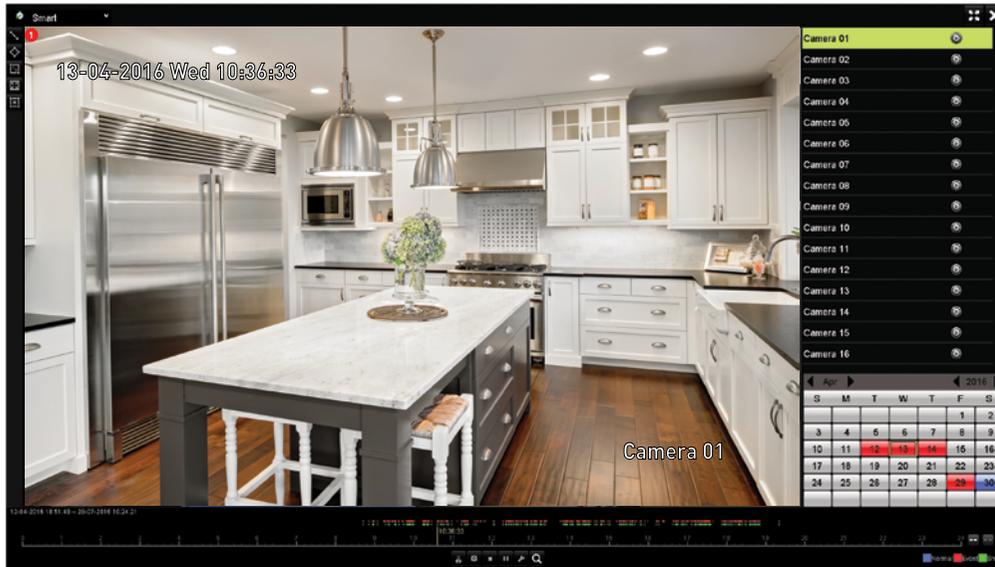
5. Pause & Play: Click this to pause or play the video.

6. Set: You can enable skipping for sections of video that doesn't match your search criteria. You can also alter the playback speed for related and non-related video and change the pre-play and post-play times.

7. Search: After creating the area that you want to define for Smart mode, click this button to start searching.

8. Zoom In/Out: Zoom in and out of the timeline for precise control.

Playback: Smart (cont.)

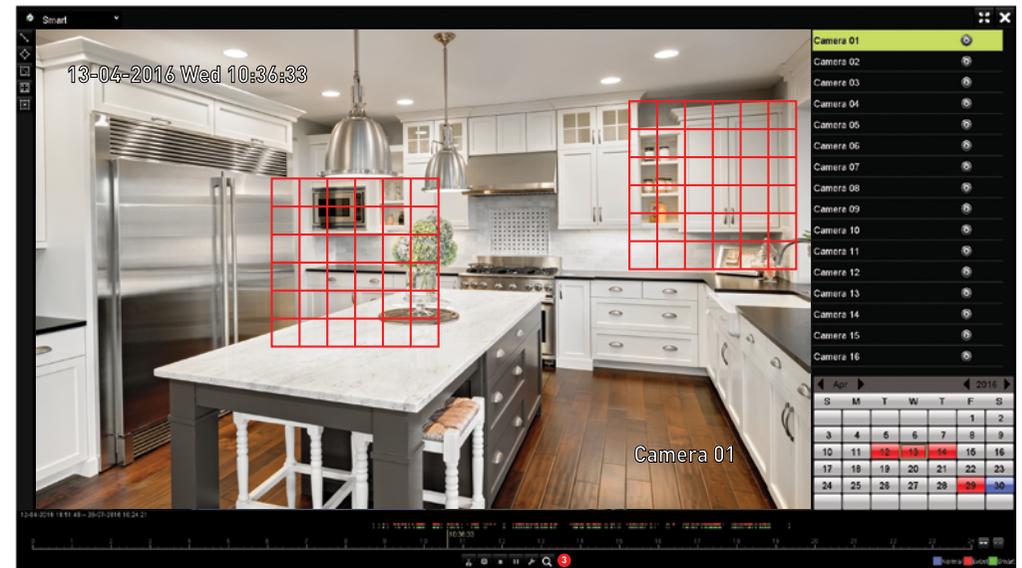


1. There are four detection types available – Draw Line, Draw Quadrilateral, Draw Rectangle (Motion Detection) and Full Screen (Motion Detection). Click “Clear All” to remove the current defined area. Select the desired detection type then create the area that you want to define for Smart mode.

2. In the above right example, Draw Rectangle (Motion Detection) has been selected. Click and drag to select the area that you want to define. Multiple areas can be defined but only one detection type can be used.

3. After creating the area that you want to define for Smart mode, click this button to start searching.

The video will automatically start playing. Sections not matching your search criteria will play at an increased speed. Sections that match your defined area will play at normal speed.



Playback: Sub-periods

Sub-periods allows you to play multiple motion events simultaneously from a single channel. Up to 16 playback screens can be enabled. With event recordings, playback is divided on the number of events that have occurred. For normal recordings, the video is divided evenly depending on the playback mode that has been selected.



Select a camera that you would like to display for playback (only one camera can be selected in Sub-periods mode).

The colored dates indicate video that is recorded on those particular days. Use the play controls or double-click a date to play.

1. Mute: Mutes audio playback. Click and hold the slider to change the volume level.

2. Start clipping: This button allows you to edit the video by setting mark in and out points which you can then export to a USB flash drive. When you have selected a video to play, press this button at the mark in point and press it again at the mark out point.

3. Lock File: Click this to lock the video. Locking the video prevents it from being deleted which you can then export to a USB flash drive.

4. Add default tag: Tagging allows you to record information such as location or people within the video. Multiple tags can be added.

5. Add customized tag: As above but you can choose your own tag name.

6. File Management: Access videos that you have edited, locked or tagged. You can export one or more videos to a USB flash drive.

7. Zoom In: Click this to enter digital zoom mode.

8. Play controls: These are your play, pause, rewind, forward, previous day and next day controls.

9. Zoom In/Out: Zoom in and out of the timeline for precise control.

10. Split-screen Number: Select the preferred mode for playback. When selecting a different mode, playback will commence from the start.

Playback: External File



To play videos that you have saved to a USB storage device (you can use the Export function - see [page 38](#)), click “External File” in the drop down menu then insert your USB flash drive to the USB port (rear or front depending on your model). If your DVR doesn’t detect the flash drive, click the “Refresh” button. After a short moment, a list of videos will appear.

As shown in the screenshot above, each video file name will display the channel (ch01) as well as the date (20160413) and time (084309) that was used to record the video. Double-click a video to play. To navigate, use the mouse to drag the green coloured navigation bar left or right. You can also use the controls on the right-hand side.

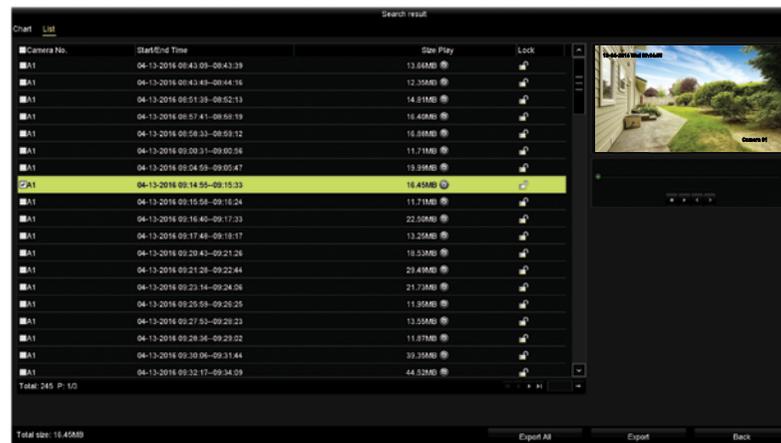
1. Click this to stop playing the video.
2. Click this to pause or play the video.
3. Click this to slow down playback. Subsequent presses will decrease the playback speed.
4. Click this to increase the playback speed. Subsequent presses will increase the playback speed.

Export

The Export function gives you the ability to save important events to a USB flash drive. As the Overwrite option is enabled by default, it's important to copy these important events before they are overwritten. You can play these video files either on your DVR or your computer.



Export: Normal



Video files fitting your search criteria will be displayed. A thumbnail is visible displaying the video's first frame.

