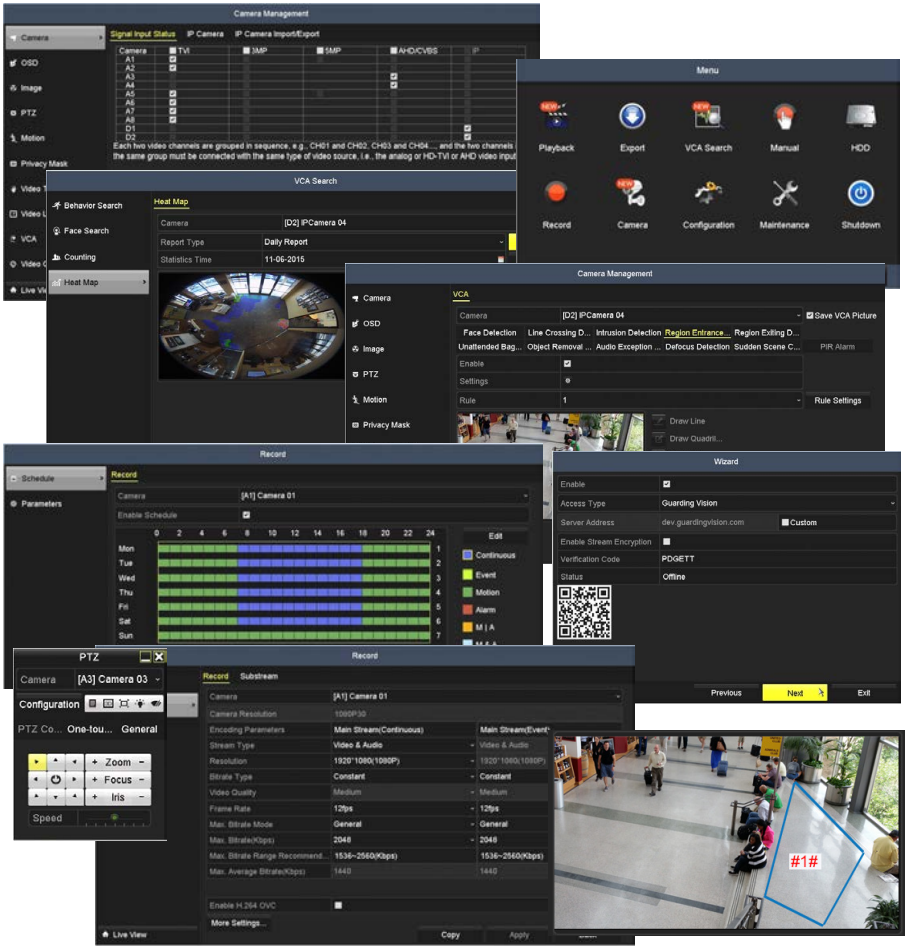
ALIBI™ Embedded Video Recorder Firmware V3.4.80 User Manual

Products: ALI-QVR3000H Series, ALI-QVR4000 Series and ALI-QVR5000 Series Recorders



PLEASE READ THIS MANUAL BEFORE USING YOUR SYSTEM, and always follow the instructions for safety and proper use. Save this manual for future reference.

ALI-QVR_3.4.80_RM
170404

About this manual

This user manual applies to all ALIBI embedded Network Video Recorders (QVRs) with firmware version V3.4.80.

Navigation in the firmware is represented by the expression: "**Menu | Configuration | Alarm | Alarm Output"**, which means:

a. Right click on the Live View display to open the pop-up menu, and then click the **Menu** entry (at the top of the list).

b. In the Menu window, click the **Configuration** icon.

c. In the Configuration window, click the **Alarm** entry in the left frame.

d. Click the **Alarm Output** tab at the top of the screen. This may also indicate a parameter on the screen.

To find the version of the firmware installed in your QVR, open the **Menu | Configuration** screen.

Some features described herein may apply to some QVRs but not to other models. For specific information about the features and capabilities of your ALIBI NVR, please contact your vendor.

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For Sales and Support, contact your distributor.

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SECTION 1
Systems Overview

Congratulations on purchasing your new Alibi QVR series recorder! Your system will accommodate Alibi HD-TVI, AHD, CVBS and Alibi IP cameras. Key features include:

General

- Connectable to HD-TVI, AHD, CVBS analog cameras and IP cameras
- Support ALIBI-C protocol for connecting camera over coax;
- Each channel supports dual-stream. Main stream supports up to 1080p resolution and sub-stream supports up to 960H resolution. The ALI-QVR3000H series and ALI-QVR4000H series recorders support up to 1080p lite (960×1080) resolution when 1080p Lite mode is enabled.
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.
- Encoding for both video stream and video & audio stream; audio and video synchronization during composite stream encoding
- Support enabling H.264+ to ensure high video quality with lowered bitrate.
- Watermark technology

Local Monitoring

- HDMI/VGA output up to 4K (3840 × 2160) resolution at 30 Hz
- 1/4/6/8/9/16-split screen live view is supported. The display sequence of screens is adjustable.
- Live view screen can be switched in group and manual switch and automatic cycle live view are also provided, the interval of automatic cycle can be adjusted
- Quick setting menu is provided for live view
- The selected live view channel can be shielded
- Motion detection, video-tampering detection, video exception alarm, video loss alarm and VCA alarm functions
- Privacy mask
- Several PTZ protocols supported; PTZ preset, patrol and pattern
- Zooming in/out by clicking the mouse and PTZ tracing by dragging mouse.

HDD Management

- ALI-QVR3000H series recorders support 1 internal SATA hard disk drive (HDD); ALI-QVR4000H series recorders support 2 internal SATA HDDs. Each HDD can have a maximum storage capacity of 8TB
- 8 network disks (8 NAS disks, 8 IP SAN disks or n NAS disks + m IP SAN disks (n+m ≤ 8)) can be connected.
- S.M.A.R.T. and bad sector detection reporting
- HDD sleeping function
- HDD property: redundancy, read-only, read/write (R/W)
- HDD group management
- HDD quota management; different capacity can be assigned to different channels

Recording and Playback

- Holiday recording schedule configuration;
- Cycle and non-cycle recording modes
- Normal and event video encoding parameters
- Multiple recording types: Manual, Continuous, Alarm, Motion, Motion | Alarm, Motion & Alarm and Event
- 8 recording time periods with separated recording types
- Support Channel-Zero encoding
- Main stream and sub-stream configurable for simultaneous recording
- Pre-record and post-record for motion detection triggered recording, and pre-record time for schedule and manual recording;
- Searching record files by events (alarm input/motion detection)
- Customization of tags, searching and playing back by tags
- Locking and unlocking of record files
- Local redundant recording
- Searching and playing back record files by camera number, recording type, start time, end time, etc.
- Smart playback to go through less effective information
- Main stream and sub-stream selectable for local/remote playback
- Zooming in for any area when playback
- Multi-channel reverse playback
- Supports pause, fast forward, slow forward, skip forward, and skip backward when playback, locating by dragging the mouse on the progress bar
- 4/8/16-channel synchronous playback

Backup

- Export data by a USB, and SATA device;
- Export video clips when playback;
- Management and maintenance of backup devices.

Alarm and Exception

- Configurable arming time of alarm input/output;
- Alarm for video loss, motion detection, video tampering, abnormal signal, video input/recording resolution mismatch, illegal login, network disconnected, IP address conflict, record exception, HDD error, and HDD full, etc.
- Alarm triggers full screen monitoring, audio alarm, notifying surveillance center, sending email and alarm output
- VCA detection alarm (line crossing detection and intrusion detection) is supported
- Support coaxial alarm
- Automatic restore when system is abnormal

Other Local Functions

- Manual and automatic video quality diagnostics
- Local control by mouse
- Three-level user management: Administrator, Operator and Guest. Administrator can create operator and quest accounts and define their operating permission, which includes the permissions to access any channel
- Manually triggering and clearing of alarms
- Importing and exporting of configuration file of devices
- Retrieve camera type information automatically

Network Functions

- Supports Alibi Cloud firmware update option
- Supports Alibi Cloud P2P remote connection
- 1 self-adaptive 10M/100M/1000Mbps network interface for ALI-QVR3016H and ALI-QVR4016H; and 1 self-adaptive 10M/100Mbps network interface for other models.
- IPv6 is supported
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™ and HTTPS are supported
- Extranet access by SimpleDDNS
- TCP, UDP and RTP for unicast
- Auto/manual port mapping by UPnPT™
- Remote search, playback, download, locking and unlocking the record files, and downloading files broken transfer resume
- Remote parameters setup; remote import/export of device parameters
- Remote viewing of the device status, system logs and alarm status
- Remote keyboard operation
- Remote HDD formatting and device upgrade
- Remote system restart and shutdown
- Remote access with smartphone app ALIBI™ Witness
- Firmware upgrade from remote server
- Support upgrading via remote FTP server
- RS-485 transparent channel transmission
- Alarm and exception information can be sent to the remote host
- Remotely start/stop recording
- Remotely start/stop alarm output
- Remote PTZ control
- Remote JPEG capture
- Two-way audio and voice broadcasting
- Embedded WEB server

1.1 Soft keyboard

One of two on-screen keyboards appears when you click in a field that accepts a entry, such as a password or name or a numerical value. A third keyboard which includes symbols can also be opened while in the numeric keyboard. The alphanumeric keyboard is shown in the following picture. Some control keys toggle their function when they are clicked. A numerical keyboard, shown beneath, appears for numerical entries such as an IP address.

Soft keyboard - alphanumeric

Soft keyboard - numeric

Soft keyboard - symbols

A USB keyboard attached to the recorder has limited functionality. It can be useful for keying in text and numbers.

1.1.1 Mouse control

A standard 3-button (left/right/scroll-wheel) USB mouse can also be used with this recorder. To use a USB mouse:

1. Plug USB mouse into the either the front panel or backpanel USB connector of the recorder.
2. The mouse will be automatically detected. If the mouse is not detected, the mouse may not be compatible with the recorder. Please refer to the recommended device list from your provider.

Using the mouse:

Action	Effect
Right click	**Live view**: Show menu. Menu: Exit current menu to upper level menu.
Left click	**Single click**: Live view: Select channel and show the quick set menu. Menu: Select and enter.
	Double click: Live view: Switch between single-screen and multi-screen.
	Click and drag: PTZ control: pan, tilt and zoom. Tamper-proof, privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar
Scroll wheel	**Scroll up**: Live view: Previous screen. Menu: Previous item.
	Scroll down: Live view: Next screen. Menu: Next item.

SECTION 2
System Setup

Use this section to setup the initial configuration of your recorder. Refer to the other sections of this manual for procedures for using the extensive features of the system.

2.1 Using the setup Wizard

After powering on an Alibi recorder for the first time, the firmware will open the setup Wizard. Use the Wizard to establish the initial configuration of the recorder for your application and begin recording video data. You can also configure, and change the configuration of the settings made using the Wizard, using the configuration features of the firmware. This setup Wizard can be disabled for a subsequent power-on or reboot in the **Menu | Configuration** screen.

1. After completing the hardware setup procedure detailed in the quick start guide provided for your recorder, power on the recorder. Normally, an Alibi logo splash screen appears within 2 minutes. A secondary flash screen may appear showing the status of the HDDs installed in the recorder.

A secondary flash screen may appear showing the status of the HDDs installed in the recorder. A green check mark on the icon indicates that the associated HDD is operating normally. If you installed new (or un-initialized) HDDs in the chassis before running the Wizard, those HDDs must be initialized before use. HDD initialization can be performed within the wizard and within the firmware menu system.

Following the splash screen, a monitor resolution screen may appear. Open the drop down list and select the monitor resolution you prefer, then click **OK**. The factory default monitor resolution is 1280 × 720 pixels.

2. If this is the first startup of the device, an an **Activation** screen will appear after the initial **Alibi Loading** window shown above.

   a. In this screen, you must create an **admin** user password. Follow the instructions on the screen to create a ***Strong*** password.

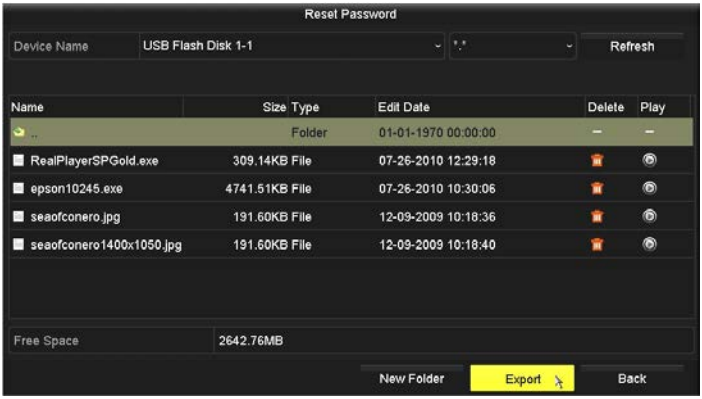
NOTE *In previous firmware versions, the recorder was initially configured with the default password. With this version, you must create an initial password to activate the recorder.*

   b. Enter the password in the **Create New Passw...** and **Confirm...** fields, and then click **OK**. Save your password in secure location for reference later, if needed.

   c. After creating a password, click the **Yes** button in the **Attention** screen to export the GUID file. The GUID file is setup when you created this password; it enables you to recreate a new password if you forget this current password.

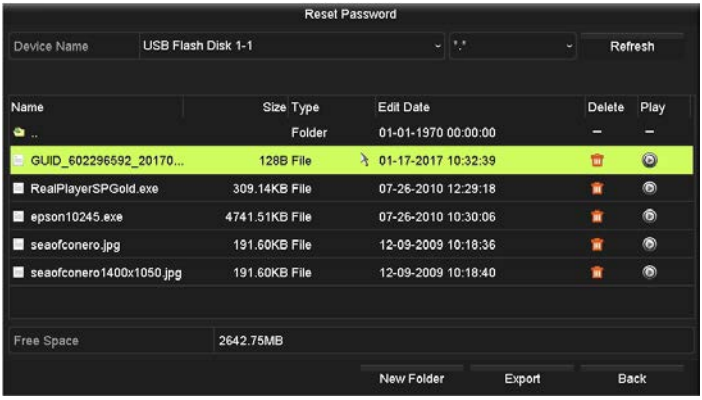
d. Insert the flash media device where you want to save the GUID file into a USB port on the recorder.

e. Navigate to the directory where you want to save the file, and then click **Export**.



f. After the export completes, click **OK** to close the **Attention** window

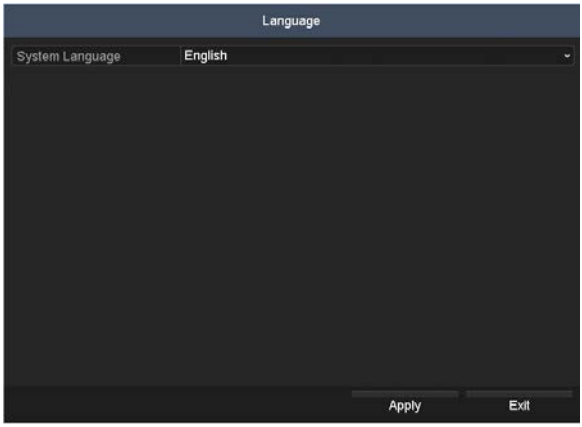
g. Verify that the GUID file is listed on the flash media.



h. Click **Back** to open the setup Wizard.

i. Remove the flash media with the GUID file and save it in a secure location.

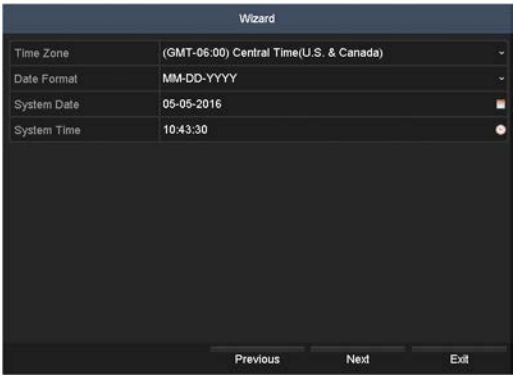
3. In the Language screen, click **Apply**.



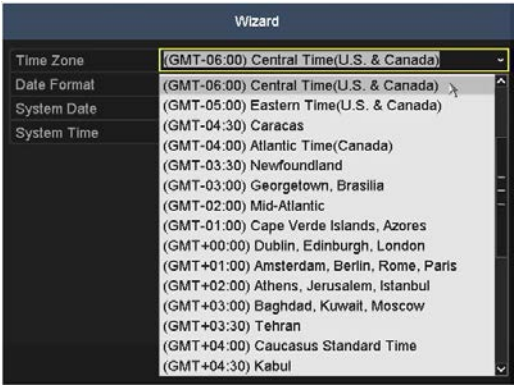
4. In the next screen, if you don't want to start the Wizard the next time the device starts, uncheck the box. The Setup Wizard can assist you in making important configuration settings in the QVR. Click **Next** button on the Wizard window.

NOTE *The configuration settings presented in the setup Wizard can also be made and changed using the **Menu** system. See Chapters 5 - 7 for more information.*

5. Click the **Next** button to open the date and time settings window.



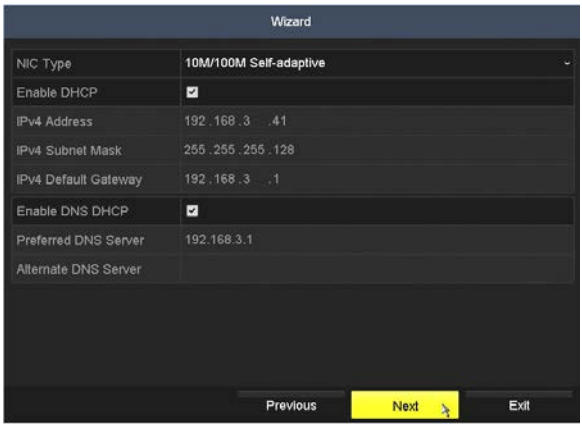
6. In the date and time setup window, click the field you want to change, then use the drop-down list or setup aids to select the appropriate values. For instance, click the Time Zone field, then highlight Time Zone for your QVR.



Click the other fields in the window and make the appropriate changes, if needed.

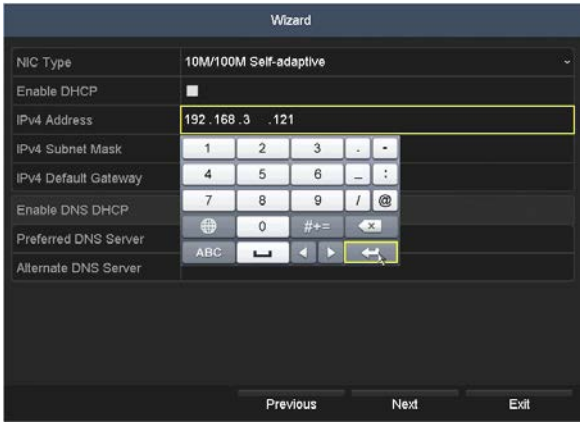
7. Click **Next** to confirm your settings or **Cancel** to discard them and open the network setup Wizard window.

8. In the **Network** setup Wizard window, click the field value you want to change, then use the pop-up aid to enter a new value. By default, the QVR uses DHCP (Dynamic Host Configuration Processor) to acquire compatible (dynamic, changeable) network settings from a network DHCP server.

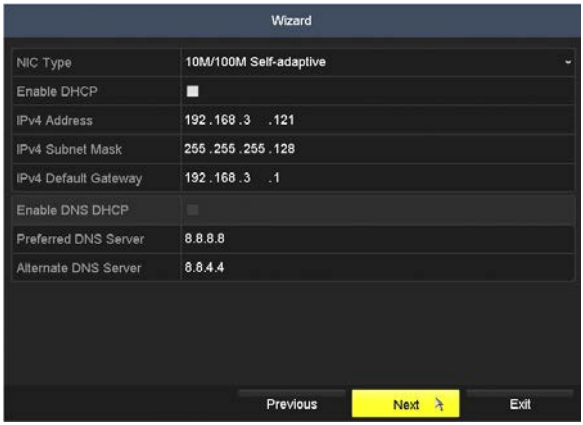


Generally, it is preferable to setup the recorder with fixed network settings, if possible, to assure the it has an unchanging IP address for remote logins. To enable fixed network settings, uncheck the **Enable DHCP** checkbox, then edit the appropriate fields to change the settings. Consult with your network administrator to determine the best network settings for your recorder.

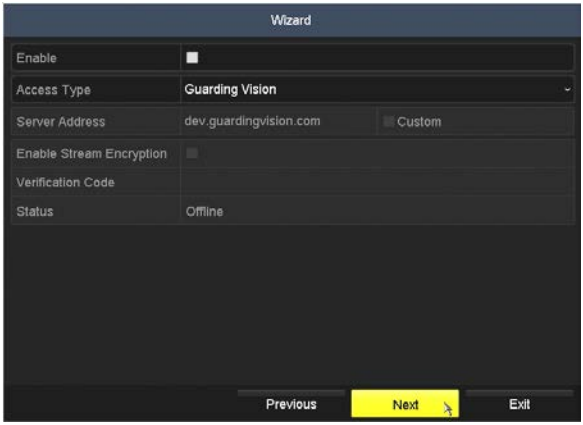
In the screen below, the **Enable DHCP** checkbox was cleared and the **IPV4 Address** was changed to 192.168.3.121.



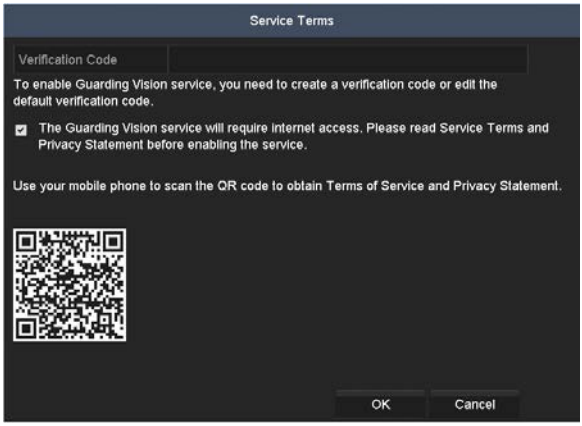
In the screen below, other fields were changed appropriately, and the Preferred and Alternate DNS Server addresses were set to 8.8.8.8 and 8.8.4.4 (Google DNS servers) respectively.



9. In the screen above, click **Next** to open the Alibi-Connect Platform Access setup page. **Guiding Vision** access can be used for Alibi Witness 2.0 smartphone app access and the Alibi Central Management System (ACMS) by creating a direct peer to peer connection. It can also be used to download recorder firmware updates.



a. To use this feature, check the enable box. The **Service Terms** menu will appear.

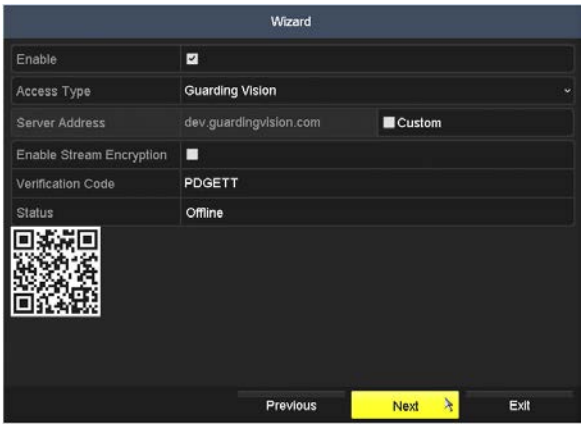


b. In the window above, scan the QR code to open and read the **Terms of Service**.

c. If you will comply with the terms of service, check the box in the middle paragraph, and then enter **Verification Code** in the field at the top. In this example, the code **PDGETT** is entered.

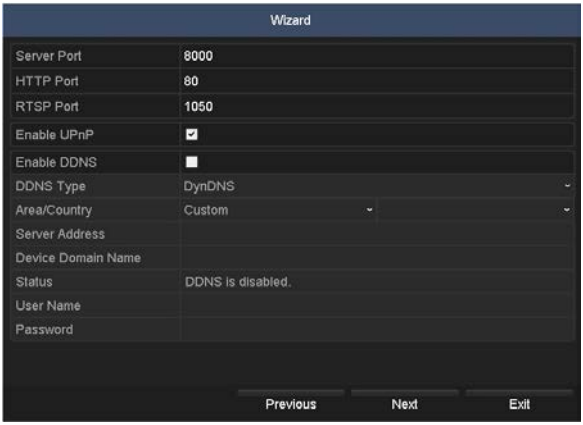
d. Click **OK** to return to the Wizard menu.

e. Check the Enable Stream Encryption box to use this option.

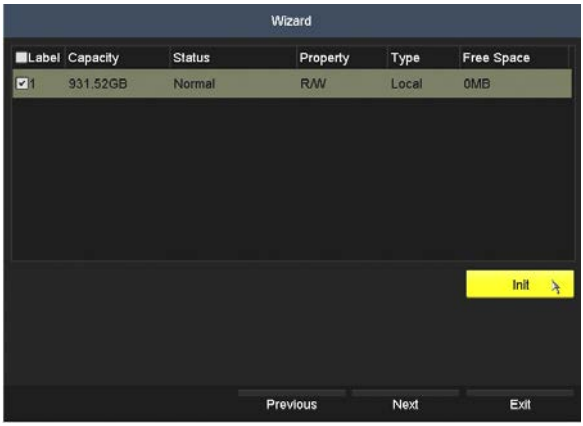


f. Open Alibi Witness 2.0 on your smartphone, and then scan the QR code to register this device. For more information about the Alibi Witness 2.0 smartphone app and ACMS, refer to documentation available on *AlibiSecurity.com/resources*.

10. Click **Next** to open the a window for configuring the network ports you prefer to use. You can also configure your recorder for DDNS (Dynamic Domain Name Server) access at this time. For more information about these settings, refer to "SECTION 9 Network Settings" on page 178. If unsure about how to setup ports and DDNS access, click **Next** to continue.



11. In the HDD Wizard window you can initialize the HDDs in the recorder. If your recorder is new and was shipped with a pre-configured HDD(s), nothing needs to be done in this window. If you installed an HDD or replaced the HDD om the recorder, you must initialize it before it can be use. **CAUTION**: Initialization erases all information on the disk.

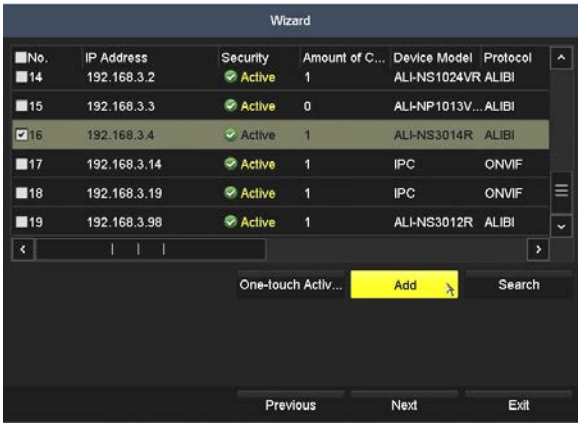


In the example above, notice that the HDD has a 931MB disk, but has no Free Space. To initialize, this disk, check the box on the left to select this drive, and then click **Init**. Follow the on-screen instructions to complete the initialization.

Click **Next** to continue.

12. In the next window, the Wizard will display all compatible IP cameras it can find on the LAN. You can add any of these cameras to your recorder if the number of cameras plugged into the BNC connectors on the backpanel plus the number of IP cameras you add here does not exceed the channel capacity of your recorder.

    To add the IP camera shown in the screen below, check the box for the camera in the list you want to add, then click the **Add** button.

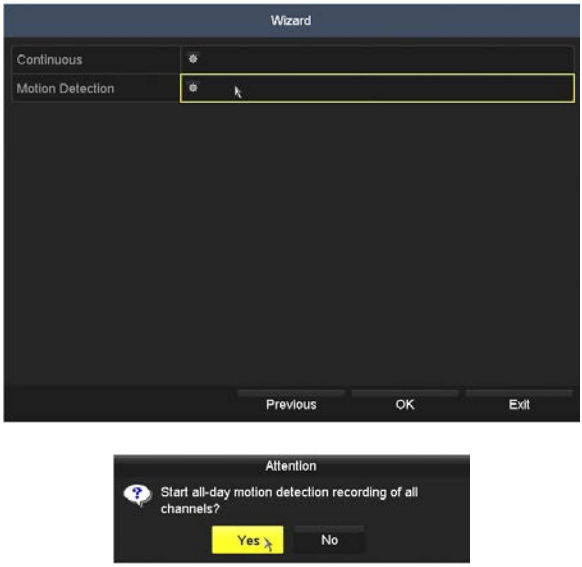


To add the ALI-NS3014R camera shown on the example above (No. 16), check the select box, and then click the **Add** button.

NOTE: If ACMS servers or other Alibi recorders are running on your network, the Wizard will list them as "IPC" devices.

Click **Next** to continue.

13. In the camera recording screen, you can initially select the recording mode for all cameras attached to the recorder. Click either **Continuous** or **Motion Detection** and then click **Yes** in the **Attention** window to force the recorder to record in that mode indefinitely.



NOTE: You can change the recording mode and recording schedule of individual cameras using the firmware menus. See "6.1 Configuring record settings" on page 109 for more information.

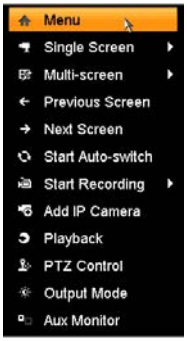
14. Click **OK** to save your settings and close the Wizard. The un-obscured Live View desktop window will appear. Use this window, if needed, to watch video from your cameras, adjust the field of view from each camera, etc.

Live View display

15. While viewing video from each cameras in the **Live View** display, adjust the direction of each camera to aim it at its surveillance target. Follow the manufacturer's recommended procedures for aiming the cameras.

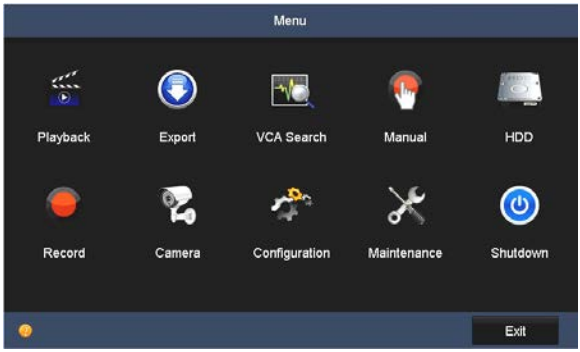
2.2 Opening the Menu system

After the initial setup of your recorder using the Wizard, the Menus interface enables you to refine your configuration settings and expand the functionality of the system. To use most menus, the user must log into the QVR system, either locally or remotely, with administrative privileges. To open the **Menu** system from the Live View screen, **right** click anywhere in the live view screen, then select **Menu**.



In the Login window, enter the ***admin*** password you created, click the **Enter** key on the virtual keyboard, and then click **OK**.

A window of **Menu** icons will open.



2.3 Using the Camera menu

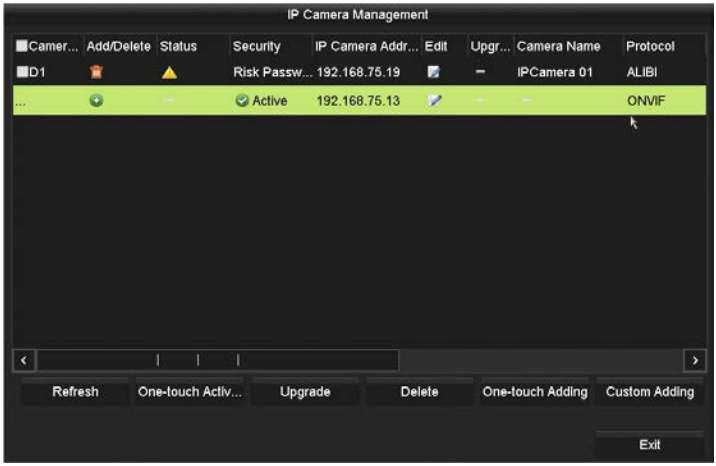
The Camera menu includes several submenus that allow you to add additional IP cameras to your system, configure individual analog cameras, control PTZ cameras, and other functions.

2.3.1 Adding IP cameras to the QVR from the Live View display

You can add an IP camera to the QVR in different ways: by right clicking on the Live View screen and selecting **Add IP Camera**, or through then Main Menu screen and going to the **Camera | IP Camera** submenu displays a list of the IP cameras added to the system, and the Alibi IP cameras it discovered on the network. Depending on the model of QVR you are configuring, you can add at most one or two IP cameras to the system. In the menus, the IP camera channels are indicated as D1 and D2, whereas HD-TVI and AHD/CVBS channels are designated as A1, A2, etc. **NOTE:** when adding cameras to the recorder, you cannot exceed the channel capacity of the recorder. Refer to the specifications for your recorder for more information.

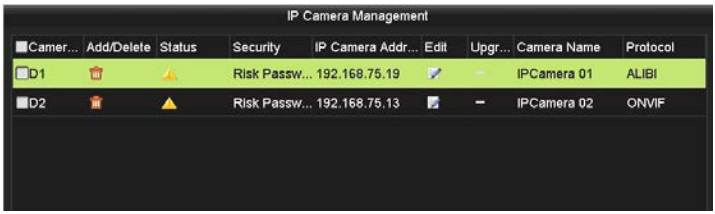
To add an IP camera to your recorder for monitoring:

1. **Right** click anywhere in the Live View screen, then select **Add IP Camera**. A menu similar to that shown below will open.



   In the screen shown above, notice that IPCamera01 is assigned to camera channel D1, and an additional camera at IP address 192.168.75.13 is available. Additionally, the camera at 192.168.75.19 includes a round, green ""+" icon in the **Add/Delete** column.

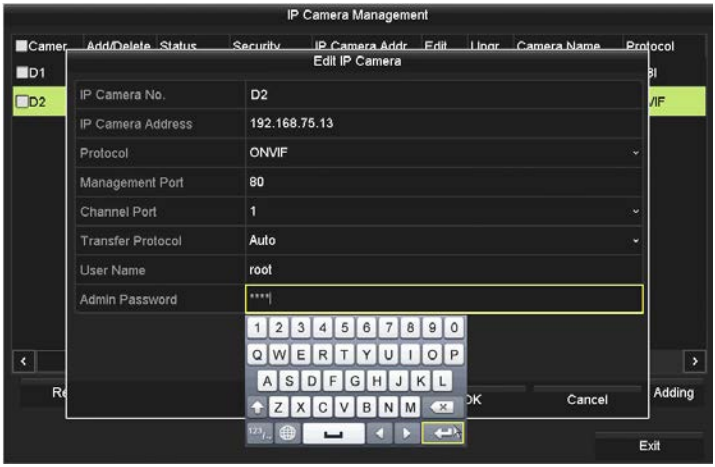
2. For the camera at 192.168.75.13, click the round, green "+" icon in the **Add/Delete** column to add the camera. The add process should take a few seconds.



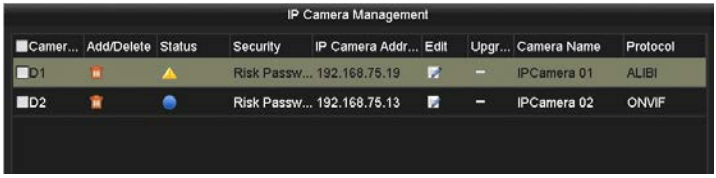
3. If the camera you added has an alert icon in the **Status** column:

   a. Click the alert icon to determine the cause of the status.

   b. Since the alert is reported as an incorrect password, click **OK** to close the **Attention** window, and then click the icon in the **Edit** column to open the **Edit IP Camera** menu.



c. Enter the correct administrative **User Name** and **Password** in the **Edit** menu, and then click **OK** to close the window. Notice that the Status icon changed to a blue dot, indicating normal status.



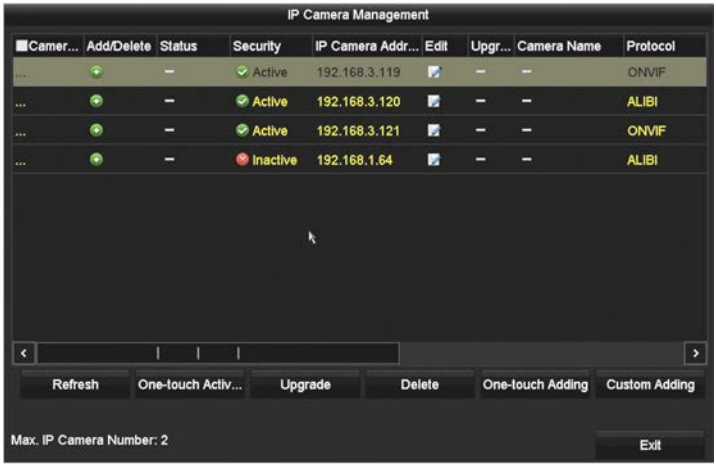
NOTE *The camera added showed an incorrect err, perhaps the most common errors that can occur during an IP add. Other types errors require different techniques to resolve. IP cameras can also be added through* ***Menu | Camera Management*** *menus.*

One Touch Activate

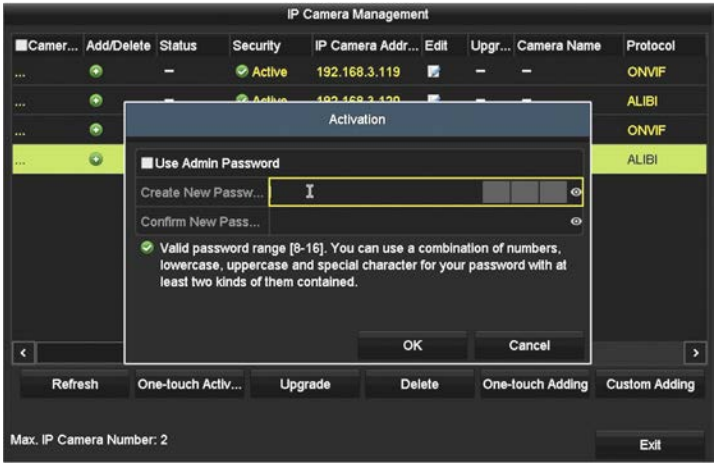
Alibi IP cameras with the latest firmware require "activation" before they can be used. Initially these cameras have no password. The "activation" process opens a menu to assign a password to the camera. Options in the menu enable you to define a password, or use the password assigned to the recorder for the camera. If no action is taken on the inactive camera, the recorder will attempt to automatically activate the camera, assigning its password to the camera. Cameras can also be "Inactivated" through the firmware.

To activate a camera:

1. In the screen below, a camera with the **Inactive** Security status is on the fourth line down. Click on the entry to select it.



2. Click the **On-touch Activate** button. An **Activation** window will open.



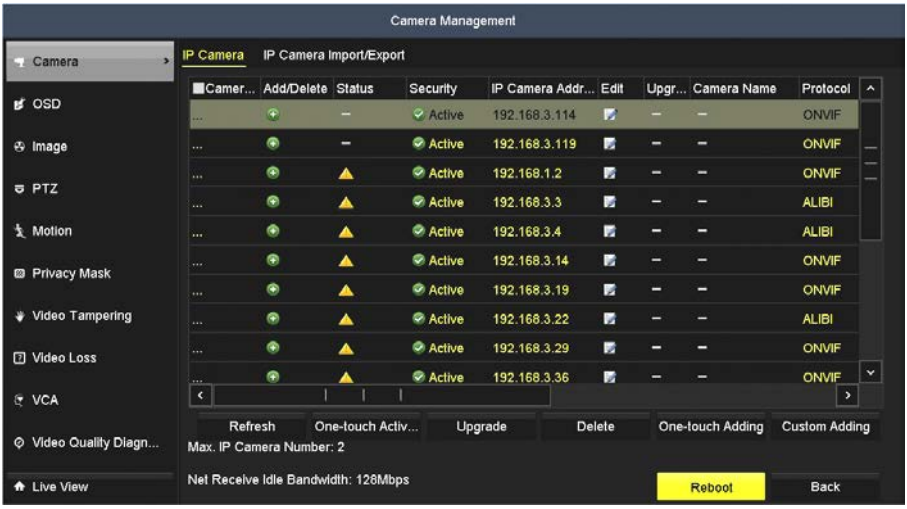
3. In the **Activation** Window, enter a new password in the Create New Password and Confirm New Password fields following the note shown, or check the **Use Admin Password** box to use the password of the recorder.

4. Click OK to complete the process. The **Security** status of the camera will change to **Active**.

2.3.2 Adding IP cameras using the Camera Management menu

The Camera Management - Camera menu function is the same as the Live View Add IP Camera menu. Procedures for using this menu are included in "2.3.1 Adding IP cameras to the QVR from the Live View display" on page 19.

To open the camera Camera Management - Camera menu. Go to: **Main Menu | Camera Management | Camera**.



Note that the screen above includes a Reboot option for rebooting individual cameras.

2.4 Configure analog cameras - basic adjustments

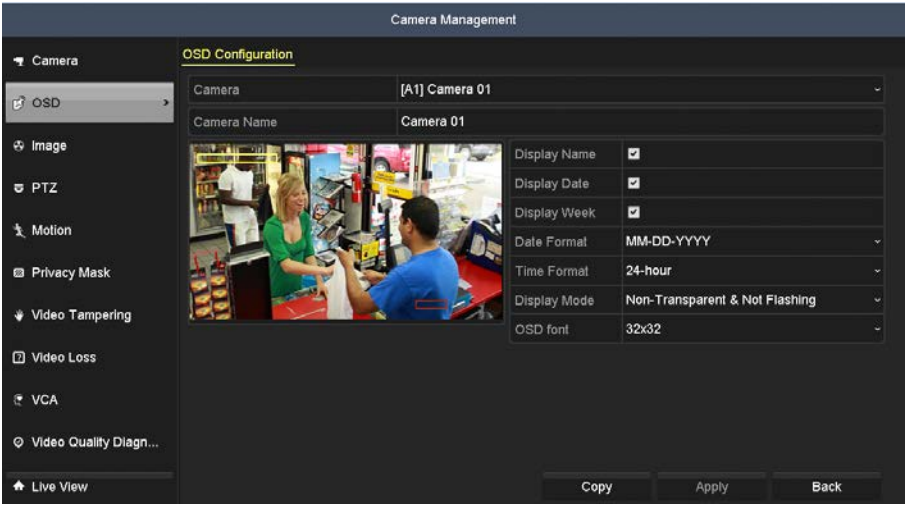
Basic configuration adjustments for analog cameras include setup of the OSD (On Screen Display) labels on the video image, Image settings (brightness, contrast, etc.), setting Motion detection zones, and setting Privacy zones.

2.4.1 OSD setup

Using the Camera OSD submenu, you can apply labels to the video image from your cameras to easily identify the camera, timestamp, etc. This feature applies only to cameras A1, A2, A3, etc. IP cameras are configured through their remote login interface.

To apply OSD labels to the video image:

1. Open the **Camera OSD** menu. Go to: **Main menu | Camera | OSD**.



2. In the screen shown above:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. On the **Camera Name** line, click on the line to open the soft keyboard to edit the name. Click the **Enter** key to close the keyboard.

   c. On the **Display Name**, **Display Date**, and **Display Week** lines, check the boxes as needed to enable those fields on the video display.

   d. On the **Date Format**, **Time Format**, and **Display Mode** lines, open the drop-down lists and select the options you prefer.

   e. On the **OSD font** line, open the drop-down list and select the font size for the OSD labels.

   f. Use the mouse to drag the labels to the best positions on the video image.

   g. Click **Apply** to save your settings for the camera.

   h. On the **Camera** line, open the drop down list and select a different camera you want to configure.

   i. Repeat steps **2.a** through **2.h** above until the OSD for all analog cameras are setup.

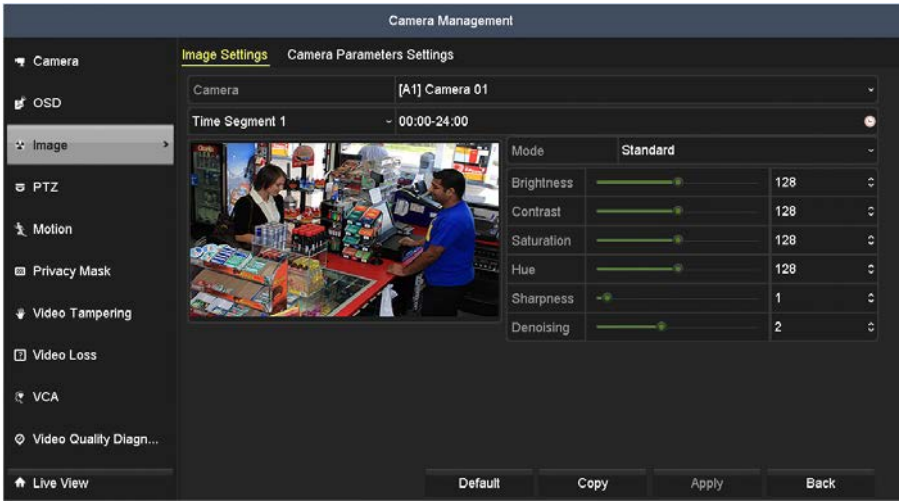
2.4.2 Image setup

Image Settings

Using the **Camera Image** submenu, you can adjust several aspects of the image (brightness, contrast, etc) to improve the visual quality of the video. You can configure two different camera image setups to adjust the camera for two different lighting conditions, such as day and night.

To adjust the image quality:

1. Open the Camera OSD menu. Go to: **Main menu | Camera | Image**.



2. In the screen shown above:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. On the **Period** line, open the drop-down list and select either Period 1 or Period 2, and then click the time to the right to set the time span for the adjustments. **NOTE**: Time spans for Period 1 and Period 2 cannot overlap.

   c. Open the **Mode** drop-down list and select either **Standard**, **Indoor**, **Dim Light**, or **Outdoor** to apply preset video adjustments to the camera. You can also modify those adjustments as described below.

   d. On the **Brightness**, **Contrast**, **Saturation**, **Hue**, **Sharpness**, and **Denoising** lines, use the mouse to move the sliders, or click the up and down arrows on the right, to perfect the video image.

e. Repeat steps **2.b** through **2.d** above to setup the other time period as needed.

f. Repeat steps **2.a** through **2. e** above for a different analog camera until the video images of all analog cameras is configured.

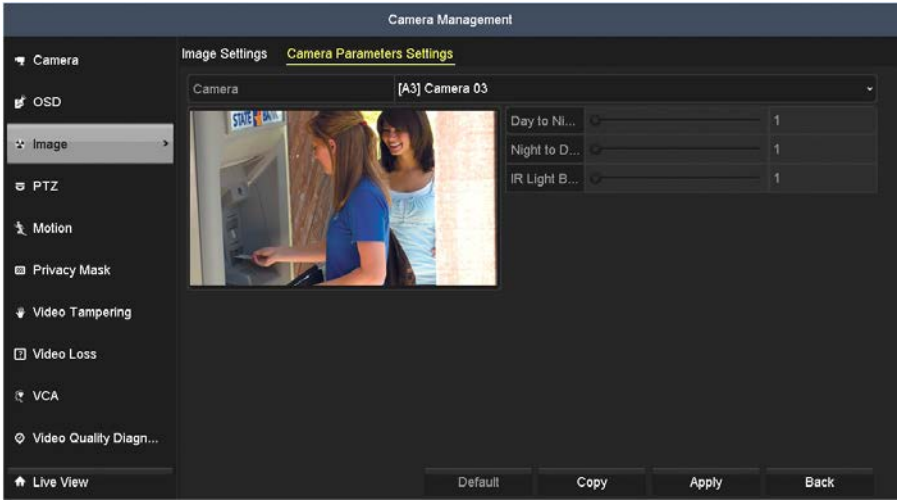
Camera Parameter Settings

The **Camera Parameter Settings** submenu is used to modify the IR performance of the camera. You can adjust the light level for the switch from **Day to Night** and **Night to Day**, and set the **IR Brightness**.

To adjust the camera parameter settings:

1. Open the Camera OSD menu. Go to: **Main menu | Camera | Image**.

2. Click the **Camera Parameter Settings** tab.



3. In the screen shown above:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. Using the sliders or the numerical measure on the right, adjust the **Day to Night** and **Night to Day**, and set the **IR Brightness** as needed. Check your settings during different lighting levels to assure they are appropriate for the environment.

   c. On the **Period** line, open the drop-down list and select either Period 1 or Period 2, and then click the time to the right to set the time span for the adjustments. **NOTE**: Time spans for Period 1 and Period 2 cannot overlap.

d. Click Apply to save your settings. You can also copy those settings to other cameras if needed.

4. Test your settings during times when the ambient light level changes to ensure that good results are produced. Adjust the settings as necessary.

5. Repeat this procedure for other cameras in your security system.

2.4.3 PTZ setup

For configuring cameras that support PTZ (pan, tilt, zoom) features, refer to "SECTION 7 PTZ Controls" on page 157.

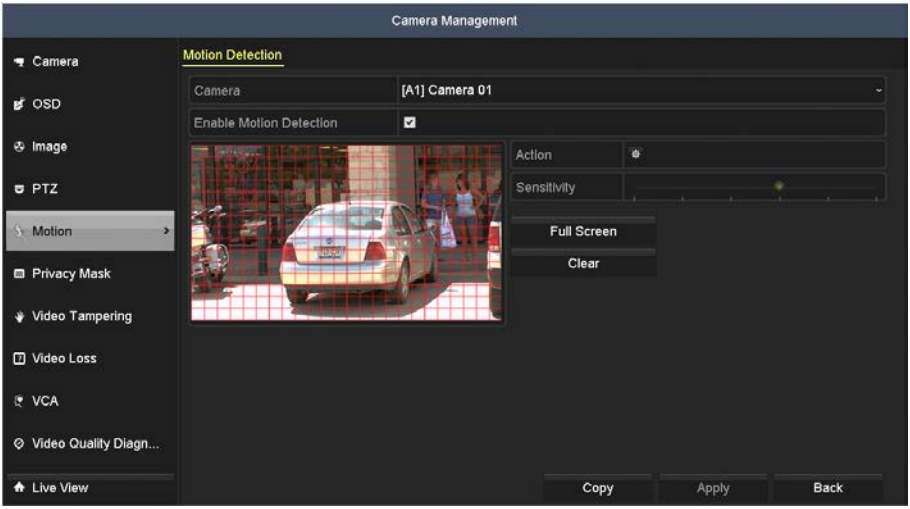
2.4.4 Motion setup

When using motion detection recording, the QVR initially senses for motion everywhere in the video image. You can configure the QVR to sense for motion in the camera video channel only in specific areas of the video, which is more efficient for processing in the QVR.

The Motion setup menu shows the video image from a camera with a grid covering the area(s) of the video image it is sensing for motion. When motion is detected in a cell of the grid, that cell is filled. With this feature, you can adjust the sensitivity of the motion detection parameters to detect (or not detect) motion in the video image.

To adjust the motion detection parameters of a video channel:

1. Open the Camera Motion menu. Go to: **Main menu | Camera | Motion**.

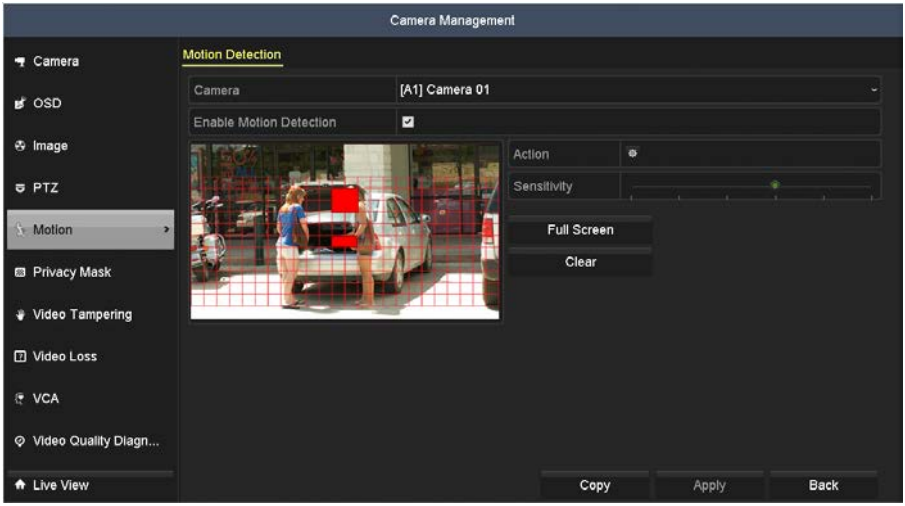


2. To change the motion detection settings for a camera:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. On the **Enable Motion Detection** line, click the box to check mark it.

   c. To change the area of the video image you want to sense for motion, click the **Clear** button, then drag the mouse across the area of the video where you want to sense for motion. An example of the result is shown below.

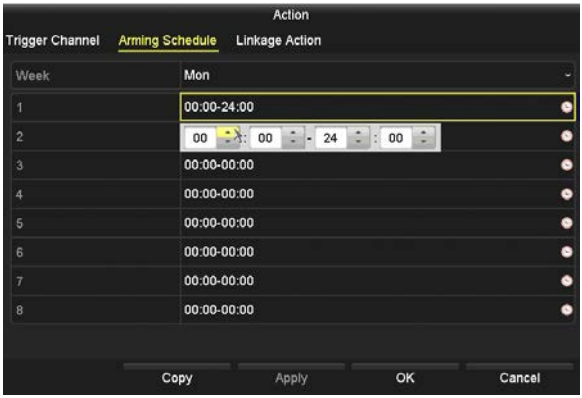


   d. In the screen shown above, notice that motion is detected in the cells of the grid where motion was sensed. You can adjust the sensitivity slider as needed for more or less detection sensitivity.

   e. Click the **Settings** icon.

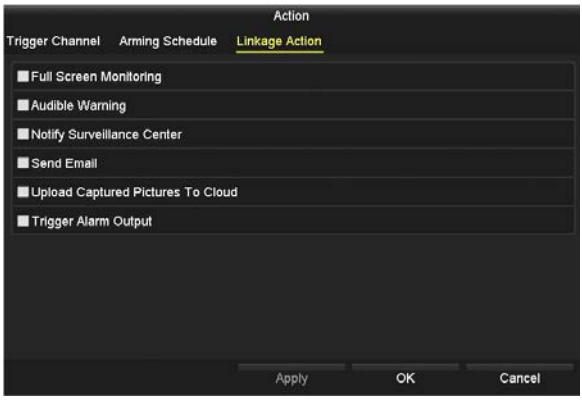
f. In the Settings **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

g. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule with up to eight periods for each day when motion detection is monitored. Time periods cannot overlap.



h. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

i. Click the **Action** tab. In the Action tab, you can cause certain actions to occur when motion triggered recording occurs.



NOTE *In the* **Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

j. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the Motion Detection menu.

NOTE *The* **Notify Surveillance Center** *and* **Send Emai***l options require additional network settings. See "SECTION 9 Network Settings" on page 178 for more information.*

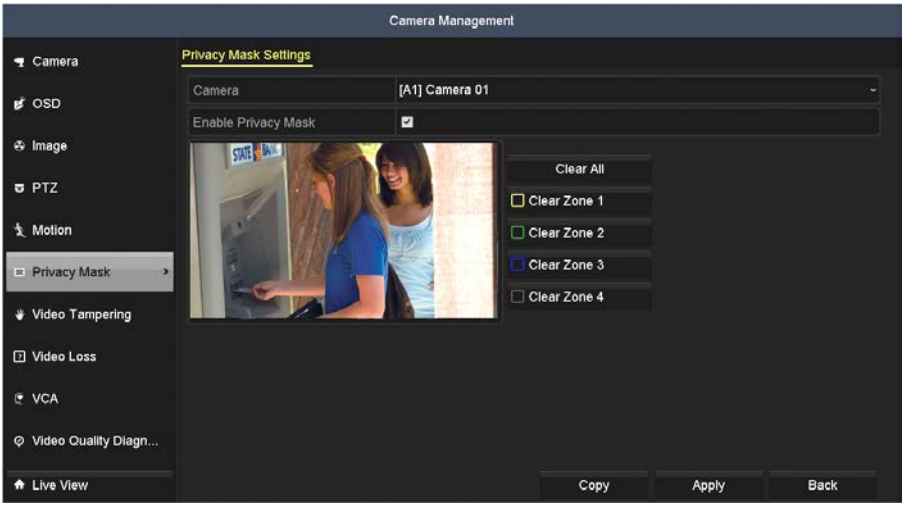
k. Repeat step **2.a** above for a different camera, then repeat steps **2.b** through **2.j** to setup motion detection for that camera. Repeat this step until all analog cameras are configured as needed.

2.4.5 Privacy Mask setup

The Privacy Mask feature allows you to block areas (zones) of the video image for privacy consideration. The zones blocked will appear covered by a box in both live video and recorded video from the camera. You can define up to four privacy zones for each camera.

To block areas of the video image for privacy:

1. Open the Camera Motion menu. Go to: **Main menu | Camera | Privacy Mask**.

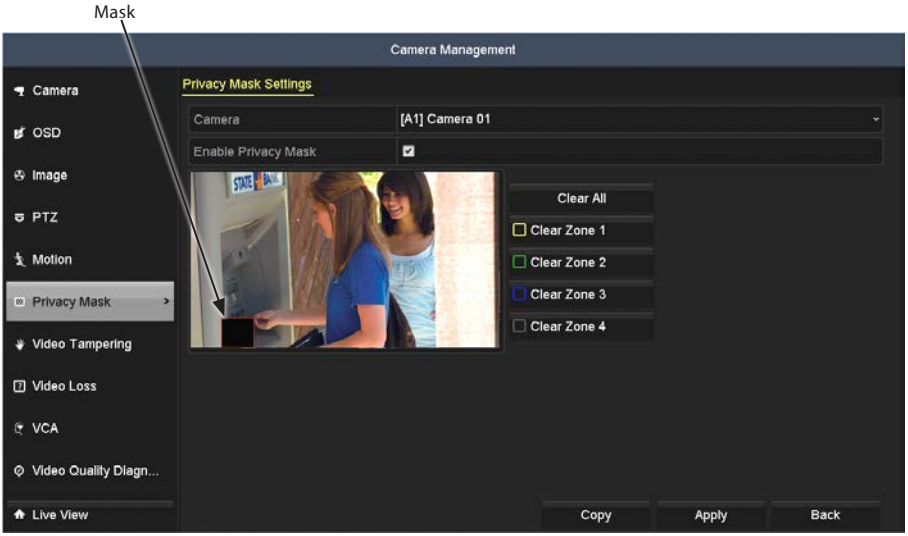


2. To change the Privacy Mask settings for a camera:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. On the **Enable Privacy Mask** line, click the box to check mark it.

   c. Using the mouse, drag a box over the area you want to block for privacy. In the example below, Zone 1 covers the ATM keypad.



d. Repeat the previous step to mask additional zones. You can define up to four privacy mask zones. To delete a zone, click the **Clear Zone** button associated with the zone you want to delete.

e. Click **Apply** to save your settings for the camera you configured.

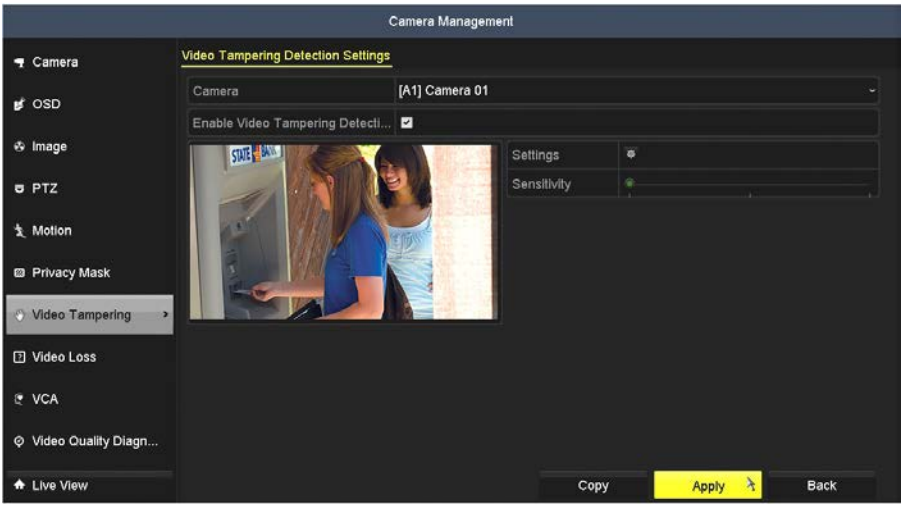
f. Repeat step **2.a** above and select a different camera to configure, if needed.

g. Repeat steps **2.b** through **2.e** until all cameras are configured as needed.

2.4.6 Camera Video Tampering setup

A Video Tampering alarm is created when the lens (an area of the image) is covered. The alarm can cause the NVR to initiate several actions.

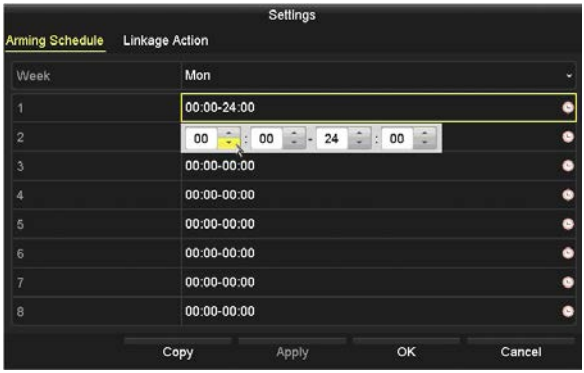
1. Click **Video Tampering** in the left frame to open the **Video Tamper Detection Settings** submenu.



2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **[A1] Camera 01** is selected.

3. Check or un-check the box to **Enable Video Tampering Detection**. If you checked the box, drag a rectangle across the area of the video that you want to monitor.

4. Click the **Settings** icon.

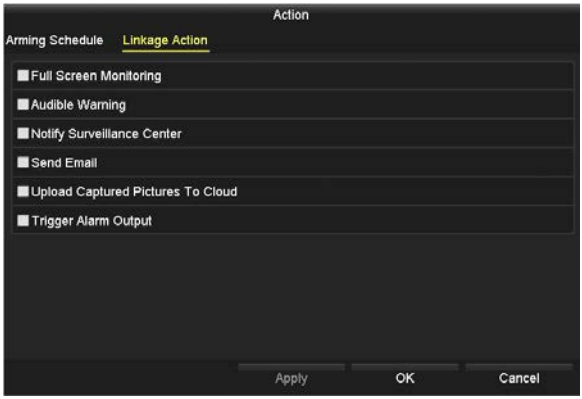


a. In the **Arming Schedule** tab, you can define up to eight periods for each day. The periods must not overlap.

b. Click the down arrow in the Mon field (see above) to setup the schedule for a different day, and/or click **Copy** to copy the Arming Schedule you setup in the window to other days of the week.

c. Click **Apply** to save the settings.

d. Click the **Linkage Action** tab. In this tab, you can cause certain actions to occur when tampering occurs.



NOTE *In the* **Settings** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the **Tamper-proof** menu. The **Send Email** option require additional network settings. See "SECTION 7 Network Settings" on page 113 for more information.

f. In the **Video Tampering** menu, click **Apply** to save your settings for this camera.

g. Repeat sub-steps **2** through **4** above for each camera managed by the NVR, if necessary.

NOTE *Test your settings during broad conditions to ensure that your tamper-proof settings trigger an action. You may need to return to this menu later to adjust the **Sensitivity** slider to ensure the feature is working properly.*

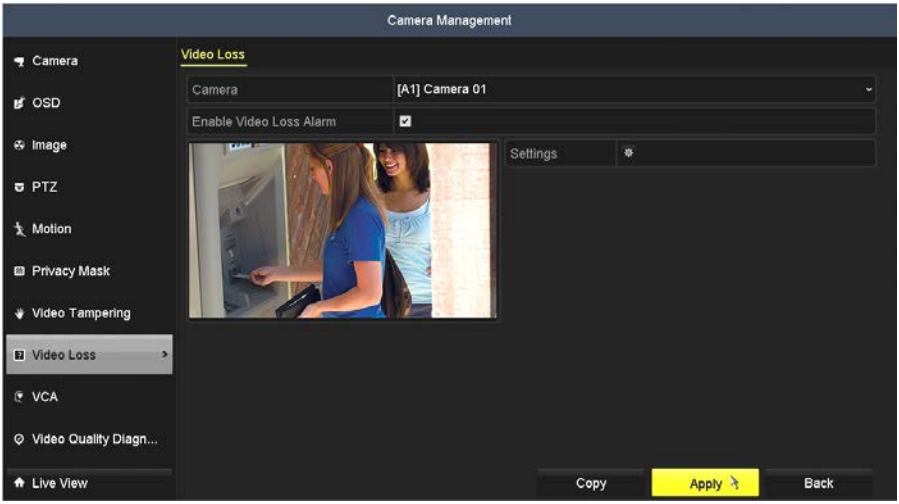
5. Click **Copy** to copy the settings you made to other cameras. The following window will open.

In the window shown above, check the boxes of the camera channels you want to copy your settings too, and then click **OK**.

a. In the **Video Tampering** menu, click **Apply** and then click **OK** to save your settings for this camera.

2.4.7 Camera Video Loss setup

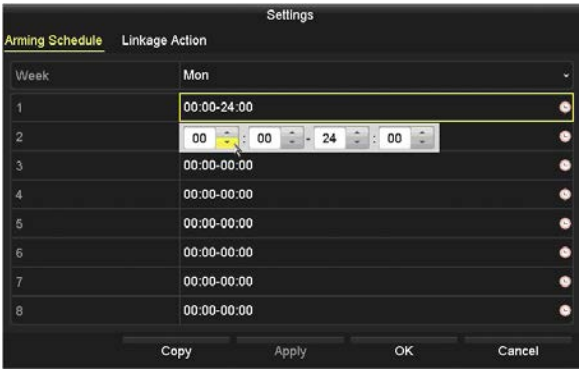
1. Click **Video Loss** in the left frame to open the Video loss submenu.



2. In the **Camera** field drop down list, select the camera you want to configure. In the example shown, **IP Camera 1** is selected.

3. Check or un-check the box to **Enable Video Loss**. If you checked the box, do the following:

   a. Click the **Settings** icon.



   b. In the **Arming Schedule** tab, you can define up to eight periods for each day. The periods must not overlap.

   c. Click the down arrow in the Mon field (see above) to setup the schedule for a different day, and/or click **Copy** to copy the Arming Schedule you setup in the window to other days of the week.

d. Click **Apply** to save the settings.

e. Click the **Linkage Action** tab. In this tab, you can cause certain actions to occur when video loss occurs.

NOTE *In the* **Settings** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

f. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the **Video Loss** menu. The **Notify Surveillance Center** and **Send Email** options require additional network settings.

4. In the **Video Loss** menu, click **Apply** to save your settings for this camera.

5. Click **COPY** to copy the settings you made to other cameras. The following window will open.

OK

In the window shown above, check the boxes of the camera channels you want to copy your settings too, and then click **OK**.

6. Repeat sub-steps **2** through **4** above for each camera managed by the DVR, if necessary.

2.4.8 VCA menu

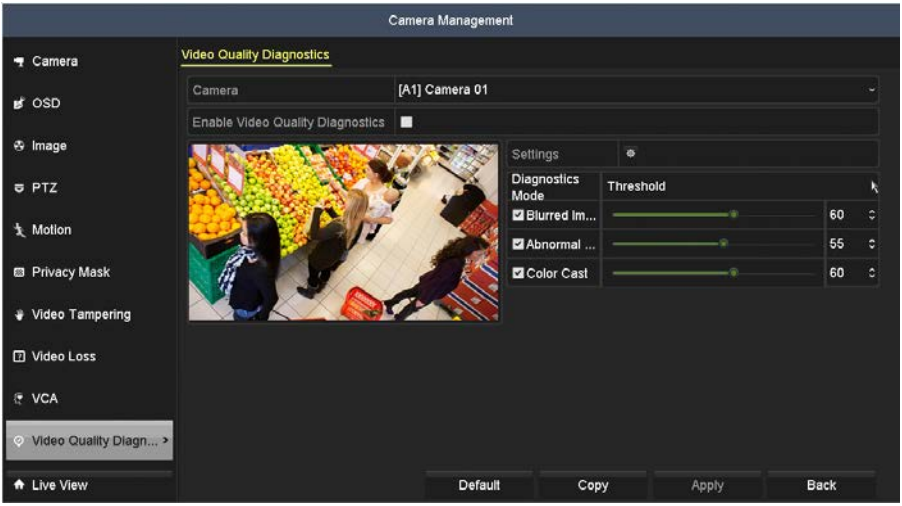
Alibi IP cameras added to your QVR may support Video Content Analytics (VCA). To configure your camera to use these features, please refer to "SECTION 3 VCA Features" on page 52.

2.4.9 Video Quality Diagnostics

The video quality of analog cameras can be quickly analyzed using the Video Quality Diagnostics feature. This feature allows you to configure thresholds for Blurred Image, Abnormal Brightness, and Color Cast and configure the QVR to perform actions on a schedule when these aspects are above threshold. These thresholds should be set for a schedule when the camera is in normal operation with a near constant light level.

To adjust the Video Quality thresholds of a video channel:

1. Open the Video Quality Diagnostics menu. Go to: **Main menu | Camera | Video Quality Diagnostics**.



2. To setup the video quality thresholds for a camera:

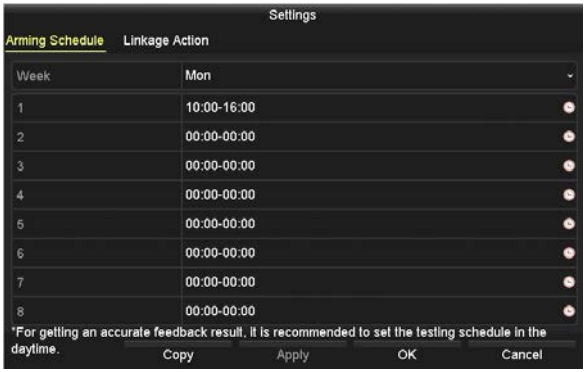
   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

   b. On the **Enable Video Quality Diagnostics** line, click the box to check mark it.

c. Adjust the thresholds for the Blurred Image, Abnormal Brightness, and Color Cast aspects as needed. You can test your settings using the manual Video Quality Diagnostics below.

d. Click the icon on the **Handling** row.

e. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule with up to eight periods for each day when Blurred Image, Abnormal Brightness, and Color Cast aspects are monitored.



f. After setting up the schedule for one day, you can click the **Copy** button to copy the schedule to other days of the week. Click **Apply** to save your settings, and then click the **Linkage Action** tab.

g. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the Video Quality Diagnostics menu.

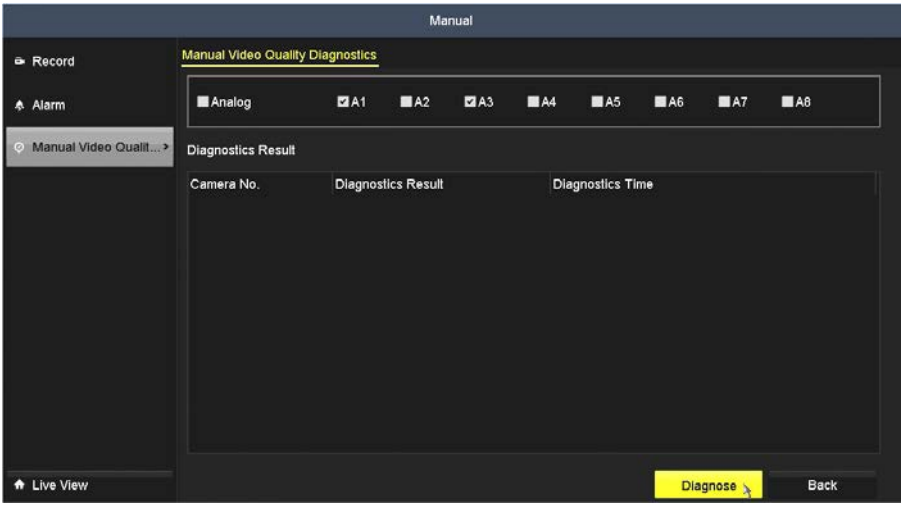
NOTE *The* **Notify Surveillance Center** *and* **Send Email** *options require additional network settings. See "SECTION 9 Network Settings" on page 178 for more information.*

h. Repeat step **2.a** above for a different camera, then repeat steps **2.b** through **2.g** to setup video quality diagnostics for that camera. Repeat this step until all analog cameras are configured as needed.

2.5 Check video quality manually

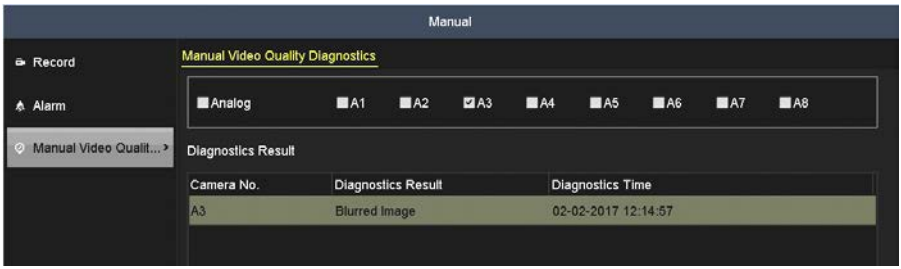
After configuring video quality thresholds using the **Video Quality Diagnostics** menu, you can check your settings using the **Manual Video Quality** menu. To use this menu:

1. Open the manual Video Quality Diagnostics menu. Go to: **Main menu | Manual | Manual Video Quality Diagnostics**.



2. On the Analog line, check mark the boxes for the cameras you want to diagnose.

3. Click the **Diagnose** button at the bottom of the window. The results of the of the test are shown in the window.



4. If the Diagnostic Result for any camera is other than **Normal**, check the camera to resolve the condition if needed.

2.6 Configuring HDD settings

By default, the QVR will treat the internal HDD(s) as one partition and save all recordings, photos and log information in it. However, you can configure the QVR to allocate a set portion of the of the storage area for recordings and pictures of individual cameras. For example, the camera on A1 could be given 100GB of storage, and the other cameras could use the rest of the disk space (i.e. **Partition** mode, [default]).

If multiple disks (internal HDD and network drives) are installed, individual cameras or groups of cameras can be configured to save their recordings only on a specific HDDs (i.e., **Group** mode).

2.6.1 Checking HDD status

Check the status of the HDD installed in the QVR to assure it is functioning normally.

1. Open the HDD Information display. Go to: **Menu | HDD | General**.

2. Check the status of the HDD. If the status is:
   - **Normal** or **Sleeping** - The HDD is working normally.
   - **Uninitialized** or **Abnormal** - Initialize the HDD before continuing. Check the select box of the HDD to initialize, then click the **Init** button at the bottom of the screen.
   - **Failed** - If the HDD failed during or after initialization, replace the HDD.

2.6.2 Network Storage

The **Add** button on the HDD Information screen (see "2.6.1 Checking HDD status" on page 40 above) will be used to add additional network storage devices (NAS or IP SAN) to the recorder. This feature is reserved for future enhancement.

2.6.3 Configuring the HDD

Before you start:

1. Make sure that an HDD is installed. If not, install a HDD and initialize it. Go to: **Menu | HDD | General**.

2. Click **Advanced** to check the storage mode of the HDD.

   a. If the HDD mode is Group, you can select a group of cameras to record to that HDD. See "2.6.4 Configuring HDD Group mode" on page 42 for more information.

   b. If the HDD mode is **Partition**, you can set the maximum record a capacity and picture capacity for each camera in the QVR:

      i. On the Camera line, open the drop-down list and then select the camera you want to set a maximum recording capacity to.

      ii. Click the **Max. Record Capacity** field, and then enter the size in GB of the space on the disk you want to allocate to the camera you selected.

iii. Click the **Max. Picture Capacity** field, and then enter the size in GB of the space on the disk you want to allocate to the camera you selected.

iv. Click **Apply** to save the setting.

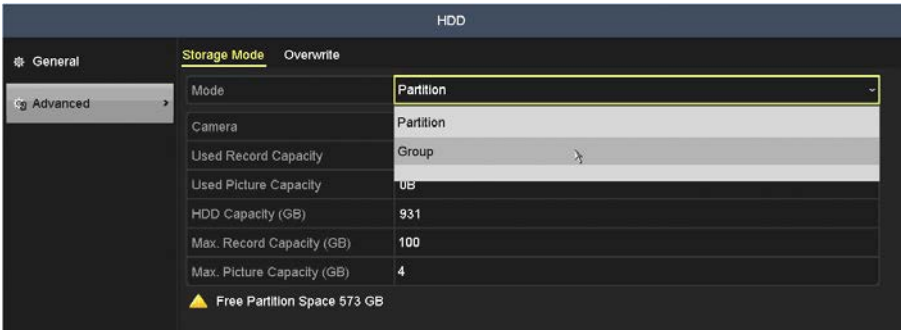
v. Repeat steps **2.b.i** through **2.b.iv** for each camera in the system, if needed.

2.6.4 Configuring HDD Group mode

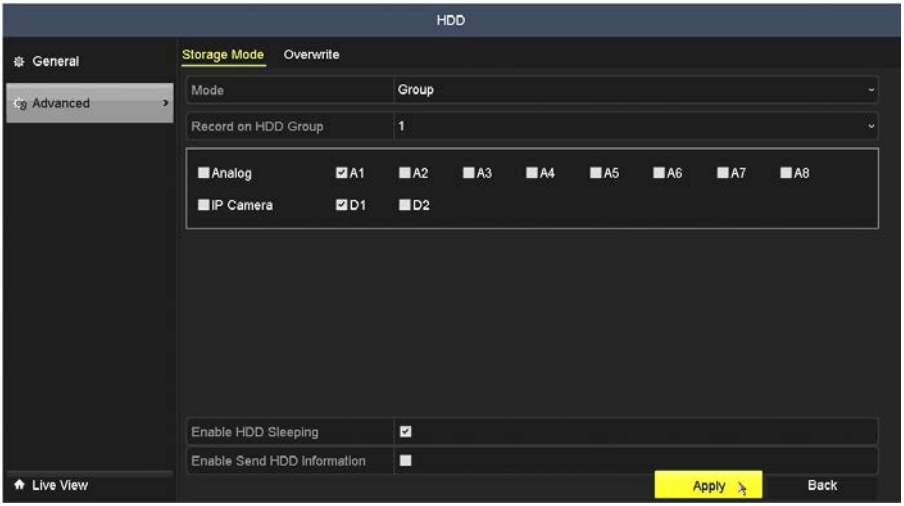
For systems with multiple HDDs, each HDD can be assigned a "Group number" and recordings and pictures from a camera or a group of cameras can be written to a specific disk (group). When changing the Storage Mode from Partition to Group (or vvsa), the QVR must be rebooted for new settings to be applied. In this example, HDD 1 will be designated the Group 1 HDD, and HDD 2 will be designated the Group 2 HDD.

1. Open the Storage Mode menu. Go to: **Menu | HDD | Advanced**.

2. On the **Mode** line, open the drop down list and select **Group**.



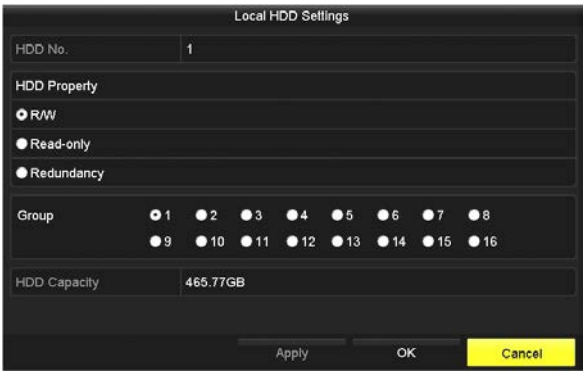
3. Select the analog and IP cameras you want to assign to the group. (Deselect the cameras that are not part of the group.)



4. Click **Apply**, and then click **Yes** in the Attention pop-up window to reboot the QVR.

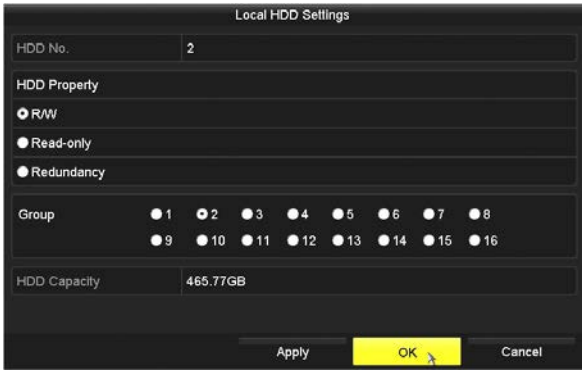
5. After the QVR reboots, re-open the HDD menu. Go to: **Menu | HDD | General**. **NOTE**: In the screen capture below, each HDD shows it is assigned to Group 1.

6. For HDD 1, click the icon in the **Edit** column to open the **Local HDD Settings** menu.



a. In the menu shown above, select the Property you want to assign to the HDD, and then select the group number to assign. Click **Apply**, and the click **OK** to save your settings.

7. For HDD 2, click the icon in the **Edit** column to open the **Local HDD Settings** menu.



a. In the menu shown above, select the Property you want to assign to the HDD, and then select the group number to assign. In this example, HDD 2 was assigned as the Group 2 HDD. Click **Apply**, and the click **OK** to save your settings.

8. Open the HDD Advanced menu. Go to: **Menu | HDD | Advanced**.

9. Open the Record on HDD Group drop-down list, and then select "2".

10. Check only the cameras you want to assign to Group 2, and then click the **Apply** button at the bottom of the menu.

Change from Group to Partition mode

To change back to Partition mode from group mode, re-open the menu shown above, open the drop-down list on the **Mode** line, and then select Partition. Changing Storage Mode will require the QVR to reboot.

2.6.5 Using Cloud Storage

The Alibi Cloud Storage feature enables you to save camera video and event data to a cloud server. Supported cloud servers include OneDrive, GoogleDrive, and Dropbox. Data saved to the cloud can be either dual-stream or sub-stream. See "6.1.1 Setting camera Record Parameters" on page 109 for more information.

To configure this feature:

1. Open the Cloud Storage menu. Go to: **Menu | HDD | Cloud Storage**.

2. Check the **Enable Cloud** box. By default, this feature is not enabled.
3. Open the **Cloud Type** drop down list, and then select either **OneDrive, GoogleDrive, or Dropbox**.
4. Open the **Camera** drop down list, and then select the camera you want to configure with this feature.
5. If you want to upload event data for this camera, check the **Enable Event Upload** box.
6. Click **Apply** to save your settings.
7. To copy these settings to other camera:
    a. Click the **Copy** button.
    b. Check the boxes for the cameras you want to apply the settings to.
    c. Click **OK**.
    d. Click **Apply** in the **Cloud Storage** menu.
8. After configuring your cameras for cloud storage, open the Alibi Witness 2.0 smartphone app, and then scan the QR code on this menu.
9. After you connect to the cloud service, record the **Authorization Code**, and then enter it into the **Authorization Code** field in the screen above.

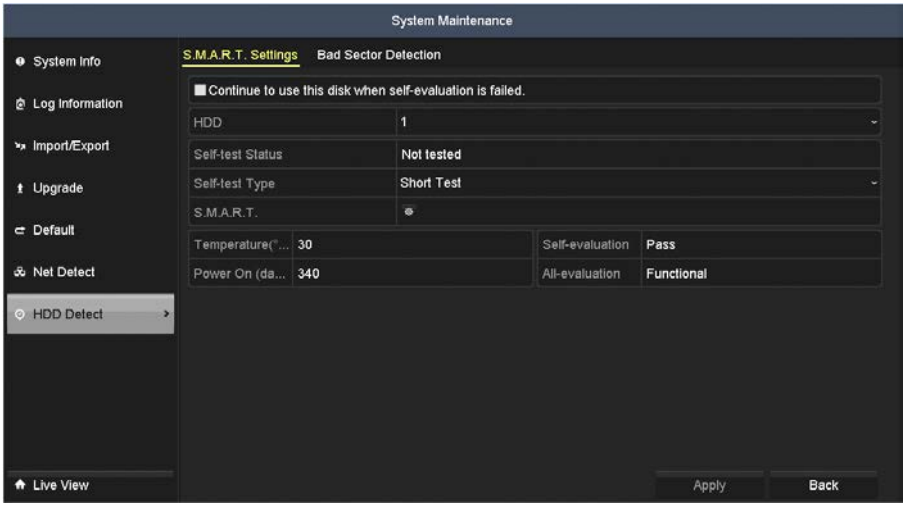
10. Use the **Cloud P2P** option in the app to open access data from your cameras.

2.6.6 HDD Detect

The **HDD Detect** feature provides two methods of monitoring the HDD: display of **S.M.A.R.T.** (Self-Monitoring, Analysis and Reporting Technology) data, and **Bad Sector Detection**. These methods can be used to assure the normal functioning of the disk, and anticipate failures.

S.M.A.R.T. Display

1. Open the S.M.A.R.T. display menu. Go to: **Main Menu | Maintenance | HDD Detect**.

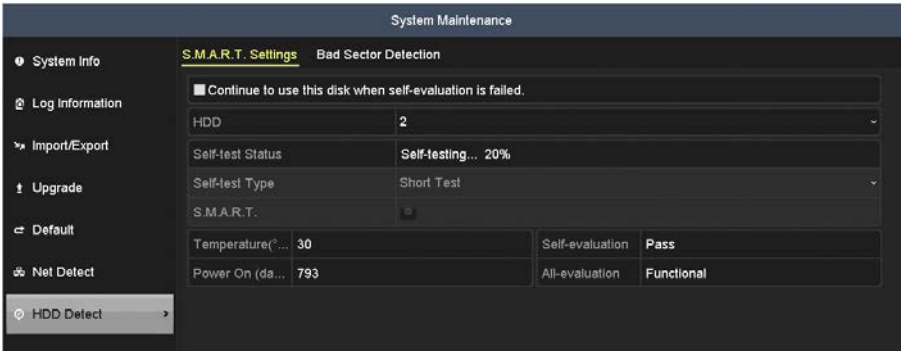


2. To execute a self-evaluation test on an HDD (see above):

   a. On the **HDD** line, open the drop down list to select the HDD to test.

   b. On the **Self-test Type** line, open the drop down list to select the type of test to execute. You can choose either Short Test, Expanded Test or Conveyance Test.

   c. Click the icon on the **S.M.A.R.T.** line to execute the test. Allow the test to complete before continuing. The test status is shown above, and the result of the test is shown on the Self-evaluation line.



3. Examine the S.M.A.R.T. data provided for the HDD. Check to ensure that the data in the value and Worst column does not exceed the data in the Threshold column.

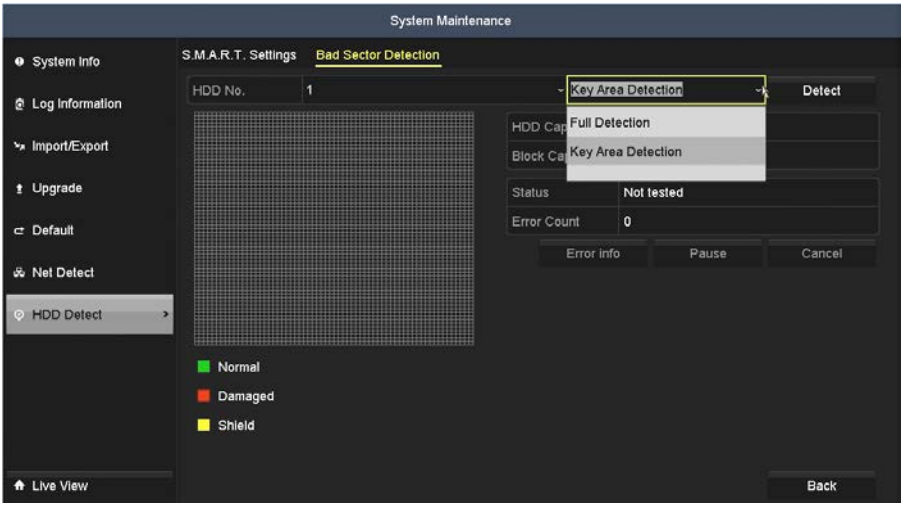
NOTE *S.M.A.R.T. data provided by each HDD manufacturer is usually different. Refer to the manufacturer's website for S.M.A.R.T. data definitions.*

Bad Sector Detection

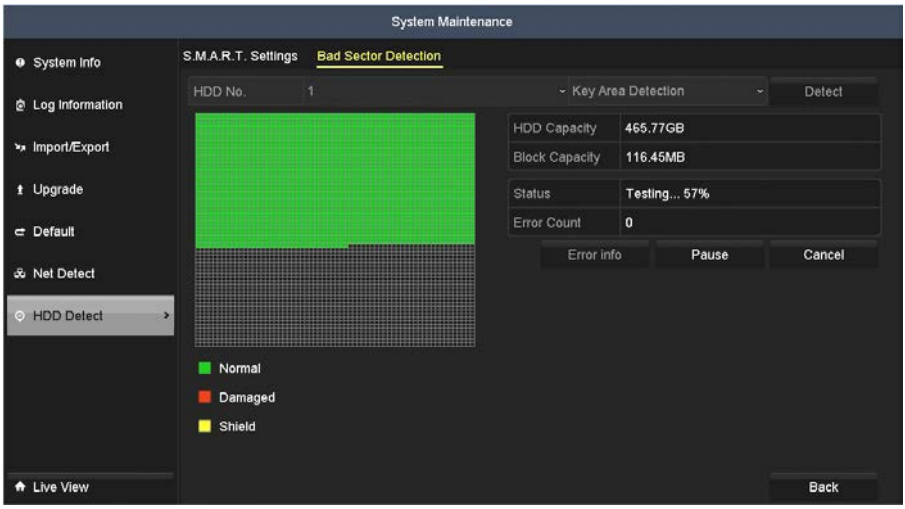
1. Open the Bad Sector Detection menu. Go to: **Main menu | Maintenance | HDD Detect | Bad Sector Detection**.

2. On the **HDD No.** line, open the drop down list and select the number of the HDD you want to test.

3. Open the drop-down list to the right of the **HDD No.** select and then click the test you want to execute.



4. Click the **Detect** button to start the detection. Bad sectors are identified in the array as red colored cells. The screen below shows the **Key Area Detection** test executing.



Click **Pause** to temporarily stop the scan, and click **Cancel** to end the scan.

Click **Error info** (if errors were found) to see the "Damaged" information.

2.7 Configuring Exception Alarms

The QVR monitors for and respond to certain system-related alarm conditions (exception alarms). Monitoring for and response to these exceptions are configurable.

Exception alarm conditions include:

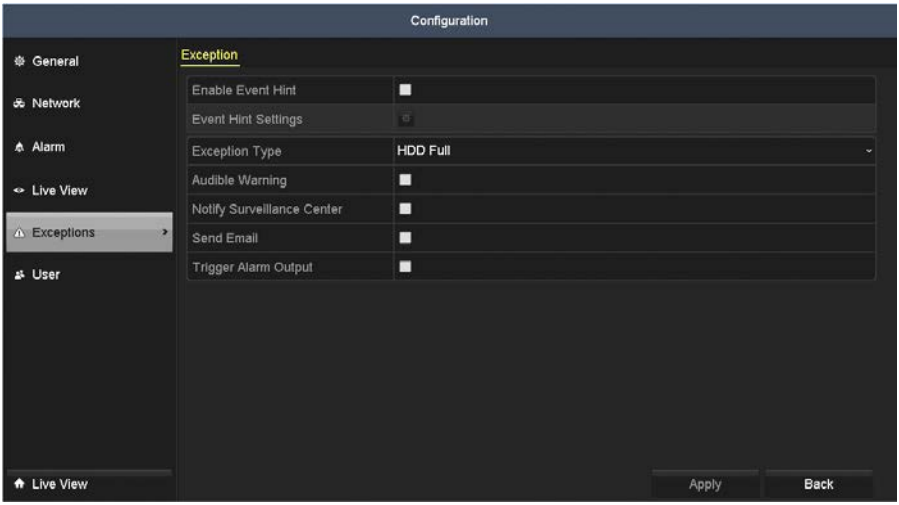
- **HDD Full**: The HDD is full.
- **HDD Error**: Writing HDD error or unformatted HDD.
- **Network Disconnected**: Disconnected network cable.
- **IP Conflicted**: Duplicated IP address.
- **Illegal Login**: Incorrect user ID or password.
- **Camera/Recording Resolution Mismatch**: I/O video standards do not match.
- **Record Exception**: No space exists for saving recorded files.

Responses to exception alarms include:

- **Audible Warning**: Trigger an audible beep when an alarm is detected.
- **Send Email**: Send an email with alarm information to a user or users when an alarm is detected.