Analog: Click this to select all cameras or select one or more cameras to search on.

Record Type: Select the type of video that you would like to export or leave the default selection.

File Type: Select the file type that you would like to export or leave the default selection.

Start Time: Select your start date & time.

End Time: Select your end date & time.

1. Click the "Search" button to display videos matching your search criteria. Your search criteria will be listed. You can select to view the videos in Chart mode (thumbnails) or List mode (as shown above right). To lock a video so it cannot be deleted, click the lock icon in List mode.

2. Select a file then use the play controls to play a video.

3. Click the checkbox to select files that you want to export.

4. Insert your USB flash drive to the USB port.

5. Click the "Export" button, select a save location then click "Export" again.

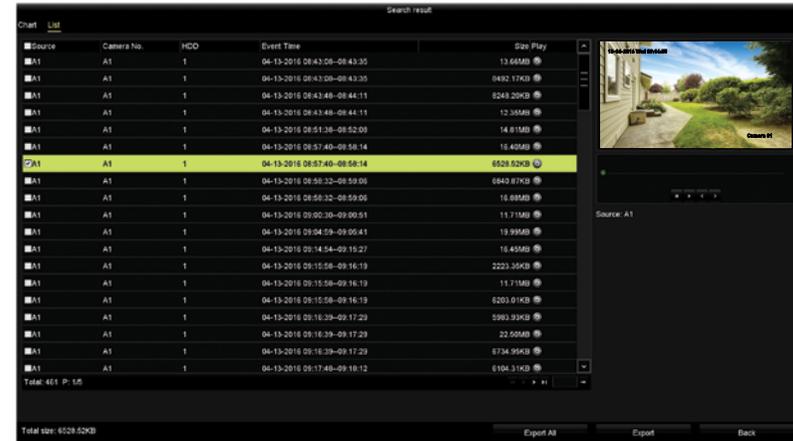
6. You have the choice of exporting a video file or player program. You can use the player program to play the video file on your computer.

7. Click "OK" to confirm. The files will now copy to the USB flash drive.

8. Click "OK" to finish and right-click to exit.

• Click the "Back" button to go back to the Menu.

Export: Event



Video files fitting your search criteria will be displayed. A thumbnail is visible displaying the video's first frame.

Major Type: Select either “Motion” or “VCA” for the event type.

Start Time: Select your start date & time.

End Time: Select your end date & time.

Pre-play: Adjust in seconds the length of video that you want to play before the event occurs.

Post-play: Adjust in seconds the length of video that you want to play after the event has occurred.

Analog: Click this to select all cameras or select one or more cameras to search on.

1. Click the “Search” button to display files matching your search criteria. Your search criteria will be listed. You can select to view the files in Chart mode (thumbnails) or List mode (as shown above right).

2. Select a file then use the play controls to play a video.

3. Click the checkbox to select files that you want to export.

4. Insert your USB flash drive to the USB port.

5. Click the “Export” button, select a save location then click “Export” again.

6. You have the choice of exporting a video file or player program. You can use the player program to play the video file on your computer.

7. Click “OK” to confirm. The files will now copy to the USB flash drive.

8. Click “OK” to finish and right-click to exit.

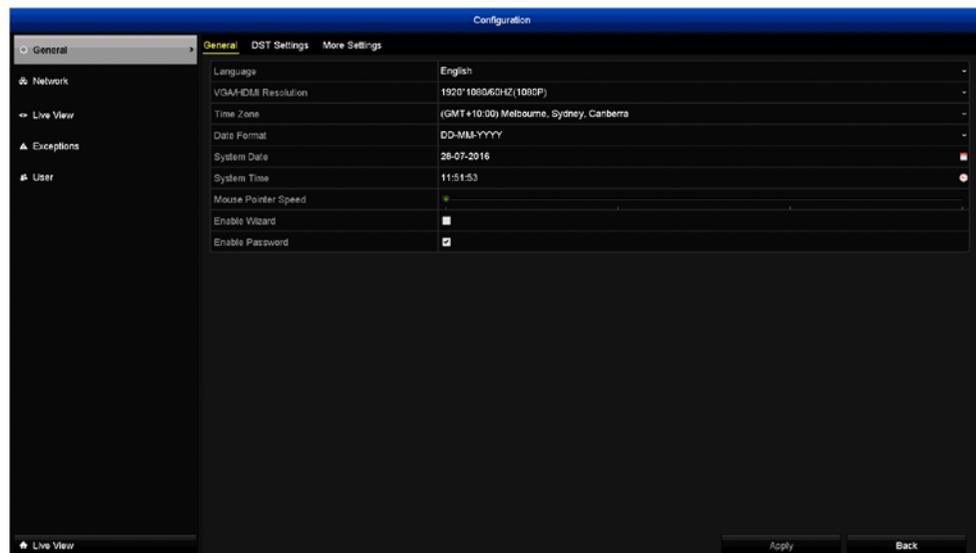
• Click the “Back” button to go back to the Menu.

Configuration

The options available give you complete control on how your DVR is configured and how it operates. Some of the options such as Resolution, Time Zone, Email, Daylight Saving and password creation are configured during the Setup Wizard. For experienced network users, your DVR provides options that can be configured to suit your particular requirements.



Configuration: General - General



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

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

VGA/HDMI Resolution: Select a resolution that is suitable for your TV. The 16CH model has an additional two resolutions (2560 x 1440 and 3840 x 2160) that are suitable for 2K and 4K TVs and monitors.

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

Date Format: Select a preferred display format.

System Date: If the date is not correct, click the calendar icon to select the correct date.

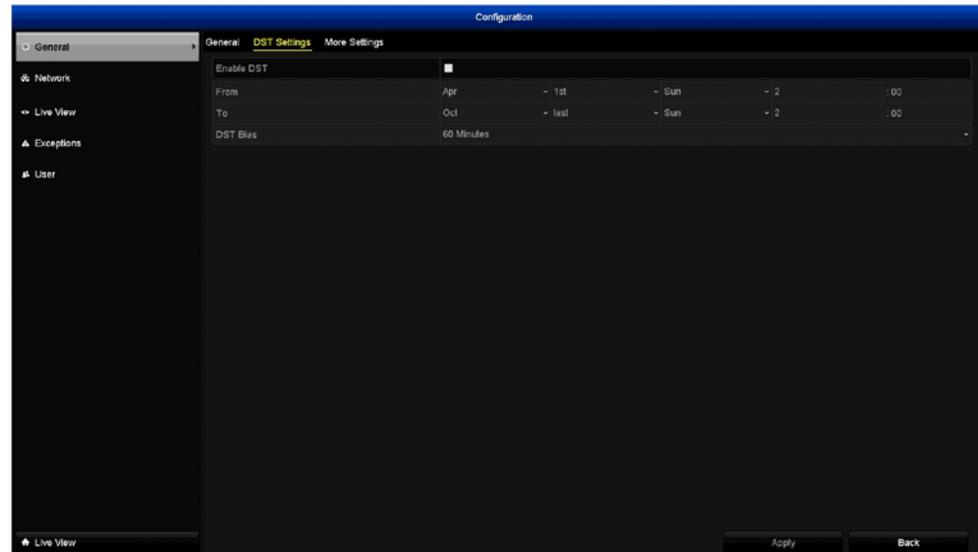
System Time: If the time is not correct, click the clock icon to select the correct time. The time is displayed in 24-hour time.

Mouse Pointer Speed: Move the slider to increase or decrease the mouse pointer speed.

Enable Wizard: Your DVR will automatically run the Setup Wizard when it is turned on (the Setup Wizard itself contains the option to disable it).

Enable Password: When enabled, your DVR will require a password to access the Menu.