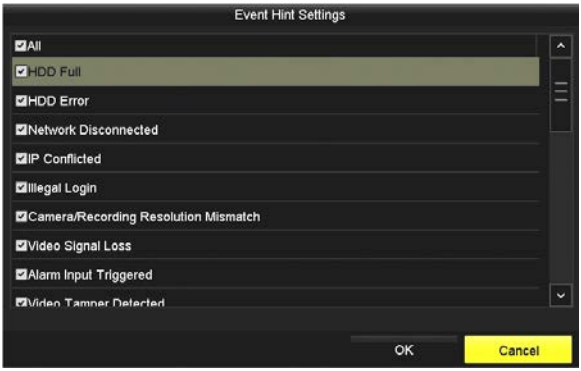
To configure exception alarms:

1. Open the **Exception** menu. Go to: **Main menu | Configuration | Exceptions**.

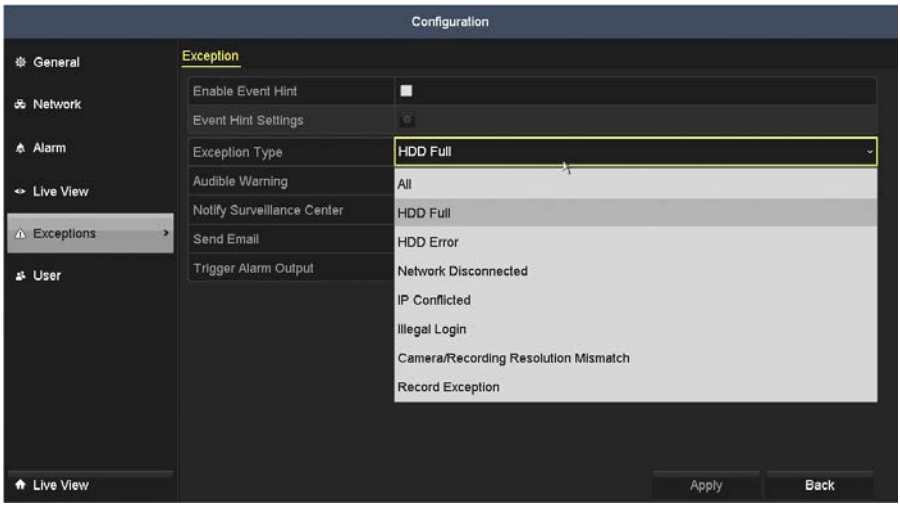


2. Check the box on the **Enable Event Hint** line to enable this feature. With feature, when an Even/Exception icon appears on the Live View video window, you can click on this icon to display a detailed event hint information for the condition.

    a. If this feature is selected, click the **Settings** icon below to select the events for which the Event Hint information will appear.



3. On the **Exception Type** line, open the drop down list and select the exception condition you want to configure. If you select **All**, all exception conditions will be treated the way you configure the response.



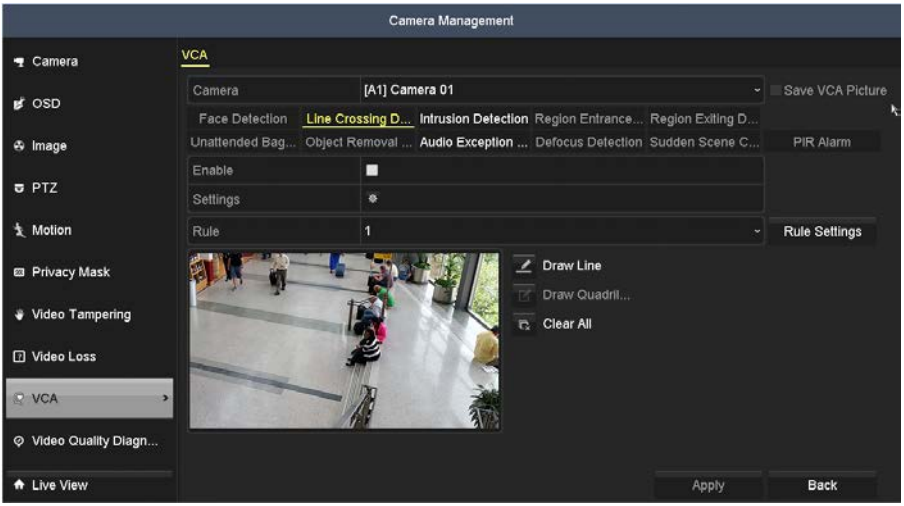
4. Select either or both of the following response options: **Audible Warning** or **Send Email**.

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

6. Repeat these steps **3** through **5** for another Exception Type you want to configure.

SECTION 3
VCA Features

Alibi recorders can configure Video Content Analysis (VCA) features supported by Alibi cameras. Alibi cameras that include VCA features usually do not include all features. After selecting a camera in the VCA menu (**Menu | Camera Management | VCA**) only those VCA features supported by the camera will be available (highlighted).



When VCA features are configured by a recorder, the settings are saved in the camera. When an VCA event occurs, the event information is sent immediately to the recorder, and acted upon by recording live video, full screen monitoring, generating an audible alarm and/or sending email.

These recorders support the following VCA features:

- **Face Detection** - Detects when a face appears in the field of view.
- **Line crossing detection** - You can specify the endpoints of an virtual line in the video image and then detect if something crosses the line from one side to the other (side A to B), vice versa (side B to A) or either way. You can define up to 4 line crossing conditions in the same video channel.
- **Intrusion detection** - You can create an virtual quadrangle in the video image, and then detect if something enters the space within the quadrangle. You can define up to 4 intrusion regions in the same video channel.
- **Region entrance detection** - Region entrance detection function detects people, vehicles or other objects which enter a pre-defined virtual region of the field of view.
- **Region exiting detection** - Region exiting detection detects people, vehicles or other objects which exit from a pre-defined virtual region of the field of view.

- **Unattended baggage detection** - Unattended baggage detection can detect when objects such as baggage, a purse, dangerous materials, etc. are left in the pre-defined area of the field of view.
- **Object removal detection** - Object removal detection detects when an object, such as an exhibit on display, is removed from the pre-defined area of the field of view.
- **Audio exception detection** - Audio exception detection detects when an abnormal sound, such as the sudden increase / decrease of the sound intensity, occurs in the surveillance area.
- **Defocus detection** - Defocus detection senses when image blur, caused by defocus of the lens, occurs.
- **Sudden scene change detection** - Scene change detection detects the change of surveillance environment affected by an external factor, such as the intentional rotation of the camera.
- **PIR alarm detection** - An infrared alarm is triggered when heat energy dissipated by a person or any other warm blooded entity such as a dog, cat, etc. moves into the field of view.

3.1 Face Detection

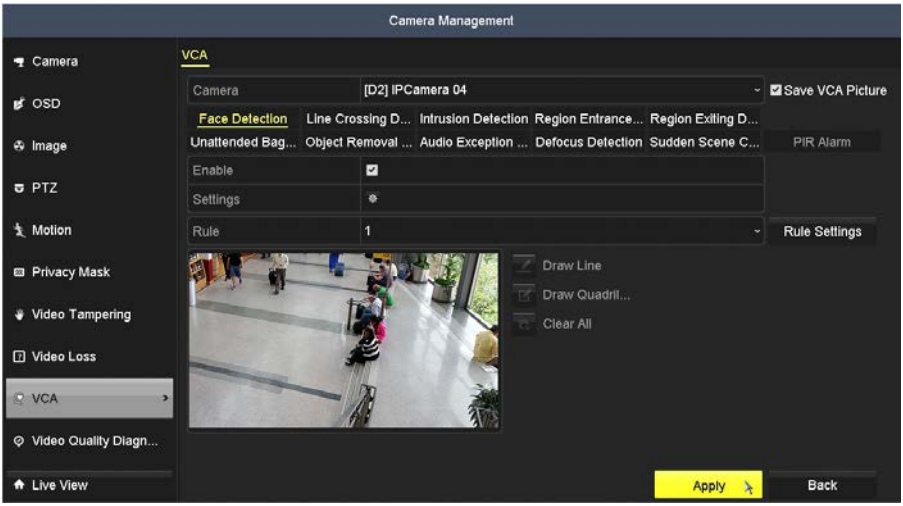
Face detection function detects when a face appears in the surveillance field of view. Certain actions can be performed when the alarm is triggered. To configure Face Detection in the camera:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

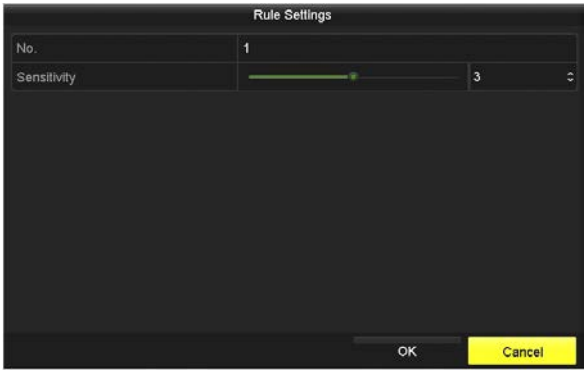
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Face Detection**. If the camera supports this feature, it will be highlighted.



5. Check the **Enable** box to select this feature.

6. Click **Rule Settings**.

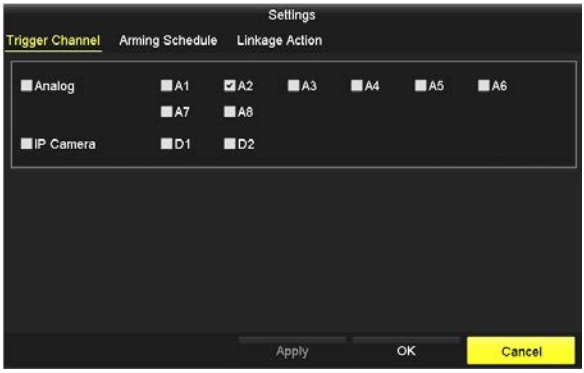


   a. In the Rule Settings window, adjust the **Sensitivity** slider to set the detection sensitivity (range : 1 .. 5). The higher the sensitivity number, the more frequently facial recognition is reported. This setting may require testing.

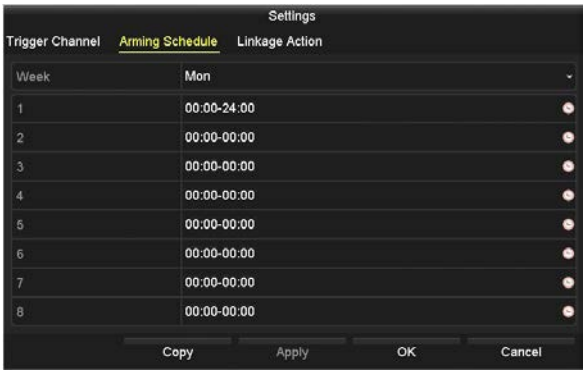
   b. Click **OK** to save the Sensitivity setting.

7. Click the icon on the **Settings** line.

   a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

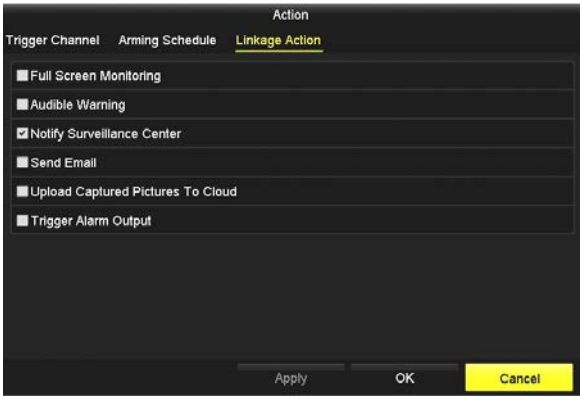


   b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when face detection is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when face recognition is detected.



NOTE *In the* **Settings** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

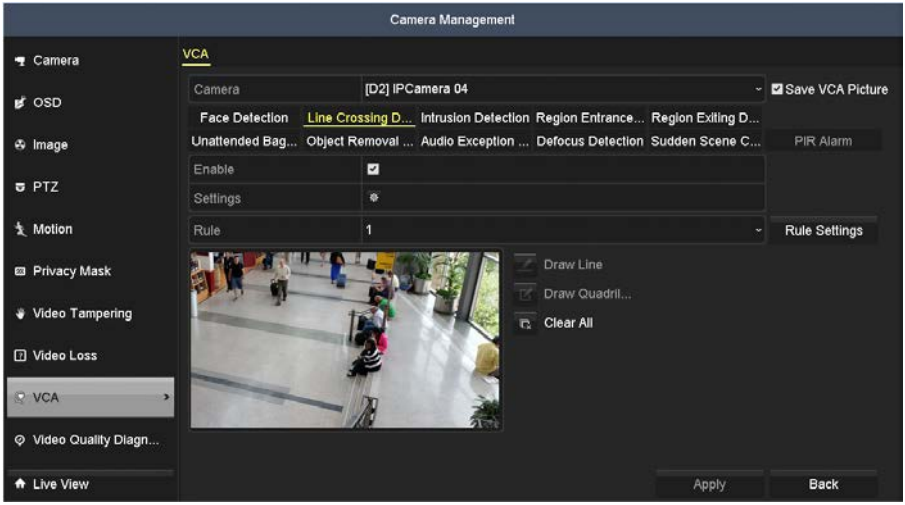
8. In the VCA menu, click **Apply** to activate the settings.

3.2 Line Crossing Detection

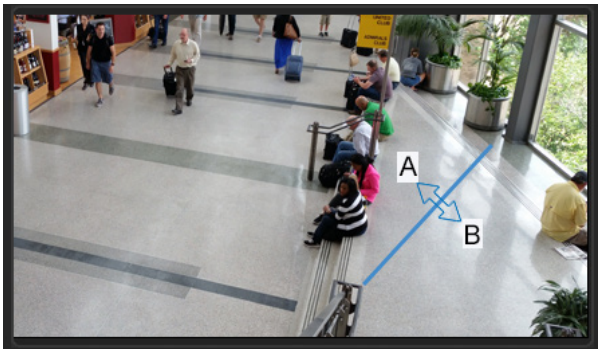
This function can be used for detecting people, vehicles and objects crossing a set virtual line. The line crossing direction can be set as bidirectional, from left to right or from right to left. And you can set the duration for the alarm response actions, such as full screen monitoring, audible warning, etc. You can create up to 4 line crossing virtual planes in the camera image.

To configure Line Crossing Detection:

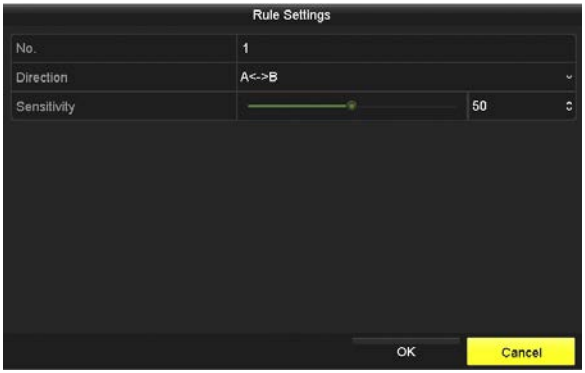
1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.
2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.
4. In the VCA type selection line, click on **Line Crossing Detection**. If the camera supports this feature, it will be highlighted.



5. Check the **Enable** box to select this feature.
6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 line crossing rules.
7. Click the **Draw Line** icon to the right of the camera image shown in the window above.
8. In the image window, create a virtual line by clicking on two points that define the endpoints of the line. A blue line will appear in the image with one side labeled **A** and the other side **B**.



9. Click **Rule Settings**.



a. In the **Rule Settings** window, open the **Direction** drop down list and select the direction of line crossing you want to detect: You can select either of the following for the rule you are configuring:

   * **A<->B**: An arrow on both the A side and the B side of the virtual line. When an object moves across the virtual line in either direction an alarm is triggered.
   * **A->B**: An arrow appears on only the B side of the virtual line. When an object moves across the virtual line from the A side to the B side an alarm is triggered.
   * **B->A**: An arrow appears on only the A side of the virtual line. When an object moves across the virtual line from the B side to the A side an alarm is triggered.

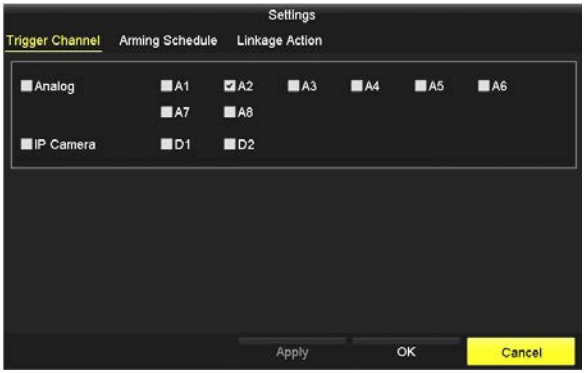
b. Adjust the **Sensitivity** slider to set the detection sensitivity (range : 1 .. 100). Higher sensitivity (number) detects smaller objects. This setting may require testing.

c. Click **OK** to save the Sensitivity setting.

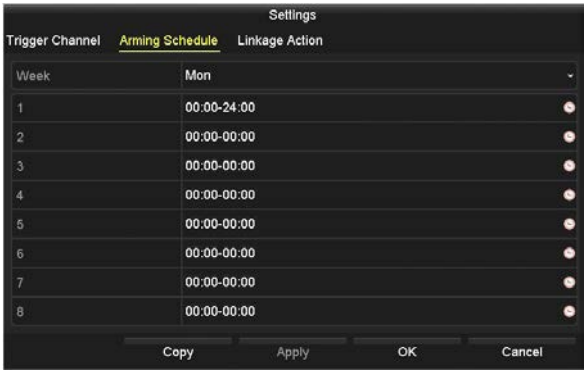
10. Repeat the four steps above to create additional virtual planes if needed.

11. Click the icon on the **Settings** line.

    a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

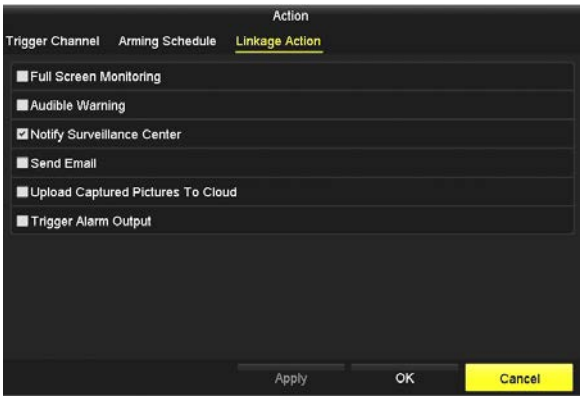


    b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when line crossing is monitored. Time periods cannot overlap.



    c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

    d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when line crossing is detected.



NOTE *In the L***inkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

12. In the VCA menu, click **Apply** to activate the settings.

3.3 Intrusion Detection

Intrusion detection detects people, vehicles or other objects which enter and loiter in a pre-defined virtual area of the field of view. Certain actions can be performed when an intrusion alarm is triggered.

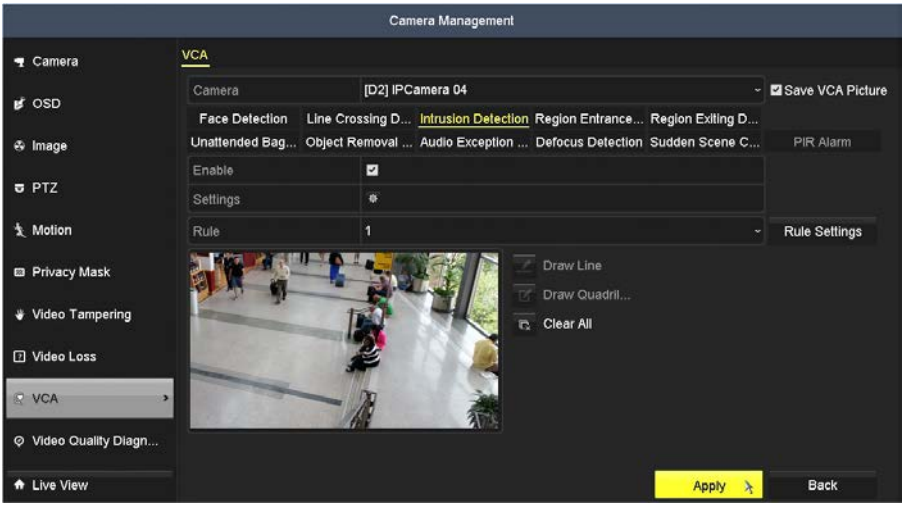
To configure Intrusion Detection in the camera:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Intrusion Detection**. If the camera supports this feature, it will be highlighted.



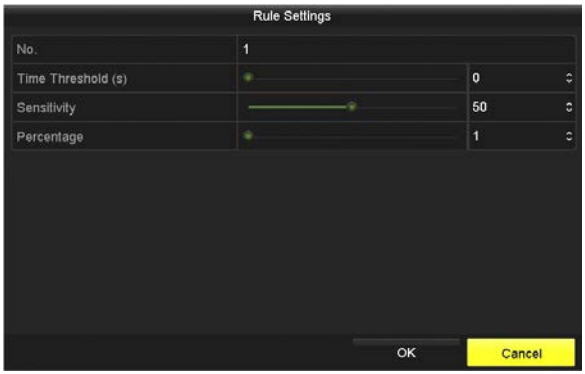
5. Check the **Enable** box to select this feature.

6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 intrusion detection rules.

7. Click the **Draw Quadrilateral** icon to the right of the camera image shown in the window above.

8. In the image window, create a virtual intrusion zone by clicking on, in a circular manner, the four corners of a quadrangle that define the corners of the zone. A blue quadrangle will appear in the image with a number indicating the rule number.

9. Click **Rule Settings**.



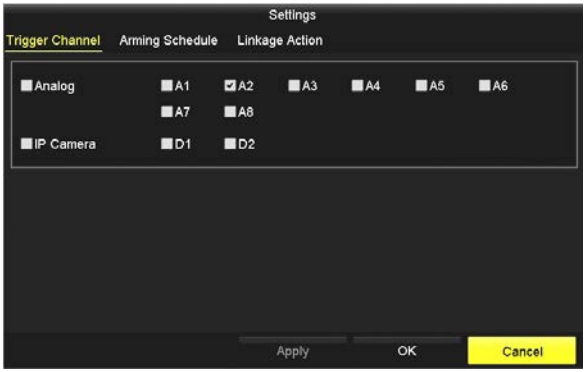
a. In the **Rule Settings** window, set the following:

* **Time Threshold (s)**: Range 1 s .. 10 s. If something moves into the zone and stays there for longer than the Time Threshold setting, an alarm can be triggered.
* **Sensitivity**: Click-and-drag the slider to set the detection sensitivity. Range 1 .. 100. The value of the sensitivity represents the size of the object which can trigger an alarm. The higher the value, the smaller the object that can trigger an alarm.
* **Percentage**: Range 1 .. 100. Percentage defines the ratio of the in-zone part of the object which can trigger the alarm. For example, if the percentage is set to 50, an object that fills at least 50% of the zone can trigger an alarm.

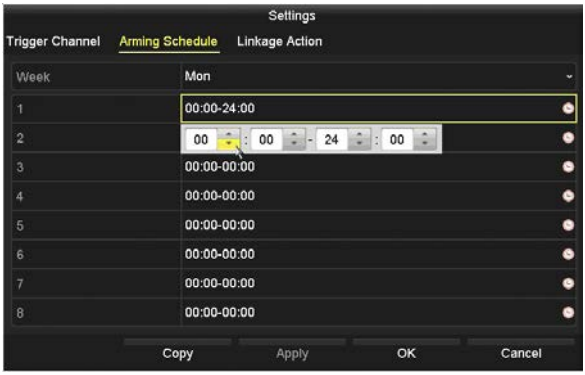
b. Click **OK** to save your settings.

10. Click the icon on the **Settings** line.

a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

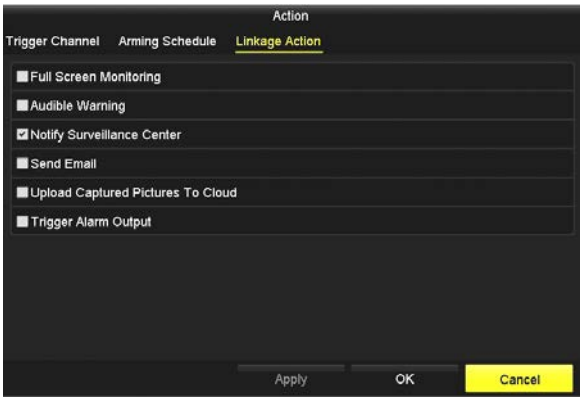


b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when intrusion is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when an intrusion is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

11. In the VCA menu, click **Apply** to activate the settings.

12. Repeat steps 6 through 11 above to create additional rules, if needed.

3.4 Region Entrance Detection

Region entrance detection detects people, vehicles or other objects which enter a pre-defined virtual region in the field of view. Certain actions can be taken when the alarm is triggered.

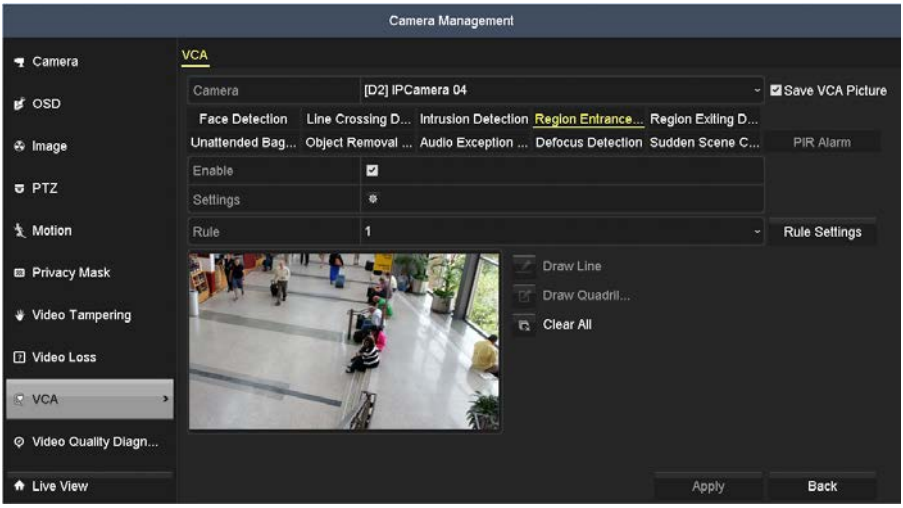
To configure Region Entrance Detection in the camera:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Region Entrance Detection**. If the camera supports this feature, it will be highlighted.



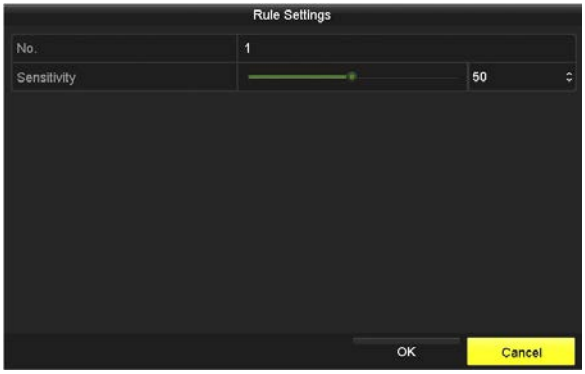
5. Check the **Enable** box to select this feature.

6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 region entrance detection rules.

7. Click the **Draw Quadrilateral** icon to the right of the camera image shown in the window above.

8. In the image window, create a virtual region by clicking on, in a circular manner, the four corners of a quadrangle that define the corners of the region. A blue quadrangle will appear in the image with a number indicating the rule number.

9. Click **Rule Settings**.



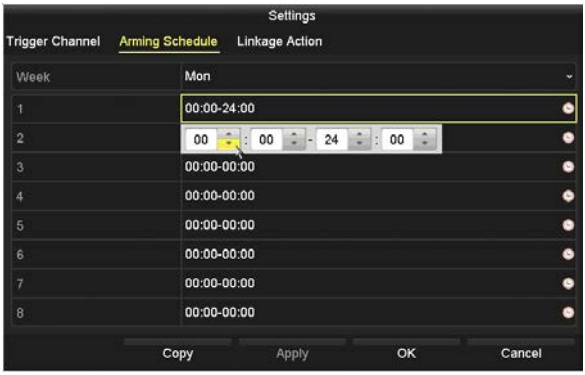
   a. In the **Rule Settings** window, set the **Sensitivity**. Click-and-drag the slider to set the detection sensitivity. Range 1 .. 100. The value of the sensitivity represents the size of the object which can trigger an alarm. The higher the value, the smaller the object that can trigger an alarm.

   b. Click **OK** to save your settings.

10. Click the icon on the **Settings** line.

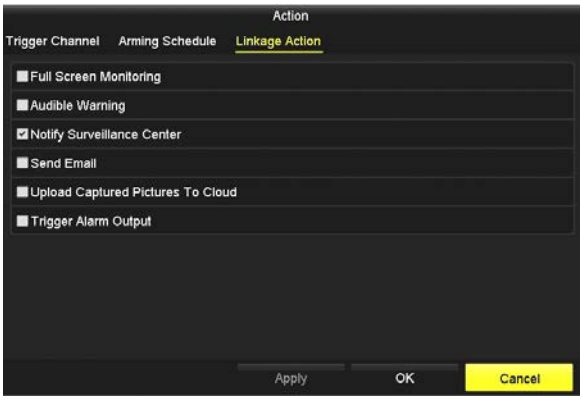
   a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when entrance detection is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when an entrance is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

11. In the VCA menu, click **Apply** to activate the settings.

12. Repeat steps 6 through 11 above to create additional rules, if needed.

3.5 Region Exiting Detection

Region exiting detection detects people, vehicles or other objects which leave a pre-defined virtual region in the field of view. Certain actions can be taken when the alarm is triggered.

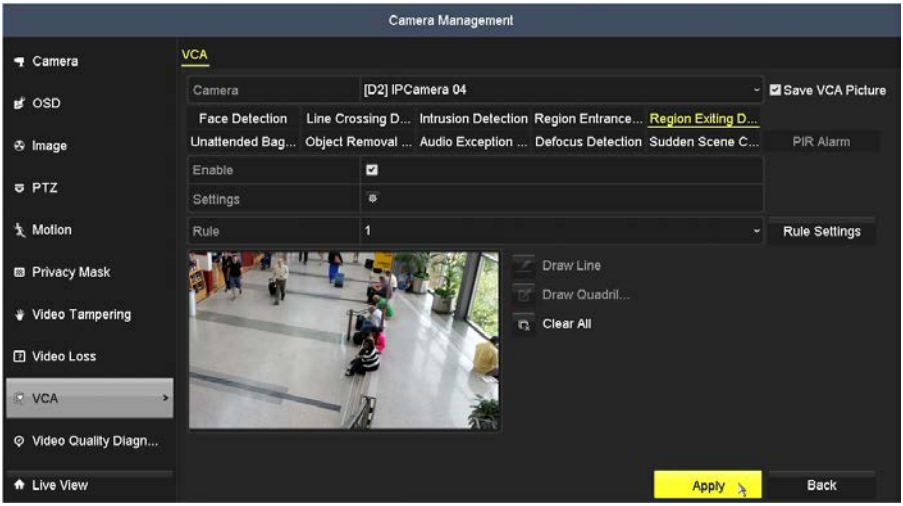
To configure Region Entrance Detection in the camera:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Region Exiting Detection**. If the camera supports this feature, it will be highlighted.



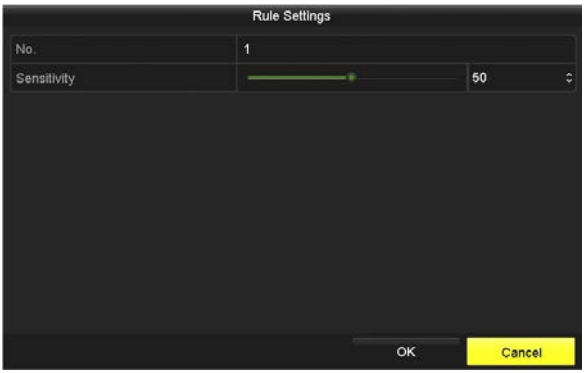
5. Check the **Enable** box to select this feature.

6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 region exiting detection rules.

7. Click the **Draw Quadrilateral** icon to the right of the camera image shown in the window above.

8. In the image window, create a virtual region by clicking on, in a circular manner, the four corners of a quadrangle that define the corners of the region. A blue quadrangle will appear in the image with a number indicating the rule number.

9. Click **Rule Settings**.

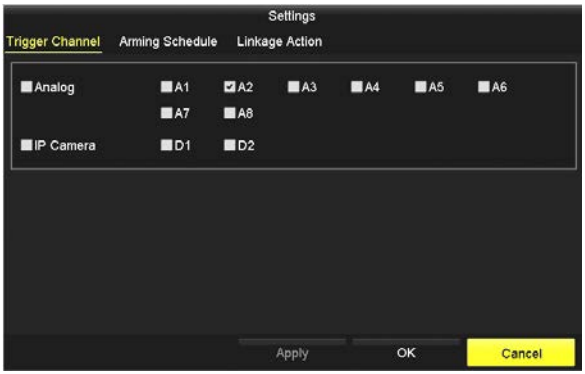


a. In the **Rule Settings** window, set the **Sensitivity**. Click-and-drag the slider to set the detection sensitivity. Range 1 .. 100. The value of the sensitivity represents the size of the object which can trigger an alarm. The higher the value, the smaller the object that can trigger an alarm.

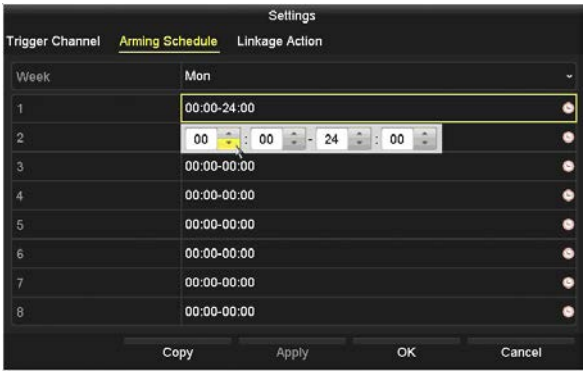
b. Click **OK** to save your settings.

10. Click the icon on the **Settings** line.

a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

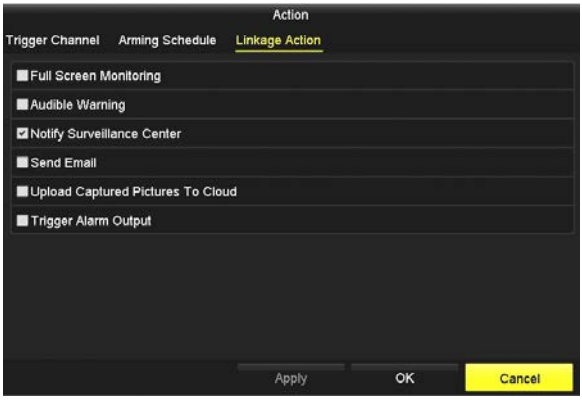


b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when exiting detection is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when an entrance is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

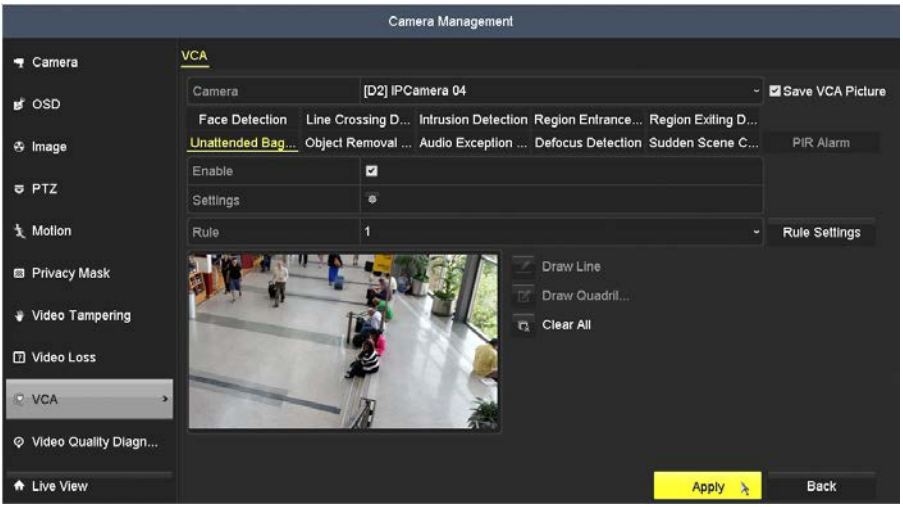
11. In the VCA menu, click **Apply** to activate the settings.

12. Repeat steps 6 through 11 above to create additional rules, if needed.

3.6 Unattended Baggage Detection

Unattended baggage detection can detect when objects such as baggage, a purse, dangerous materials, etc. are left in the pre-defined area of the field of view. A series of actions can be taken when the alarm is triggered. To configure Unattended Baggage Detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.



2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Unattended Baggage Detection**. If the camera supports this feature, it will be highlighted.

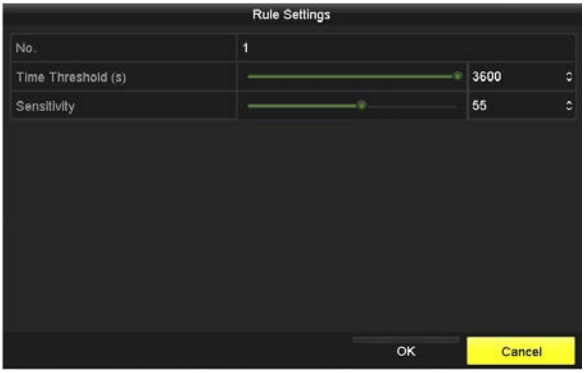
5. Check the **Enable** box to select this feature.

6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 unattended baggage detection rules.

7. Click the **Draw Quadrilateral** icon to the right of the camera image shown in the window above.

8. In the image window, create a virtual baggage zone by clicking on, in a circular manner, the four corners of a quadrangle that define the corners of the zone. A blue quadrangle will appear in the image with a number indicating the rule number.

9. Click **Rule Settings**.



a. In the **Rule Settings** window, set the following:

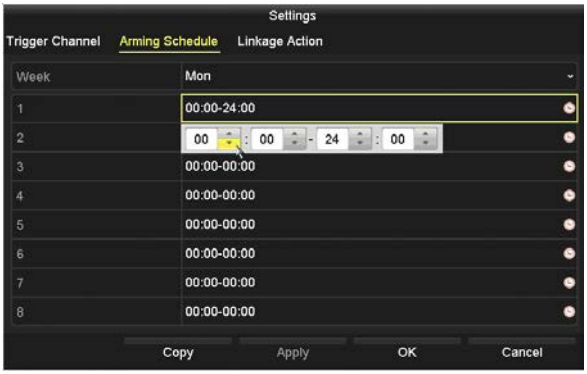
* **Time Threshold (s)**: Range 5 s .. 20 s. If something is left in the zone and stays there for longer than the Time Threshold setting, an alarm can be triggered. If you select "0", and alarm can be reported immediately when the object enters the zone.
* **Sensitivity**: Click-and-drag the slider to set the detection sensitivity. Range 1 .. 100. Sensitivity defines the similarity with the background image. Usually, when the sensitivity is high, a very small object left in the region can trigger the alarm.
* **Percentage**: Range 1 .. 100. Percentage defines the ratio of the in-zone part of the object which can trigger the alarm. For example, if the percentage is set to 50, an object that fills at least 50% of the zone can trigger an alarm.

b. Click **OK** to save your settings.

10. Click the icon on the **Settings** line.

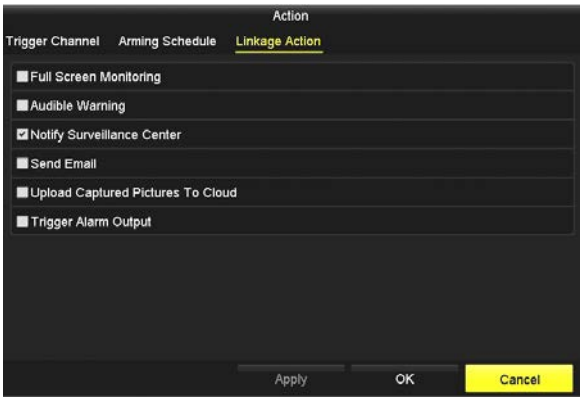
a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when parking is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when parking is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

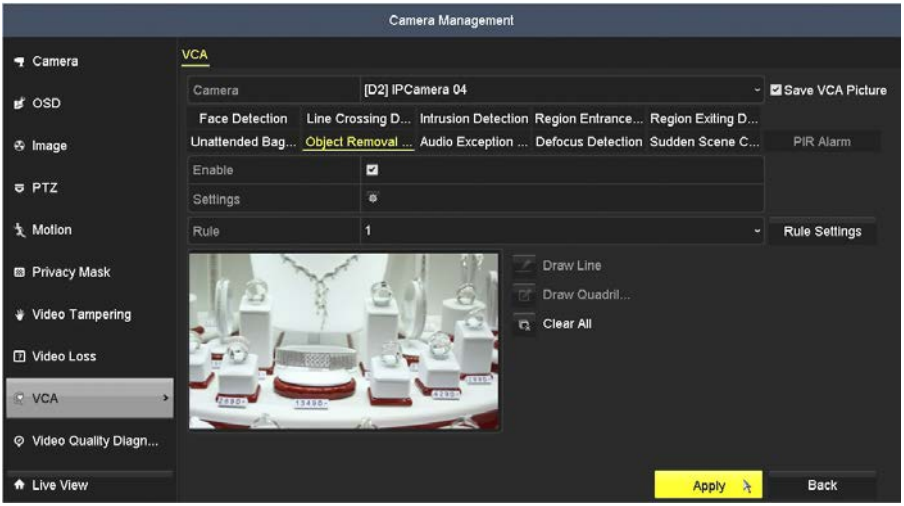
11. In the VCA menu, click **Apply** to activate the settings.

12. Repeat steps 6 through 11 above to create additional rules, if needed.

3.7 Object Removal Detection

Object removal detection detects when an object, such as an exhibit on display, is removed from the pre-defined area of the field of view. A series of actions can be taken when the alarm is triggered. To configure Object Removal detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.



2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Object Removal Detection**. If the camera supports this feature, it will be highlighted.

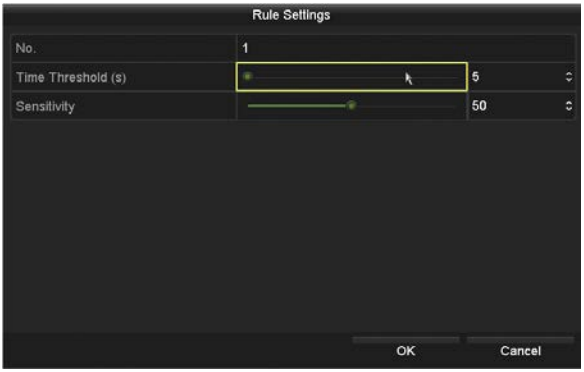
5. Check the **Enable** box to select this feature.

6. Open the **Rule** drop down list and select the rule number you want to configure. You can configure up to 4 unattended object removal detection rules.

7. Click the **Draw Quadrilateral** icon to the right of the camera image shown in the window above.

8. In the image window, create a virtual object zone by clicking on, in a circular manner, the four corners of a quadrangle that define the corners of the zone. A blue quadrangle will appear in the image with a number indicating the rule number.

9. Click **Rule Settings**.



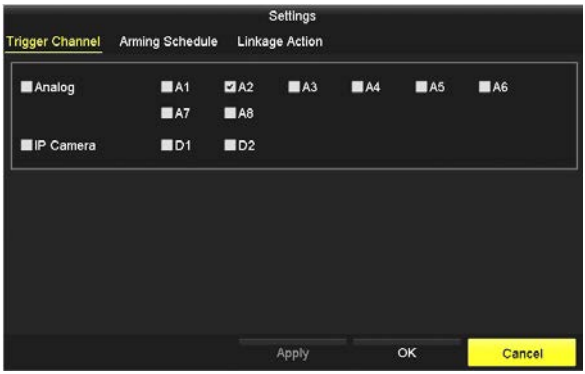
a. In the **Rule Settings** window, set the following:

* **Time Threshold (s)**: Range 5 s .. 20 s. If something is removed from the zone for longer than the Time Threshold setting, an alarm can be triggered. If you select "0", and alarm can be reported immediately when the object enters the zone.
* **Sensitivity**: Click-and-drag the slider to set the detection sensitivity. Range 1 .. 100. Sensitivity defines the similarity degree of the background image. Usually, when the sensitivity is high, a very small object taken from the region can trigger the alarm.

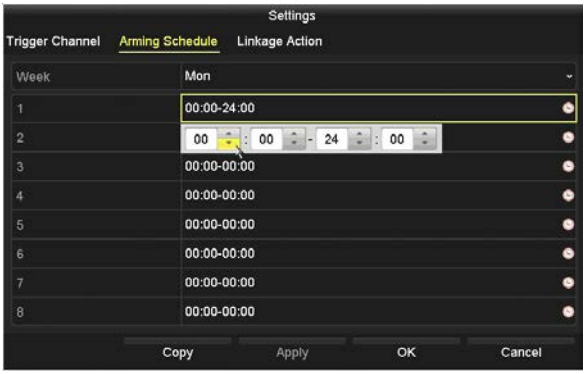
b. Click **OK** to save your settings.

10. Click the icon on the **Settings** line.

a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

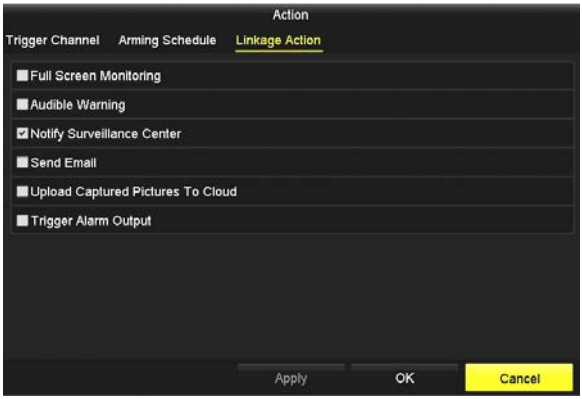


b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when parking is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when object removal is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

11. In the VCA menu, click **Apply** to activate the settings.

12. Repeat steps 6 through 11 above to create additional rules, if needed.

3.8 Audio Exception Detection

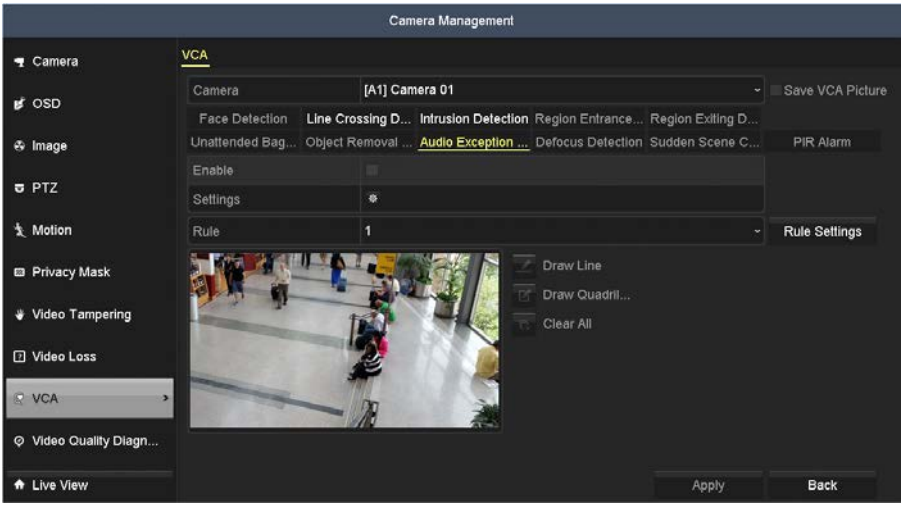
Audio exception detection detects when an abnormal sound, such as the sudden increase / decrease of the sound intensity, occurs in the surveillance area. Certain actions can be performed when the alarm is triggered. To configure Audio Exception Detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

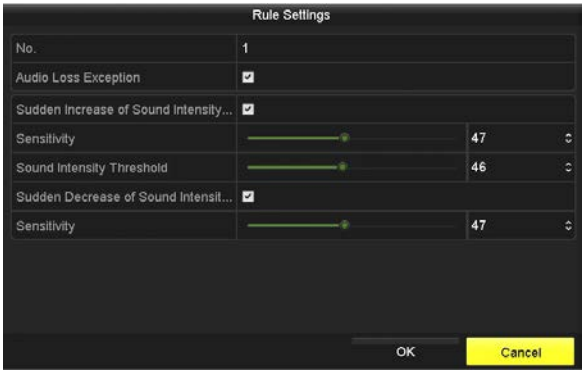
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.