Configuration: General - DST Settings



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

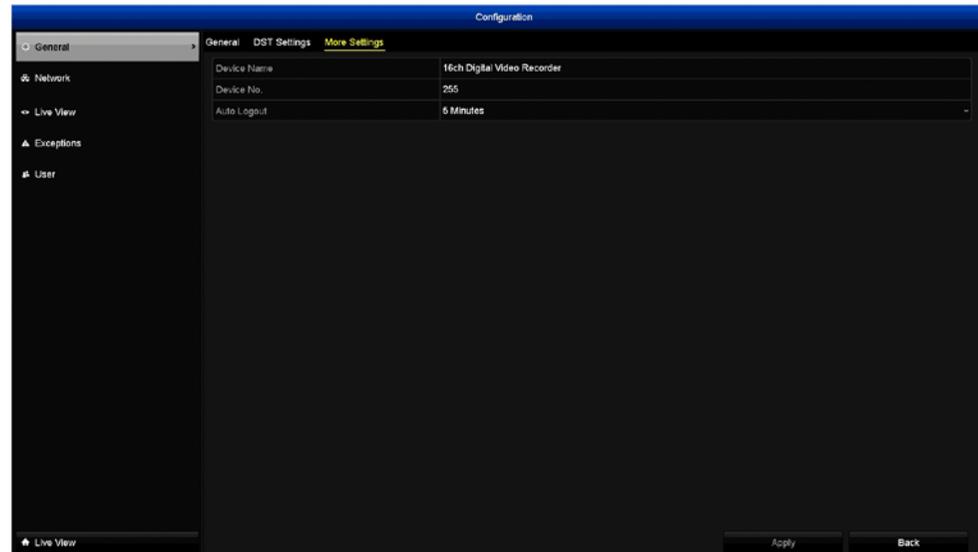
The DST (Daylight Saving Time) function allows you to select the amount of time that Daylight Saving has increased by in your time zone.

Enable DST: Click the checkbox to enable.

From/To: Set when Daylight Saving starts and ends. For example, 2 a.m. on the first Sunday of a particular month.

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

Configuration: General - More Settings



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

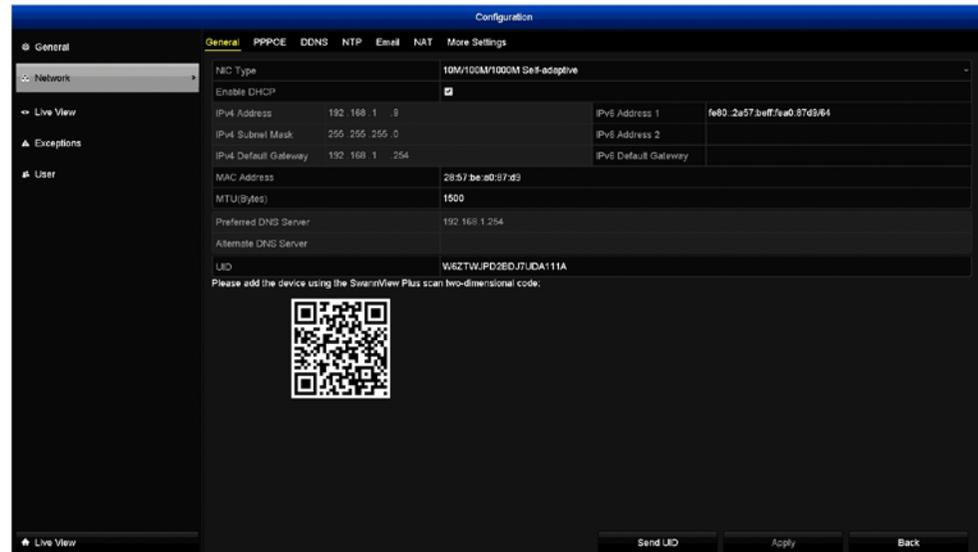
Device Name: The name that your DVR considers to be its own and what it will use to register an IP address with your router. You can change this to something more relevant or leave the default name.

Device No.: The device number of your DVR. We recommend that you leave the default setting.

Auto Logout: Here you can change the time your DVR will exit the Menu if there is no activity.

Configuration: Network - General

Network configuration is not required when using SwannLink P2P for local or remote access. All that is required is a connection to your router. Most of the settings here are recommended for advanced users only.



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

NIC Type: Your DVR has the ability to connect to your network at various speeds and can adjust itself accordingly.

Enable DHCP: Your router will automatically assign an IP address.

IPv4 Address: Your DVR uses IPv4 addressing, which consists of four groups of numbers between 0 and 255, separated by periods.

IPv4 Subnet Mask: This will be formatted in a similar way to the IP address. For example, four numbers up to 255 separated by periods.

IPv4 Default Gateway: This allows your DVR to connect to the Internet.

IPv6 Address 1/2 & Default Gateway: IPv6 is the latest revision of the Internet Protocol (IP). It will eventually replace the older IPv4 system.

MAC Address: The MAC (Media Access Control) address is hardwired into the hardware and can't be changed. If password protection has been enabled and you have forgotten your password, the MAC address

(without the colons) can be used to create a new password.

MTU (Bytes): The MTU (Maximum Transmission Unit) is the size of the largest datagram that can be sent over a network.

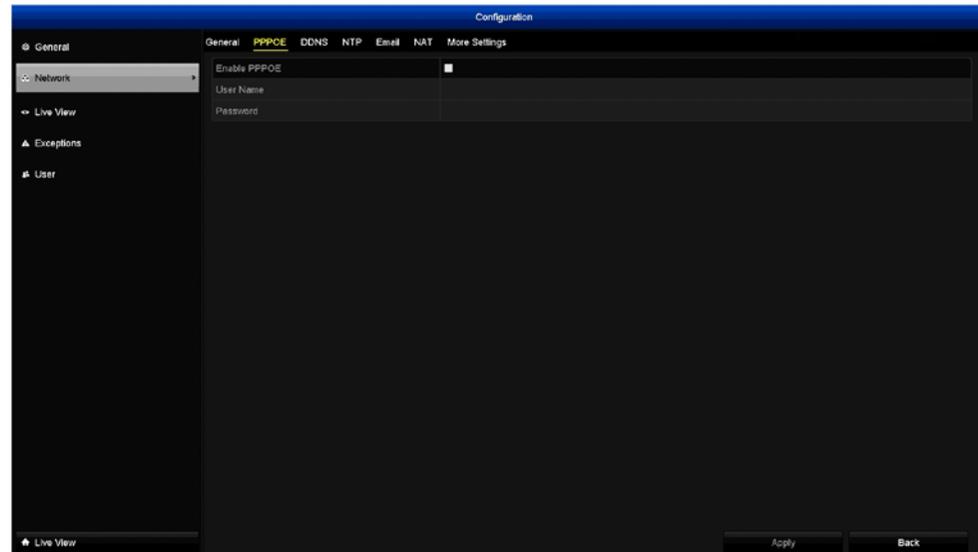
Preferred DNS Server: A DNS (Domain Name System) server is used to translate a website address to its IP address.

Alternate DNS Server: A backup DNS server.

UID: The UID is used to access your DVR from SwannView Plus on your mobile device or computer.

Send UID: Click this button to send the UID to your email address.

Configuration: Network - PPPoE



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

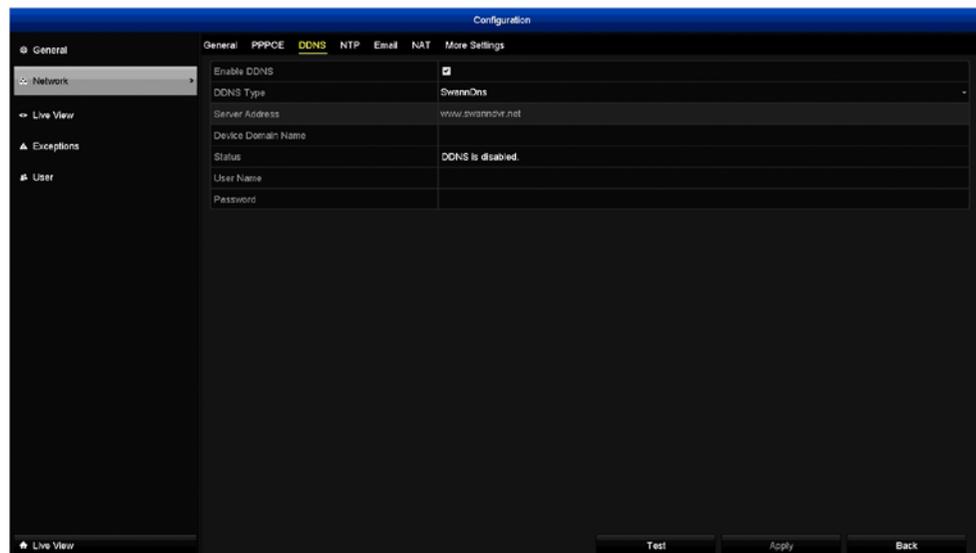
PPPoE is an advanced protocol that allows your DVR to be directly connected to the Internet via a DSL modem. This is an option for advanced users only.

Username: Enter the username for your DSL account provider.

Password: Enter the password for your DSL account provider.

Configuration: Network - DDNS

Prior to developing our SwannLink P2P technology, our SwannDNS service was used to connect to your DVR remotely. This service is still active and we recommend creating an account as a means of backup.



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

For now, ignore the "DDNS is disabled" message that appears. This will change when your DVR has confirmed your account details.

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

Enable DDNS: Click the checkbox to enable.

DDNS Type: SwannDNS is automatically selected.

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

User Name: Enter the username (host name) for your account.

Password: Enter the password for your account.

Click the "Test" button to confirm your account details. After a short moment you should see "Status of DDNS is normal".

Configuration: Network - NTP



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

The NTP (Network Time Protocol) function allows your DVR to automatically sync its clock with a time server. This gives it the ability to constantly have an accurate time setting (your DVR will periodically sync time automatically). Obviously this is very important for a security system and is enabled by default.

Configuration: Network - Email

We recommend that you create a new email account that is dedicated to your DVR. Both Gmail (gmail.com) and Outlook (outlook.com) are supported. Select your preferred provider, go to the relevant website to create an account then input those details here.

The screenshot shows the 'Email' configuration page in a web interface. The page is titled 'Configuration' and has tabs for General, PPPoE, DDNS, NTP, Email, NAT, and More Settings. The 'Email' tab is active. The configuration fields are as follows:

Enable Server Authent...	<input checked="" type="checkbox"/>	SMTP Server	smtp.gmail.com
User Name	mydvr	SMTP Port	587
Password	*****	Enable SSL/TLS	<input checked="" type="checkbox"/>
Sender	DVR		
Sender's Address	mydvr@emailaddress.com		
Select Receivers	Receiver 1		
Receiver	John		
Receiver's Address	john@emailaddress.com		
Enable Attached Picture	<input checked="" type="checkbox"/>		
Interval	2min		

At the bottom of the page, there are three buttons: 'Test', 'Apply', and 'Back'.

- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

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

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.

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

SMTP Port: Gmail input 587. Outlook input 587.

Enable SSL/TLS: Click the checkbox to enable (this is required for both email providers).

Sender: Enter the sender's name (see example above).

Sender's Address: Enter the email address for the account you created.

Select Receivers: Up to three different email addresses can be entered

to send email alerts to.

Receiver: Enter the receiver's name.

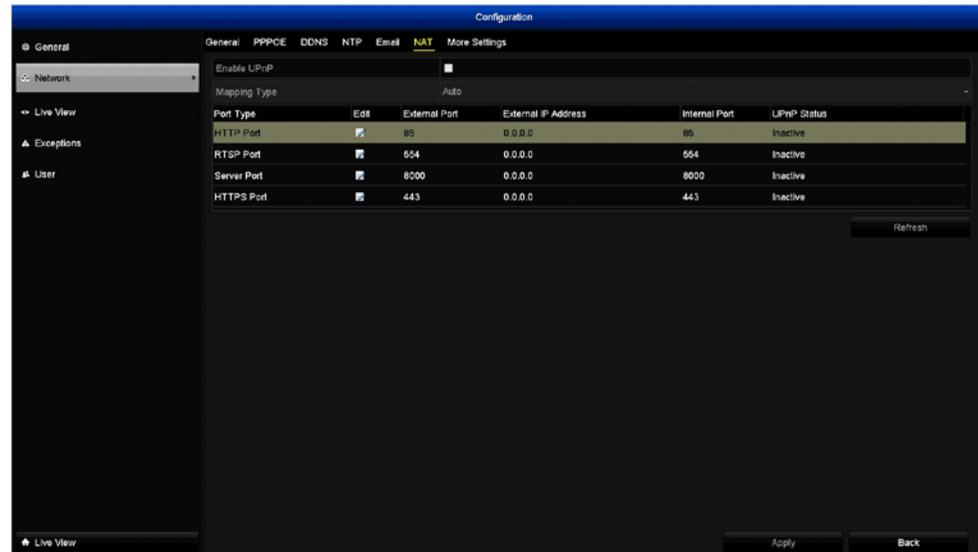
Receiver's Address: Enter the receiver's email address. You can send alerts to an additional two different email addresses.

Test: Click to verify the information is correct. A message will appear on-screen stating if the test has been successful. Click "OK" to continue.

Enable Attached Picture: When enabled, each time motion has been detected by a particular camera, your DVR will attach three small images of the event when sending an email.

Interval: The length of time that must elapse after your DVR sends an email before it will send another. Adjust accordingly.

Configuration: Network - NAT



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

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

Enable UPnP: Click the checkbox to enable.

Mapping Type: Depending on how your network has been configured, select either "Manual" or "Auto".

HTTP Port: This port is used to log into your DVR via your network or remotely. The default port number (85) is seldom used by other devices, however if you have another device using this port, you may need to change it. An alternative port number to use is 90. Make sure that the number used for the External Port and Internal Port both match, otherwise the UPnP function will not work.

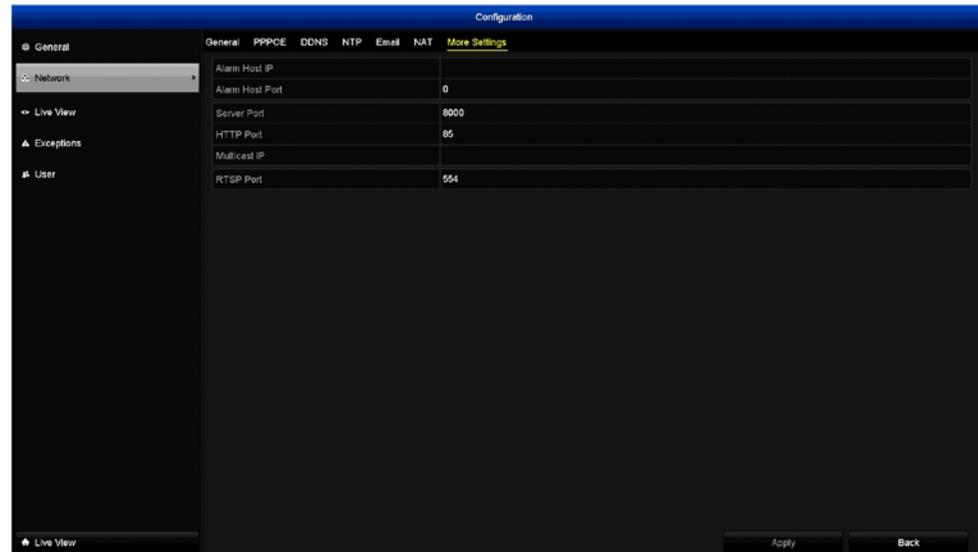
RTSP Port: This port is used to stream real-time images to your mobile device. If you're having issues streaming video to your mobile device

or your mobile service provider is blocking access, we recommend to change this to 5554. Do not change this if everything is working.

Server Port: This is the internal port that your DVR will use to send information through. This particular port number (8000) is not used by many devices, however if you have another DVR-like device, you may need to change it. An alternative port number to use is 9000. Make sure that the number used for the External Port and Internal Port both match, otherwise the UPnP function will not work.

HTTPS Port: Basically the same as HTTP Port but with an additional layer of security. The default port number (443) is seldom used by other devices. Make sure that the number used for the External Port and Internal Port both match, otherwise the UPnP function will not work.

Configuration: Network - More Settings

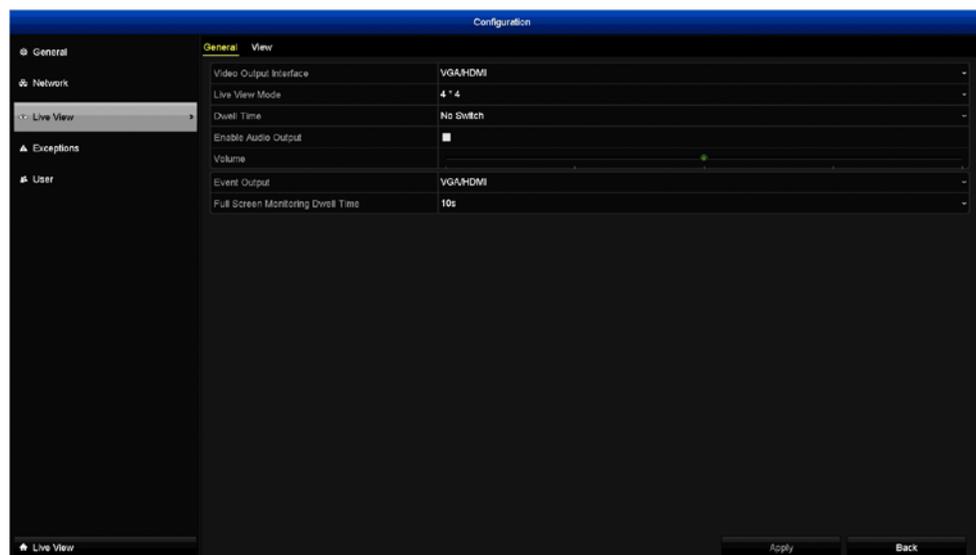


- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

The Alarm Host IP, Alarm Host Port and Multicast IP functions are not compatible with this DVR.