4. In the VCA type selection line, click on **Audio Exception Detection**. If the camera supports this feature, it will be highlighted.



5. Check the **Enable** box to select this feature.

6. Click **Rule Settings**.



a. In the **Rule Settings** window, set the following:

   * **Audio Input Exception**: Check the select box of to enable the audio loss detection function.
   * **Sudden Increase of Sound Intensity Detection**: Check the select box to detect a steep increase in the sound volume in the surveillance scene.
     — Set the detection sensitivity and threshold for sound steep rise. **Sensitivity**: Range: 1 .. 100. The smaller the value is, the more severe the change must be to trigger the detection.

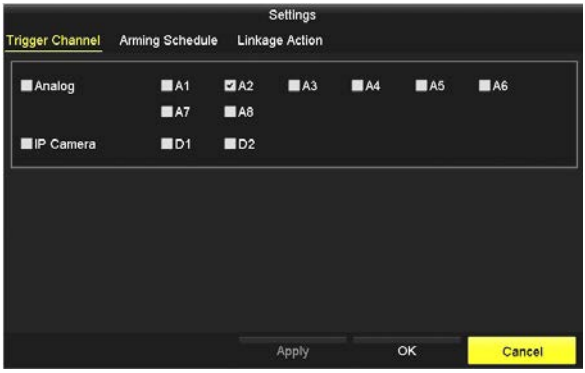
- **Sound Intensity Threshold**: Range: 1 .. 100. This option can filter the sound in the environment. The louder the sound, the higher the value should be. Adjust this value with consideration of the actual ambient sound level.

* **Sudden Decrease of Sound Intensity Detection**: Check the select box of to detect a steep drop in the sound level in the surveillance area.
  - **Sensitivity**: Range: 1 .. 100. Set the detection sensitivity for a steep drop in volume.

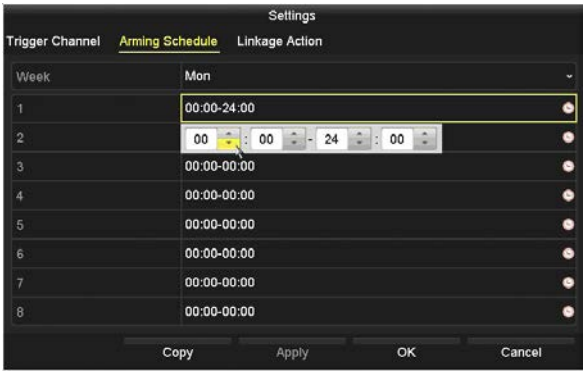
b. Click **OK** to save your settings.

7. Click the icon on the **Settings** line.

a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

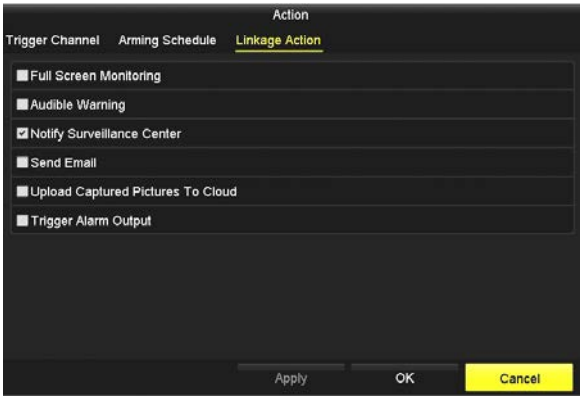


b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when parking is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when an audio exception is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

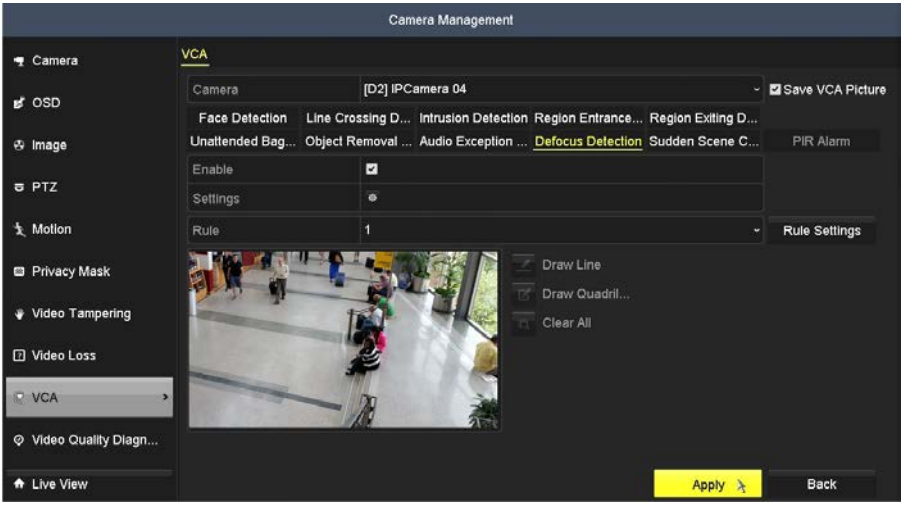
e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

8. In the VCA menu, click **Apply** to activate the settings.

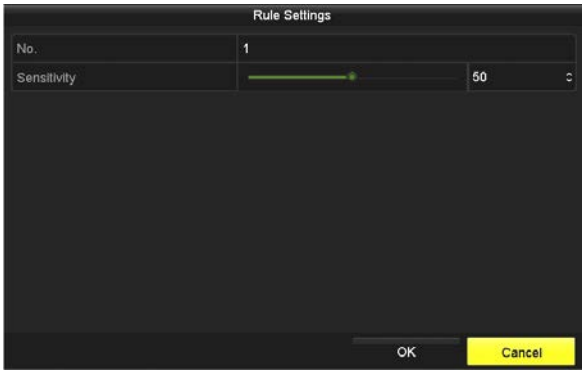
3.9 Defocus Detection

Defocus Detection senses when image blur, caused by defocus of the lens, occurs. Certain actions can be taken when the alarm is triggered. To configure Defocus Detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.
2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.
4. In the VCA type selection line, click on **Defocus Detection**. If the camera supports this feature, it will be highlighted.



5. Check the **Enable** box to select this feature.
6. Click **Rule Settings**.

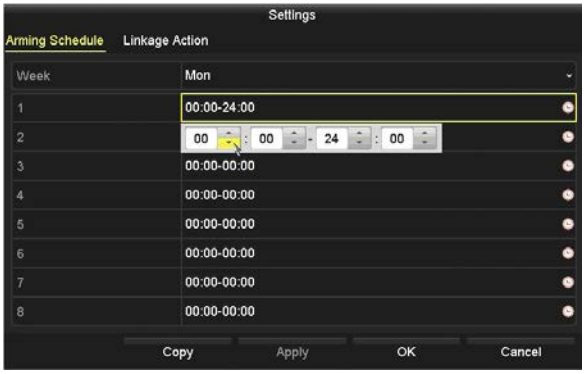


a. In the Rule Settings window, adjust the **Sensitivity** slider to set the detection sensitivity (range : 1 .. 100). The higher the sensitivity number, the more easily defocus is recognized. This setting may require testing.

b. Click **OK** to save the Sensitivity setting.

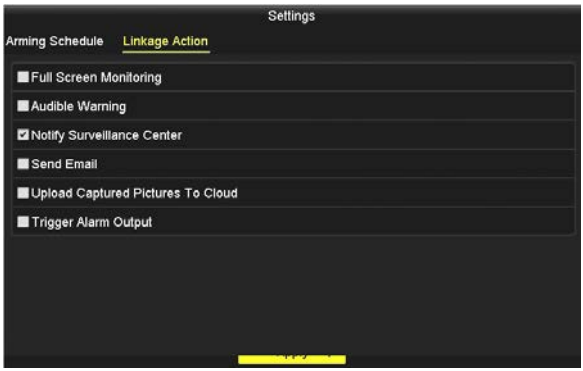
7. Click the icon on the **Settings** line.

a. In the **Arming Schedule** tab, you can define a schedule for each day of eight weeks (56 days) when defocus is monitored. Time periods cannot overlap.



b. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

c. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when defocus is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

d. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

8. In the VCA menu, click **Apply** to activate the settings.

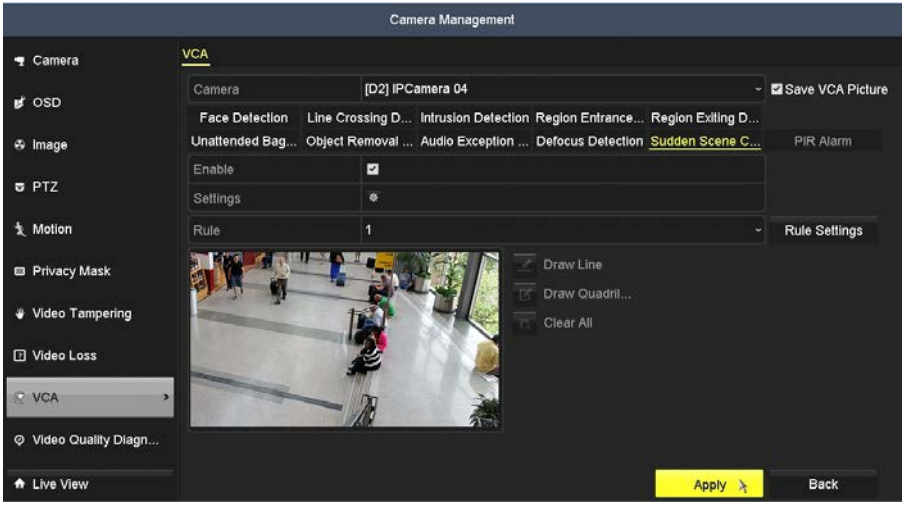
3.10 Sudden Scene Change Detection

Scene change detection detects the change of surveillance environment affected by an external factor, such as the intentional rotation of the camera. Certain actions can be taken when the alarm is triggered. To configure Sudden Scene Change Detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.

2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.

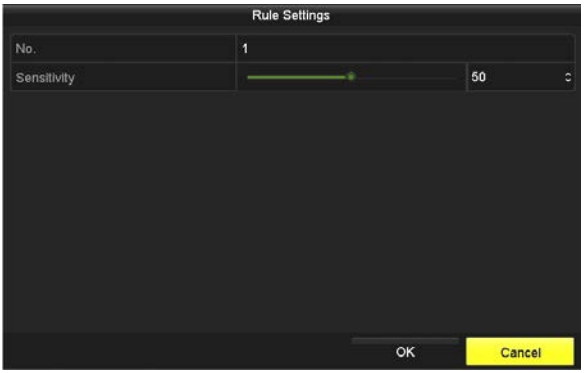
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.



4. In the VCA type selection line, click on **Sudden Scene Change Detection**. If the camera supports this feature, it will be highlighted.

5. Check the **Enable** box to select this feature.

6. Click **Rule Settings**.

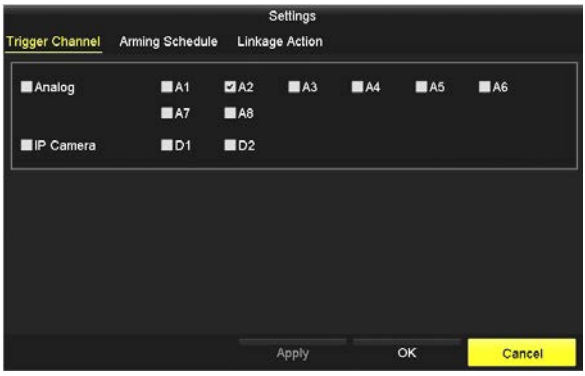


   a. In the Rule Settings window, adjust the **Sensitivity** slider to set the detection sensitivity (range : 1 .. 100). The higher the sensitivity number, the more easily a scene change is recognized. This setting may require testing.

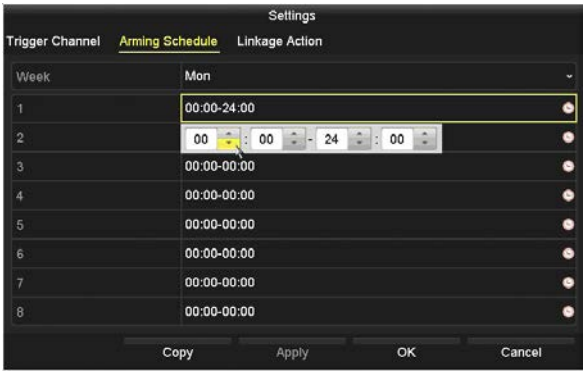
   b. Click **OK** to save the Sensitivity setting.

7. Click the icon on the **Settings** line.

   a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

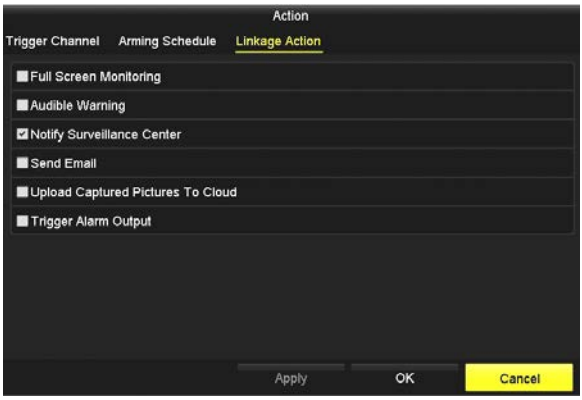


   b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when scene change is monitored. Time periods cannot overlap.



   c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

   d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when a scene change is detected.



NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

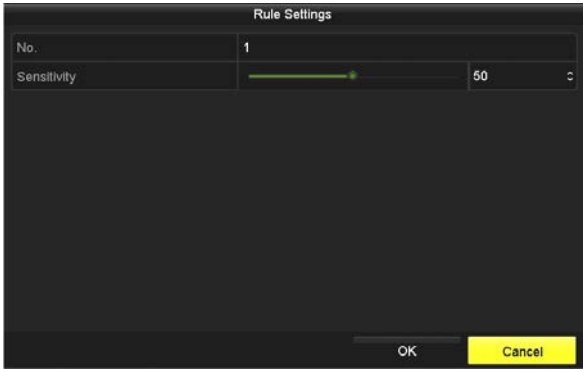
e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

8. In the VCA menu, click **Apply** to activate the settings.

3.11 PIR Alarm

An infrared alarm is generated when heat energy dissipated by a person or any other warm blooded entity such as a dog, cat, etc. moves into the field of view. To configure the camera for infrared alarm detection:

1. Open the VCA menu. Go to: **Menu | Camera Management | VCA**.
2. On the **Camera** line, open the drop down list, and then select the camera you want to configure.
3. Check the **Save VCA Picture** box to capture a live view image of the VCA event.
4. In the VCA type selection line, click on **PIR Alarm**. If the camera supports this feature, it will be highlighted.
5. Check the **Enable** box to select this feature.
6. Click **Rule Settings**.

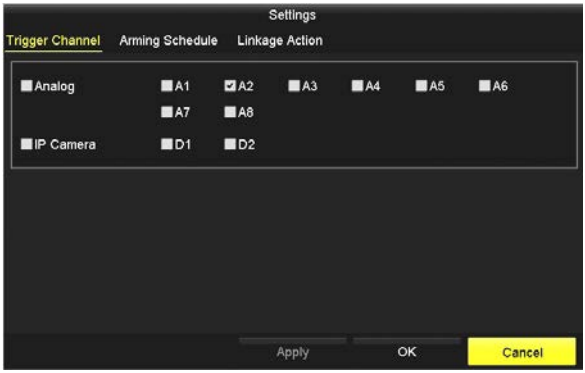


a. In the Rule Settings window, adjust the **Sensitivity** slider to set the detection sensitivity (range : 1 .. 100). The higher the sensitivity number, the more easily it can recognized a PIR Alarm condition. This setting may require testing.

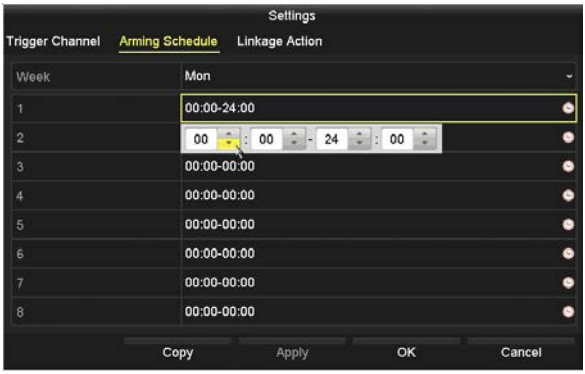
b. Click **OK** to save the Sensitivity setting.

7. Click the icon on the **Settings** line.

a. In the **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

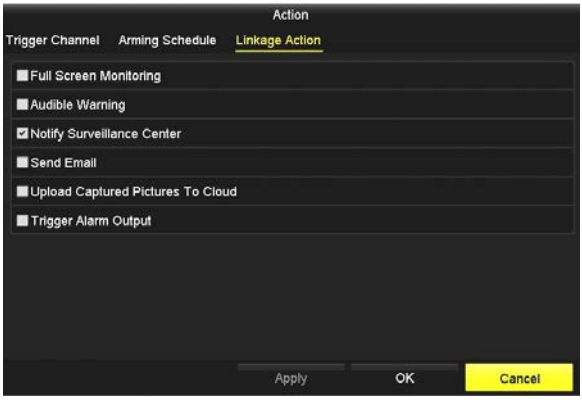


b. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule for each day of eight weeks (56 days) when scene change is monitored. Time periods cannot overlap.



c. Click **Apply** to save the settings. You can also click **Copy** to copy the Arming Schedule setup in the window to other days of the week.

d. Click the **Linkage Action** tab. In this tab you can cause certain actions to occur when a PIR Alarm condition is detected.



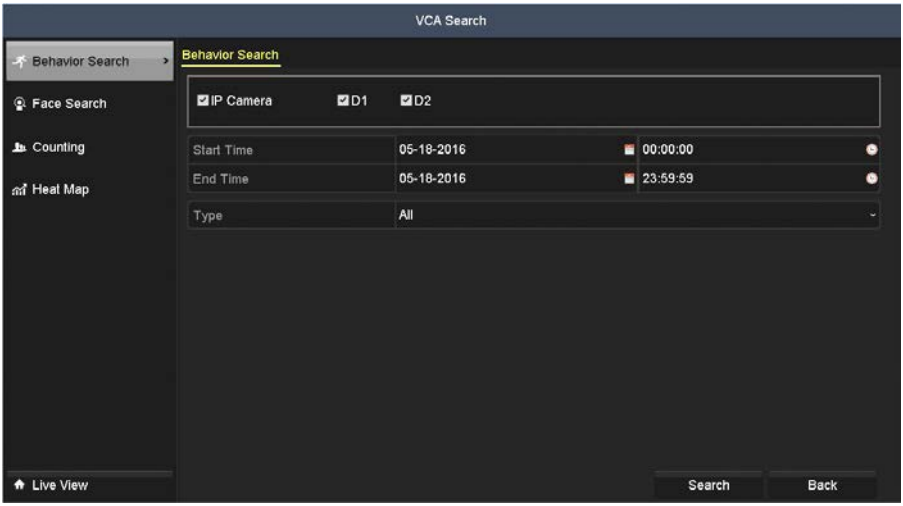
NOTE *TIn the* **Linkage Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

e. Select the actions you want to occur, then click **Apply** to save your settings, and then click **OK** to return to the VCA menu.

8. In the VCA menu, click **Apply** to activate the settings.

3.12 VCA Search features

VCA Search features are used to quickly analyze data generated from VCA analysis of video images. To use VCA Search features, the VCA analysis must first be enabled and configured in the camera(s). **NOTE**: All Alibi cameras do not support all VCA features shown in this section. To open the VCA Search interface, Go to: **Menu | VCA Search**.

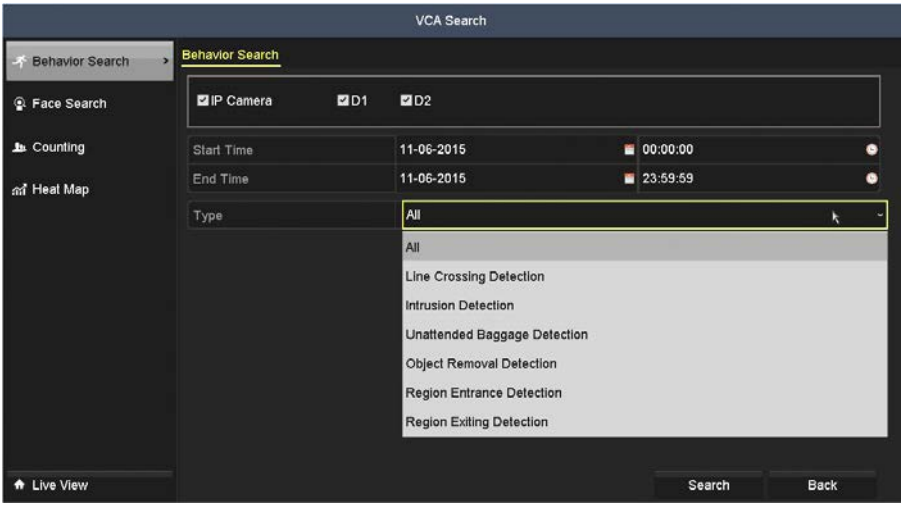


3.12.1 Behavior search

The behavior analysis detects suspicious behavior based on VCA analysis. To use this analysis, specific linkage actions are performed when the VCA alarm is triggered. To use VCA Search - Behavior Search:

1. Configure the camera for any of the following VCA features:
   - Line Crossing detection
   - Intrusion Detection
   - Unattended Baggage Detection
   - Object removal Detection
   - Region Entrance Detection
   - Region Exiting Detection

2. Open the VCA Search Behavior Search menu. Go to: **Menu | VCA Search | Behavior Search**.

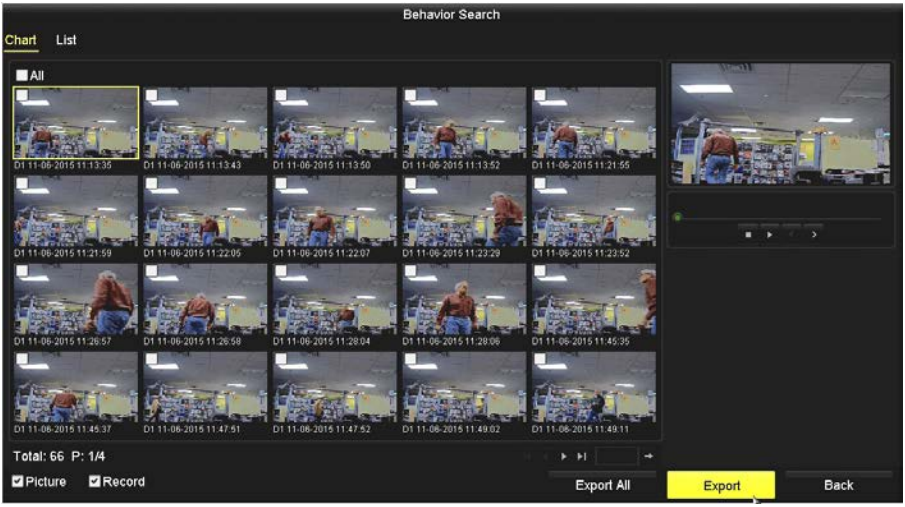


3. Check the box(es) for the camera(s) you want to search.

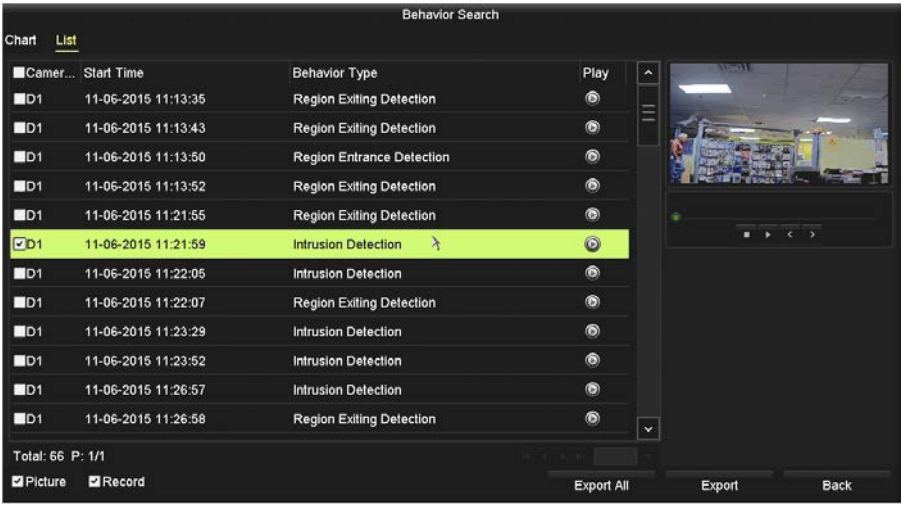
4. Click the **Start Time** field and then set the date and time at which you want to search begin the search for data. Similarly, set the End Time field.

5. Open the **Type** drop down list, and then select the type of VCA event you want to search for. You can leave the option at All to find all VCA events.

6. Click the **Search** button at the bottom of the screen. In this screen, you can peruse thumbnails of video clips, play them, and export them to an external device or flash drive. To export a clip, check the box(es) for the clip(s) you want to export, and then click the **Export** button at the bottom of the screen.



7. You can also view the result in **List** format by click the **List** option in the upper left corner. In this screen, you can play video clips and export them to an external device or flash drive. To export a clip, check the box(es) for the clip(s) you want to export, and then click the **Export** button at the bottom of the screen.

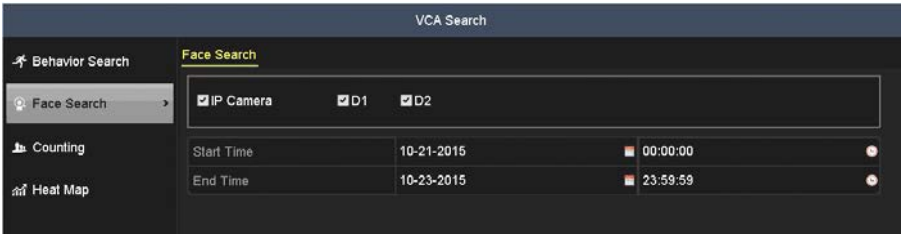


3.12.2 Face search

Face Search displays occurrences of the VCA Face Detection feature. This feature must be enabled and configured in a camera before using a VCA Search. To use VCA Search - Face Search:

1. Configure VCA Face Detection in a camera. See "3.1 Face Detection" on page 53. You can verify that the camera is generating Face Detection alarms through Log Search.

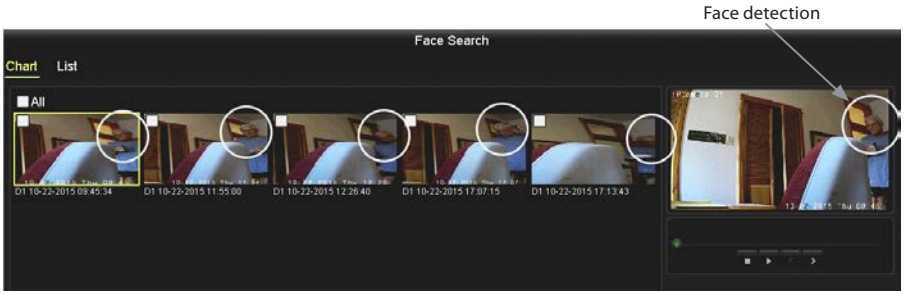
2. Open the VCA Search Face Search menu. Go to: **Menu | VCA Search | Face Search**.



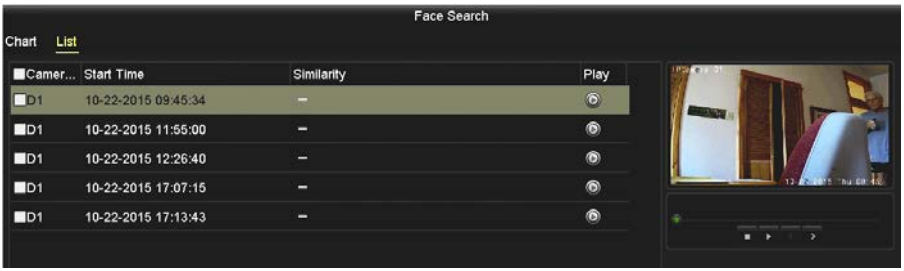
3. Check the box(es) for the camera(s) you want to search.

4. Click the **Start Time** field and then set the date and time at which you want to search begin the search for data. Similarly, set the End Time field.

5. Click the **Search** button at the bottom of the screen. In this screen, you can peruse thumbnails of video clips, play them, and export them to an external device or flash drive. To export a clip, check the box(es) for the clip(s) you want to export, and then click the **Export** button at the bottom of the screen.



6. You can also view the result in **List** format by click the List option in the upper left corner. In this screen, you can play video clips and export them to an external device or flash drive. To export a clip, check the box(es) for the clip(s) you want to export, and then click the **Export** button at the bottom of the screen.



3.12.3 Counting

Counting is used to determine the number of objects entering or leaving a designated area in the field of view. The data can be displayed in a line graph across daily, weekly, monthly or annual time range.

NOTE *The IP camera used for counting must include a microSD card for data accumulation.*

To use Counting:

1. Configure the camera for any of the following VCA features:
   - Region Entrance Detection
   - Region Exiting Detection

2. Open the VCA Search Face Search menu. Go to: **Menu | VCA Search | Counting**.

3. Open the **Camera** drop down lost, and then select the camera you want to search.

4. Open the **Report Type** drop down list, and then select the time span for which you want to count Region Entrance and/or Exiting alarms. You can select either **Daily Report**, **Weekly Report**, **Monthly Report** or **Annual Report**.

5. Click the **Statistics Time** field, and then select the day for which to generate a report.

6. Click the **Counting** button to start object counting across the report type you selected.

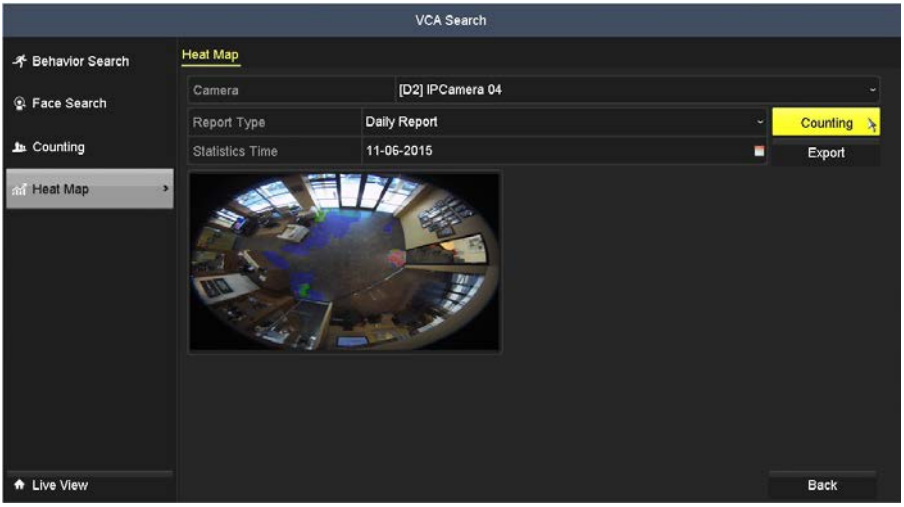
7. Click **Export** to save the statistics report in Microsoft® Excel® format.

3.12.4 Heat map

The Heat Map feature presents a graphical representation of heat data represented by colors. A red color block indicates the most welcome area, and blue color block (0, 0, 255) indicates the less-popular area. Heat map is normally used to analyze the visit times and dwell time of customers in an designated area of the field of view. The heat map function must be supported by the IP camera and the corresponding configuration must be set.

1. Configure a camera for the VCA features PIR Alarm. See "3.11 PIR Alarm" on page 86.

2. Open the VCA Search Face Search menu. Go to: **Menu | VCA Search | Heat Map**.



3. Open the **Camera** drop down lost, and then select the camera you configured for PIR alarm detection.

4. Open the **Report Type** drop down list, and then select the time span for which you want to count alarms. You can select either **Daily Report**, **Weekly Report**, **Monthly Report** or **Annual Report**.

5. Click the **Statistics Time** field, and then select the day for which to generate a report.

6. Click the **Counting** button to start counting across the report type you selected.

7. Click **Export** to save the statistics report in Microsoft® Excel® format.

SECTION 4
Startup, Shutdown, Reboot

After the QVR and cameras are installed, the QVR system must be configured to function in the surveillance mode(s) that best serve your needs. This chapter includes the essential steps to get your system running, including configuring the QVR date and time, and setting up the LAN interface, cameras and recording modes. Advanced features, including remote access, video export, adding user names and setting user permissions, etc. are described in later sections of this manual.

4.1 Starting Up, Shutting Down and Rebooting the QVR

4.1.1 Startup

Proper startup and shutdown procedures are essential for getting the most out of your QVR. To startup:

1. Check the power cable is plugged into a standard electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device.

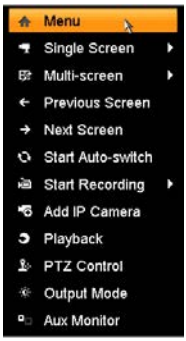
2. Rock the **POWER** switch on the back panel to the on ("I") position. The Power indicator LED on the front panel should turn green indicating that the unit is powered on.

3. After startup, the Power indicator LED remains green. A splash screen will appear on the monitor.

4.1.2 Shutdown

To shut down the QVR:

1. Right click anywhere on the desktop to open the pop-up window, then select **Menu**.



2. If a **Login** window opens, select a User Name with administrative privileges, enter the appropriate Password, then click **OK**.

NOTE *The default User Name with administrative privileges and its associated Password are* **admin** *and* **1111**.

3. In the **Menu** window, click the **Shutdown** icon, then click **Shutdown** in the pop-up window.

4. Click **Yes** in the **Attention** window.

5. When the message **Please power off!** appears, rock the power switch on the back panel to the off ("**0**") position.

4.1.3 Rebooting the QVR

In the Shutdown menu, you can also reboot the QVR.

1. Open the Shutdown menu by clicking **Menu | Shutdown**.

2. In the **Menu** window, click the **Shutdown** icon, then click **Reboot** in the pop-up window.

3. Click **Yes** in the **Attention** window.

SECTION 5
Live View Interface

The Live View interface is the primary camera viewing and monitoring mode. It can be configured to present video from the cameras configured in the system singularly or in multi mode, or using a "patrol" feature wherein video from each of a select group of cameras is displayed singularly and sequentially, with each camera view shown for a preset duration (dwell). The Live View screen can be configured to display 1, 6, 9 or more camera channels concurrently, or playback recorded video.

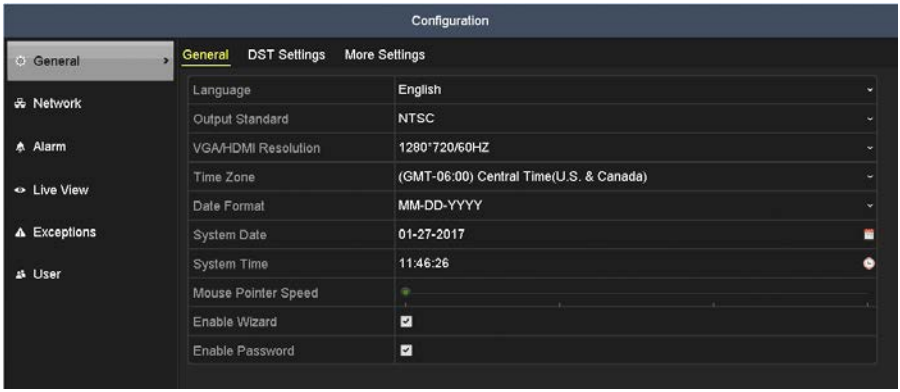
*Live View 2 * 2 multi-screen display*

Each camera channel displayed on the Live View screen may contain one or both status icons in the upper-right corner of the viewing frame.

The recorder can support up to two monitors if it provides both VGA and HDMI video out ports.

5.1 Setting monitor resolution

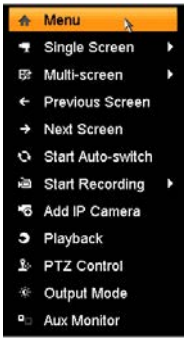
Depending on the QVR you are using, the firmware supports VGA monitor resolutions up to 2K (2560 x 1440 pixels), and HDMI resolutions up to 4K (3840 x 2160 pixels). The default resolution is 720p. To set the monitor resolution, open the **Menu | Configuration | General** display.



Use the screen above to select the resolution for the VGA and HDMI monitors you are using, and then click the **Apply** button at the bottom of the screen.

5.2 Live View pop-up menu

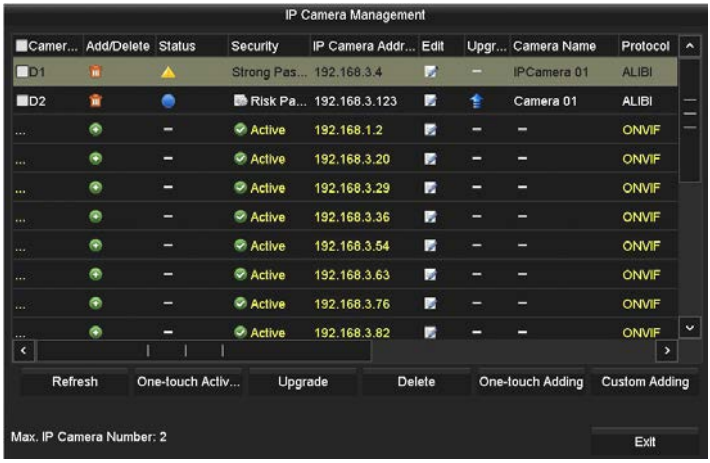
Right-clicking the mouse on the desktop opens the pop-up window shown below.



Clicking one of the items listed produces the result described below.

- **Menu**: Opens the configuration menu window.
- **Single Screen**: showing only one camera channel on the monitor. Open the drop-down list to select the camera channel you want to view.
- **Multi-screen:** opens a submenu where you can choose from several multi-channel screen configurations, including **2 * 2**, **1 + 5**, **1 + 7**, **3 * 3**, **4 * 4**,. etc. Options depend on the channel capacity of the recorder.
- **Previous screen**: Move to the screen displayed previously.

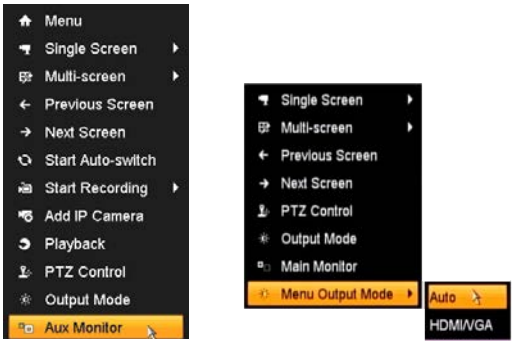
- **Next screen**: Move to the screen displayed after the current one.
- **Start Auto-switch**: the screen is automatically switched from one camera channel to the next. You must set the dwell time before enabling auto-switch. Go to: **Menu | Configuration | Live View | Dwell Time**.
- **Start Recording**: Select Normal Record and Motion Detection record from the drop-down list.
- Add IP Camera:
- **Add IP Camera**: Opens the IP Camera Management menu to add a camera to the system. See "2.3.1 Adding IP cameras to the QVR" on page 19 for usage of this display.



- **Playback**: Opens a playback menu where you can playback video recorded at a specific time of the day.
- **PTZ Control**: The Live View window for the channel expands to full screen and opens the PTZ control menu.
- **Output Mode**: opens a menu where you can select the output mode to Standard, Bright, Gentle or Vivid.
- **Aux/Main Monitor**: switch menus to other monitor in dual monitor mode.

5.3 Tripple monitor support - Main (HDMI/VGA) and Aux (CVBS) monitors

QVRs provide both a Main monitor output and Aux Monitor output. The Main Monitor output is sent to both the HDMI and VGA output connectors and provides options to control the Live View display, open the configuration menus, add IP cameras, switch control to the Aux monitor, and other features. The Aux monitor output is sent to the CVBS BNC connector and provides controls for the Live View display and to switch control back to the Main monitor. The controls appear on the Live View pop-up menu. The Main Monitor and Aux Monitor live view pop-up menus are shown below. When switching from the Aux monitor back to the HDMI/VGA monitor, a reboot of the recorder is required.

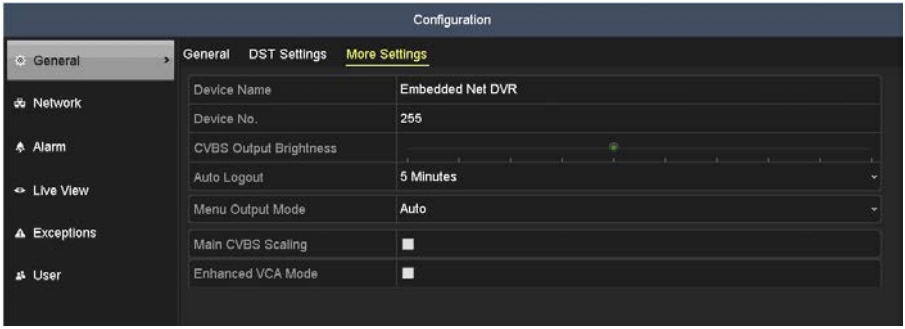


*Pop-up menus for the **Main** monitor (left) and **Aux** (CVBS) monitor (right)*

For definitions of items in the Main and Aux pop-up menus, see "5.2 Live View pop-up menu" on page 99.

5.3.1 Setting Menu Output Mode

The Menu Output Mode is configured with the **Menu | Configuration | More Settings** display.



Menu Output Mode provides two options. These options function the same way in Alibi 3000 and 4000 series recorders:

- **Auto**: Main monitor mode is assigned to both the HDMI video output port or the VGA video output port.
- **HDMI/VGA**: Main monitor mode is assigned to both the HDMI video output port or the VGA video output port.

In Ali-QVR5016H recorders connected to multiple HDMi or HDMI and VGA displays, you can designate the MAIN display and AUX display, and switch between the MAIN and AUX as described in "5.3 Tripple monitor support - Main (HDMI/VGA) and Aux (CVBS) monitors" on page 100.

5.4 Using the mouse in Live view

Table 1. Mouse operation in Live view

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to single full screen by choosing channel number from the drop down list.
Multi-screen	Select the screen layout from the drop down list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop Auto-switch	Enable/disable the auto-switch feature.
Start Recording	Start continuous recording or motion detection recording of all channels.
Add IP Camera	Enter the IP Camera Management interface to add cameras.
Playback	Enter the playback interface and start playing back the video of the selected channel.
Output Mode	Select one of four output modes: Standard, Bright, Gentle or Vivid.

NOTE

- *The dwell time of the live view configuration must be set before using Start Auto-switch.*
- *If the corresponding camera supports intelligent function, the Reboot Intelligence option is included when right-clicking the mouse on this camera.*

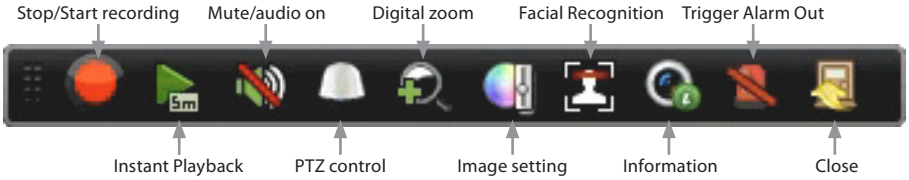
5.5 Live View Status icons

In the **Live** view mode, icons can appear in the upper-right of the screen for each channel, showing the status of the record and alarm in the channel.

Icon	Type	Reason
	**Alarm**	This icon appears in the upper right corner of the live video stream. It results from video loss, video tampering, motion detection, sensor alarm, etc.
	**Record**	Manual record, schedule record, motion detection or alarm triggered record
	**Record and Alarm**	Both alarm and record status

5.6 Quick Setting Toolbar

Left-clicking the mouse on a viewing frame opens a Quick Setting Toolbar. This toolbar appears at the top or bottom of the frame. Icons that are darkened are for features not supported by the camera. The toolbar for an IP camera is shown below.



Instant Playback: Plays what was recorded in the previous five minutes. Nothing is played if a recording was not made at that time.

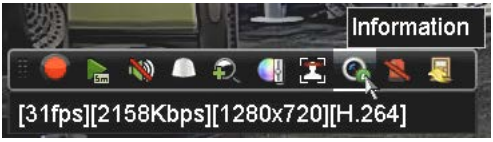
PTZ Control: Opens a control panel. Available for cameras with PTZ capabilities.

Digital Zoom: Shows the selected portion of the camera image in full-screen mode. To select an area, left-click on the camera image in the lower right corner, and then drag to form a rectangle across the area to expand. See the figure below.

Image Settings: Click this icon to open menus for creating customized setting for the brightness, contrast, saturation, hue, sharpness and noise reduction of the camera image. You can configure different settings for each of two periods, use preset settings, and/or configure settings manually. After making an adjustment on in this menu, the QVR will respond within a few seconds. Click **OK** when your adjustments are complete.

Face Detection: Click this icon to open the face detection enable box. Click **Yes**. Face detection opens the camera image in full screen mode. Click ☒ to close face detection.