Any changes to the Server Port, HTTP Port and RTSP Port on the previous tab will be reflected here.

Configuration: Live View - General



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

Video Output Interface: This option cannot be changed.

Live View Mode: This function allows you to change how the cameras are displayed on-screen in Live View mode. Selecting 2 x 2 will display four cameras on-screen, selecting 3 x 3 will display eight cameras on-screen and so on. Selecting 1 x 1 will display the first video channel full-screen. The number of views available is dependent on how many video channels your DVR has.

Dwell Time: The time in seconds to dwell on a video channel when enabling "Start Auto-switch" on the Menu Bar. This only works when Live View mode is set to "Single Screen".

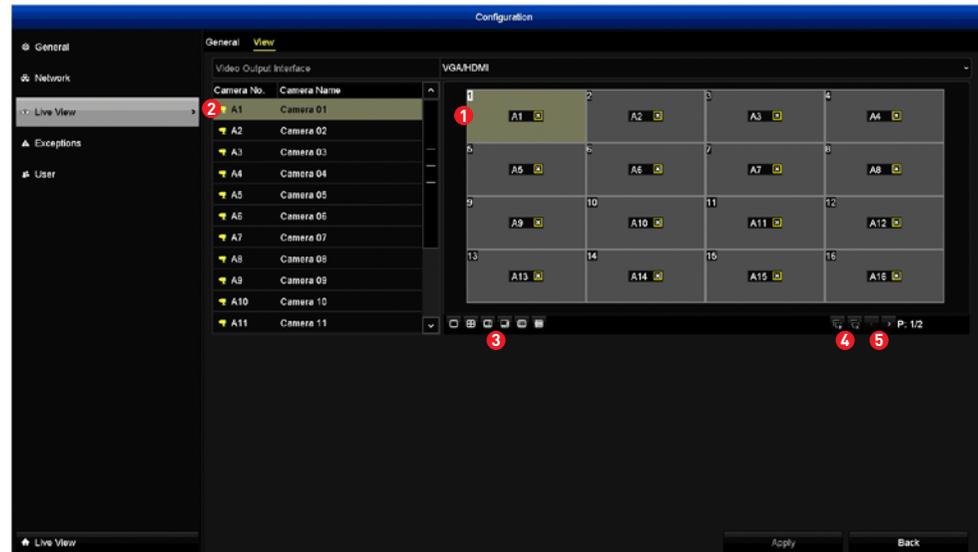
Enable Audio Output: Click the checkbox to enable the audio output connection on your DVR.

Volume: Click to change the volume level.

Event Output: All events will display on your DVR's VGA or HDMI output.

Full Screen Monitoring Dwell Time: The time in seconds to display a full screen image when an event has occurred.

Configuration: Live View - View



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

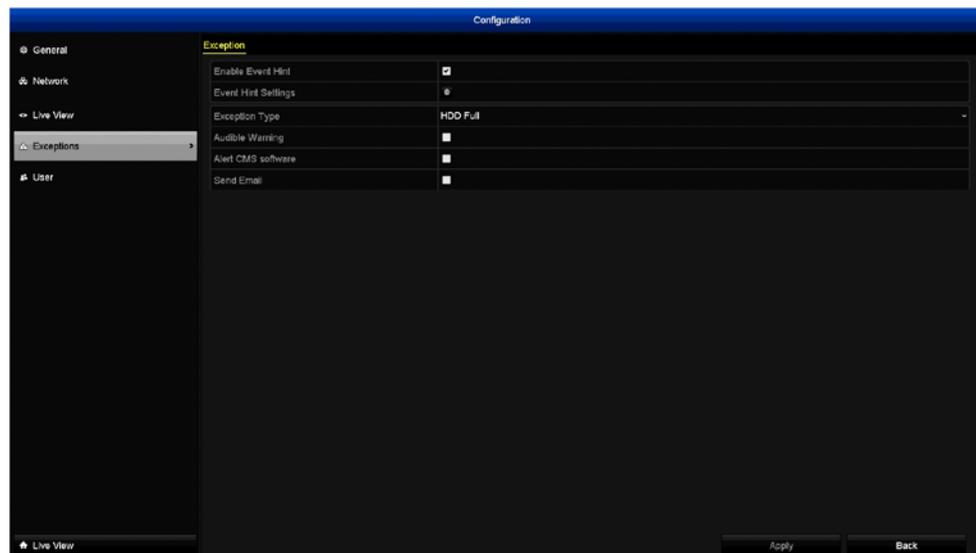
This function allows you to change the display order of each camera connected in Live View mode.

1. Select an available viewing window.
2. Double-click one of the cameras available. That camera will be placed in the viewing window that you selected.
3. Select the Live View mode that you would like to change.
4. Press the "Start live view of all channels" button to start the Live View of all cameras connected. Press the "Stop live view of all channels" button to stop the Live View of all cameras connected. Pressing the "Stop live view of all channels" button means you will not see a real-time image in Live View mode.
5. When selecting different Live View modes, you can click the "Next" and "Previous" buttons to change the viewing windows available. The

page numbers displayed will change depending on which Live View mode you have selected.

Configuration: Exceptions

Whenever there is an event or if your DVR displays abnormal behaviour, you can be alerted to in multiple ways such as receiving an email, receiving an alert via the SwannView Plus Windows software and activating its internal buzzer.



- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

Enable Event Hint: When an event occurs, a message will appear on-screen. Click the checkbox if you wish to disable on-screen messages.

Event Hint Settings: You can select which event messages will appear on-screen.

Exception Type: Select the event type you'd like your DVR to react to:

HDD Full: As the name suggests, this event occurs when the hard drive has run out of space. This does not apply if "Overwrite" is enabled by default - see [page 27](#) for more information.

HDD Error: When your DVR has difficulty accessing the hard drive.

Network Disconnected: When your DVR has been disconnected from your network and can no longer connect to the Internet.

IP Conflicted: When your DVR detects a conflicting IP address.

Illegal Login: When your DVR detects an incorrect login.

Input/recording resolution mismatch: When the camera connected is not capable of matching the recording resolution selected.

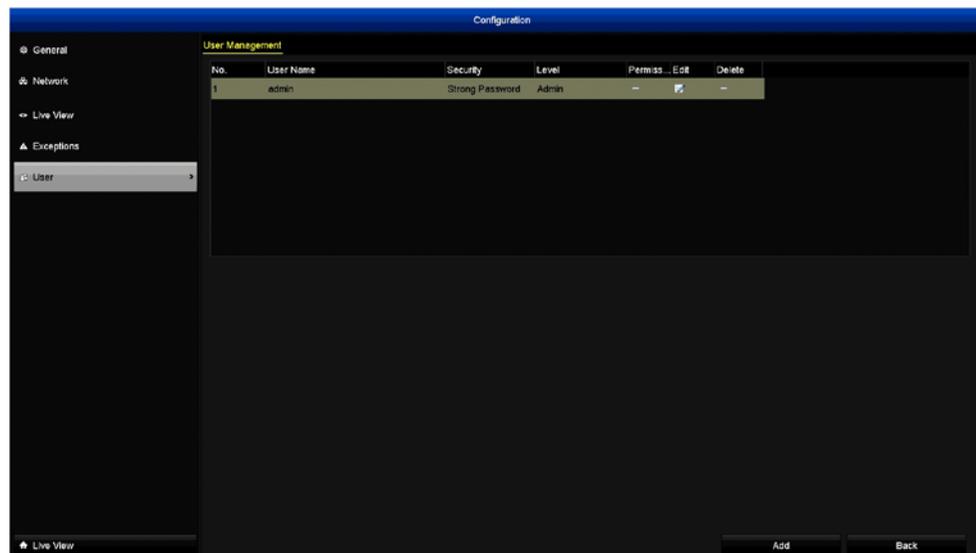
Record Exception: When there is one or more errors during capture such as a hard drive failure or if the hard drive quota has been changed.

Audible Warning: This will enable your DVR's internal buzzer.

Alert CMS Software: This will alert the SwannView Plus Windows software that's installed on your computer.

Send Email: Your DVR will send an email alert.

Configuration: User



We recommend enabling password protection as your login has access to all aspects of your DVR's operation.

1. Click "Edit" to change the password. Input your old password, enable "Change Password" and then input your new password. Click "OK" to save.
 2. If you have multiple user accounts that you have created, click "Delete" to remove them.
 3. Click the "Add" button to create additional user accounts. You can create multiple admin accounts or guest accounts. Guest accounts are restricted to a limited amount of options only.
- Click the "Back" button to go back to the Menu.

System Maintenance

System Maintenance gives you an overview of the various settings and options that have been selected for your DVR to function. Each action that your DVR performs as well as events detected are logged, which you can search, view and export. You can also install a firmware upgrade when available, format the hard drive and perform a factory reset in case of error.

The screenshot shows the 'HDD Information' screen. It features a table with columns: Label, Capacity, Status, Property, Type, Free Space, Group, Edit, and Delete. Below the table, there are summary statistics for Total Capacity, Free Space, and Estimated time of recording.

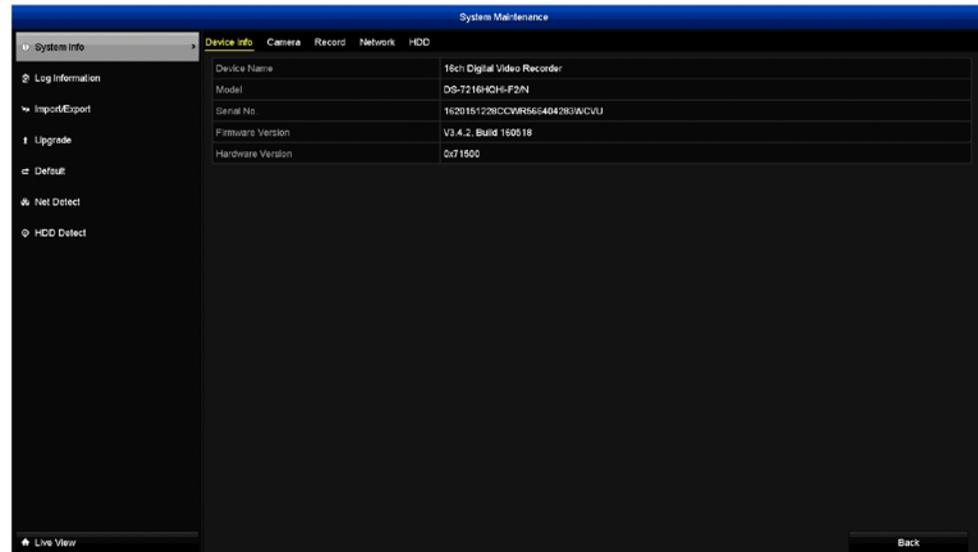
Label	Capacity	Status	Property	Type	Free Space	Group	Edit	Delete
1	1063.02GB	Normal	RAW	Local	1059.00GB	1	-	-

Summary statistics:
Total Capacity: 1063.02GB
Free Space: 1059.00GB
Estimated time of recording in days: 64

The screenshot shows the 'System Maintenance' screen with the 'Traffic' tab selected. It displays a line graph of network traffic for LAN1, with 'Sending: 0bps' and 'Receiving: 2Kbps' indicated. Below the graph is a table with columns: Name, Linking Status, Type, MAC Address, MTU(B), NIC Type, and Traffic.

Name	Linking Status	Type	MAC Address	MTU(B)	NIC Type	Traffic
LAN1	Succeeded	Ethernet	28:57:be:a0:87:d3	1500	100M Full-dup	

System Maintenance: System Info



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

- Click the “Back” button to go back to the Menu.

System Maintenance: Log Information

Each action that your DVR 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.

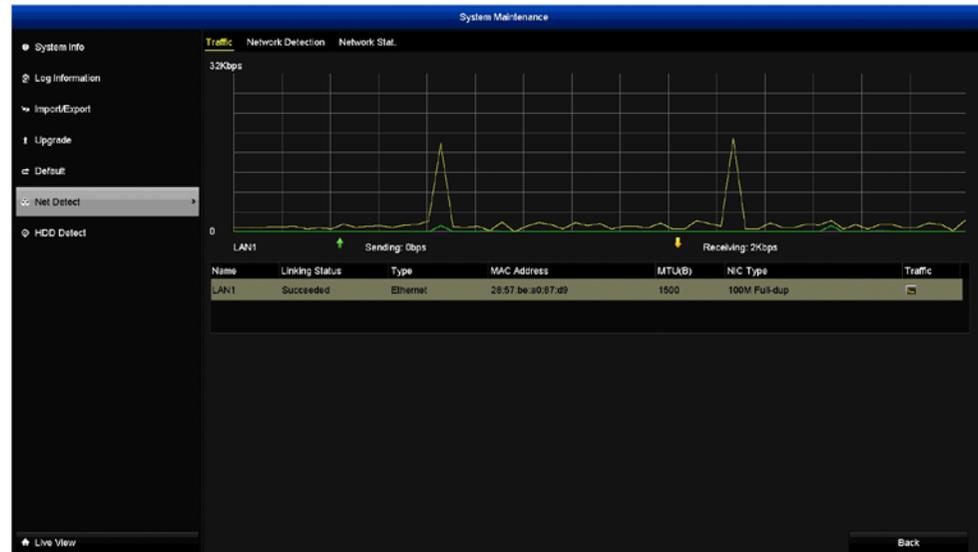


1. Select the search conditions to refine your search including the start & end time, Major Type and Minor Type.
 2. Click the “Search” button to start searching the log files.
 3. The matched log files will be displayed. Up to 2000 log files will be displayed first.
 4. Double-click a file to view detailed information contained in the log.
 5. Insert your USB flash drive to the USB port.
 6. Select a log file that you want to copy, click the “Export” button, select a save location then click “Export” again.
 7. Click “OK” to finish and right-click to exit.
- Click the “Back” button to go back to the Menu.

To export all log files without searching, click the “Export All” button, select a save location then click “Export” again.

System Maintenance: Import/Export

This function gives you the option to import or export your current configuration settings. This comes in handy as it will save you time configuring your DVR after performing a factory reset.



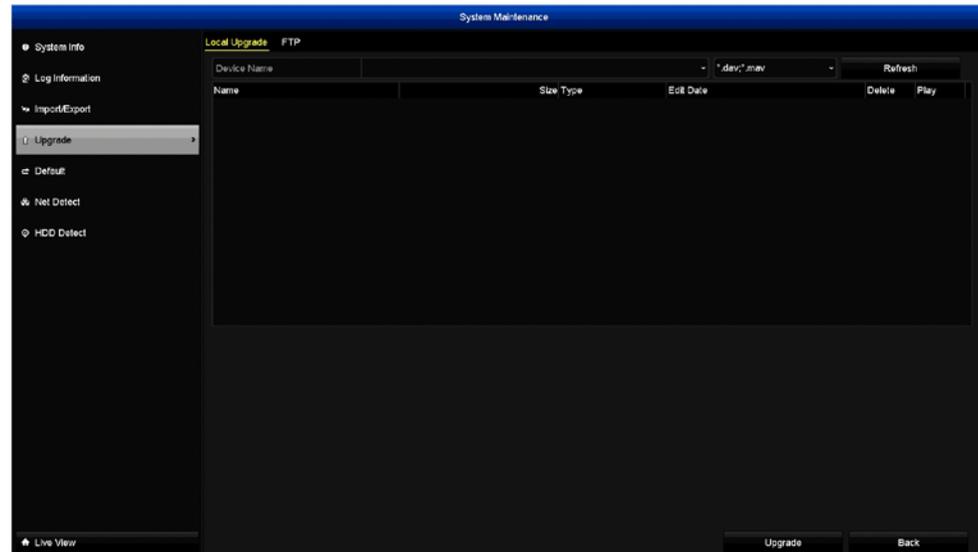
Exporting your configuration settings

1. Insert your USB flash drive to the USB port.
2. Select a save location then click "Export".
3. Click "OK" to finish and right-click to exit.