Information (IP cameras): Click this icon to display the real-time frame rate, bit rate, resolution and stream type.

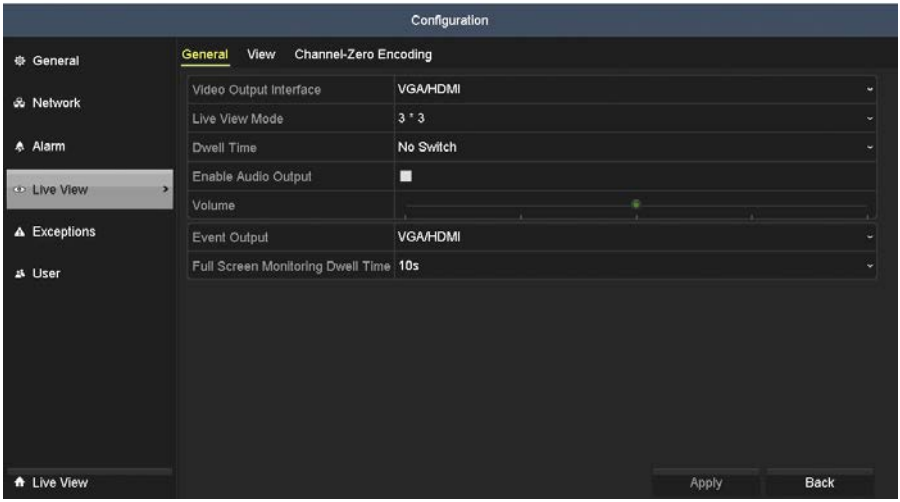


Trigger Alarm Out: Click this icon to create an alarm output condition on the camera. This feature is available only for cameras that have alarm out circuits.

5.6.1 Live View settings

Live View settings can be customized according to differing needs. You can configure the screen frame split, placement of camera channels on the screen, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

1. Open the Live View Settings menu. Go to: **Menu | Configuration | Live View**.



Adjust the settings in the screen as needed:

- **Video Output Interface**: Designates the output to configure the settings for. Option includes only VGA/HDMI.
- **Live View Mode**: Designates the display mode (screen split) to be used for Live View.
- **Dwell Time**: The time in seconds to dwell between switching channels when auto-switch is enabled in Live View.
- **Enable Audio Output**: Enables/disables audio output for the selected video output.
- **Event Output**: Designates the output to show event video. Option includes only VGA/HDMI.
- **Full Screen Monitoring Dwell Time**: The time in seconds to show alarm event screen.

2. After changing settings in the screen shown above, click the **Apply** button at the bottom of the screen, and then click **Back**.

3. Click the **View** tab at the top of the screen.

4. Click the single- or multi-screen select icon for the screen split you prefer. In the example shown above, a 2*2 screen is selected.

5. Click an item in the **Video Output Interface** column, and then click the Viewing Screen where you want the video image to appear. In the example above, the D1 (IP camera) channel item was placed in the viewing screen in the lower right corner.

6. Click the **Apply** button to save your setting.

5.6.2 Channel-Zero Encoding

Use the Channel-Zero Encoding menu to configure the QVR for viewing multiple video channels simultaneously with a remote client. With this features you can decrease the bandwidth requirement without affecting the image quality. To use Channel-Zero Encoding:

1. Open the **Channel-Zero Encoding** menu. Go to: **Menu | Configuration | Live View | Channel-Zero Encoding**.

2. Check the box to **Enable Channel Zero Encoding**.

3. Configure the **Frame Rate**, **Max. Bitrate Mode** and **Max. Bitrate** as needed.

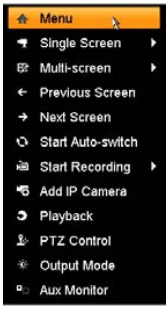
4. Click **Apply**.

After setting Channel-Zero Encoding, you can see up to 16 channels of live video on one screen of the remote client.

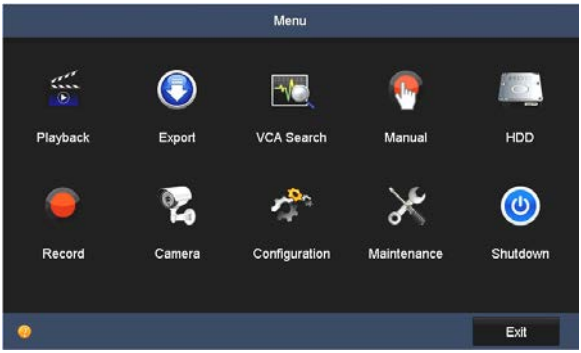
SECTION 6
Record, Playback and Video Backup

After the initial setup of your QVR using the Wizard, the Menus interface enables you to refine your configuration settings and expand the functionality of the system. To use most menus, the user must log into the QVR system, either locally or remotely, with administrative privileges.

To open the Menu system from the Live View screen, right click anywhere in the screen, then select **Menu**.



After selecting **Menu**, a login window will open. In the Login window, select a User Name with administrative privileges, enter its password, then click **OK**. A window of Menu icons will open. **NOTE**: When the system option **Enable ID Authentication** is disabled (see the **Configuration** - **General** settings submenu), the Login window to open the Menu does not appear.



6.1 Configuring record settings

6.1.1 Setting camera Record Parameters

In the Record Parameters screen you can configure the camera performance for Mainstream (Continuous) and Mainstream (Event) recording. Each camera video channel also includes a substream channel that is configured separately.

1. Enter the **Record** settings interface to configure the camera parameters. Go to: **Menu | Record | Parameters**

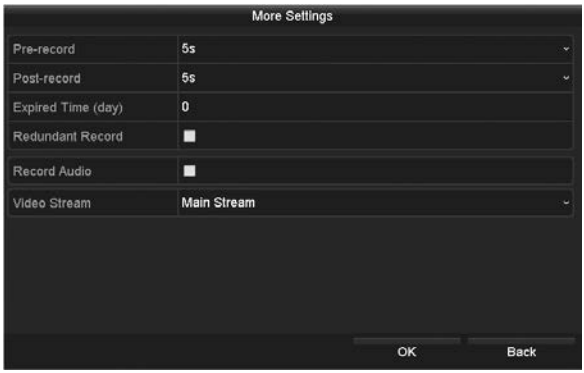
2. Open the **Camera** drop-down list and select the analog or IP camera you want to configure. The screen shown above is for an analog camera, the screen below represents an IP camera.

3. Set the Encoding Parameters (Stream type, Resolution, Max bitrate, etc.) for the Continuous and Event streams as needed for the camera. **NOTE**: If you are configuring an IP camera on a ALI-QVR3004H or ALI-QVR3008H, do not set the **Resolution** above **1280*720 (HD720P)**.

4. Select the **Record** tab page you want to configure. You can configure the stream type, the resolution, and other parameters.

   — **Pre-record**: The time you set to record before the scheduled time or event. For example, when an alarm triggered the recording at 10:00, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
   — **Post-record**: The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
   — **Expired Time**: The expired time is the duration a record file is kept in the HDD. When the duration ends, the file will be deleted. If the expired time is set to 0, the file will not be deleted. The duration a file should is kept on the HDD is determined by the capacity of the HDD.
   — **Redundant Record**: The redundant record is to decide whether you want the camera to save the record files in the redundant HDD. You must configure the redundant HDD in HDD settings. For detailed information, see Chapter 5.7 Configuring Redundant Recording.
   — **Record Audio**: Check the checkbox to record video with sound.
   — **Video Stream**: Select either Main stream, Dual-stream or Sub-stream for recording. When you select sub-stream, you can record for a longer time with the same storage space. For cloud storage, select either Dual-strteam or Sub-stream.

5. Click the **More Settings** button to configure additional parameters for the recording, and then click **OK**.



6. Click **Apply** to save your new configuration settings.

NOTE *You can copy the settings to other cameras with same features. For example, if video channel 1-3 connect to HD-TVI cameras and channel 4 connects to a non-HD-TVI camera, you can copy the settings made for channel 1 to channel 2 and 3, but not to channel 4.*

7. Repeat steps **2** through **4** for each camera installed on the system.

8. Open the **Substream** tab page.

   a. Configure the sub-stream parameters for each camera as needed.

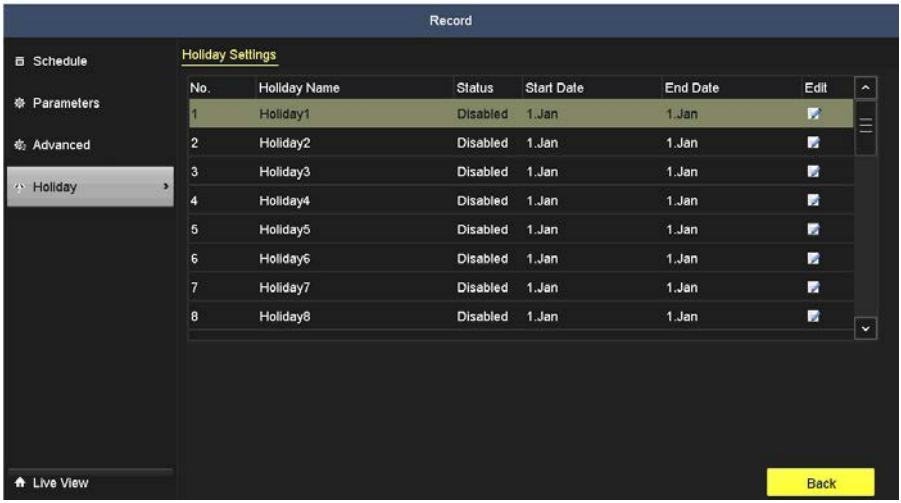
   b. Click **Apply** to save the settings.

9. Repeat steps **2** through **5** above for each camera in the system.

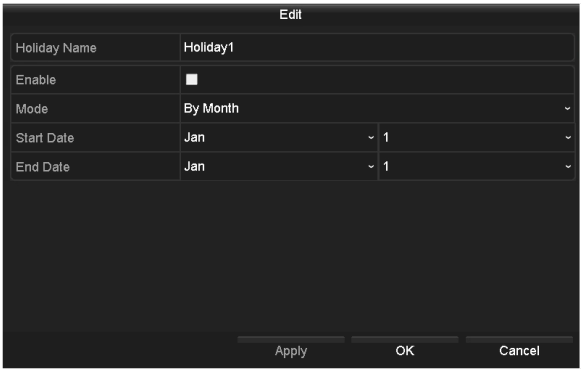
6.1.2 Holiday setup

If surveillance requirements on Holidays is different from the normal Sunday through Saturday surveillance schedule, you can configure a recording schedule for holidays that supersedes the normal schedule (see "6.1.3 Configuring Record schedule" on page 113). To use this feature, you must first define which days are holidays using the **Holiday Settings** menu before creating a recording schedule for those days. Then, when a holiday occurs, your holiday recording schedule for that day will apply instead of the normal Sunday through Saturday schedule. To specify which days are holidays, do the following:

1. Open the Record Holiday menu. Go to: **Menu | Record | Holiday**.



2. Click on the **Edit** icon in an entry in the list. You can define up to 31 different holidays periods.

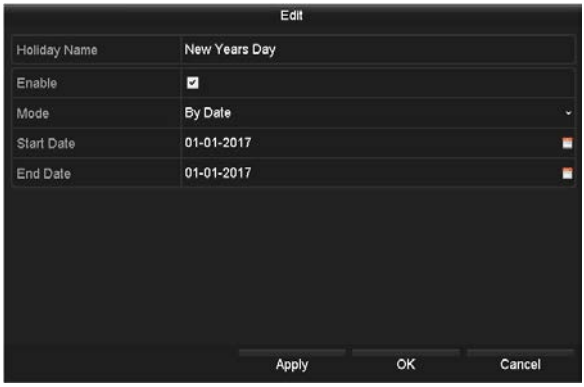


3. In the Edit window, click on the Holiday Name field, and then enter a common name for the holiday.

4. Click the **Enable** box to check it.

5. Open the **Mode** drop down list and select either **By Date**, **By Week** or **By Month**. Depending on your selection, the **Start Date** and **End Date** fields will adjust accordingly.

6. Edit the **Start Date** and **End Date** fields as needed. A Holiday can be a single day or range of days. In the window below, a New Years Day holiday was specified.



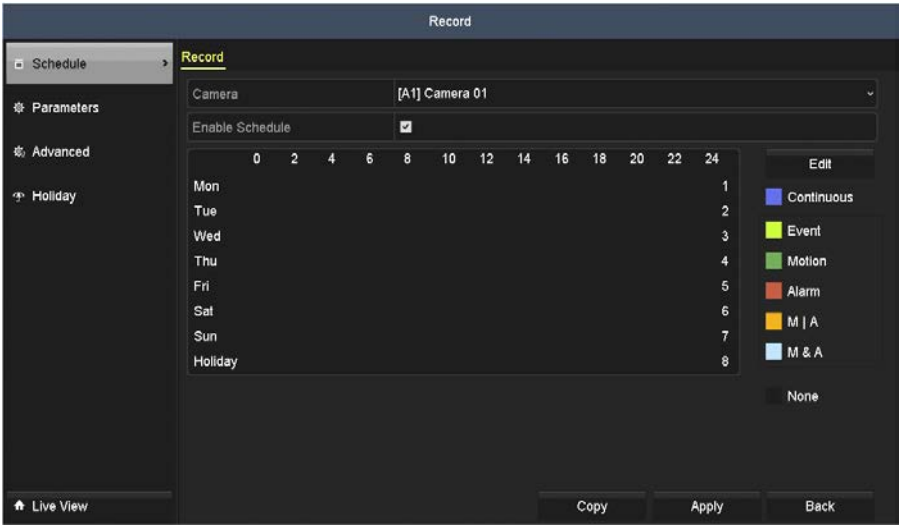
7. Click **Apply** to save your setting, and then click **OK**. The Holiday Settings window will show the holidays you created.

8. Repeat steps 2 through 7 above to create additional holidays.

6.1.3 Configuring Record schedule

The record schedule can be used to automatically start and stops recording at preset times.

1. Open the Record Schedule menu. Go to: **Menu | Record | Schedule**.



NOTE *Holiday recording schedules can be configured after Holidays are defined. See "6.1.2 Holiday setup" on page 112 for more information.*

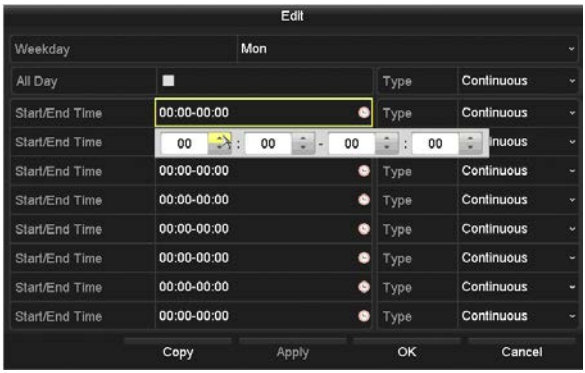
2. To configure the Record schedule:

   a. Open the **Camera** drop-down list to select the camera you want to configure.

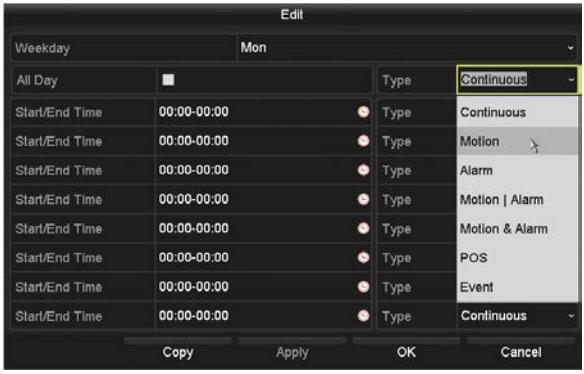
   b. Check the **Enable Schedule** box.

   c. Click **Edit**, or use the graphical method to apply recording modes to hours of the day.

      i. If you clicked the **Edit** button, a record schedule list opens.



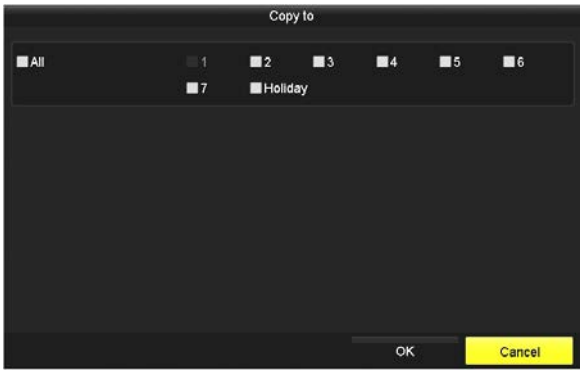
— Open the **Schedule** line drop down list and select the day you want to create a record schedule for.
— To schedule all-day recording, check the checkbox after the All Day item. To setup specific start and end times, click the clock icon to open a time setting popup window.
— In the **Type** column, select the type of recording trigger you want to use. "**Normal**" recording is continuous recording. "**Motion**" recording is recording triggered by some kind of motion detected in the video image.



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

NOTE *You can define up to eight recording time periods for each day, each with a specified recording type. Recording time periods cannot overlap with each other. Each recording period can use either Normal or Motion triggered recording.*

— Repeat the steps above to schedule recording for other days of the week. If the same schedule can also be applied to other days, click **Copy** (see the window below), select the days you want to copy the schedule to, then click **OK**.



ii. To use the **graphical method** to draw the schedule:

— In the right column, click the color icons for the type of recording you want to perform. You can choose either **Continuous**, **Motion**, **Alarm**, **M | A** (Motion or Alarm), **M & A** , or none.

— Drag the mouse pointer across the area of the chart (day of the week, hours of the day) where you want to use that type of recording. Blocks on the chart, each representing 1 hour of one day, will be colored for the recording mode you selected.
In the example shown below, Continuous recording was scheduled from 7 AM to 6 PM, Monday through Friday. Motion recording was scheduled for all other times.

— Click **Apply** to save the settings.

3. If the settings can be applied to other camera channels, click **Copy**.

4. In the **Copy** menu, click the channels you to which you want to copy the schedule to, then click **OK**.

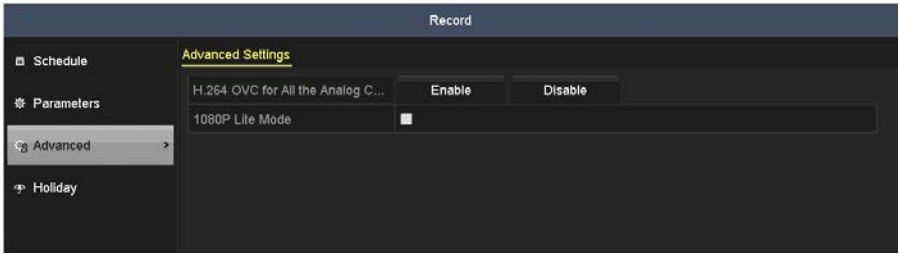
6.1.4 Advanced Record parameters

In the Record Advanced menu, you can enable either of these parameters:

- H.264 OVC (for all analog cameras: This option reduces bandwidth requirements for each camera by using the improved H.264 OVC CODEC.
- 1080P Lite Mode: provides real time 1080p and Lite - 720p resolutions from 960 × 1080 real-time recording

To use these features:

1. Open the Record Advanced menu. Go to: **Menu | Record | Advanced**.



2. Select the parameter options you prefer, and then click **Apply**.

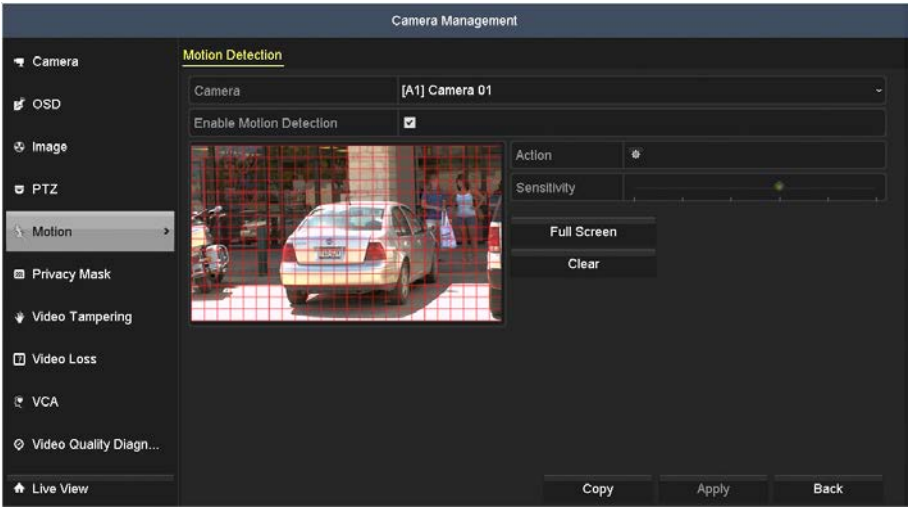
6.1.5 Configuring Motion Detection Recording

When using motion detection recording, the QVR initially senses for motion everywhere in the video image. You can configure the QVR to sense for motion in the camera video channel only in specific areas of the video, which is more efficient for the QVR.

The Motion setup menu shows the video image from a camera with a grid covering the area(s) of the video image it is sensing for motion. When motion is detected in a cell of the grid, that cell is filled. With this feature, you can adjust the sensitivity of the motion detection parameters to detect (or not detect) motion in the video image.

To adjust the motion detection parameters of a video channel:

1. Open the Camera Motion menu. Go to: **Main menu | Camera | Motion**.

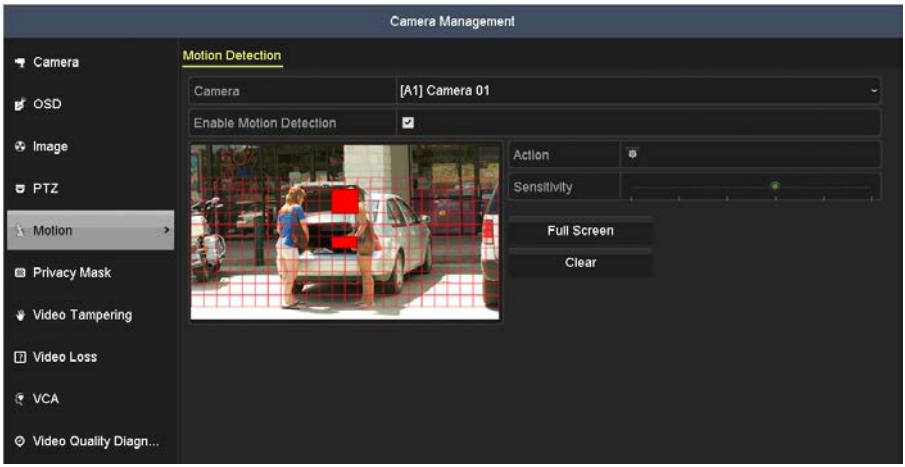


2. To change the motion detection settings for a camera:

   a. On the **Camera** line, open the drop down list and select the camera you want to configure.

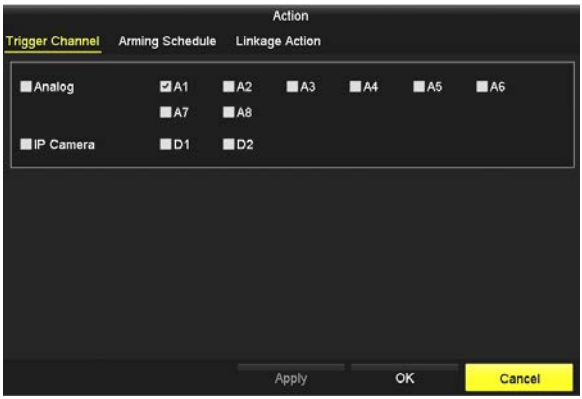
   b. On the **Enable Motion Detection** line, click the box to check mark it.

   c. To change the area of the video image where you want to sense for motion, click the **Clear** button, then drag the mouse across the area of the video where you want to sense for motion. An example of the result is shown below.



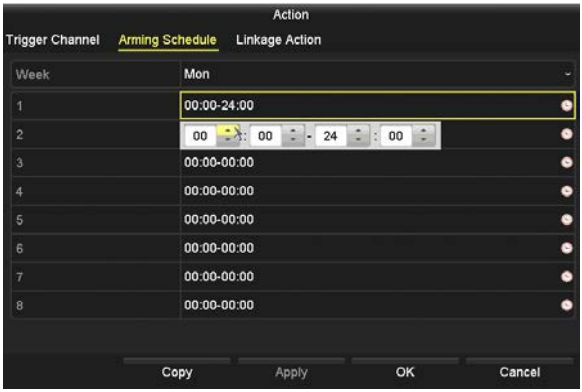
d. In the screen shown above, notice that motion is detected in the cells of the grid where motion was sensed. You can adjust the sensitivity slider as needed for more or less detection sensitivity.

e. Click the **Settings** icon.



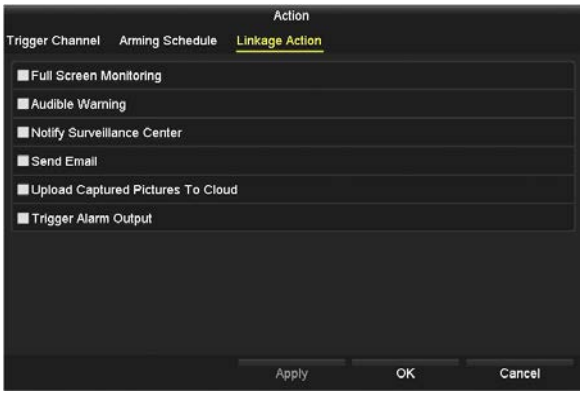
f. In the Settings **Trigger Channel** window, select the other channels that should trigger recording on this channel, then click **Apply** to save your settings.

g. Click the **Arming Schedule** tab. With the Arming Schedule, you can define a schedule with up to eight periods for each day when motion detection is monitored. Time periods cannot overlap.



h. Click **Apply** to save the settings. You can also click Copy to copy the Arming Schedule setup in the window to other days of the week.

i. Click the **Action** tab. In the Action tab, you can cause certain actions to occur when motion triggered recording occurs.



NOTE *In the* **Action** *window above, the* ***Upload Captured Pictures To Cloud*** *option is not supported at this time.*

j. Select the actions you want to occur, then click **Apply** to save your settings, and **OK** to return to the Motion Detection menu.

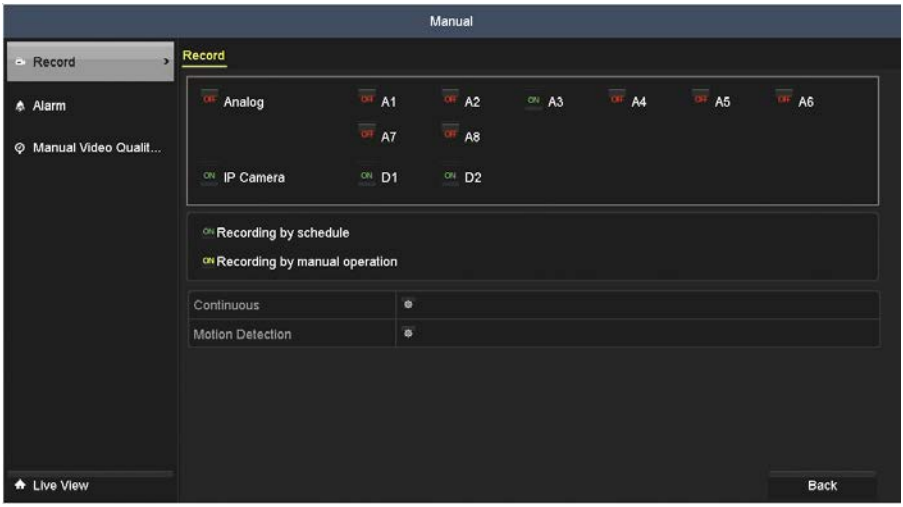
NOTE *The* **Notify Surveillance Center** *and* **Send Emai***l options require additional network settings.*
See "SECTION 9 Network Settings" on page 178 for more information.

k. Repeat step **2.a** above for a different camera, then repeat steps **2.b** through **2.j** to setup motion detection for that camera. Repeat this step until all analog cameras are configured as needed.

6.1.6 Manual record

Follow the steps below to begin manual recording. Manual recording, once initiated, requires a manual cancel of the record. The Manual recording can occur prior to the scheduled recording.

1. Open the Manual settings menu. Go to: **Menu | Manual**.



2. To enable Manual Record:

   a. Select **Record** on the left menu frame.

   b. Click the status button before camera number to change the label from OFF to ON, if necessary.

   c. Click the icon after **Normal** or **Motion Detection**.

   d. When the Attention window opens, click **Yes**.

3. To disable Manual Record:

   a. Select **Record** on the left menu frame.

   b. Click the status button before camera number to change the label from **ON** to **OFF**.

   c. Click the icon after **Normal** or **Motion Detection**.

   d. When the Attention window opens, click **No**.

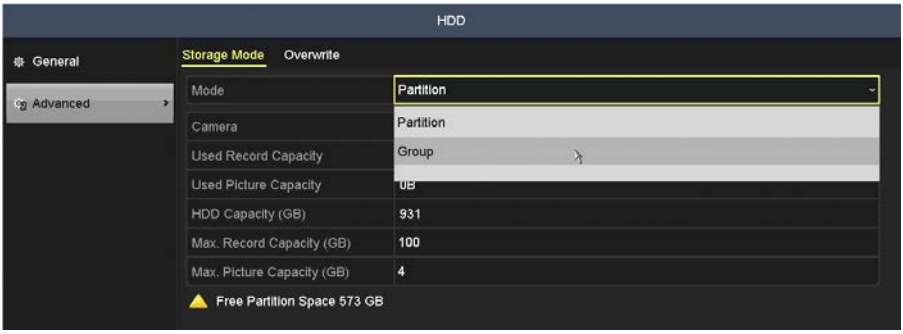
NOTE *Green "**ON**" icon means that the channel is configured with a record schedule.*
If the QVR is rebooted, manual record operations are canceled.

6.1.7 Configuring HDD Group for Recording

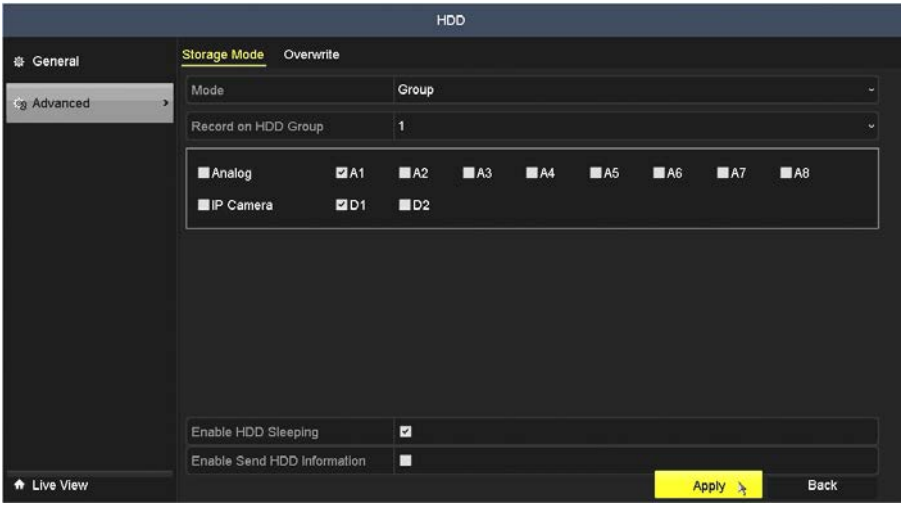
For systems with multiple HDDs, each HDD can be assigned a "Group number" and recordings and pictures from a camera or a group of cameras can be written to a specific disk (group). When changing the Storage Mode from Partition to Group (or vvsa), the QVR must be rebooted for new settings to be applied. In this example, HDD 1 will be designated the Group 1 HDD, and HDD 2 will be designated the Group 2 HDD.

1. Open the HDD menu. Go to: **Menu | HDD | Advanced**.

2. Click **Advanced** in the left frame to open the **Storage Mode** menu.



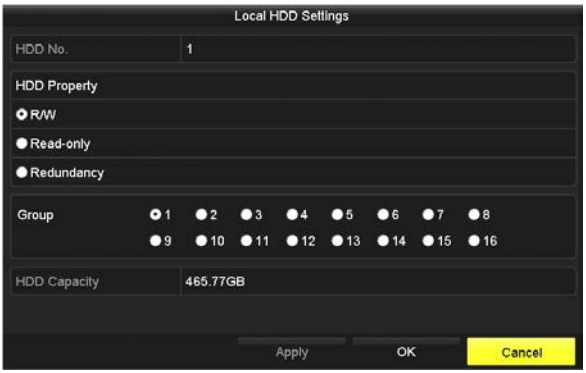
3. In the **Mode** drop down list, select **Group**. The Group definition window will open.



4. Click **Apply** to create the group. **NOTE**: Creation of a group will force a QVR reboot.

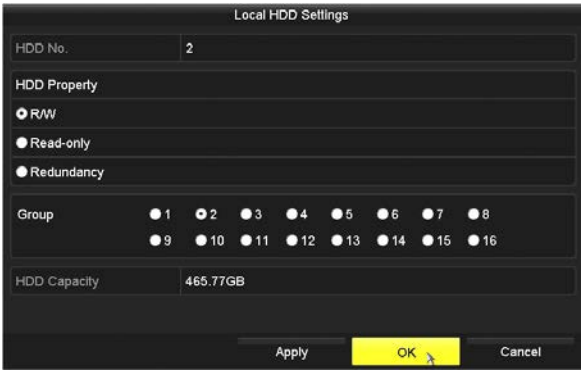
5. After the QVR reboots, open the HDD Genera menu. Go to: **Main menu | HDD**.

6. For HDD 1, click the icon in the **Edit** column to open the **Local HDD Settings** menu.



a. In the menu shown above, select the Property you want to assign to the HDD, and then select the group number to assign. Click **Apply**, and the click **OK** to save your settings.

7. For HDD 2, click the icon in the **Edit** column to open the **Local HDD Settings** menu.



a. In the menu shown above, select the Property you want to assign to the HDD, and then select the group number to assign. In this example, HDD 2 was assigned as the Group 2 HDD. Click **Apply**, and the click **OK** to save your settings.

8. Open the HDD Advanced menu. Go to: **Menu | HDD | Advanced**.

9. Open the Record on HDD Group drop-down list, and then select "2".

10. Check only the cameras you want to assign to Group 2, and then click the **Apply** button at the bottom of the menu.

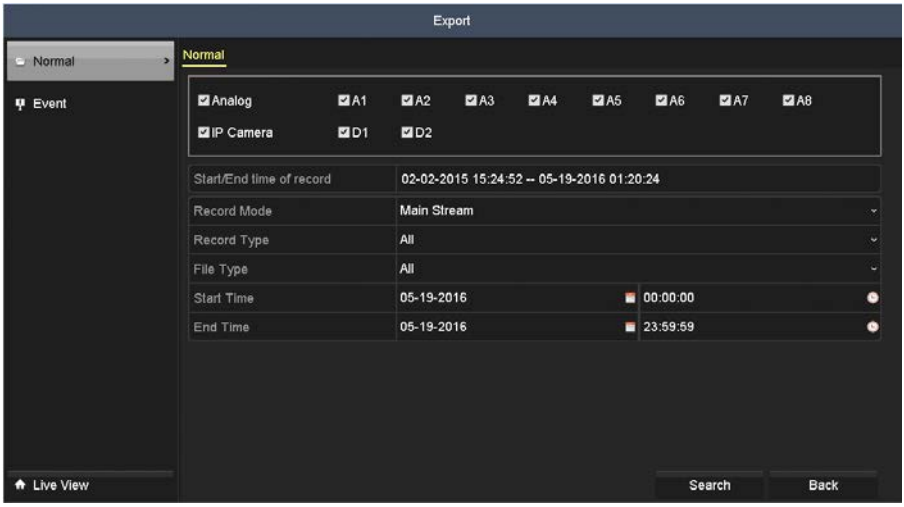
Change from Group to Partition mode

To change back to Partition mode from group mode, re-open the menu shown above, open the drop-down list on the **Mode** line, and then select **Partition**. Changing Storage Modes will require the QVR to reboot.

6.1.8 Files Protection

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

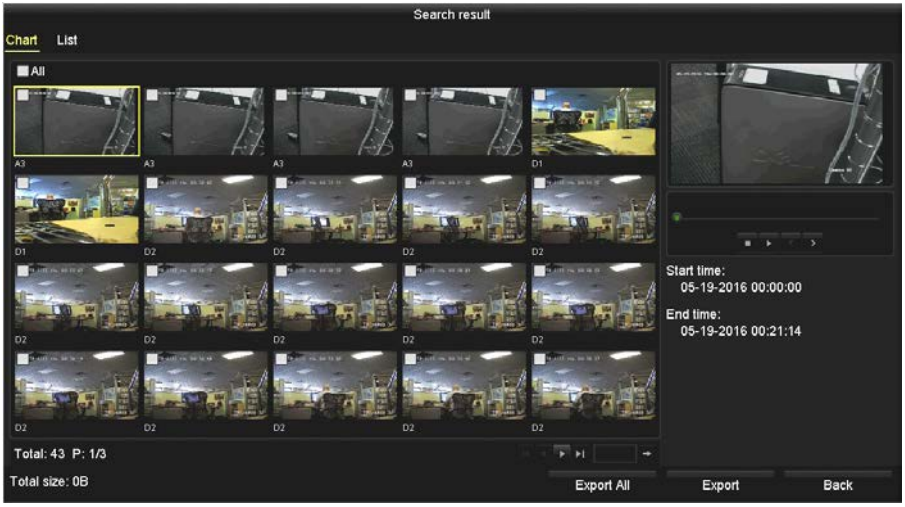
1. Open the **Export** menu. Go to: **Menu | Export**.



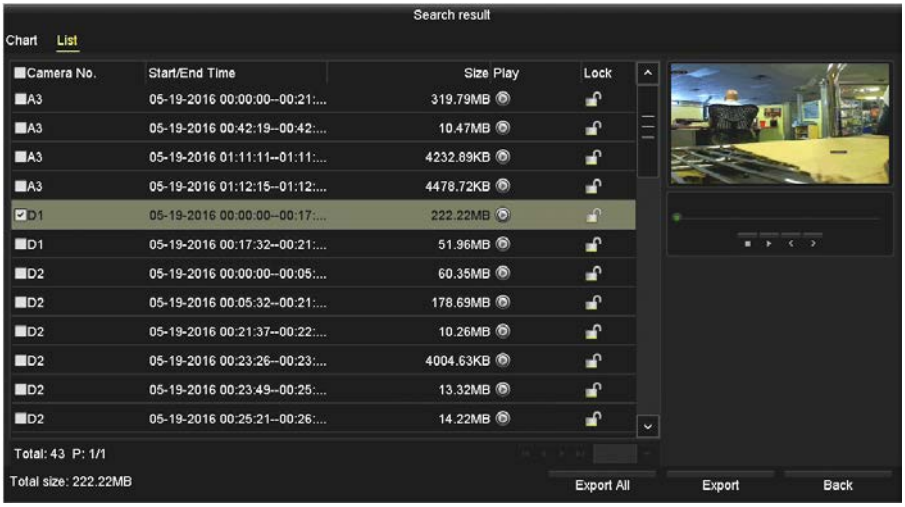
2. Check the box(es) for the channel(s) you want to investigate.

3. Configure the record type, File Type (locked or unlocked), and Start Time and End Time.

4. Click **Search** to show the results.

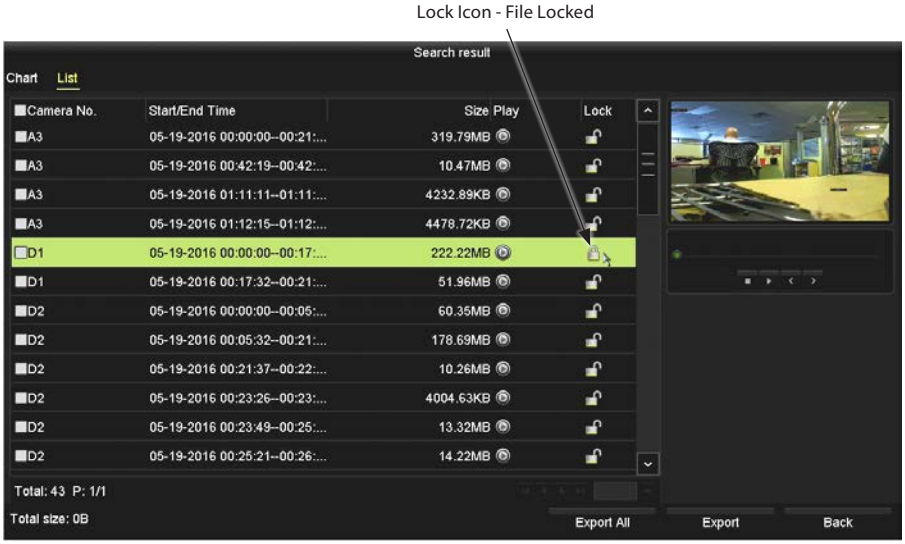


To show search results by list, click the List option in the upper left corner.



5. To protect the record files:

   a. Determine which files you want to protect, and then click the icon in the Lock column to show a "locked" padlock (indicating that the file is locked). Similarly, unlock files by clicking on the "locked" icon to show an "unlocked" padlock.



6. To unlock a file, click a locked icon, and then respond appropriately to the **Attention** pop-up window.

NOTE *File of recording in progress cannot be locked.*

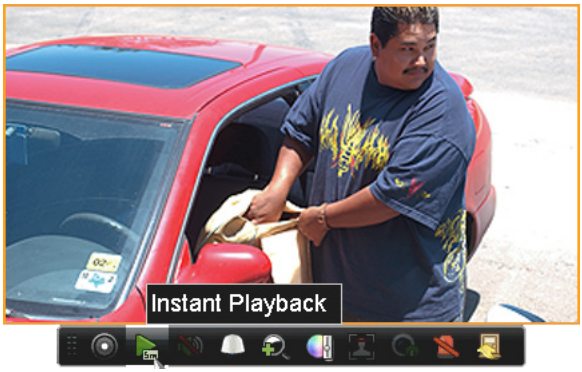
6.2 Playback

6.2.1 Instant playback by channel

Playback the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel

In Live View mode, click the channel you want to playback, then click the playback icon on the Quick Setting toolbar. In the instant playback mode, only recordings made during the previous five minutes on the channel are played.



During playback, the menu changes to a playback control bar you can use to pause and cancel playback.

6.2.2 Playing back video by channel

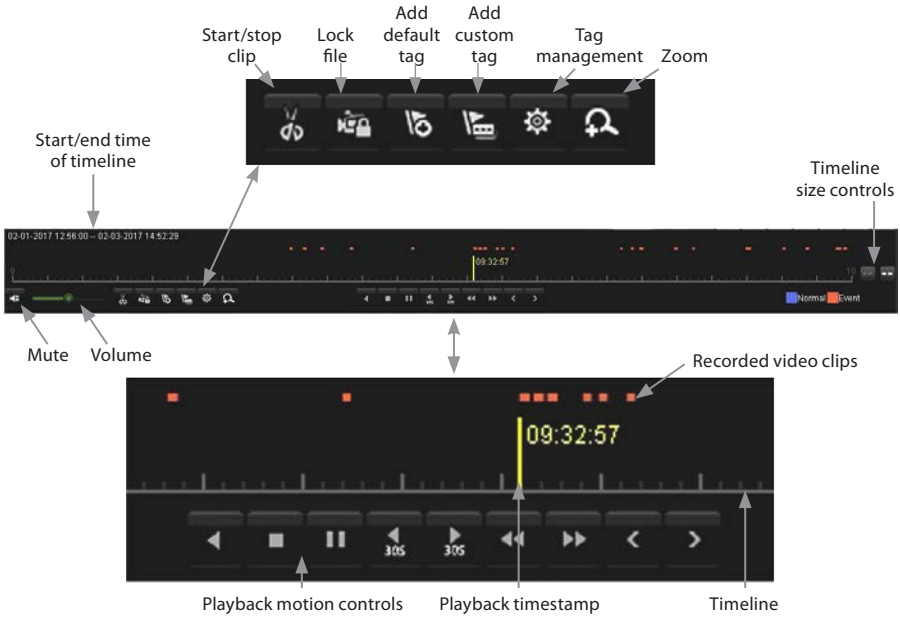
1. Open the Playback menu. Go to: **Menu | Playback**. You can also open single channel playback mode by viewing a single channel in Live view mode, then pressing the **Play** button on the front panel.

2. In the **Playback** screen, check the box for the camera channel(s) you want to playback.

3. In the calendar section, click the day when the video clip you want to play was recorded.

4. To start playback, click the **Play** button (▶) in the playback controls panel at the bottom of the screen.

Playback controls are shown below.



Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/ Mute		Adjust volume		Start/Stop clipping		Capture
	File lock		Add default tag		Add customized tag		File Management
	Digital Zoom		Pause reverse play/ Reverse play/ Single-frame reverse play		Stop		Pause play/ Play/ Single-frame play
	30s forward		30s reverse		Speed down		Speed up
	Previous day		Next day		Scaling up/down the time line		Process bar
	Video type bar		Playback type / picture		Full screen		Exit

Playback toolbar icons

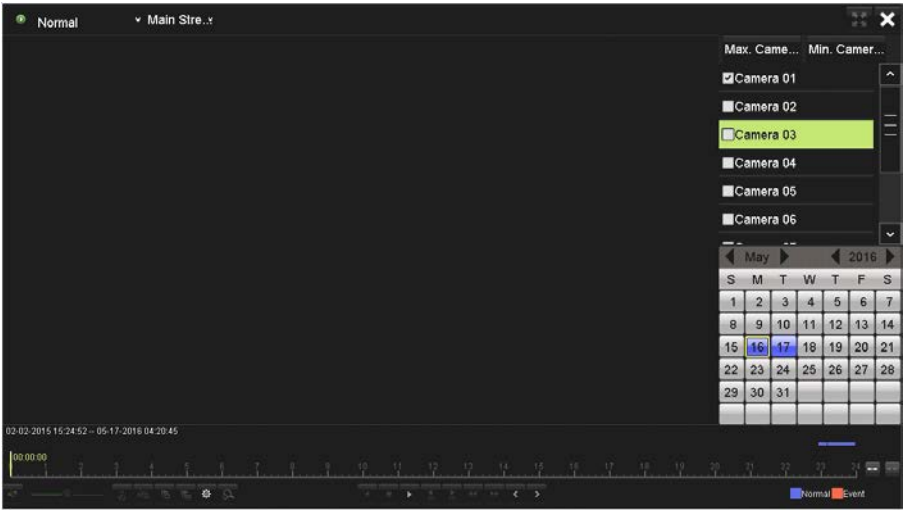
NOTES:

- In the "Recorded video clips" markings, blue marks represent Normal recording, red marks indicate event recording (motion, alarm, motion | alarm, motion & alarm).
- Timeline: Use the mouse to click any point of the timeline bar to locate special frames, and drag the cursor to show the thumbnail of the current time.