Importing your configuration settings

1. Insert your USB storage device to the USB port.
 2. Select the location of the file then click "Import". Your DVR will now restart to apply your configuration settings.
- Click the "Back" button to go back to the Menu.

System Maintenance: Upgrade



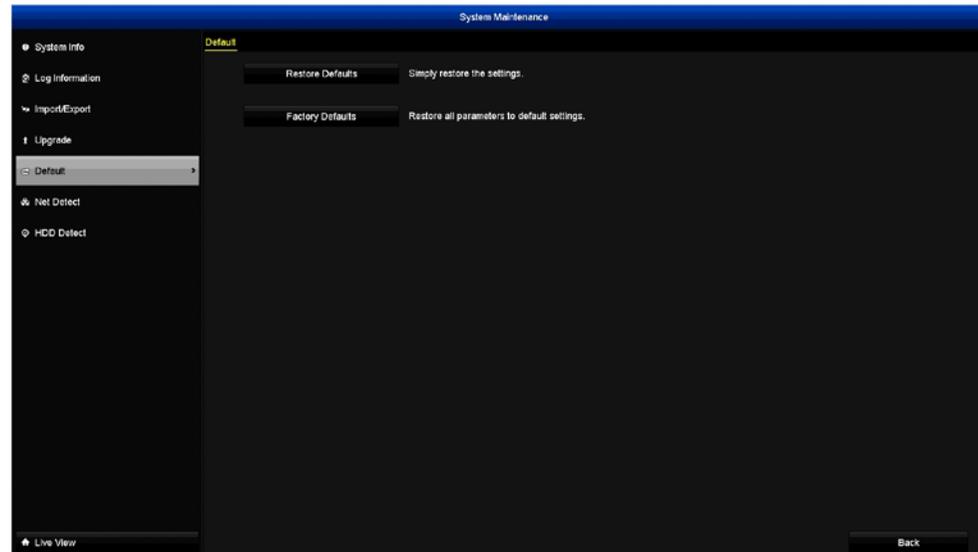
When new firmware is released, you can use this function to install the upgrade.

1. Insert your USB flash drive to the USB port.
2. Select the location of the file then click "Upgrade". Your DVR will re-start when finished.

FTP: We don't recommend using this option in case your DVR is disconnected from your network during the upgrade.

- Click the "Back" button to go back to the Menu.

System Maintenance: Default



This function allows you to factory reset your DVR in case of error. There are two options available:

Restore Defaults: This option will reset all settings that have been changed.

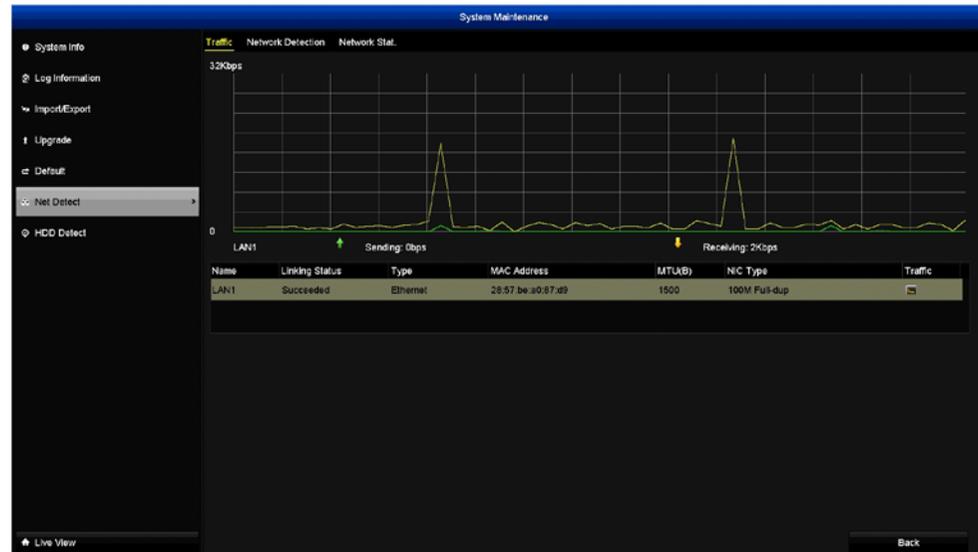
Factory Defaults: This option will perform a factory reset. All settings will go back to their default settings and information such as password and email settings will be removed.

Your DVR will restart after pressing the “OK” button.

- Click the “Back” button to go back to the Menu.

System Maintenance: Net Detect

This function allows you to check network traffic and to obtain real-time information from your DVR such as sending and receiving, network detection and network status.



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

- Click the “Back” button to go back to the Menu.

System Maintenance: HDD Detect

This function displays technical information of the hard drive installed as well as the ability to detect bad sectors (a bad sector is simply a cluster of storage space that appears to be defective).



The screenshot shows the 'System Maintenance' interface with the 'HDD Detect' menu item selected. The main display area is titled 'S.M.A.R.T. Settings' and 'Bad Sector Detection'. It includes a checkbox for 'Continue to use this disk when self-evaluation is failed.' and a table of SMART attributes. The table has columns for ID, Attribute Name, Status, Flags, Threshold, Value, Worst, and Raw Value. The attributes listed are: 0b1 Raw Read Error Rate (Status: OK, Value: 200), 0b3 Spin Up Time (Status: OK, Value: 3450), 0b4 Start/Stop Count (Status: OK, Value: 127), and 0b5 Reallocated Sector Count (Status: OK, Value: 0). There are 'Apply' and 'Back' buttons at the bottom right.

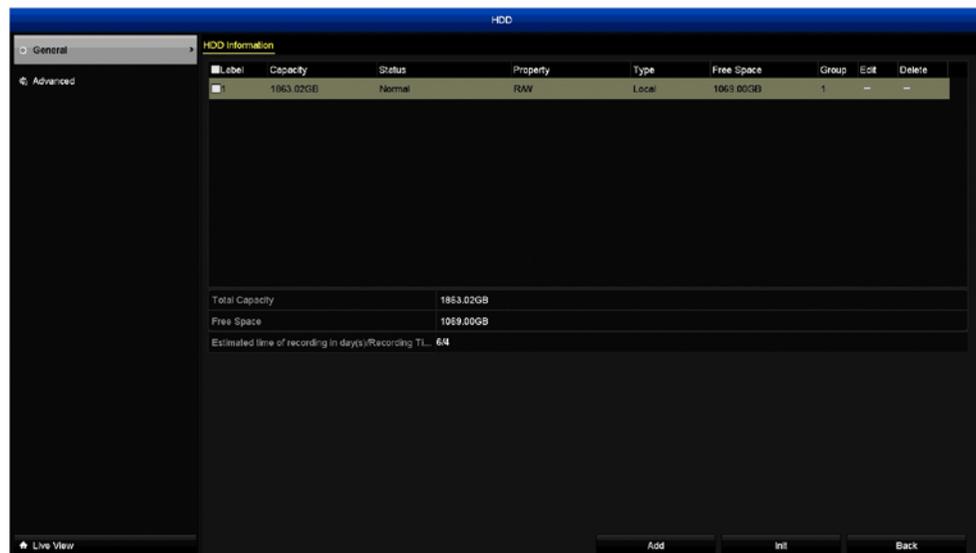
ID	Attribute Name	Status	Flags	Threshold	Value	Worst	Raw Value
0b1	Raw Read Error Rate	OK	2f	51	200	200	0
0b3	Spin Up Time	OK	27	21	191	172	3450
0b4	Start/Stop Count	OK	32	0	100	100	127
0b5	Reallocated Sector Count	OK	33	140	200	200	0

- Don't forget to click "Apply" to save settings.
- Click the "Back" button to go back to the Menu.

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

HDD: General

This function allows you to initialize the hard drive inside your DVR. Initializing will erase any data that is on there. You also have the option of adding a NAS (network attached storage) device that your DVR can use to record to.



Add: Create a folder on your NAS device to save to. Select “NAS”, input the IP address of your NAS device then click the “Search” button. If your NAS device uses the iSCSI protocol select “IP SAN”. Select the folder that you created then click “OK” to continue.

Init: 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.

Please note: From time to time, we recommend that you format the hard drive. This ensures that your DVR runs efficiently and maintains system integrity.



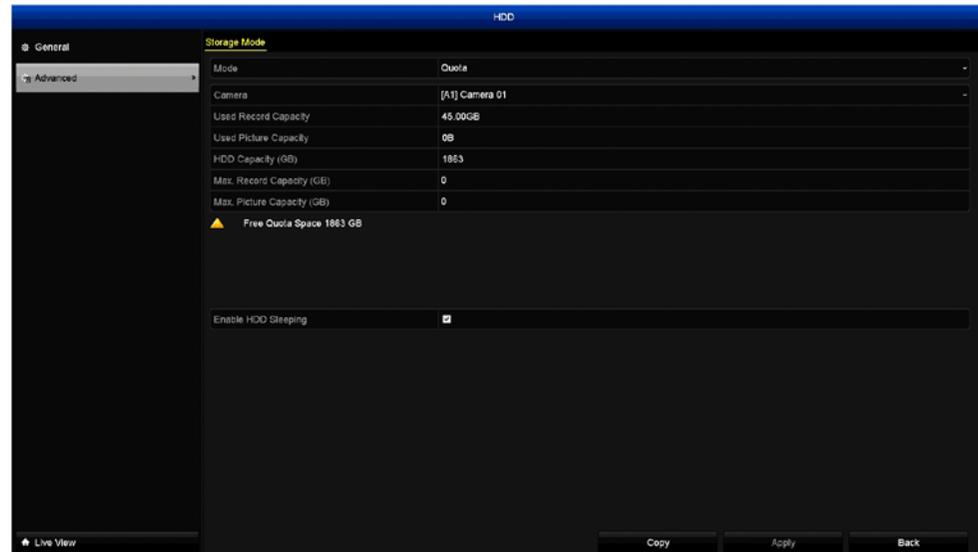
Connect a USB flash drive to copy events that you want to save. Remember, formatting the hard drive erases all your recordings.

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

• Click the “Back” button to go back to the Menu.

HDD: Advanced

This function allows you to configure a quota on the hard drive for each camera connected. You can allocate more hard drive space to cameras monitoring a high traffic area and decrease space to cameras monitoring less frequented areas.



- Don't forget to click "Apply" to save settings.
- Use the "Copy" function to apply all settings to the other cameras.
- Click the "Back" button to go back to the Menu.

Mode: The default selection is "Quota". Select "Group" if you have multiple hard drives installed. You can then instruct your DVR on which drive each camera can record to.

Camera: Select the camera you want to change.

Used Record Capacity: Displays how much hard drive space has been used to date (video).

Used Picture Capacity: Displays how much hard drive space has been used to date (picture).

HDD Capacity (GB): Displays the hard drive's total capacity.

Max. Record Capacity (GB): Select in gigabytes the space you want to allocate. For example, 50 gigabytes for camera 1, 50 gigabytes for camera 2. The free quota space will decrease each time an allocation is made.

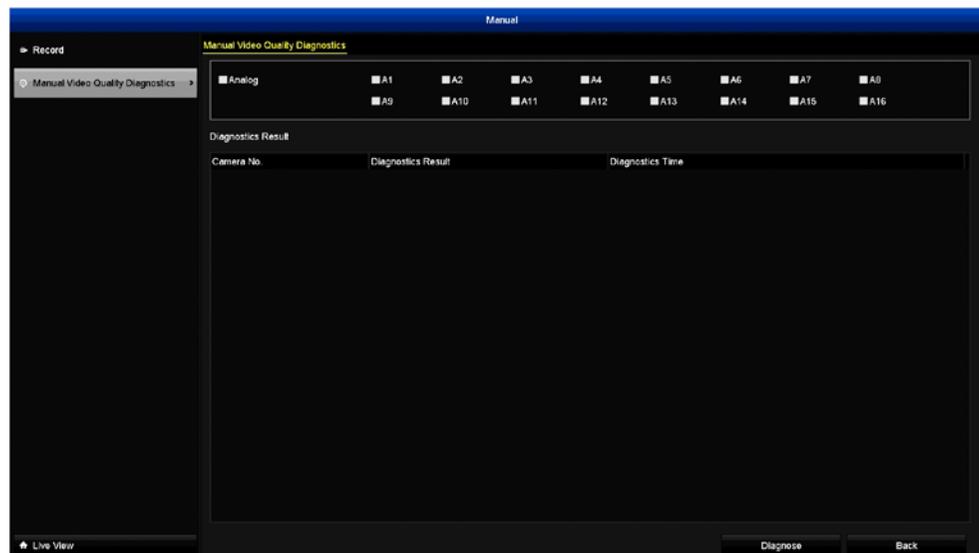
Max. Picture Capacity (GB): Select in gigabytes the space you want to al-

locate. For example, 50 gigabytes for camera 1, 50 gigabytes for camera 2. The free quota space will decrease each time an allocation is made.

Record on HDD Group: In Group mode, select which camera is allocated to hard drive 1 or 2 (if you have multiple hard drives installed).

Enable HDD Sleeping: This function is only applicable if you have multiple hard drives installed. Having this option enabled will reduce wear and tear and will increase the overall lifespan of the second drive.

Manual: Video Quality Diagnostics



Diagnose: If you have Video Quality Diagnostics enabled on one or more cameras, click this button to display the diagnostic result and diagnostic time for each camera selected.

- Click the “Back” button to go back to the 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.

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.

AP Mode: This mode allows wireless communication with the provided cameras, however, your DVR must be physically connected to your router to gain Internet access.

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. For this option, 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.

Bit rate: The amount of data that your DVR 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.

Contrast: This increases the difference between the blackest black and the whitest white in the image. Without contrast there wouldn't be an image because there would be no differentiation between light and dark.

DDNS (Dynamic DNS): Is a service that converts IP addresses into host names (this is a lot easier than trying to remember an IP address). This makes DDNS a good fit for home networks, which normally receives an IP address from the ISP that will change occasionally.

Glossary

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. 1920 x 1080 resolution will give you the best display quality.

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.

Extranet: Better known as a remote network. On your DVR, this is where the DDNS settings are found.

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 your 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.

Hardware: A physical device. Your DVR is hardware.

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

HTTP Port: HTTP stands for Hypertext Transfer Protocol. This port is used to log into the web browser interface of your DVR 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 colour 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. IP addresses range from 0.0.0.0 to 255.255.255.255.

IP Channel: Is a list of cameras that are either directly connected to your DVR, or connected directly to your network. This will typically display the camera's name, IP address, channel number, status, user name and password.

Live View: Is the default display mode for your DVR. 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.

Main Stream: Is the video feed that your DVR 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 detects motion. Any area obscured won't be shown live or recorded.

Glossary

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

Motion Detection: Is the main method used by your DVR 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's clock automatically with a network time server.

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.

Pack Duration: Instructs your DVR to split recordings into discrete units. Each unit can be a maximum of 60 minutes in length. Your DVR 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 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 your DVR, 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 to record for a number of seconds before an event occurs.

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

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 colour is displayed in the image. The higher the saturation, the more bright and vivid colours 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.

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

SMTP: This stands for Simple Mail Transfer Protocol. This is used to send an outbound email (e.g. from your DVR 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.

Glossary

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. Internet Explorer and Swannview Plus for Windows are examples of software.

SSID: Is the technical term for a wireless network name. When you set-up 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 your DVR, 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.

Station Mode: This mode allows your wireless DVR to connect to your wireless network like any other wireless device. Used when you don't want to have your wireless DVR connected to the router via a cable.

Sub Stream: Is the video stream that your DVR 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. If this is incorrect, your DVR may not be able to connect to the internet.

Time Server: Is a computer or server that reads the actual time from 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.

UID: It stands for Unique Identifier and is an alphanumeric string that is associated with a single entity within a given system. By entering your DVR's UID into the SwannView Link app and software, allows you to communicate with your DVR without having to remember IP addresses or port numbers.

UPnP: Universal Plug and Play. A network protocol designed to allow network connected devices to automatically configure a 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 & camera to set specific triggers for recording (such as line crossing or intrusion (loitering)). 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 doesn't receive an active video signal from any one of its video inputs.

Video Quality Diagnostics: Enables your DVR 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.

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.

Warranty Information

USA

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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.

Helpdesk & Technical Support

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