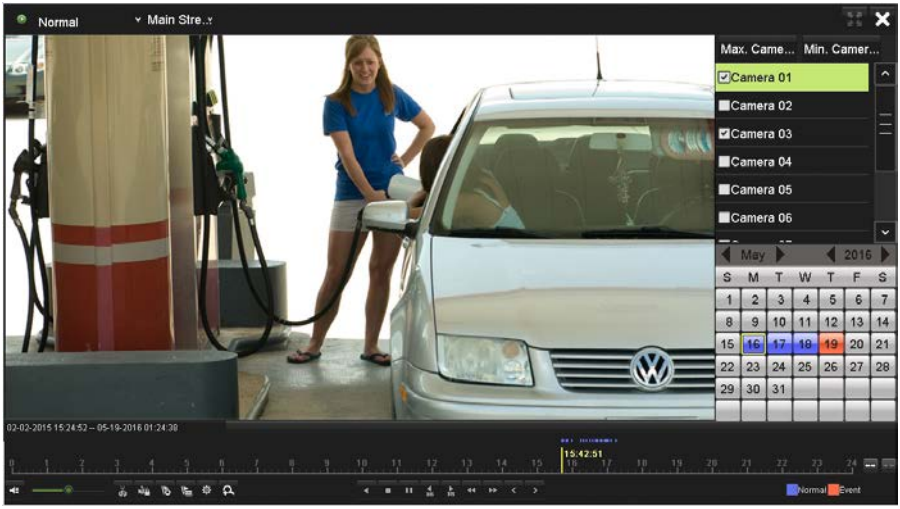
6.2.3 Playing Back by Time

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported.

1. Open the Playback interface. Go to: **Menu | Playback**.



2. Check the box of the channel(s) in the channel list you want to playback, then double-click the date on the calendar to select the day when video was recorded. On the calendar, days when video was recorded for the cameras selected is marked in blue. The day selected is bordered in yellow.



For the definition of icons in the playback toolbar, see "6.2.2 Playing back video by channel" on page 128.

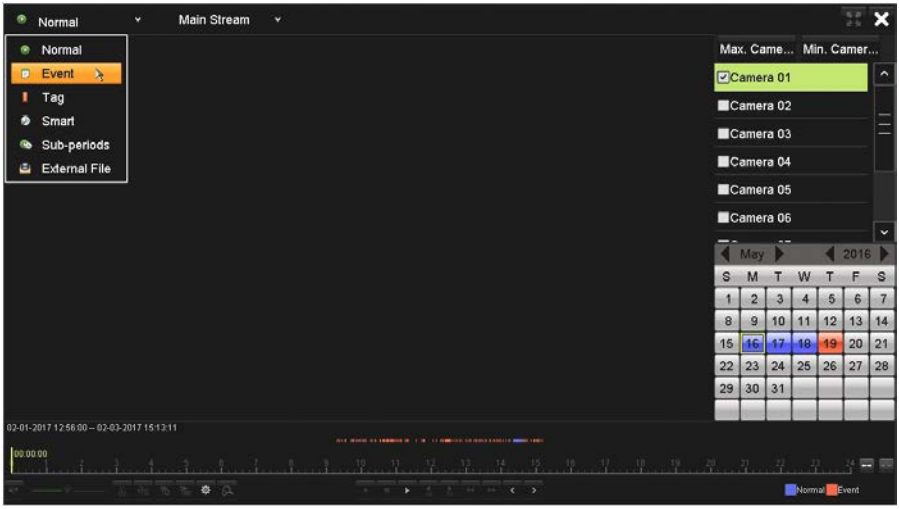
NOTES:

- In the "Recorded video clips" markings, blue marks represent Normal recording, red marks indicate event recording (motion, alarm, motion | alarm, motion & alarm, VCA).
- Timeline: Use the mouse to click any point of the timeline bar to locate special frames, and drag the cursor to show the thumbnail of the current time.

6.2.4 Playback by Event Search

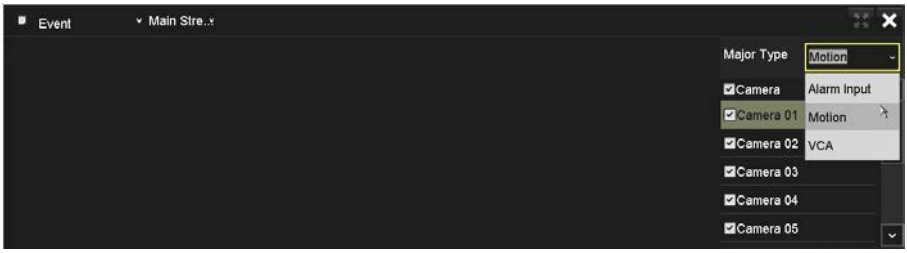
Play back record files on one or several channels searched out by restricting event type (e.g. alarm input and motion detection).

1. Open the **Playback** interface. Go to: **Menu | Playback**.

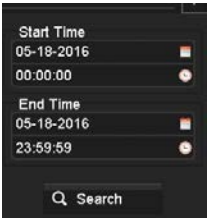


2. Open the drop-down list in the upper-left corner of the screen, then select **Event**.

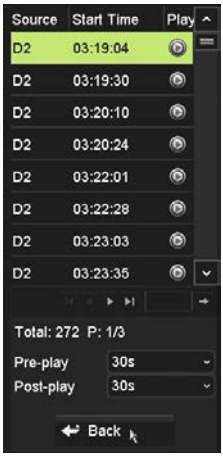
3. Open the **Type** drop down list (in the upper right corner), then select the kind of event you want to search for. In the example above, only **Alarm Input** and **Motion** type events are available.



4. On the right side of the screen, click the icons to select the **Start Time** and **End Time** within which the event occurred.



5. Click **Search**. A list of events (channel and time) that occurred during the time frame selected will appear on the right side of the screen.



6. Select an entry in the list (camera channel and the time), then click the **Play** icon in the playback toolbar to show the video associated with the event.

For the definition of icons in the playback toolbar, see "6.2.2 Playing back video by channel" on page 128.

6.2.5 Playback by Tag

Video tags provide a convenient way to identify video clips, then find and replay them later. Tags are associated with video clips during playback using the icons in the lower left corner of the screen.

1. Open the **Playback** interface. Go to: **Menu | Playback**.

2. Search for and play back the record file(s). See "6.2.2 Playing back video by channel" on page 128 for more information.

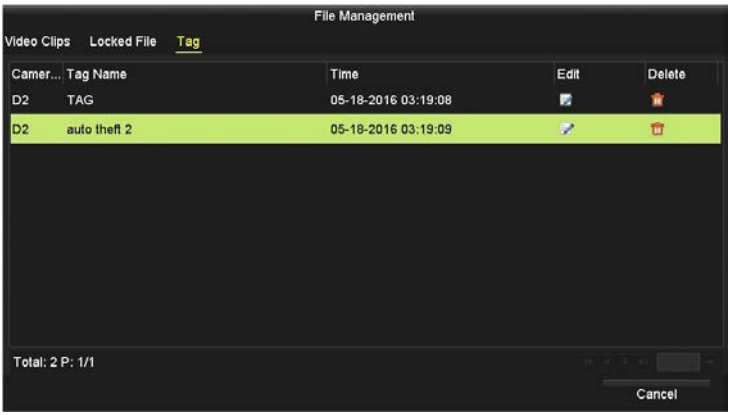
3. Play the file you want to tag.

4. To tag the file, click the icon to add a default tag, or click the icon to add customized tag and input tag name. In the example below, a customized tag is created. Up to 64 tags can be assigned to one video clip.

5. In the pop-up window above, the tag auto theft was keyed in. After entering the tag name, click **Enter**, then click **OK** to close the **Add Tag** window.

Tag management

1. Click the  icon to open the **Tag management** window. In the example below, two tags are shown.



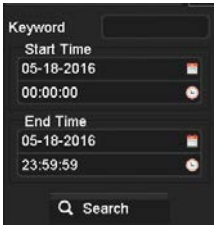
In the **Tag management** window, click the **Edit** icon to edit the **Tag Name**, or click the **Del...** icon to delete it.

Search for tagged video clips

2. In the Playback interface window, open the drop-down list in the upper-left corner of the screen, then select **Tag**.

3. Select the camera channels that contain tags you want to search for.

4. On the right side of the screen, click the icons to select the **Start Time** and **End Time** within which the event occurred. You can also search by Keyword.



5. Click **Search**. A list of events (channel and time) that occurred during the time frame selected will appear on the right side of the screen.

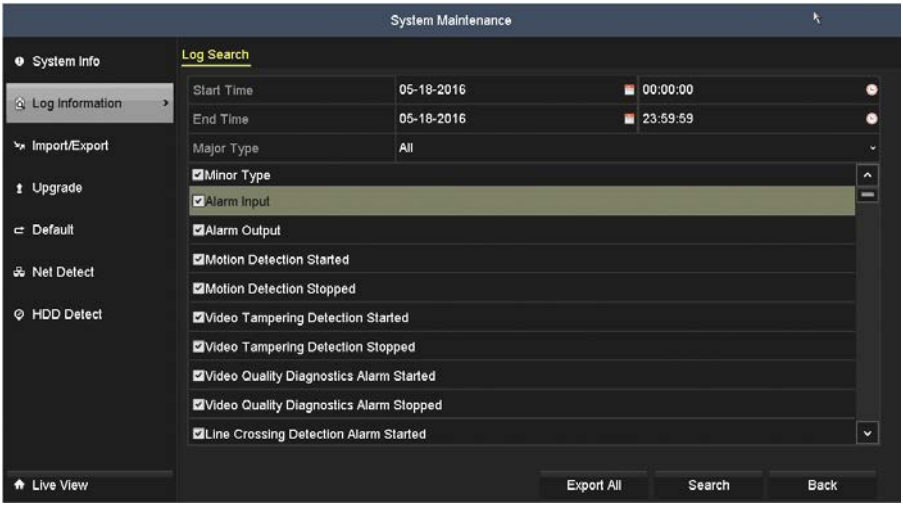
6. Click the Play icon associated with the tag to play the tagged video clip.

In the Playback window, you can change the Pre-play and Post-play values to see more video around the tag.

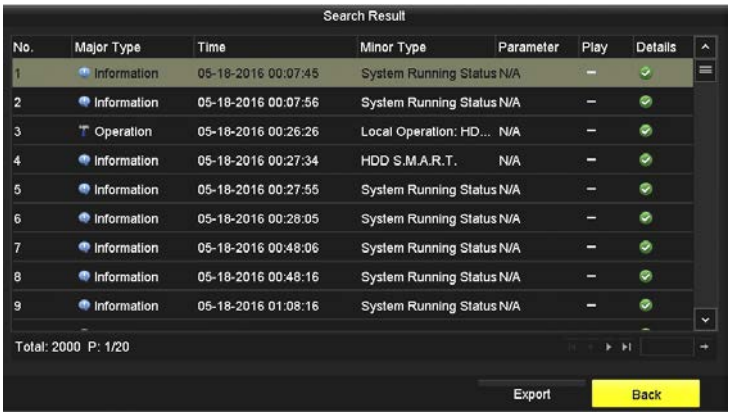
6.2.6 Playback using System logs

You can play back record file(s) associated with channels after searching system logs.

1. Open the Log Information menu. Go to: **Menu | Maintenance | Log Information**.

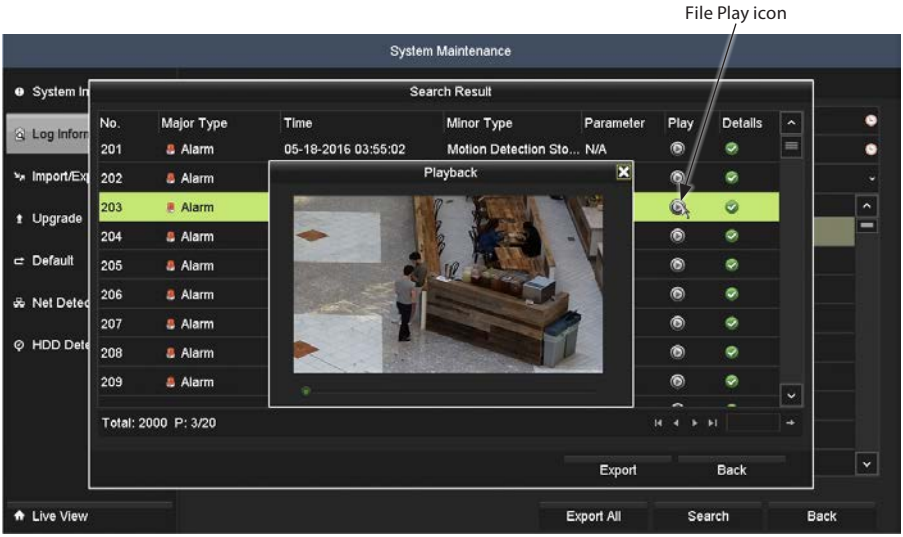


2. Select a Start Time, End Time, Major Type and Minor Type., then click **Search**. In the example below, the search criterion specified are "All" (Major Type) entries.



3. Find the entry in the search results list that is associated with a Play icon. See the example above.

4. Click the **Play** icon to watch the video associated with the event.



6.2.7 Smart Playback

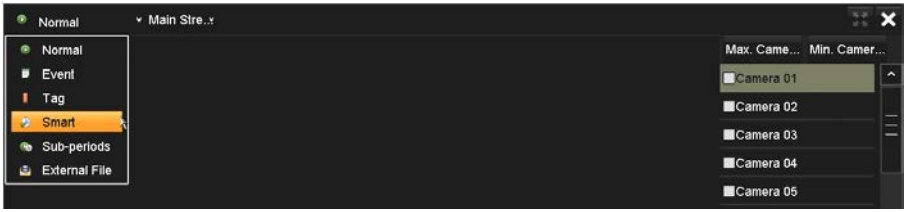
The smart playback feature provides an easy way to bypass unimportant information. When you select **Smart** playback mode, the system will analyze the video containing the motion or VCA information, mark it with green color and play it in the normal speed while the video without motion will be played in the 16x speed.

To acquire a Smart search result, the corresponding event type must first be enabled and configured on the IP camera. Refer to the Alibi IP Camera Software User Manual for setting up VCA and motion detection settings in the camera, or refer to the applicable sections in this manual.

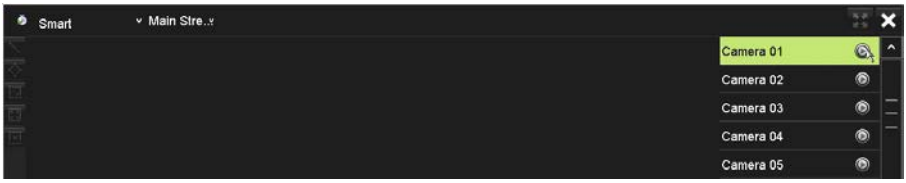
To use Smart playback:

1. Open the **Playback** interface. Go to: **Menu | Playback**.

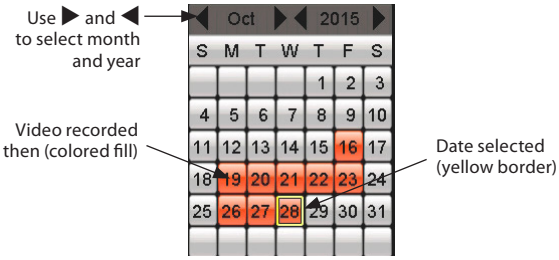
2. Open the drop-down list in the upper-left corner of the screen, then select **Smart**.



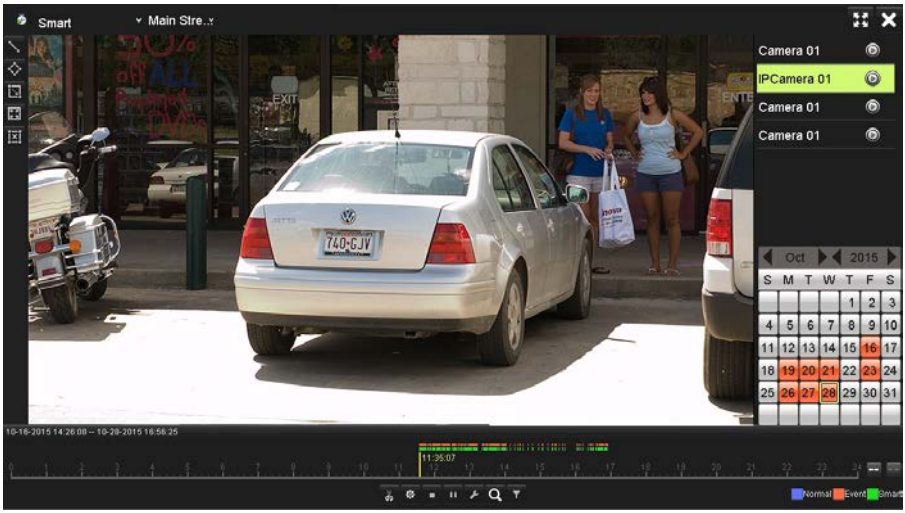
3. Select the camera channel for which the tag was created. If unsure, select all channels.



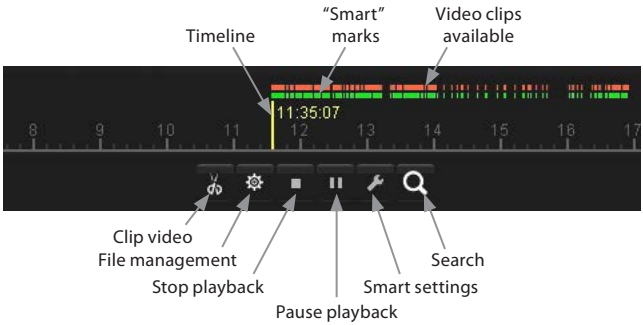
4. In the calendar section, click the day when the video clip you want to play was recorded. In the example shown below, October 28, 2015 was selected. Notice that colored marks in the timeline at the bottom of the screen appeared. These marks indicate when and what type of recordings were made for that camera(s) selected.



5. To start playback, click the **Play** button (▶) on the line of the camera you selected.



The green bars on the timeline indicate when video with Smart elements were found. Smart screen icons are defined below.



Button	Operation	Button	Operation	Button	Operation
	Draw line for the line crossing detection		Draw quadrilateral for the intrusion detection		Draw rectangle for the intrusion detection
	Set full screen for motion detection		Clear all	/	Start/Stop clipping
	File management for video clips		Stop playing	/	Pause playing / Play
	Smart settings		Search matched video files		Filter video files by setting the target characters

Smart search with on-screen line crossing, intrusion or motion detection

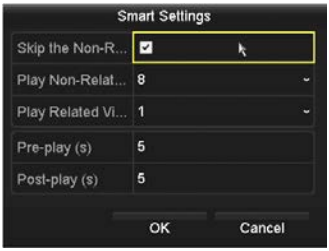
Within Smart Playback you can define a line, for line crossing detection, a quadrilateral, for intrusion detection, or an area of the screen, for motion detection, and then search all video recorded across a time span for all events that match the Smart criteria you defined. The general procedure for using this methodology is:

1. Open the playback screen and select Smart.

2. Select the camera and the date you want to search.

3. Select one of the three Smart search tools from the icons on the left edge of the screen:
   - **Line crossing detection**: Click two points on the video image that define the endpoints of a line where you want to detect a line crossing event.
   - **Intrusion detection**: Click four points on the screen in a circular fashion that identify the corners of a quadrilateral where you want to detect an intrusion.
   - **Motion detection**: Drag a rectangle across the area of the screen where you want to detect motion.

4. Click the **Smart Settings** icon at the bottom of the screen, and then choose the parameters you want to use:



a. Select the parameters in the Smart Settings screen as needed:
   * **Skip the Non-Related Video**: The non-related video will not be played if this function is enabled.
   * **Play Non-Related Video at**: Set the speed to play the non-related video. Max./8/4/1 are selectable.
   * **Play Related Video at**: Set the speed to play the related video. Max./8/4/1 are selectable.

b. Click **OK** to save your settings.

5. Click the **Search** or **Play** icon at the bottom of the screen to see the results of the search. Green marks on the timeline indicate where Smart search criteria were met your search.

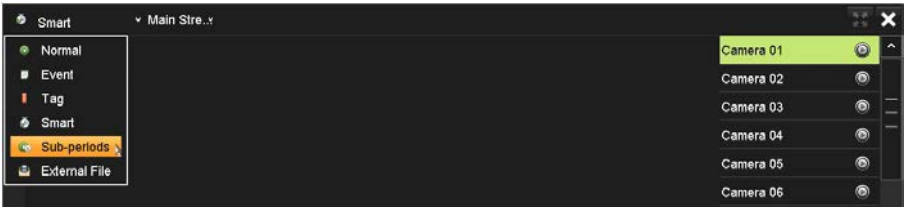
6.2.8 Playback by Sub-Periods

According to the configured number of split-screens, the video files on the selected date can be divided into average segments for playback. E.g., if there are video files existing between 16:00 and 20:00, and the 2 × 2 display mode is selected, then it can play the video files for 1 hour on each screen simultaneously.

To use Sub-periods playback:

1. Open the **Playback** interface. Go to: **Menu | Playback**.

2. Open the drop-down list in the upper-left corner of the screen, then select **Sub-periods**.



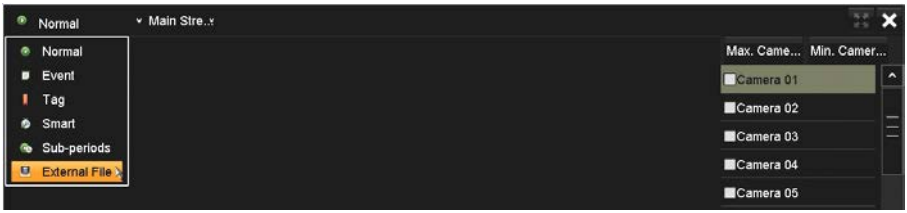
3. Select the camera channel for which you want to use this feature, and the date range.

4. Select the split-screen number from the list, and then click the **Play** icon. In the example below, 4 screens was selected.

6.2.9 Playing an external file

You can playback a file on an external device, such as a video file saved on a backup disk or flash drive.

1. Open the **Playback** interface. Go to: **Menu | Playback**.

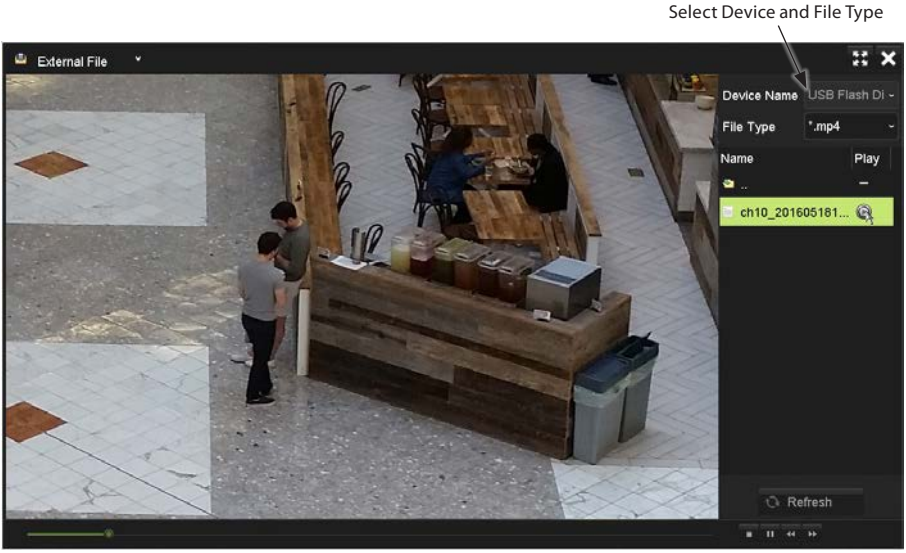


2. Open the drop-down list in the upper-left corner of the screen, then select **External file** . See above.

3. Attach the external storage device containing the file to one of the USB ports. If multiple storage devices are connected to USB ports, open the **Device** drop down list in the upper right corner and select the device containing the file.

4. Peruse the list, then highlight the file you want to play. If the file is in a directory on the device, click the icon to the left of the directory name to show the contents of the directory.

5. Click the **Play** icon associated with the file you want to play.



6.2.10 Auxiliary Functions - Playback frame by frame

Play video files frame by frame, in case of checking image details of the video when abnormal events happen.

Using a Mouse

Go to: **Menu | Playback**.

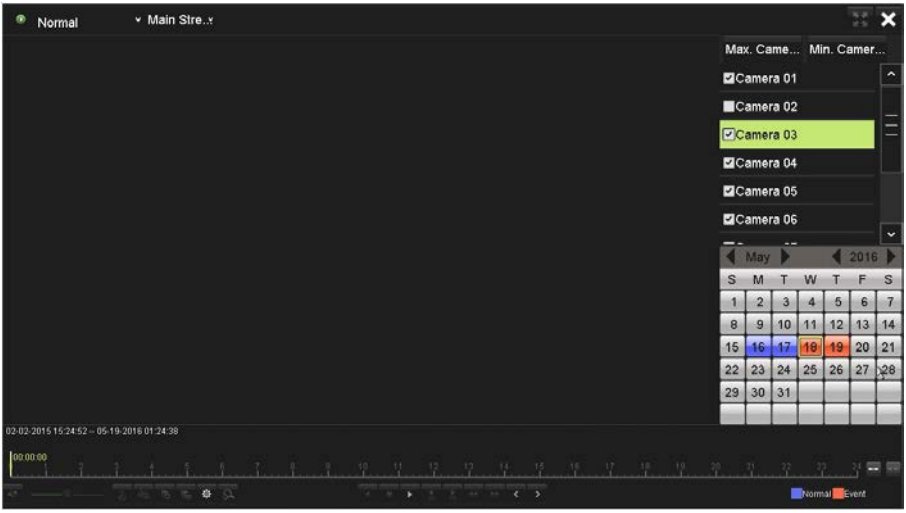
Playback a file. During playback, click the button ◀◀ until the speed changes to **Single**. One click on the playback screen advances playback to the next frame forward. Click ▶▶ to increase the playback speed in forward.

During reverse playback click the button ◀◀ until the speed changes to **Single**. One click on the playback screen advances playback to the next frame in reverse. Click ▶▶ to increase the playback speed in reverse.

6.2.11 Auxiliary Functions - Reverse Playback of Multi-channel

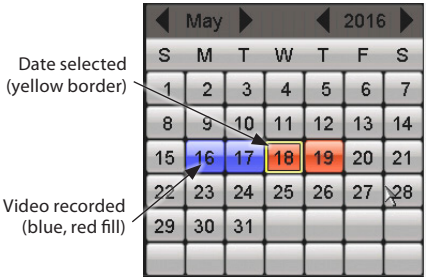
You can play back record files of multi-channel reversely. Up to 16-ch (with 1280*720 resolution) simultaneous reverse playback is supported; up to 4-ch (with 1920*1080p resolution) simultaneous reverse playback is supported and up to 1-ch (with 2560*1920 resolution) reverse playback is supported.

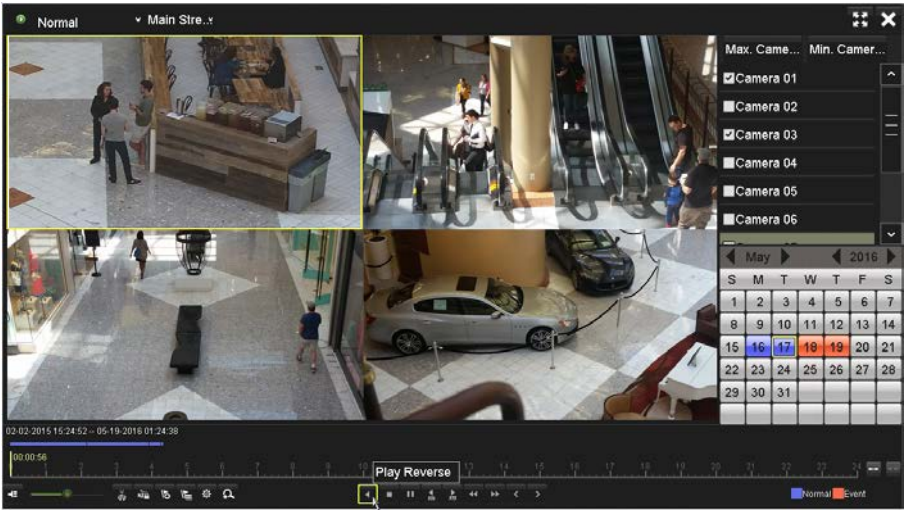
1. Open the Playback interface. Go to: **Menu | Playback**.



2. Check the box of the channel(s) in the channel list you want to playback.

3. Double-click the date on the calendar to select the day when video was recorded. On the calendar, days when video was recorded for the cameras selected is marked in blue. The day selected is bordered in yellow.





For the definition of icons in the playback toolbar, see "6.2.2 Playing back video by channel" on page 128.

6.2.12 Digital Zoom

1. Click the magnifier button on the playback control bar to enter Digital Zoom screen. The video image will expand to full-screen, with an inset box in the lower right corner.

2. Use the mouse to click in the inset box on the area of the screen you want to expand. To exit Zoom mode, right click anywhere on the screen.

3. Right-click on the image to exit the digital zoom mode.

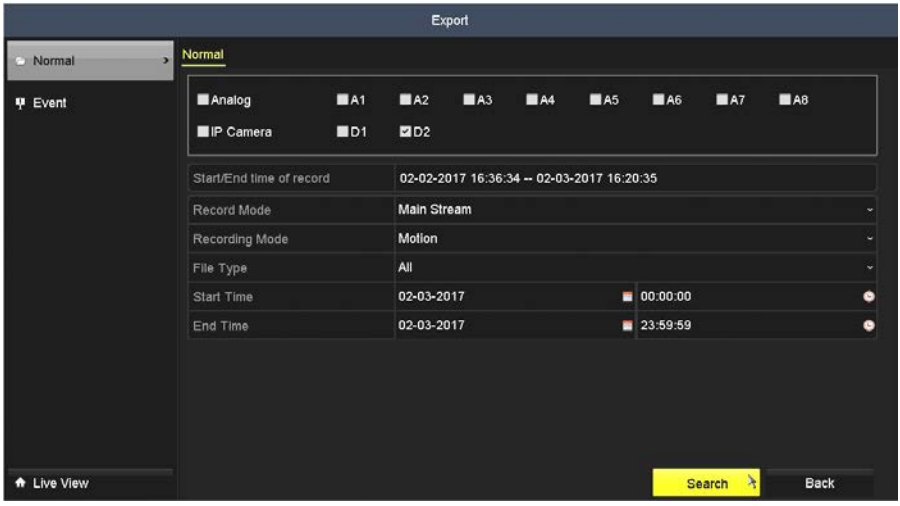
6.3 Backing up Record Files - Export

6.3.1 Export by video search

The Export by video search feature allows you to export specific video clips. The export operation writes the selected file(s) to an USB device.

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the QVR USB port.

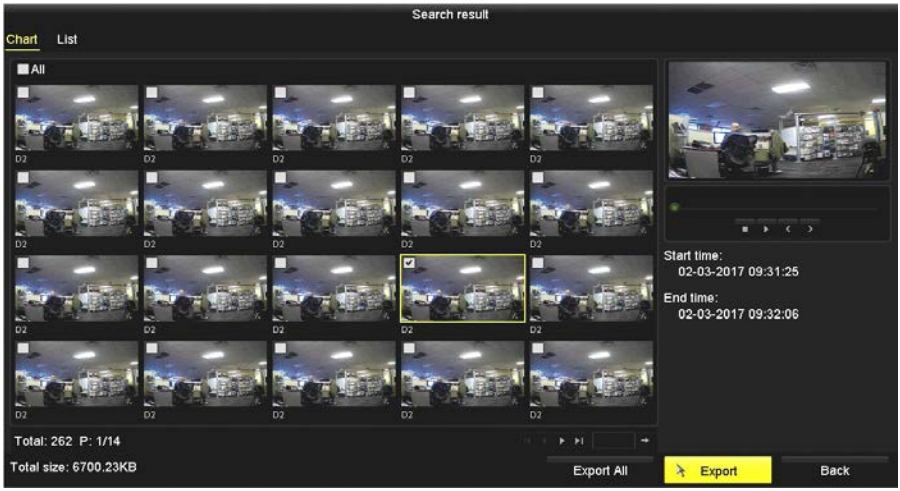
2. Open the Export menu. Go to: **Menu | Export | Normal**.



3. Check the boxes for the camera channels you want to back up.

4. Select the **Start Time** and **End Time** of the period when the video clips of interest were recorded. To change the time, click on the field, then select the target date or time from the pop-up menu.

5. Click **Search** to list the video clips recorded during the selected time span. Search results appear in a **Chart** display of video thumbnails. You can play the video clip by clicking the thumbnail, and then clicking the **Play** icon in the player to the right.



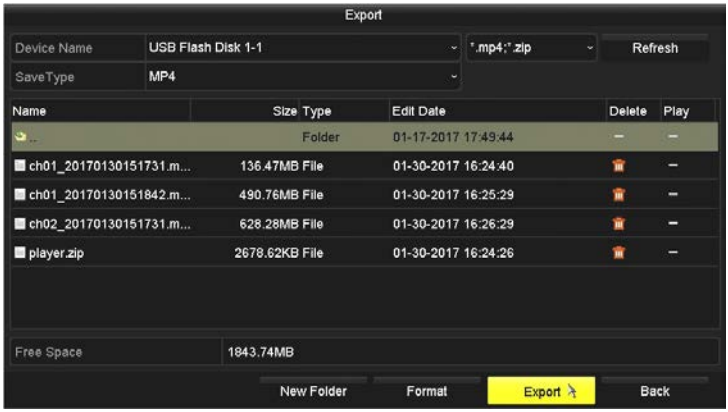
6. To export a file (see the screen above):

   a. Insert a flash media drive into a USB port of the recorder.

   b. Check the select box)es) of the video(s) you want to export.

   c. Click the **Export** button.

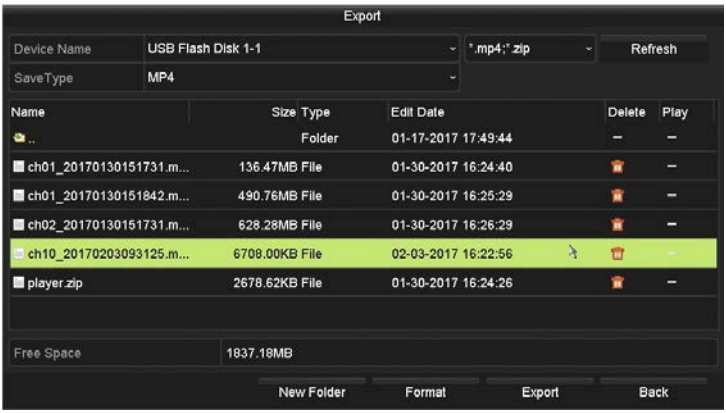
   d. In the file display of the flash media device, navigate to the directory where you want to save the file(s), and then double click on it to open it.



   e. Click the **Export** button. In the Export window that opens, select the **Player** bullet if you want to export it with the other file(s), and then click **OK** Notice that the directory selected already has player.zip

   f. Follow the on-screen instructions. Allow the export to complete before continuing.

   g. Verify that the file you exported cis now listed in the export destination directory.



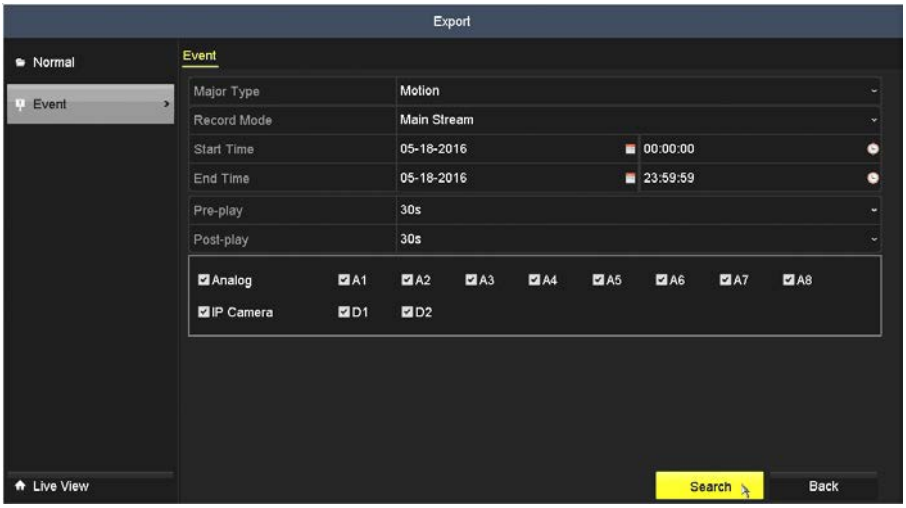
6.3.2 Export by Event Search

Video recordings triggered my Events, such as motion detection, can be searched for and exported to a USB storage device such as a USB flash drive or USB disk drive, or USB optical drive.

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the QVR USB port.

2. Open the Export menu. Go to: **Menu | Export | Event**.

3. On the Event Type line, select open the drop down list and select, for example, **Motion**.

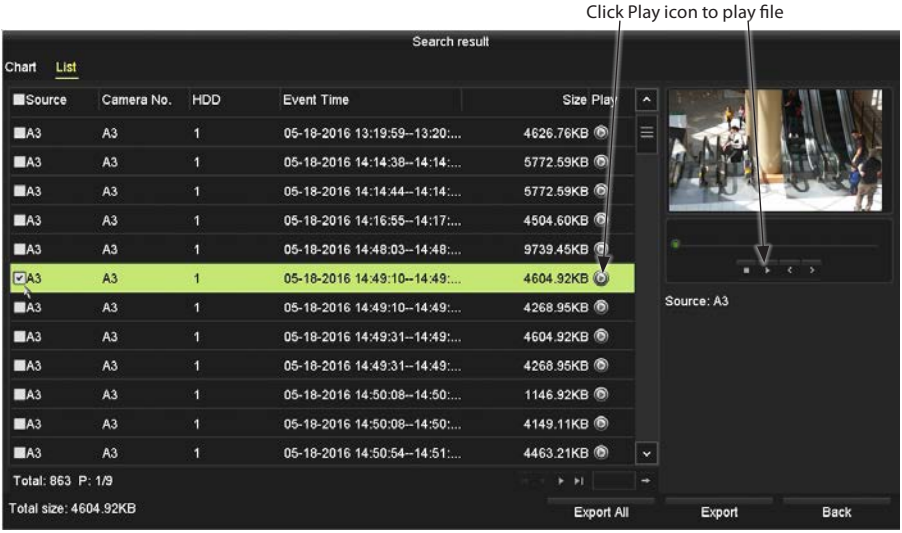


4. Check the boxes for the analog cameras you want to search.

5. Select the **Start Time** and **End Time** of the period when the video clips of interest were recorded. To change the time, click on the field, then select the target date or time from the pop-up menu.

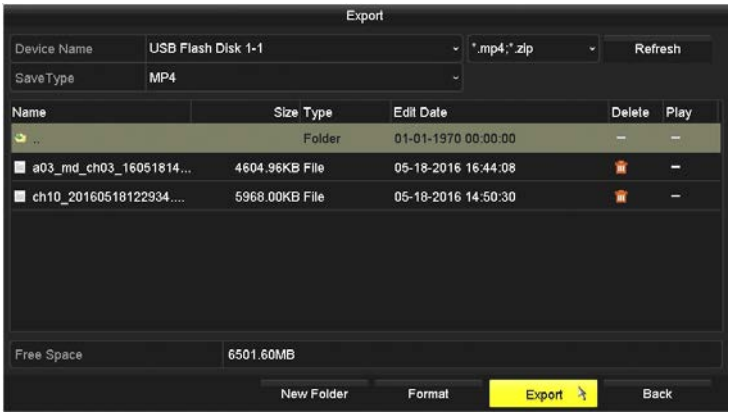
6. Click **Search** to list the video clips recorded during the selected time span. Search results appear in a Chart display of video thumbnails. You can play the video clip by clicking the thumbnail, and then clicking the **Play** icon in the player to the right.

    a. You can also list the video clips by clicking the **List** option in the upper right corner.



7. Click the file you want to export, then click the select box to check mark it. Click **Export**.

8. In the **Export** window, select the directory where you want to copy the files, or create a **New Folder**, and then click **Export**.



9. In the pop-up window that appears, you can export the file and log (upper option), or just the player. Choose the option you prefer, and then click **OK**.

10. Allow the Export process to finish, and then click in the status window.

11. Verify that the file you exported can be played from the flash device.

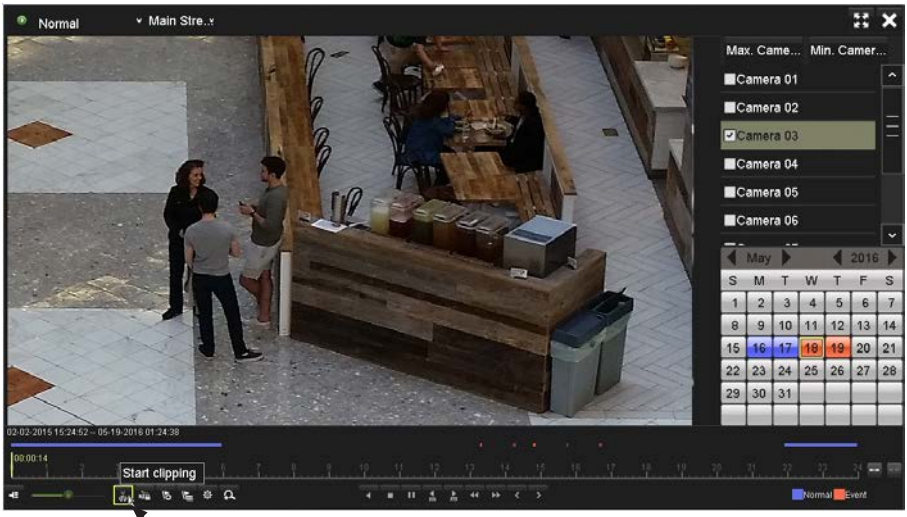
6.3.3 Exporting Video Clips during playback

Segments of video recordings, clips, can be backed up (exported) during playback. These files exported to a USB storage device such as a USB flash drive or USB disk drive, or USB optical drive.

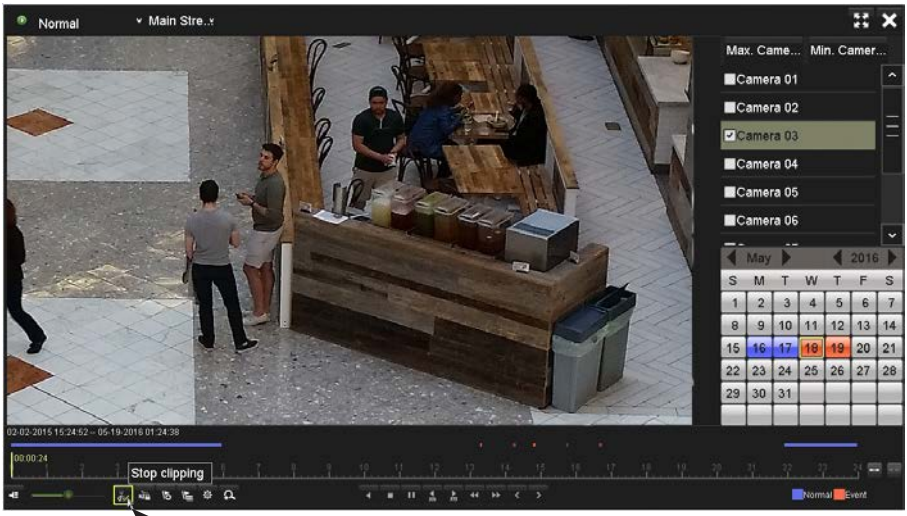
1. Attach an USB storage device, such as a USB flash drive or USB disk drive or USB optical drive, to the QVR USB port.

2. Playback a video file.

3. Advance the file playback to the start of the segment you want to export, then click the **Clip** icon (**Start clipping** scissors) at the bottom of the screen to mark the start of the clip you want to save.

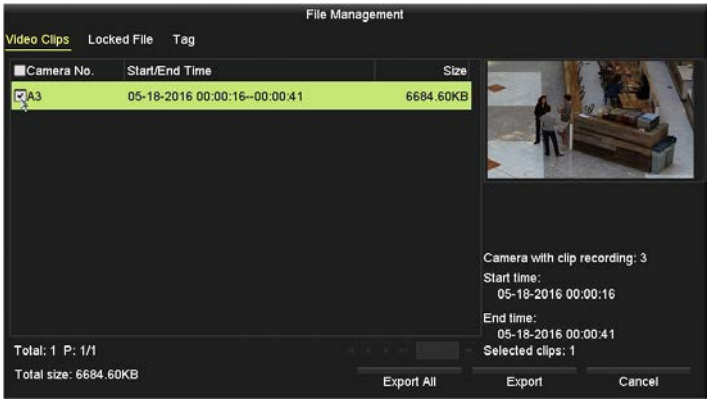


4. Advance the file playback to the end of the segment you want to export, then click the **Clip** icon (**Stop clipping** scissors) again to mark the end of the clip you want to save.

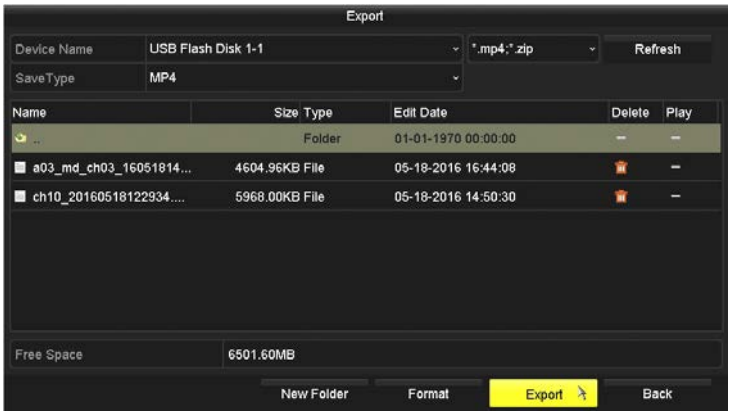


5. Right click anywhere in the video window, then select **Exit**. The Attention pop-up window shown below will appear. Click **Yes** to continue.

6. In the File Management window, check the select box of the video clip you want to save, and then click **Export**.



7. In the **Export** window. if the USB drive doesn't appear on the **Device Name** line, click **Refresh** until it shown. Browse through the directory list on the USB drive to open the location where you want to save the clip. **NOTE**: Some USB devices types include the **New Folder** and **Format** options, other types include only an **Erase** option.



8. Click the **Export** button in the Export window to continue. In the pop-up window that appears, you can export the file and log (upper option), or just the player. Choose the option you prefer, and then click **OK**.

9. Allow the Export process to finish, and then click **OK** in the status window.

10. Verify that the file you exported can be played from the flash device.

SECTION 7
PTZ Controls

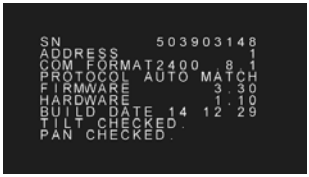
DVR PTZ controls enable you to access and use the PTZ features of analog PTZ cameras.

NOTE

- *Due to the large variation of RS-485 protocols and analog PTZ cameras, some features of the PTZ controls in the DVR may not function as expected. To access and use all features of your PTZ camera, Observint Technologies recommends that an external PTZ Controller device, compatible with your camera, be used to perform PTZ operations.*
- ***ALIBI-C** protocol does not require RS-485.*

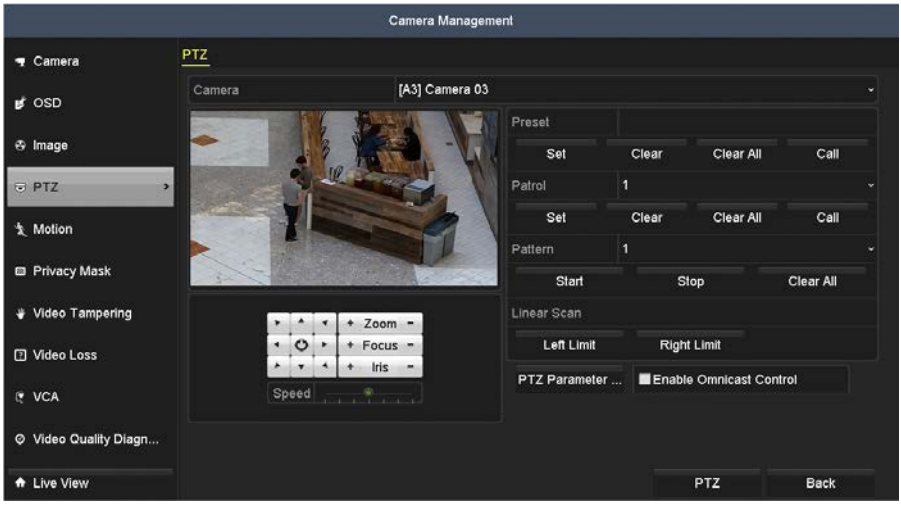
7.1 Matching the RS-485 QVR interface to the PTZ camera

The QVR RS-485 interface on the back of the recorder is self adapting. It senses the communication format and protocol of the network it is connected to. Cameras that use this network are usually To configurable. The PTZ camera used in this example displays its RS-485 network settings during camera initialization. An example is shown below.



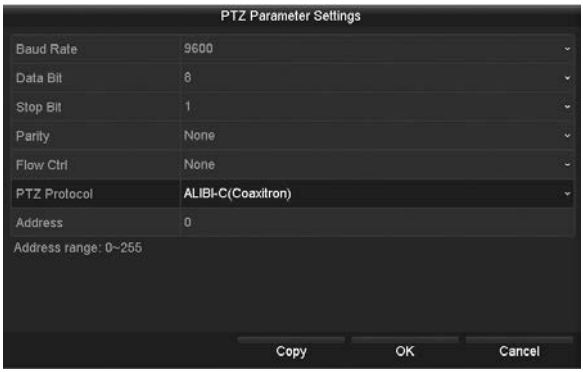
The COM FORMAT shown above, 2400 . 8 . 1 indicates 2400 baud, 8 data bits and 1 stop bit. To see the PTZ communication settings in the DVR for Analog camera 3:

1. Open the PTZ menu. Go to: **Menu | Camera | PTZ**.



2. On the camera line, open the drop-down menu and select the camera you want to access. In this example, we are using **[A3] Camera 03** (see above).

3. Click the **PTZ Parameter ...** button.



4. Enter the RS-485 network parameters and PTZ Protocol and Address parameters of the PTZ camera as needed.

5. Click **OK** to save the settings and close the window.

7.2 PTZ Control Panel

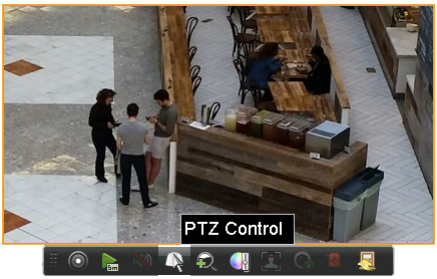
The PTZ control panel is used to quickly access the PTZ features of the camera. Some of these features must be pre-configured, either in the camera or through the DVR firmware interface. Also, some PTZ cameras have pre-configured preset features, such as the PELCO preset 95 (to access the internal menu system of your camera), that can be accessed through the PTZ features of the DVR.

The PTZ Control panel can be accessed in either of two ways:

- From the Live View window of the PTZ camera by clicking the PTZ Control icon on the quick setting toolbar. To open the control panel:

  a. Click on the **Live View** video from the PTZ Camera.

  b. Click on the **PTZ Control** icon () in the quick setting bar.



c. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

- From the Camera | PTZ menu by selecting the PTZ camera, and then clicking the PTZ button:

a. Open the PTZ menu. Go to: **Menu | Camera | PTZ**.

b. Open the Camera line drop-down list and select the camera you want to manage. In the following example, ***[A3] Camera 03*** was selected.

c. Click the **PTZ** button at the bottom of the window.

d. Use the PTZ menu to control the camera. The PTZ menu can be repositioned by dragging the title bar.

e. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

7.2.1 The PTZ Live View menu

The PTZ Live View menu contains several items:

- **Camera** (first line): Click the down arrow on the camera line to select the PTZ camera you want to access.
- **Configuration** (second line): Click the icon to access that feature of the camera. Some cameras do not support some features. See the table below for icon definitions.
- **Tab bar** (third line): The tab line contains three tabs: **PTZ Control**, **One-touch**, and **General**. The tab bar can be repositioned by clicking the ◀ and ▶ icons at either end.

Definitions for items shown on the PTZ menu included in the table below.

Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	3D-Zoom		Image Centralization		Menu
PTZ Control	Switch to the PTZ control interface	One-touch	Switch to the one-touch control interface	General	Switch to the general settings interface
	Previous item		Next item		Start pattern / patrol
	Stop the patrol / pattern movement		Exit		Minimize windows

Also, you can copy your settings to other cameras. Click the Copy button, and then select the cameras you want to apply the settings to.

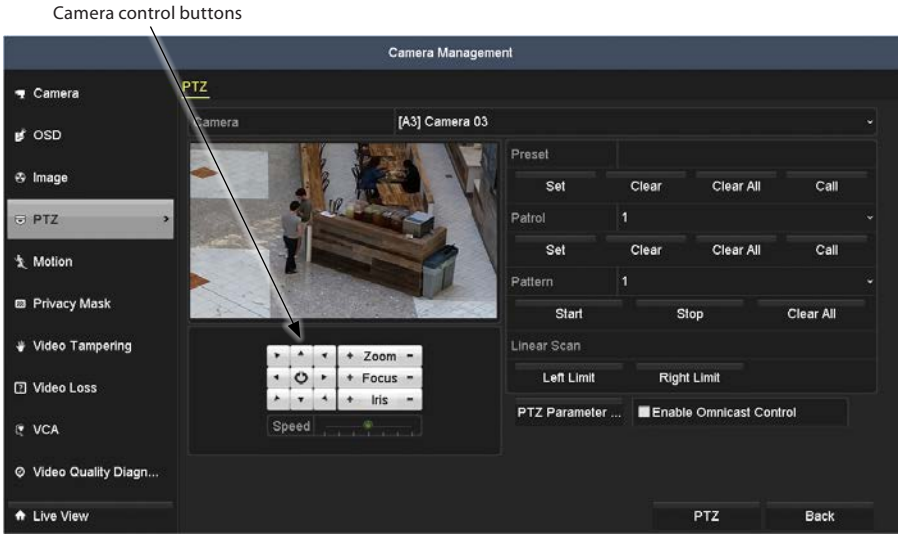
7.3 Setting PTZ Presets, Patrols and Patterns

NOTE *The presets, patrols and patterns you configure must be supported by the PTZ protocols.*

7.3.1 Customizing Presets

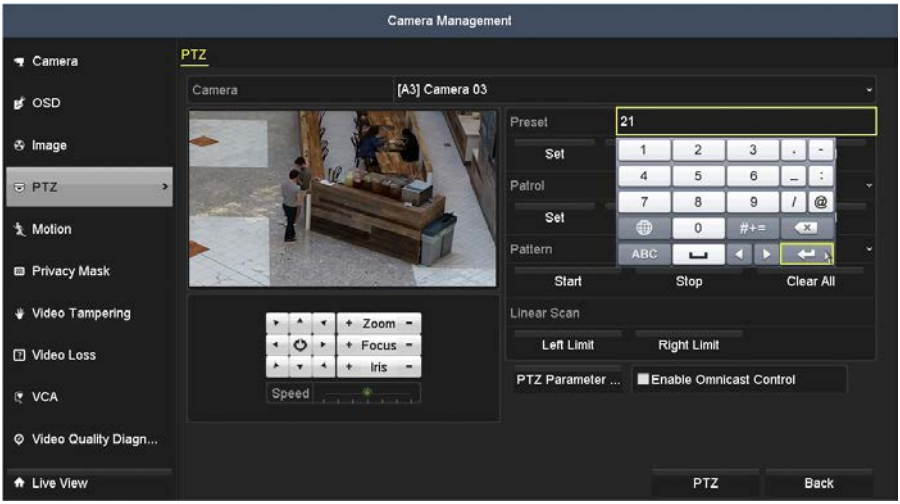
Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place.

1. Open the PTZ settings menu. Go to: **Menu | Camera | PTZ**.



2. Use the PTZ control - directional buttons to point the camera at the position where you want to create a preset.

3. Click the field to the right of the **Preset** label to open the numeric virtual keyboard.



4. Use the keyboard to enter a number for the preset you want to create, and then press the **Enter** key.

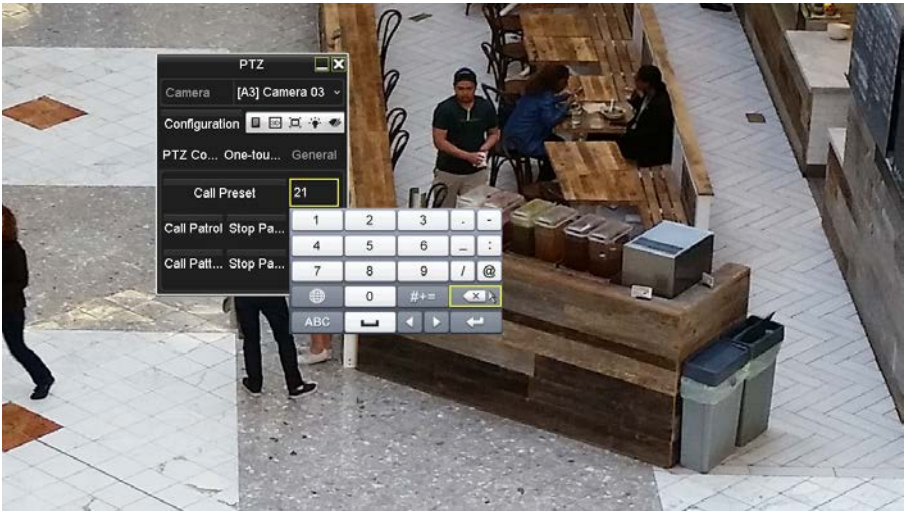
5. Click the **Set** button beneath the **Preset** label to save your preset configuration. You can click the **Clear** button to clear the location information of the preset, or click the **Clear All** button to clear all presets that were saved.

6. Repeat the steps 2-5 to create more presets. If the number of the presets you want to save is more than 17, you can click [. . .] and choose the available numbers.

7.3.2 Calling Presets

After creating a preset, you can quickly move the camera to that position by "calling" that preset. Use the PTZ Control panel interface to call a preset.

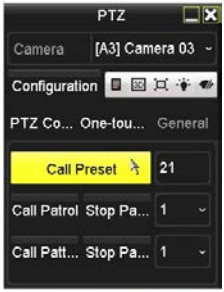
1. Open the **PTZ Control** panel (see "7.2 PTZ Control Panel" on page 158 above).



2. On the third line down, click the right arrow (▶) to access the **General** tab (see above).

3. Enter the preset number in the preset field.

4. Click **Call Preset** to move the camera.



The camera will move to the pre-configured preset position.

5. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

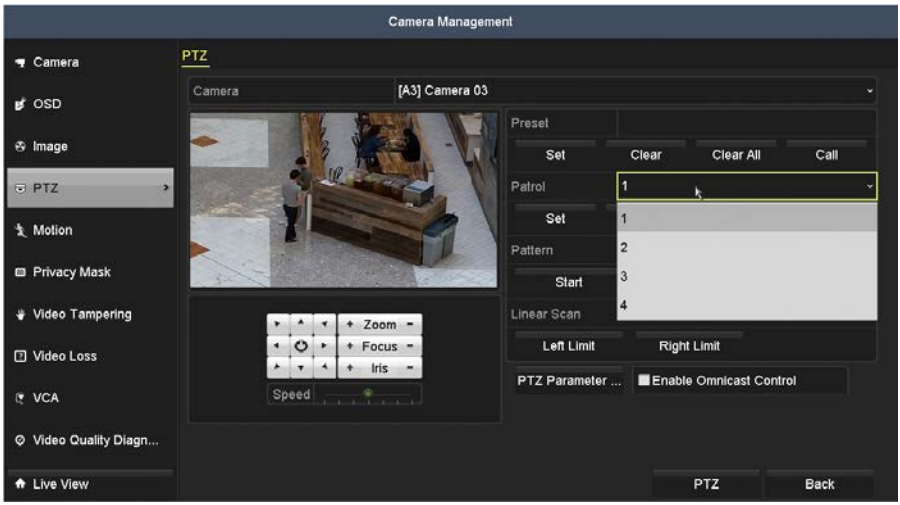
7.3.3 Customizing Patrols

Patrols can be set to position a PTZ camera to a KeyPoint (Preset number) and hold it there for a set duration (dwell) before moving on to another KeyPoint (Preset number). To create Preset positions for the camera, see "7.3.1 Customizing Presets" on page 161.

1. Open the PTZ settings menu. Go to: **Menu | Camera | PTZ**.

2. Select the camera you want to control from the Camera drop-down list.

3. Open the drop-down list to the right of the Patrol label, than then select a number for the patrol.



4. Click the **Set** button beneath the **Preset** label to open the **KeyPoint** window. Configure KeyPoint parameters, such as the KeyPoint number, duration (seconds) of staying at one KeyPoint, and speed of patrol. The KeyPoint is corresponding to the preset. The KeyPoint number indicates the step in the patrol the PTZ camera will cycle through. **Duration** refers to the time span to stay at the corresponding key point. **Speed** defines the speed at which the PTZ will move from one KeyPoint to the next. You can click the **Clear** button to clear the location information of the preset, or click the **Clear All** button to clear all presets that were saved.

In the example above, two presets, 21 and 14, were created in the DVR and used to form Patrol 1. Each preset has a different duration. In the fourth window, click **OK** to save the KeyPoint to the patrol.

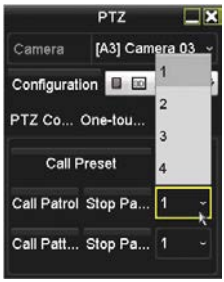
7.3.4 Calling Patrols

Pre-configured patrols can be executed using the PTZ Control panel.

1. Open the **PTZ Control** panel (see "7.2 PTZ Control Panel" on page 158 above).

2. Display the **General** tab by clicking the ▶ icon on the tab bar.

3. On the Patrol line, click the right-most field to open the patrol number select list, and then select the number for the patrol you want to use.



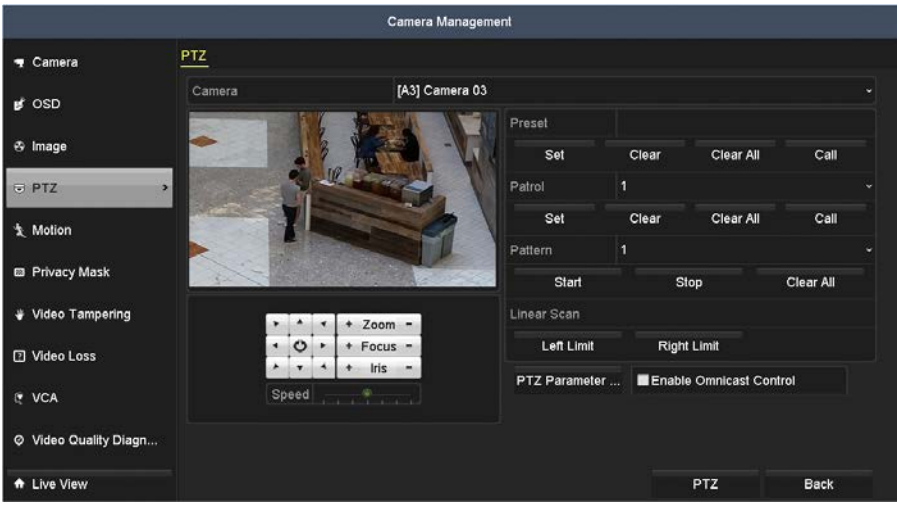
4. Click **Call Patrol** to execute the patrol. To stop the patrol, click the **Stop Patrol** button.

5. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

7.3.5 Customizing Patterns

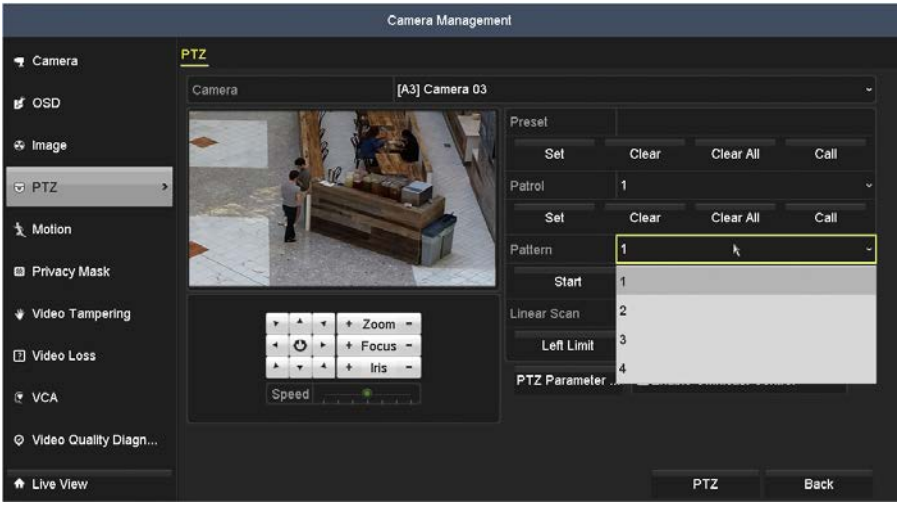
Patterns can be setup by recording the movement of the PTZ camera. You can call the pattern to make the PTZ camera move as recorded. To create a pattern:

1. Open the PTZ settings menu. Go to: **Menu | Camera | PTZ**.



2. Select the camera you want to control from the **Camera** drop-down list.

3. Open the drop-down list to the right of the Pattern label, than then select a number for the patrol. In the example below, only one option, "1", is available.



4. Click the **Start** button under **Pattern**.

5. Use the camera control buttons (see above) to move the camera in the pattern you want to record. You can also use the Zoom, Focus, and Iris control features. Note that the recording will not only record the position of the cameras, but will also record the timing of the movement.
6. When finished recording the pattern, click the **Stop** button. You can click the **Clear** button to clear the pattern, or click the **Clear All** button to clear all patterns that were recorded.

7.3.6 Calling Patterns

Calling a pattern causes the PTZ camera move according to the motion recorded for the pattern. Pre-configured patterns can be executed using the PTZ Control panel.

1. Open the **PTZ Control** panel (see "7.2 PTZ Control Panel" on page 158 above).
2. Display the **General** tab by clicking the ▶ icon on the tab bar.
3. On the Pattern line, click the right-most field to open the patrol number select list, and then select the number for the patrol you want to use.

4. Click **Call Pattern** to execute the pattern. To stop the patrol, click the **Stop Pattern** button.

5. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

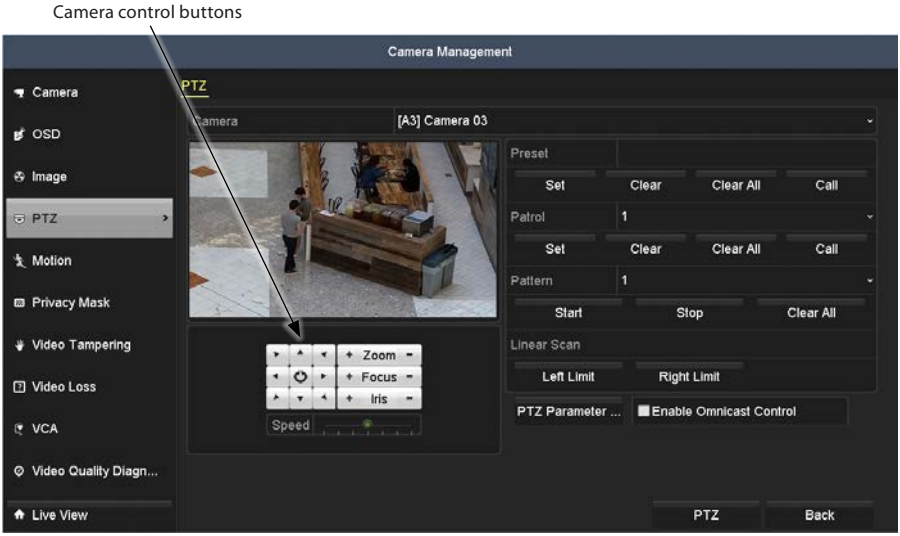
7.4 Setting Linear Scan Limit

The Linear Scan can be enabled to trigger the scan in the horizontal direction in the predefined range.

NOTE *This feature not supported by all PTZ camera models.*

To implement this feature:

1. Open the PTZ settings menu. Go to: **Menu | Camera | PTZ**.



2. On the **Camera** line, open the drop-down list and select the camera for which you want to configure the Linear Scan.

3. Use the camera control buttons to point the camera at the location where you want to set the left scan limit, and then click the **Left Limit** button to link the direction to the limit.

4. Use the camera control buttons to point the camera at the location where you want to set the right scan limit, and then click the **Right Limit** button to link the direction to the limit. The right limit must be to the right of the left limit, and the scan limit can be no more than 180°.

7.4.1 Calling a Linear Scan

After the scan limits are set, you can use this feature to scan the area. The Linear Scan is executed using the PTZ Control menu.

1. Open the **PTZ Control** panel (see "7.2 PTZ Control Panel" on page 158).

2. Click the **One-touch** tab to select it.

3. Click **Linear Scan** to begin the pre-configured scan. To stop the scan, click the **Restore** button.

4. To close the PTZ menu and the full screen camera video in the Live Video window, click the ☒ icon in the upper right corner of the PTZ window.

7.4.2 One-touch Park

Some PTZ cameras support a configurable park (or home) position the camera will move to after a period of inactivity ("park time"). These park positions are configured in the PTZ camera, and activated through the DVR. To activate a one-touch park operation:

1. Open the **PTZ Control** panel (see "7.2 PTZ Control Panel" on page 158 above).

2. Click the **One-touch** tab to select it.

3. Click one of the three park buttons to activate that park feature. These "park" types are defined as follows:
   - **Park (Quick Patrol)**: The camera starts a patrol from the predefined Preset 1 to Preset 32 sequentially after the park
   - time. An undefined preset will be skipped.
   - **Park (Patrol 1)**: The camera starts move according to the predefined Patrol 1 path after the park time.

— **Park (Preset 1)**: The camera moves to the predefined Preset 1 location after the park time.

The "park time" is set in the PTZ camera. Normally, the default value is 5 seconds.

4. Click the button again to deactivate the park feature.

SECTION 8
Managing User Accounts

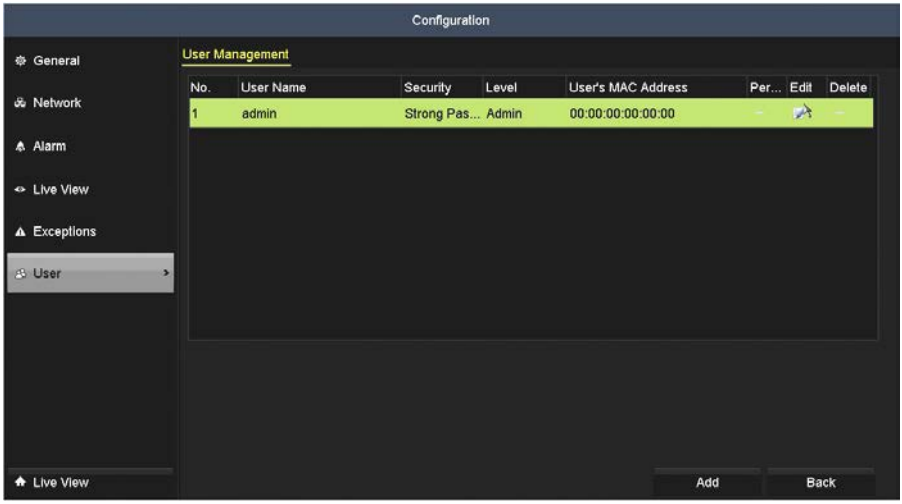
User accounts are created to control access to the system both at the QVR and when logging into the QVR from a remote computer. Each account has a User Name, Password, and a selection of permissions granted to the user.

By default, one user, named "***admin***", is provided. The admin user is granted all permissions with the system, and can create, modify, and delete other users.

The QVR supports up to 32 user accounts.

Adding a user account

1. Enter the User Management interface. Go to: **Menu | Configuration | User**.

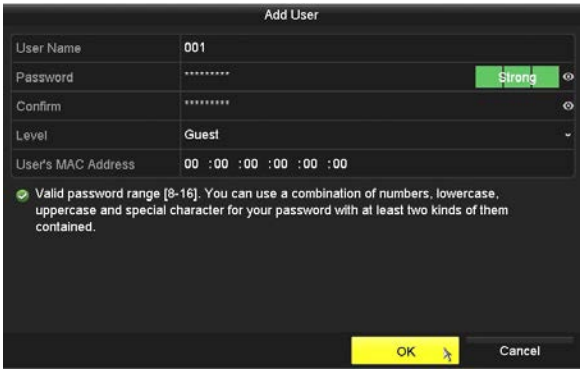


2. Click **Add** to open the **Add User** menu.

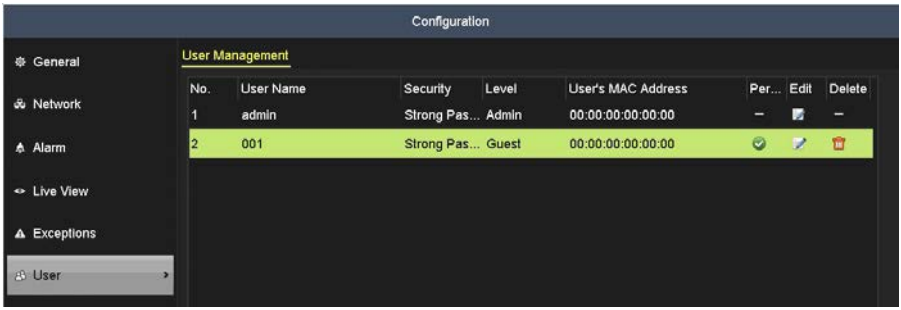
3. In the **Add User** menu, enter the information for new user, including User Name, Admin Password, Password and Confirm password, Level and User's MAC Address (optional).

   — Set the user **Level** to Operator or Guest. Different **Levels** have different operating permission.
   * **Operator**: The Operator user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration by default.
   * **Guest**: The Guest user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration by default.

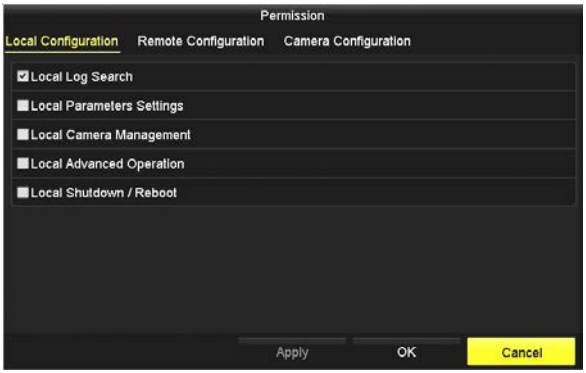
— **User's MAC Address**: The MAC address of the remote PC which logs onto the NVR. If this option is configured and enabled, a remote user with this MAC address only can access the NVR.



4. Click the **OK** to save the settings and go back to the User Management interface. The added new user will be displayed on the list. See the screen shown below.



5. Select the user from the list and then click the button to enter the Permission settings interface. In the example above, user "**001**" was selected.



6. Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration options:

- **Local Log Search**: Searching and viewing logs and system information of QVR.
- **Local Parameters Settings**: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- **Local Camera Management**: Configuring camera parameters, add/delete cameras.
- **Local Advanced Operation**: Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- **Local Shutdown Reboot**: Shutting down or rebooting the QVR.

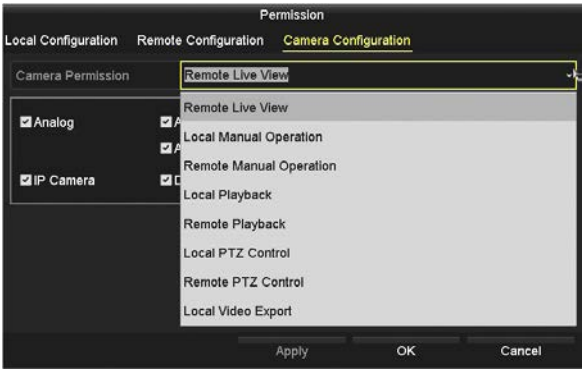
Remote Configuration options

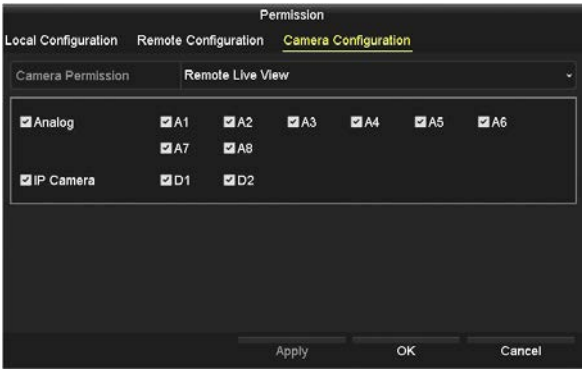
- **Remote Log Search**: Remotely viewing logs that are saved on the QVR.
- **Remote Parameters Settings**: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.

- **Remote Serial Port Control**: Reserved for future expansion.
- **Remote Video Output Control**: Sending remote button control signal.
- **Two-Way Audio**: Realizing two-way radio between the remote client and the QVR.
- **Remote Alarm Control**: Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- **Remote Advanced Operation**: Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- **Remote Shutdown/Reboot**: Remotely shutting down or rebooting the QVR.

Camera Configuration

Use the Camera Configuration menus to assign different permissions to different cameras. Permissions are defined below. Select the permission, and then select the camera(s) to grant that permission to.





- **Remote Live View**: Remotely viewing live video of the selected camera(s).
- **Local Manual Operation**: Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera(s).
- **Remote Manual Operation**: Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera(s).
- **Local Playback**: Locally playing back recorded files of the selected camera(s).
- **Remote Playback**: Remotely playing back recorded files of the selected camera(s).
- **Local PTZ Control**: Locally controlling PTZ movement of the selected camera(s).
- **Remote PTZ Control**: Remotely controlling PTZ movement of the selected camera(s).
- **Local Video Export**: Locally exporting recorded files of the selected camera(s).

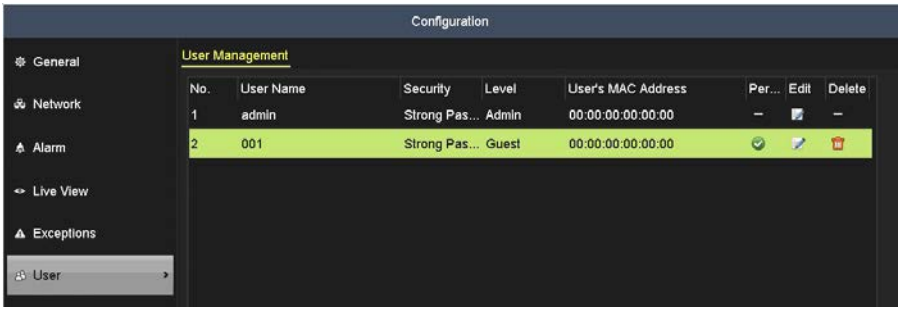
7. Click **OK** to save your settings and exit the User menus.

NOTE *Only the admin user account has permission to restore the QVR to factory default settings.*

8.1 Deleting a user account

1. Enter the User Management interface. Go to: **Menu | Configuration | User**

2. Click the entry for the user to be deleted from the list. When the item is selected, it is highlighted.



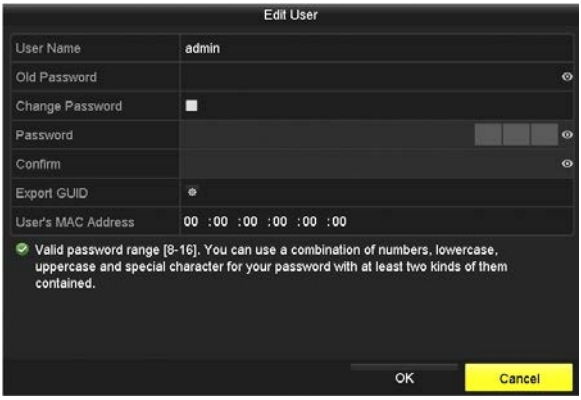
3. Click the trash icon to delete the selected user.

8.2 Editing a user account

1. Enter the User Management interface. Go to: **Menu | Configuration | User**.

2. Select the user to be edited from the list (see the **User Management** window above).

3. Click the Edit icon to open the Edit User interface. **Note**: The **admin** user can also be edited.



Operator and Guest Edit User menu

admin user Edit User menu

4. Select and edit the menu options as needed:

5. Click **OK** to save the settings and exit the menu.

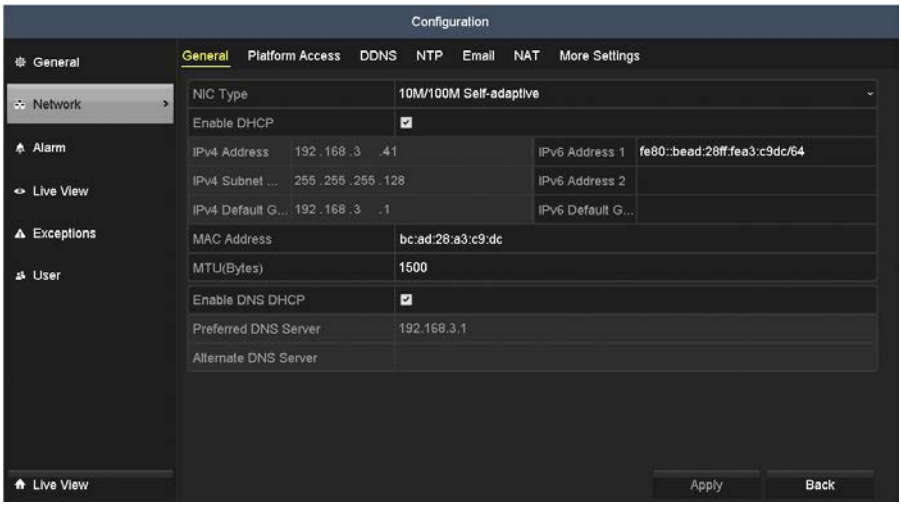
6. After confirming changes to the password, reopen the **Edit User** window and then click the Export GUID icon to save this file. The GUID file can enable you to log into the recorder if you've forgotton your user password. The GUID is usually saved to a USB flash device and kept in a secure location.

SECTION 9
Network Settings

9.1 Configuring General Settings

Network settings must be properly configured before you connect the QVR to cameras on network, or access it remotely. By default, the QVR will use DHCP (Dynamic Host Configuration Processor) to acquire network settings from the network's Domain Name Server (DNS). Since with DHCP, the IPV4 (IP address) of the QVR can change, it is preferable to use a fixed IP address for easy access through your local network.

1. Open the Network General settings menu. Go to: **Menu | Configuration | Network | General**.



   By default, the DHCP option is enabled. When DHCP is enabled and the network is running a DHCP server, the QVR will automatically acquire compatible network settings and will show these settings in the menu above. These settings are dynamic and can change over time. It is preferable, however, to have unchanging, or static, network settings to simplify remote logins.

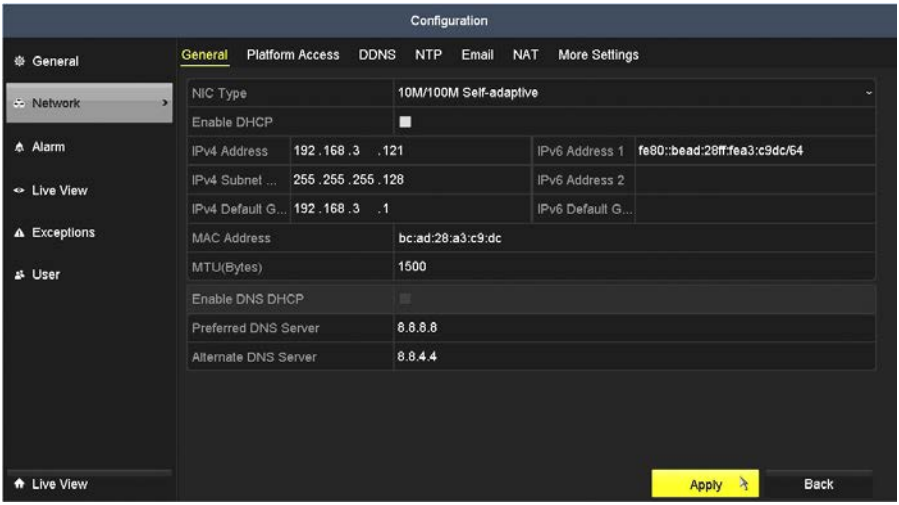
2. To change from dynamic network settings (using DHCP) to static network settings, do the following:

   a. Uncheck the Enable DHCP select box.

   b. Keep the network settings provided by DHCP,
      - or-

Enter the following network parameters (**NOTE**: These settings **must** be compatible with the other devices on your network.):

* IPV4 Address
* IPV4 Subnet Mask
* IPV4 Default Gateway
* MTU range (500 .. 1500)
* Preferred and Alternate DNS server addresses.



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

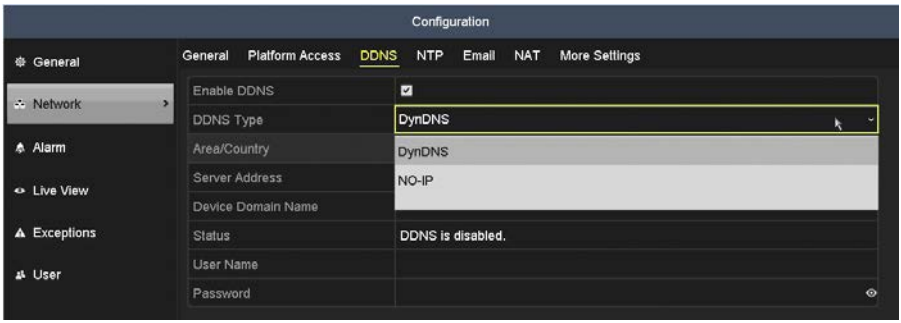
9.2 Configuring DDNS Access

You can configure your QVR to use DDNS Access (or Dynamic DNS, DDNS). DDNS is especially useful for access to your QVR from outside the local network (i.e., the Internet), and you use DHCP to configure your QVR network settings. To configure the QVR to use DDNS:

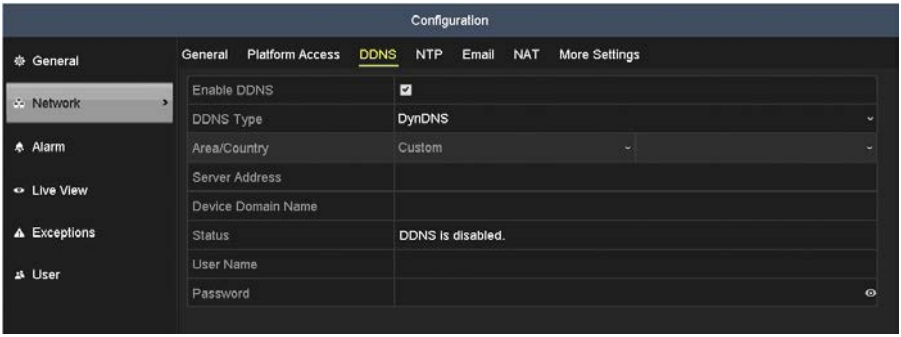
1. Open the Network Settings menu. Go to: **Menu | Configuration | Network**.

2. Check the **Enable DDNS** box to enable this feature.

3. Open the **DDNS Type** drop down list and select one of two options: DynDNS and NO-IP.



— **DynDNS**:



i. Enter **Server Address** for DynDNS (*members.dyndns.org*).

ii. In the **Device Domain Name** text field, enter the domain obtained from the DynDNS website.

iii. Enter the **User Name** and **Password** registered in the DynDNS website.

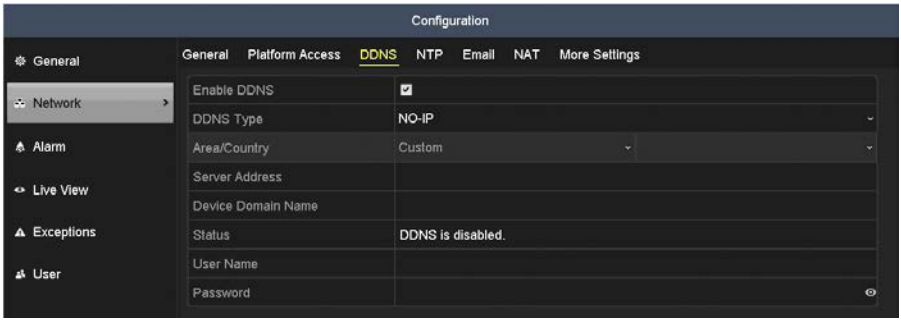
iv. Click **Apply** to save your settings.

— **NO-IP**:

i. In a browser window, go to the URL: **HTTP://alibiddns.com**

ii. In this website, create a **Domain Name**, **User Name** and **Password** for the reccorder. Record these for use later.

iii. In the recorder DDNS menu, open the **DDNS Type** drop-down list and select NO-IP.



iv. Enter **Server Address** for NO-IP (*dynupdate.noip.com*).

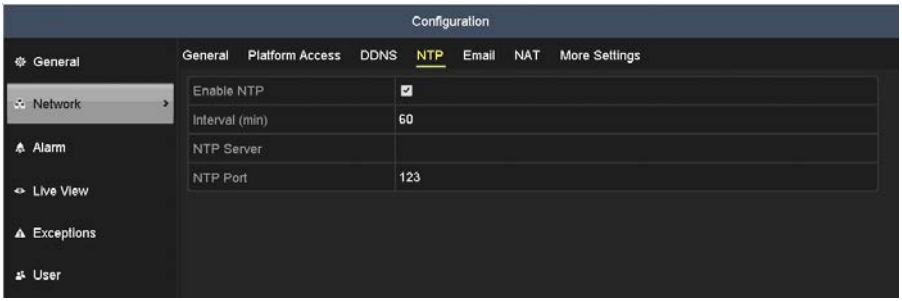
v. In the **Device Domain Name**, **User Name** and **Password** fields, enter the information setup at the *alibiddns.com* website.

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

9.3 Configuring NTP Server

A Network Time Protocol (NTP) Server can be configured on your QVR to ensure the accuracy of system date/time.

1. Open the Network NTP settings menu. Go to: **Menu | Configuration | Network | NTP**.



2. Check the Enable NTP box to enable this feature.

3. Select the following NTP settings:

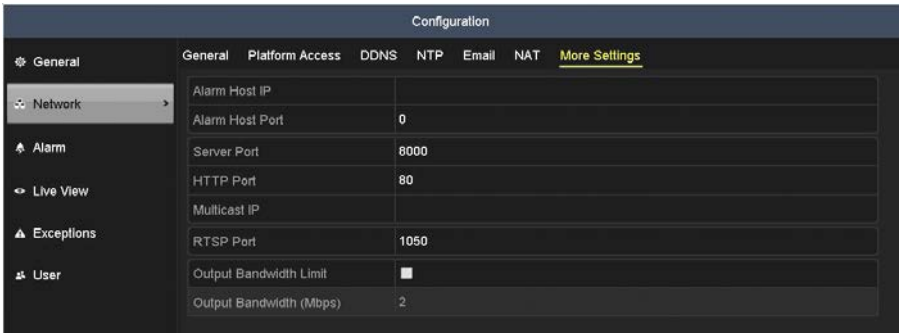
   — **Interval**: Interval in minutes between the two synchronizing actions with an NTP server.
   NOTE: The synchronization time interval can be set from 1 to 10080 minutes. The default value is 60 min. If the QVR is connected to a public network, use an NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the QVR is setup in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.
   — **NTP Server**: IP address of NTP server
   — **NTP Port**: Port of NTP server

4. Click **Apply** to save your settings and close the menu.

9.4 Configuring Multicast

Using the multicast function, more than 64 cameras are connectable. A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. We recommended that you use the IP address range from 239.252.0.0 to 239.255.255.255.

1. Enter the Network More Settings interface. Go to: **Menu | Configuration | Network | More Settings**.



2. Set the Multicast IP address. When adding a device to the Network Video Surveillance Software, the multicast address must be the same as the QVR's multicast IP.

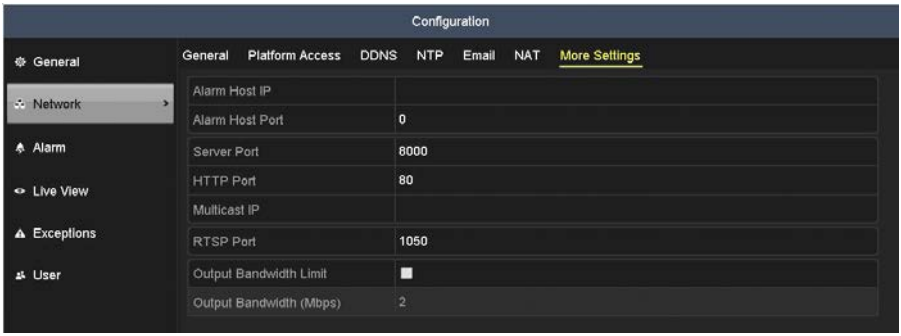
3. Click **Apply** to save your settings and close the menu.

NOTE *The multicast function must be supported by the network switch to which the QVR is connected.*

9.5 Configuring RTSP

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in communication systems to control streaming media servers.

1. Open the Network More Settings menu. Go to: **Menu | Configuration | Network | More Settings**.



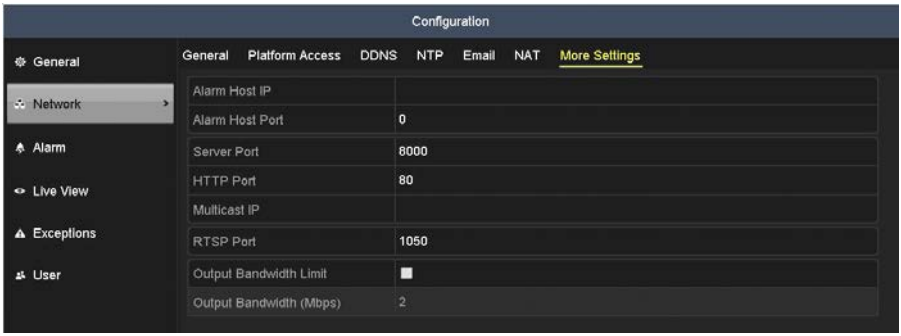
2. In the menu shown above, enter the RTSP port number. The default RTSP port is 1050.

3. Click **Apply** to save your settings and close the menu.

9.5.1 Configuring Server and HTTP Ports

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.

1. Open the Network More Settings menu. Go to: **Menu | Configuration | Network | More Settings**.



2. Enter a new Server Port number and HTTP Port number in the appropriate fields. The default Server Port is 8000 and the HTTP Port is 80.

NOTE

- *The Server Port number must be in the range 2000 .. 65535. it is used for remote client software access. The HTTP port is used for remote IE access.*
- *Refer to the Superciruits YouTube video for Port Forwarding at:* http://www.supercircuits.com/resources/learn/port-forwarding *or the step by step guide at:* http://www.supercircuits.com/media/docs/port-forwarding-alibi-ip-devices.pdf

3. Click **Apply** to save your settings and close the menu.

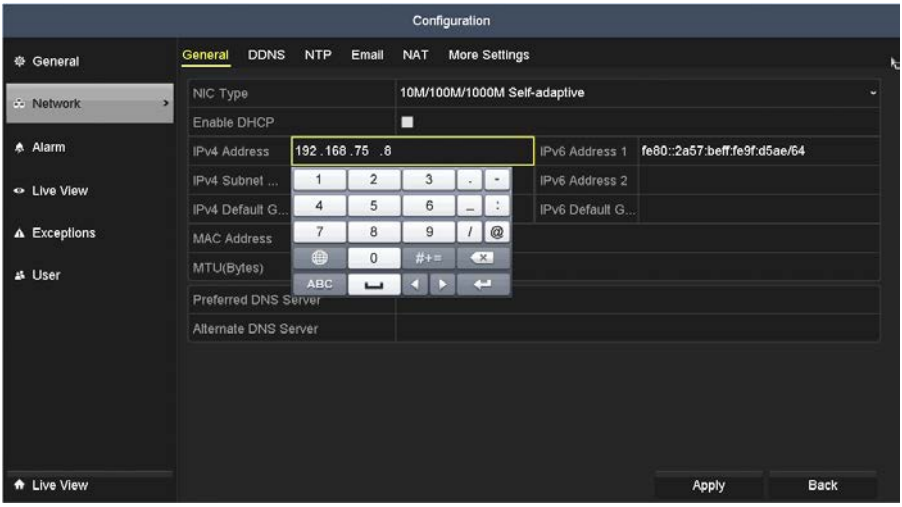
9.6 Configuring Email

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected or the administrator password is changed.

Before configuring the Email settings, the QVR must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

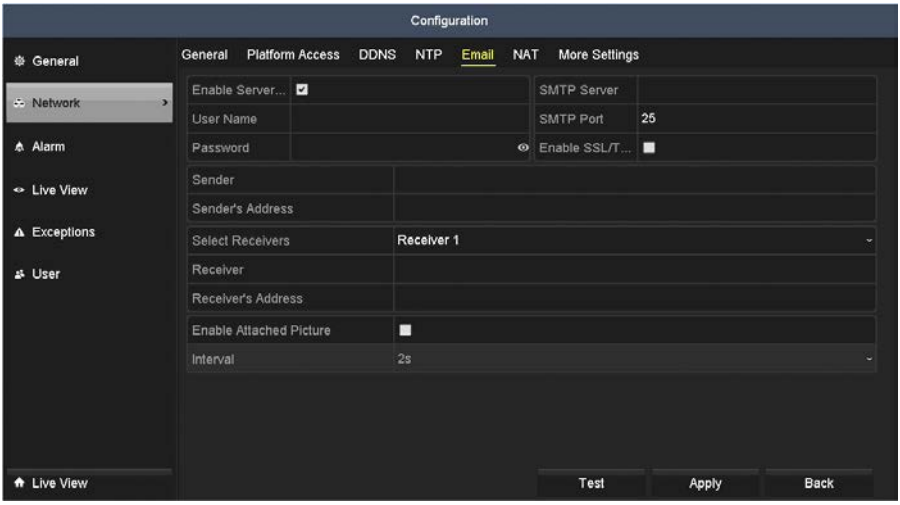
1. Open the Network Settings menu. Go to: **Menu | Configuration | Network | General**.

2. Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu. See "9.1 Configuring General Settings" on page 178 for more information.



3. Click **Apply** to save your settings and close the menu.

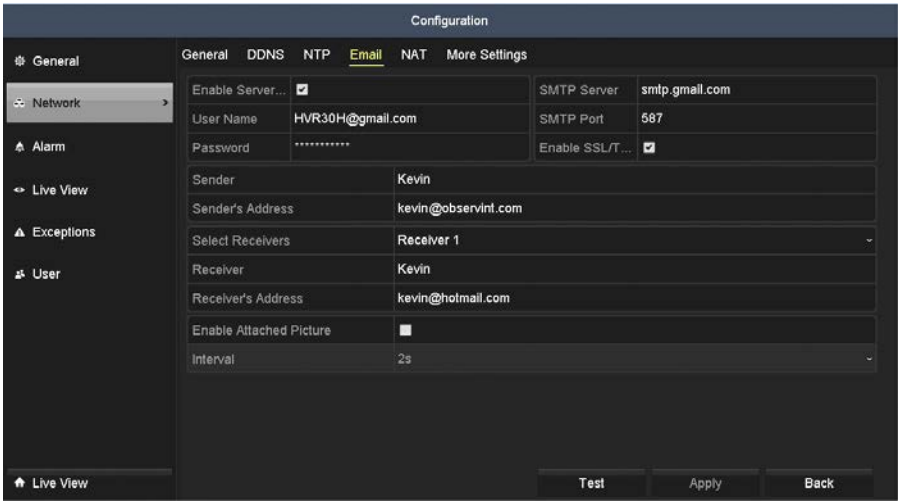
4. Click the **Email** tab to open the email settings men.



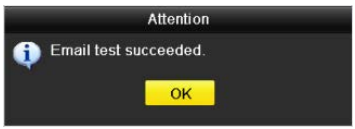
5. Configure the following Email settings:

- **Enable Server Authentication** (optional): Check the checkbox to enable the server authentication feature.
- **User Name**: The user account of sender's Email for SMTP server authentication.
- **Password**: The password of sender's Email for SMTP server authentication.
- **SMTP Server**: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).
- **SMTP Port No**.: The SMTP port. The default TCP/IP port used for SMTP is 25.
- **Enable SSL/TSL** (optional): Click the checkbox to enable SSL/TSL if required by the SMTP server.
- **Sender**: The name of sender.
- **Sender's Address**: The Email address of sender.
- **Select Receivers**: Select the receiver. Up to 3 receivers can be configured.
- **Receiver**: The name of user to be notified.
- **Receiver's Address**: The Email address of user to be notified.
- **Enable Attached Pictures**: Check the Enable Attached Picture box if you want to send email with attached alarm images. The interval is the time of two adjacent alarm images. You can also set SMTP port and enable SSL here.
- **Interval**: The interval refers to the time between two actions of sending attached pictures.
- **E-mail Test**: Sends a test message to verify that the SMTP server can be reached.

6. Click **Apply** to save your settings. A configuration using a Gmail email account may look like the following.



7. Click the **Test** button to test your Email settings. The corresponding **Attention** message box will pop up.

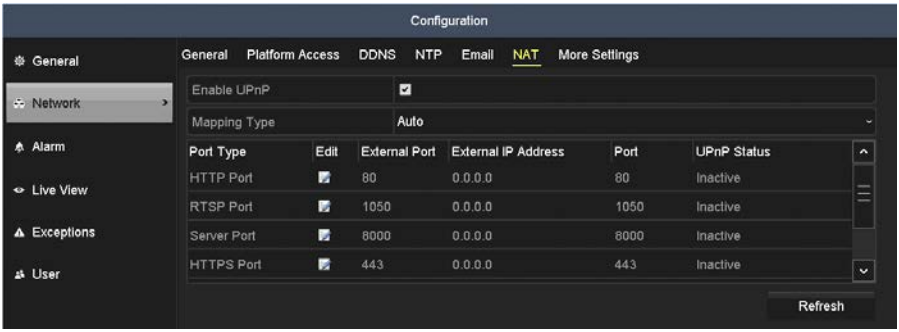


9.7 Configuring UPnP™

The Universal Plug and Play (UPnP™) feature allows the device to seamlessly discover other network devices and establish functional network services for data sharing, communications, etc. You can use the UPnP function to enable the fast connection of the device to the WAN via a router without port mapping. **NOTE**: Some routers do not support UPnP.

If you want to enable the UPnP function of the device, you must enable the UPnP function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

1. Open the Network NAT menu. Go to: **Menu | Configuration | Network | NAT**.



2. Check the **Enable UPnP** box to enable UPnP.

3. Open the Mapping Type drop down list, and then select either:

   — **Auto**: This option automatically sets the **External Port** numbers for the recorder. The **Port**s (internal network ports) used by the recorder for HTTP (80), RTSP (1050), Server (8000) and HTTPS (443) remain at their default values. The new external port numbers will appear on this display. Use these ports numbers when establishing a connection to the recorder from outside the local network.

   — **Manual**: This option allows you to change the **External Port** numbers by clicking the icon in the **Edit** column for the HTTP, RTSP, Server and/or HTTPS ports. The Ports (internal ports) remain unchanged.

4. If settings in this menu were changed, click **Refresh**, and then click **Apply** to save the changes.

SECTION 10
Managing HDDs

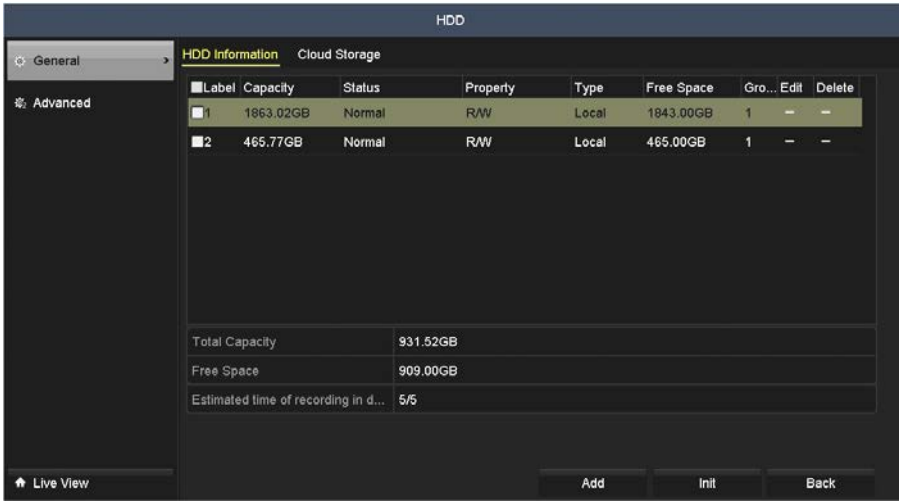
QVR storage (HDDs) is highly configurable. You can simply save data to the internal HDD(s) in the chassis, or add network based NAS or IP SAN devices to the system and save recordings and other data there. You can also define where data for each camera or groups of cameras is saved, and have 16 different storage groups. Before an HDD is used by the QVR, it must be initialized by the recorder. Preconfigured HDD(s) are already initialized.

If you add an internal HDD to the recorder, or replace an HDD in the recorder, it must be initialized before it can be used. See "10.1 Initializing HDDs" on page 188for more information.

10.1 Initializing HDDs

An HDD must be initialized before it can be used by the recorder to store data. Pre-installed HDDs are initialized by your vendor. Check the status of the HDD installed in the QVR to assure it is functioning normally.

1. Open the HDD Information display. Go to: **Menu | HDD | General**.



2. Check the status of the HDD. If the status is:

   - **Normal** or **Sleeping** - The HDD is working normally.
   - **Uninitialized** or **Abnormal** - Initialize the HDD before continuing. Check the select box of the HDD to initialize, then click the **Init** button at the bottom of the screen.
   - **Failed** - If the HDD failed during or after initialization, replace the HDD.

3. If you installed a new HDD in your QVR chassis, select the HDD in the window then click **Init** to initialize it for use. Allow the initialization procedure to complete before continuing.

10.2 Adding network HDDs to the system

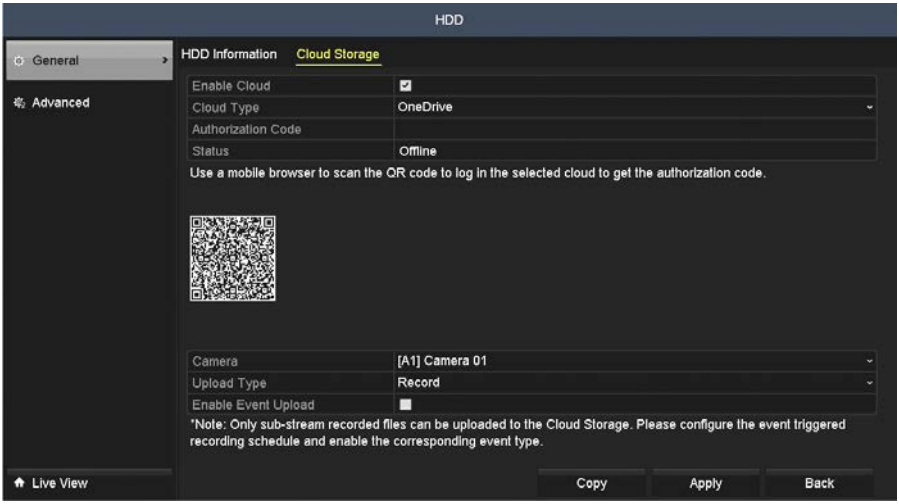
10.2.1 Using Cloud Storage

The Alibi Cloud Storage feature enables you to save camera video and event data to a cloud server. Supported cloud servers include OneDrive, GoogleDrive, and Dropbox. The server you choose to use must be configured prior to configuring this feature.

The **Authorization Code** required the menu shown below is obtained by scanning the QR code shown with a smartphone QR reader, and reading the code from that link.

To configure this feature:

1. Open the Cloud Storage menu. Go to: **Menu | HDD | Cloud Storage**.



2. Check the **Enable Cloud** box. By default, this feature is not enabled.

3. Open the **Cloud Type** drop down list, and then select either **OneDrive, GoogleDrive, or Dropbox**.

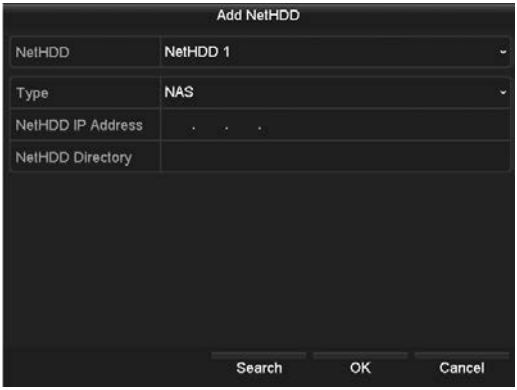
4. Scan the QR code with a QR reader, and then access your **Cloud Type** account. Copy the **Authorization code** provided in the account.

5. Enter the **Authorization Code** in the field provided.
6. Open the **Camera** drop down list, and then select the camera you want to configure with this feature.
7. If you want to upload event data for this camera, check the **Enable Event Upload** box.
8. Click **Apply** to save your settings.
9. To copy these settings to other camera:
    a. Click the **Copy** button.
    b. Check the boxes for the cameras you want to apply the settings to.
    c. Click **OK**.
    d. Click Apply in the **Cloud Storage** menu.

10.2.2 Using HDD Add

Additional file storage can be added to your QVR using up to 8 NAS disks, or up to 7 NAS disks with 1 IP SAN disk. The NAS device must support NFS and Unix/Linux file formats. To configure this storage:

1. Open the HDD Information interface. Go to: **Menu | HDD | General**.
2. Click the **Add** button at the bottom of the screen to open the **Add NetHDD** menu.



3. In the **NetHDD** drop down list, select the NetHDD ID (NetHDD 1 .. NetHDD 8) you want to add.
4. In the **Type** drop down list select either NAS or IP SAN.

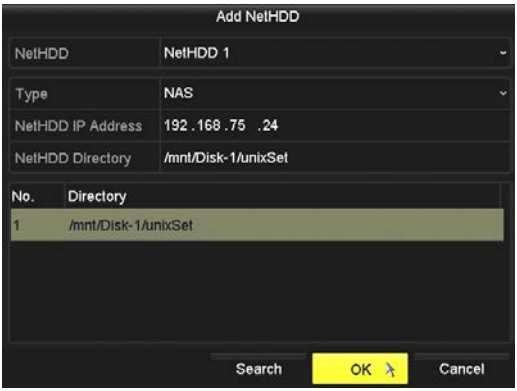
5. Configure the device type you selected.

— **For a NAS disk:**

i. Click the **NetHDD IP Address** field to open a virtual keyboard and enter the IP address of the storage device.

ii. Click the **Search** button to search for available NAS disks.

iii. Select the NAS disk directory from the list shown, or manually enter the directory in the text field of NetHDD Directory.



iv. Click **OK** to add the NAS disk to your system. The NAS will appear in the HDD Information menu.

— **For an IP SAN disk:**

i. In the **Add NetHDD** window, click the **Type field**, then select **IP SAN**.

ii. Enter the NetHDD IP address in the text field.

iii. Click **Search** to discover the available IP SAN disk directories on the network.

iv. Select the IP SAN disk directory from the list shown below.

v. Click **OK** to add the selected IP SAN disk to your system.

NOTE *If the added NetHDD is uninitialized, select it and click the* **Init** *button for initialization. Initializing an storage device erases all data saved on the disk.*

6. Add additional disks as needed up to a maximum of 8 NAS, or 7 NAS and 1 IP SAN. Note that HDDs added to the system may need to be initialized before use.

10.3 Configuring the HDD Partition/Group mode

By default, all cameras will record to the one partition(s) of the internal HDD(s). However, the QVR can be configured to allocate space in one of two modes:

- **Partition** mode: Each camera can be allocated it's own recording space on a storage device (HDD).
- **Group** mode: Groups of cameras can each be allocated recording space on a storage device. Configuring the HDD for Group recording mode requires an QVR reboot. You must have at least two HDDs (including internal and NAS/IP San HDDS added to the system) to configure Group mode.

To configure the recorder for Group mode:

1. Go to: **Menu | HDD | General**.

2. Click **Advanced** to check the storage mode of the HDD. If you prefer to use **Partition** mode, do the following:

a. Open the Camera drop down list and select the camera for which you want to allocate storage space.

b. Edit the **Max. Record Capacity** and the **Max. Picture Capacity** values to specify the space allocated to each.

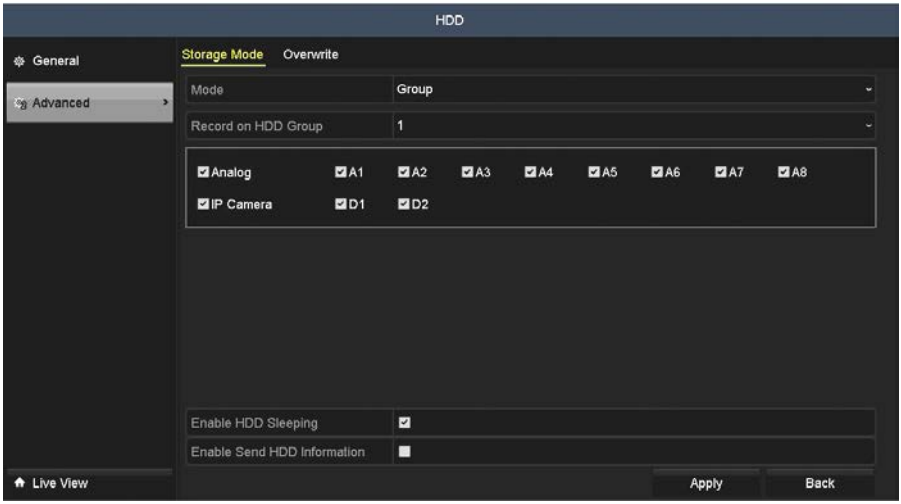
c. Click **Apply** to save the settings.

d. Repeat sub-steps a through c above for other cameras monitored by the recorder.

3. If you prefer to use **Group** mode, do the following:

a. In the **Mode** select field, select either **Group**. **NOTE**: If you are changing modes from Partition to Group, a system restart may be required.

b. Check the box(es) for the camera(s) you want to add to the group.



c. Click **Apply**. If you are changing the mode from Partition to Group, reboot the system.

d. After the reboot is complete, Go to: **Menu | HDD | General**.

e. Select an HDD from the list, and then click the icon in the **Edit** column to open the Local HDD Settings menu.

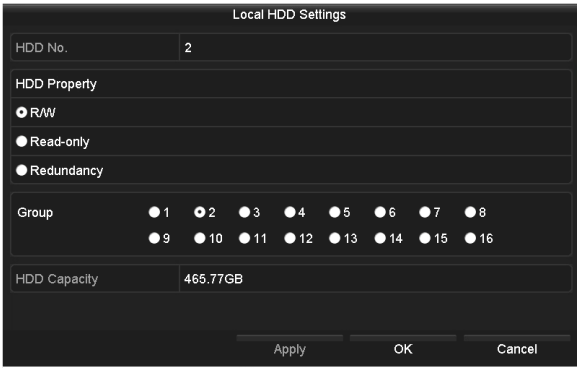
f. Select the Group number for the current HDD, and then click **OK** to confirm your settings. The default group number is 1.

g. In the pop-up Attention window, click **Yes** go complete the setup.

h. To configure an additional HDD for a different group of cameras, do the following:

i. Open the **Menu | HDD | General** menu.

ii. Click the icon in the **Edit** column of an HDD not assigned to a group.



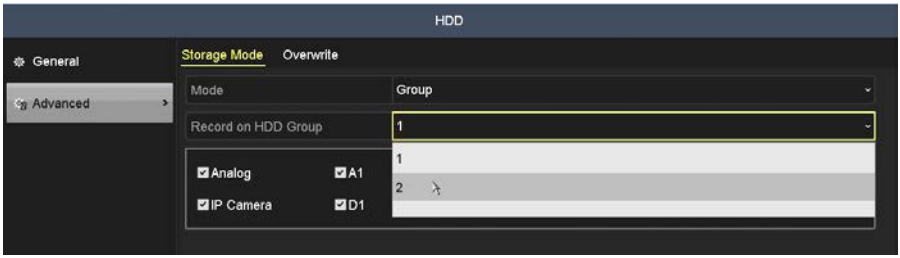
iii. In the Local HDD Settings window, click the HDD property you want to assign to the group.

iv. Select the Group number to assign to the HDD.

v. Click **Apply** to create the group, and then click **OK** to close the window.

vi. Open the **Menu | HDD | Advanced** menu.

vii. Open the Record on HDD Group field and select the number of the group you just created.



viii. Check the boxes for the cameras you want to add to the group.

ix. Click **Apply**.

x. Repeat steps **h.i.** through **h.x.** above to create additional groups to unassigned HDDs as needed.

10.3.1 Setting HDD property

In Group mode recording (systems with multiple HDDs), you can assign specific properties to each HDD. The HDD property can be set to either redundancy, read-only or read/write (R/W). For instance, an HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode. When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

To change an HDD's properties:

1. Open the HDD Information display. Go to: **Menu | HDD | General**.

2. Select HDD from the list and click the icon in the **Edit** column to enter the Local HDD Settings menu.

3. Set the HDD property to R/W, Read-only or Redundancy.

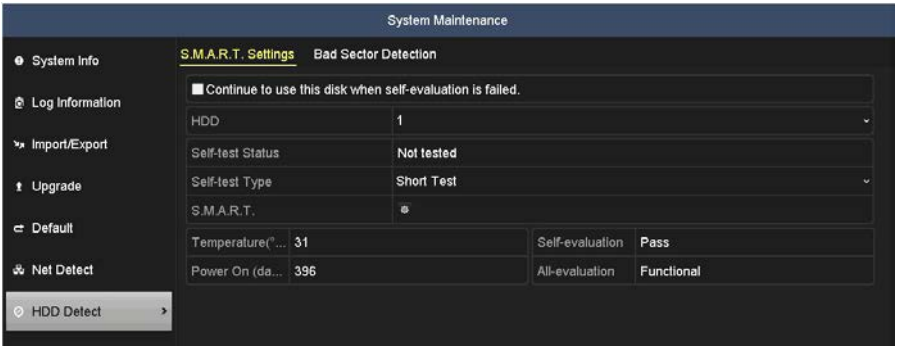
4. Click **OK** to save the settings and close the menu. The new HDD property will be shown in the HDD Information display.

10.4 HDD Maintenance

The **HDD Detect** feature provides two methods of monitoring the HDD: display of **S.M.A.R.T.** (Self-Monitoring, Analysis and Reporting Technology) data, and **Bad Sector Detection**. These methods can be used to assure the normal functioning of the disk, and anticipate failures.

10.4.1 S.M.A.R.T. Display

1. Open the S.M.A.R.T. display menu. Go to: **Menu | System Maintenance | HDD Detect**.



2. To execute a self-evaluation test on an HDD:

   a. On the **HDD** line, open the drop down list to select the HDD of interest.

   b. On the **Self-test Type** line, open the drop down list to select the type of test to execute. You can choose either Short Test, Expanded Test or Conveyance Test.

   c. Click the icon on the **S.M.A.R.T.** line to execute the test. Allow the test to complete before continuing. The result of the test is shown on the Self-evaluation line.

3. Examine the S.M.A.R.T. data provided for the HDD. Check to ensure that the data in the value and Worst column does not exceed the data in the Threshold column.

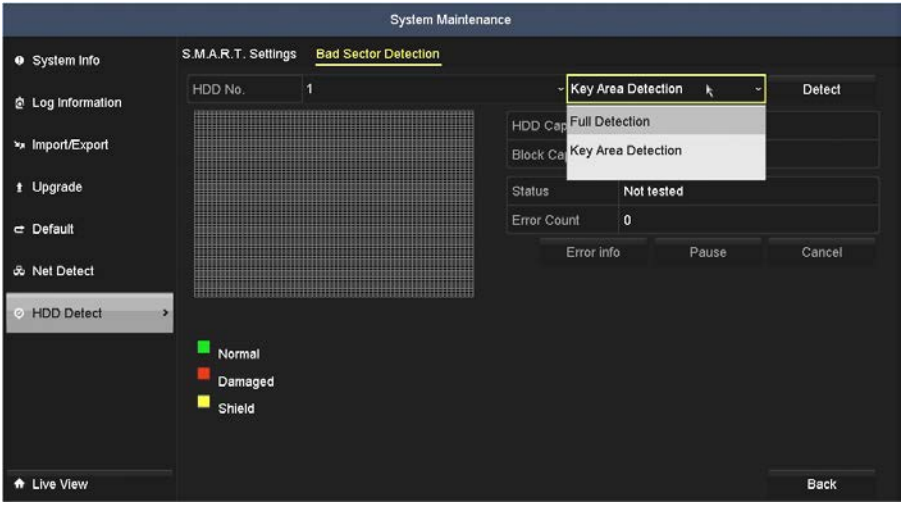
NOTE *S.M.A.R.T. data provided by each HDD manufacturer is usually different. Refer to the manufacturer's website for S.M.A.R.T. data definitions.*

10.4.2 Bad Sector Detection

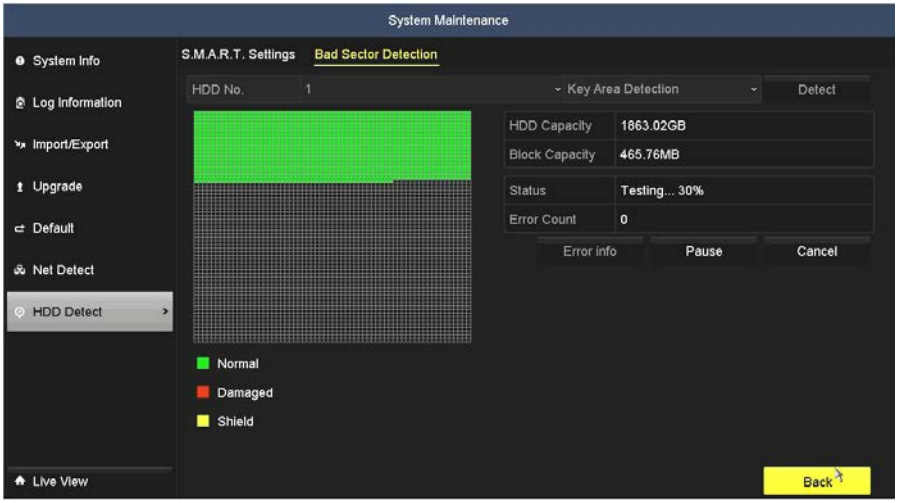
1. Open the Bad Sector Detection menu. Go to: **Menu | System Maintenance | HDD Detect | Bad Sector Detection**.

2. On the **HDD No.** line, open the drop down list and select the number of the HDD you want to test.

3. Open the drop down list to the right of the HDD number, and then select either **Key Area Detection** or **Full Detection**. Key Area Detection will execute an abbreviated surface analysis test of the HDD.



4. Click the **Detect** button to start the test. Bad sectors are identified in the array as red colored cells.



Click **Pause** to temporarily stop the scan, and click **Cancel** to end the scan.

Click **Error info** to see the detailed damage information.

10.4.3 HDD status reporting

The HDD monitoring features include an option to report the HDD status daily. To use this feature:

1. Open the HDD Advanced menu. Go to: **Menu | HDD | Advanced**.

2. Check the **Enable Send HDD Information** box at the bottom of the screen.

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

SECTION 11
System Maintenance

The Maintenance menus provide several displays that report system device information, log information, and network traffic. Features also include the export and import of the system configuration file, firmware upgrade, and factory reset.

11.1 System Information

The System Information displays include status reports of the QVR, cameras, record settings, the network and the HDDs. The configuration settings shown on these displays can only be changed in other areas of the menu system.

1. To open the System Information displays, Go to: **Menu | Maintenance | System Info**:

The Device Info tab includes information about the QVR. Other tabs show the configuration settings for **Cameras**, **Record**ings, **Network**, and **HDD** settings. To view information about other parts of the system, click the appropriate tab.

11.2 Log Information

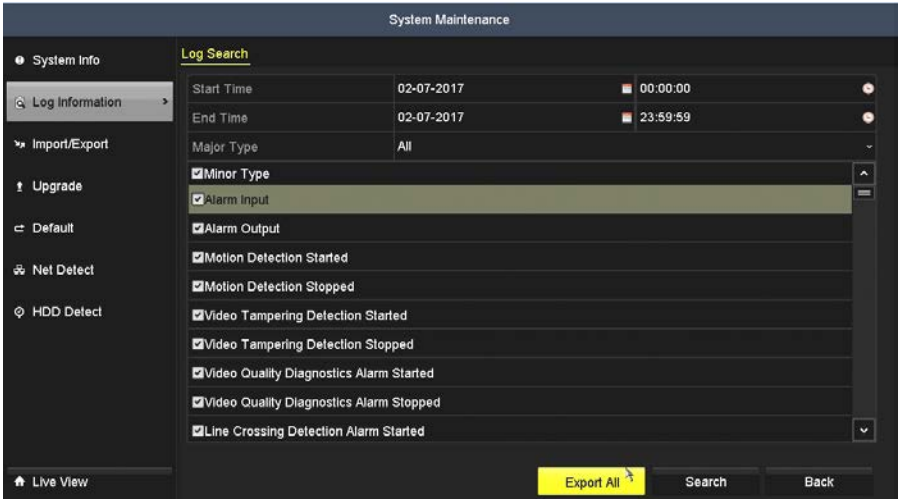
System log information is continuously generated and saved in log records. System logs include the following types of entries:

- Alarms events - Start/stop motion detection, start/stop tamper detection etc.
- Exception conditions - Video loss, illegal login, HDD full/error, IP camera disconnected, network disconnected, etc.
- Information events - Start/stop recording, local/network HDD information, HDD S.M.A.R.T., etc.
- Operation events - power on, login, local operation logout, etc.

System logs can be searched and sorted for specific entries, and archived for use later. You can also search for video clips through system logs.

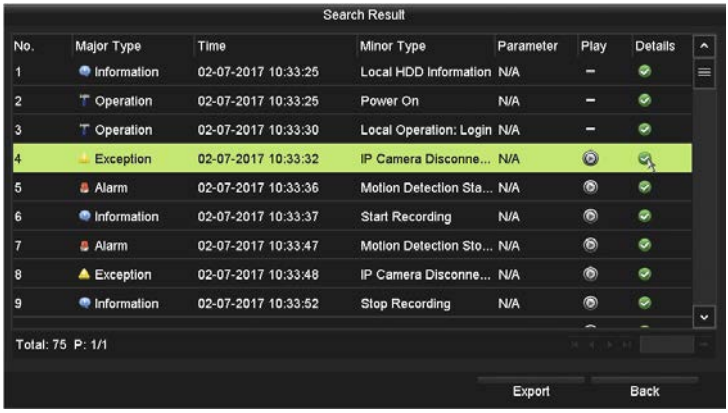
11.2.1 Log Search

1. Open the Log Information screen. Go to: **Menu | Maintenance | Log Information**.

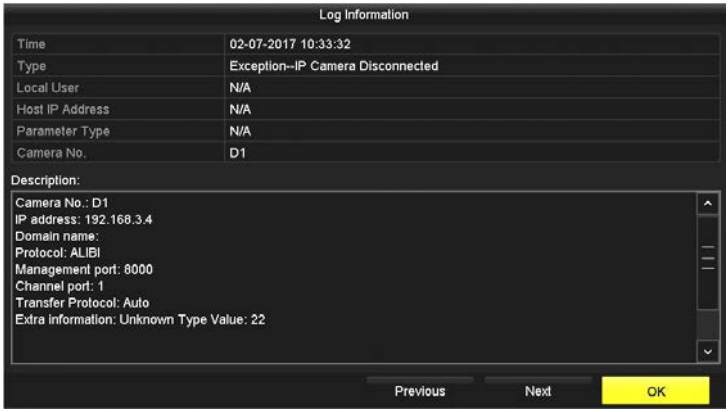


2. Select a **Start Time**, End Time, **Major Type** and **Minor Type**. You can modify your search to find only specific log messages. In the example below, the search criterion specified are "All" (Major Type) entries with "All" (Minor Type).

3. Click **Search**. If the search didn't find a file matching your search criteria, the message **No matched log file.** will appear.



4. You can Export the result of the log search (click Export), choose a log entry with record file and click the playback button to play the file, or click the icon in the Details column to see more information about the entry. The Log Information Details screen is shown below.



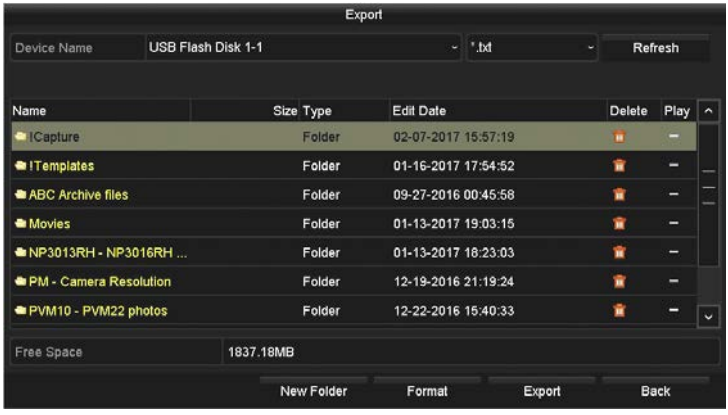
11.2.2 Log Export

Log information can be exported to a backup device such as a USB storage device. The exported log file is in .txt format and readable with an ASCII text viewer such as Microsoft® Windows® Notepad or Wordpad. The filename, prefixed with the date and timestamp, in the format *YYYYMMDDHHMMSSlogBack.txt*. To export the log file:

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to a QVR USB port.

2. Open the Log Information menu. Go to: **Menu | Maintenance | Log Information**.

3. Click the **Export All** button to display the QVR storage devices.

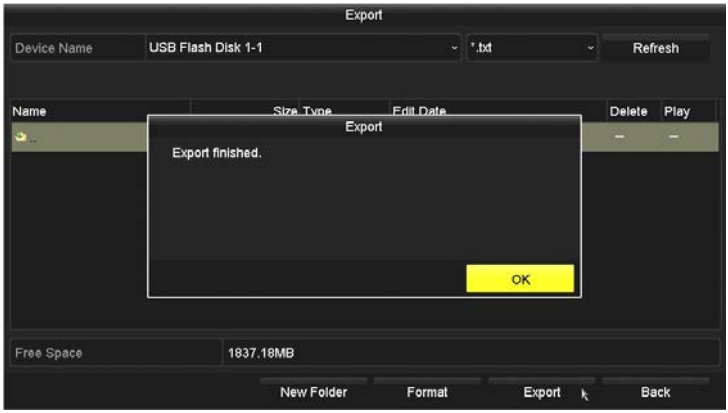


4. On the **Device Name** line, open the drop down list and select the destination for the file export.

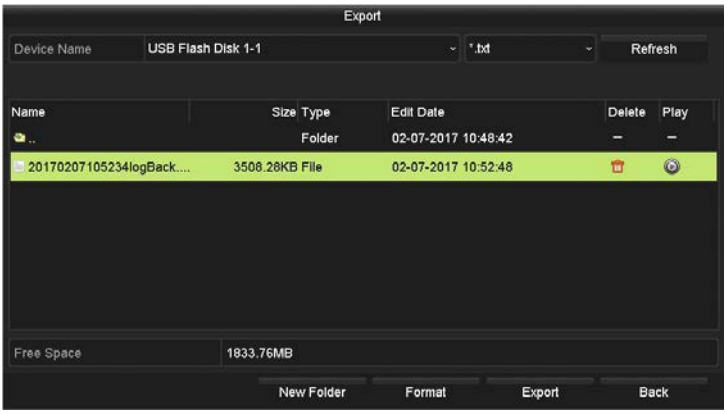
5. Double click on the directory (if available) you want to export the log to, or click **New Folder** create a new directory on the device.

6. Open the directory where the Log export will be saved by double clicking on it.

7. Click the **Export** button to start the **Export**. Allow the operation to finish before continuing. A status message will appear.



8. Check the Export result on a computer by opening a file that was saved.

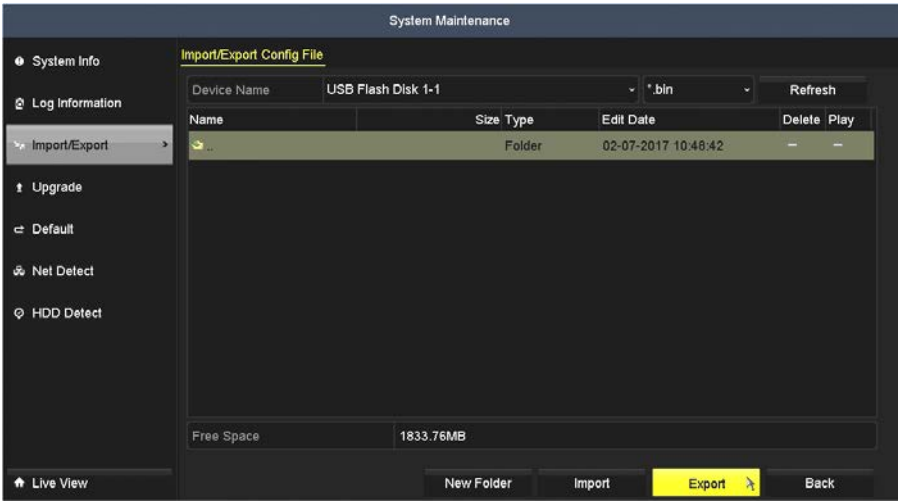


11.3 Import / Export system configuration

You can export the QVR configuration, then import the file later to restore the earlier configuration.

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, to the QVR USB port.

2. Open the **Import/Export** menu. Go to: **Menu | Maintenance | Import/Export**.



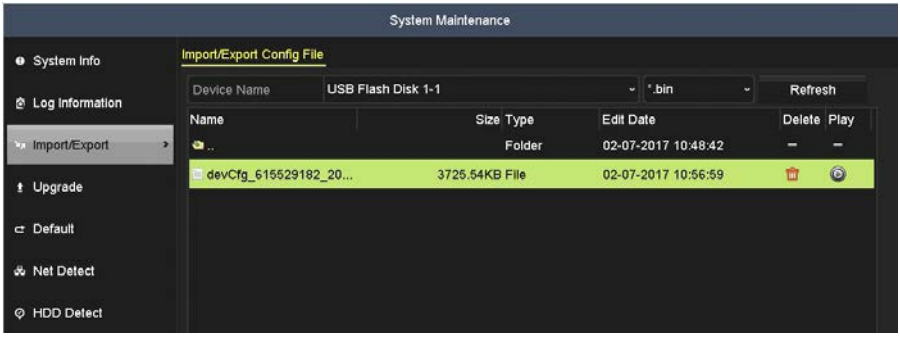
Export configuration file

1. On the **Device Name** line, open the drop down list and select the destination for the exported configuration file. The example above shows the export will be made to the USB drive.

2. Click the **Export** button to start the export. Allow the operation to finish before continuing. When the export operation is successful, an "Attention" "Export succeeded" pop-up window will open.

3. Click **OK** to close the pop-up window.

NOTE *The configuration backup file a binary file with a timestamp in the format devCfg_<code>_YYYYMMDDHHMMSS.bin*



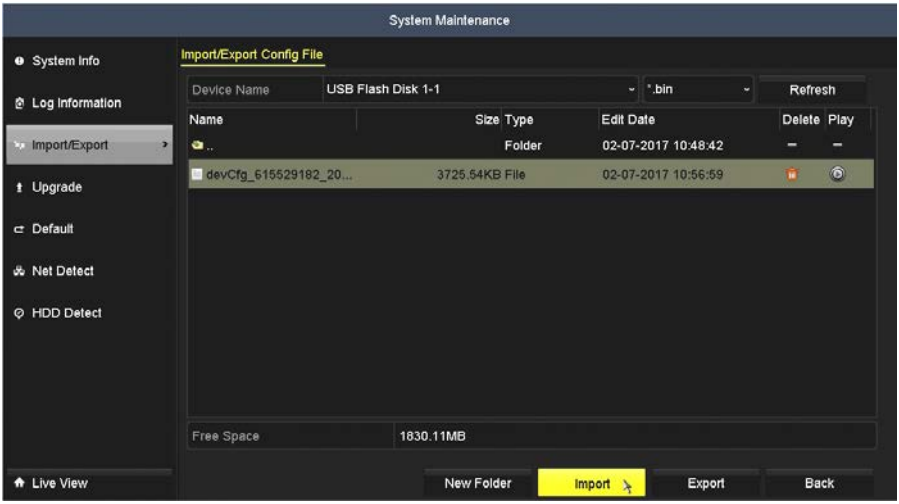
4. Record the name of the exported file for future reference.

Import configuration file

1. Attach an USB storage device, such as a USB flash drive or USB disk drive, with the configuration file to a QVR USB port.

2. Open the **Import/Export** menu. Go to: **Menu | Maintenance | Import/Export**.

3. On the **Device Name** line, open the drop down list and select the source device with the exported configuration file. The configuration backup file is a binary file with a timestamp in the format *devCfg_<code>_YYYYMMDDHHMMSS.bin*



4. In the file list of the USB device, highlight the QVR configuration file you want to load, and then click **Import** (see the screen above).

5. When the Attention message box opens, click **Yes**.

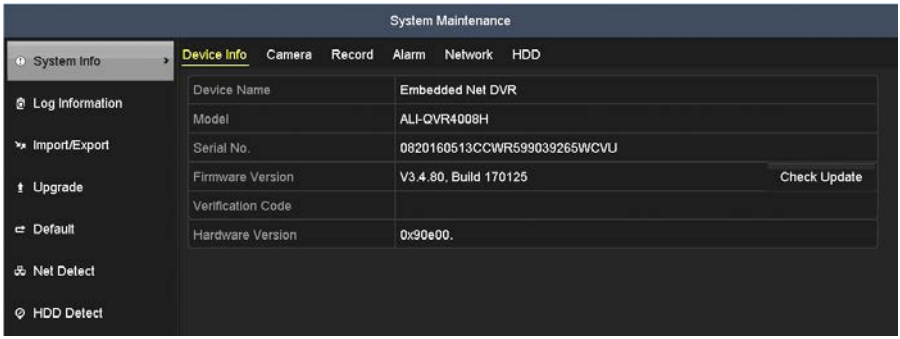
6. Allow the QVR to fully reboot, then use it normally.

11.4 Upgrade Firmware

You can upgrade the firmware through **Guarding Vision** cloud (when enabled), from a local USB device, or from a locally accessible FTP server. You should check the current Firmware version before upgrading your QVR firmware. Firmware upgrade should only be performed when recommended by your Alibi support organization. The firmware file is usually provided in compressed format, and must be decompressed before it is installed. The uncompressed QVR firmware file is usually named **digicap.dav**.

A reboot is usually required when installing new firmware.

1. To check the current firmware version, open the System information display. Go to: **Menu | Maintenance | System Info**.



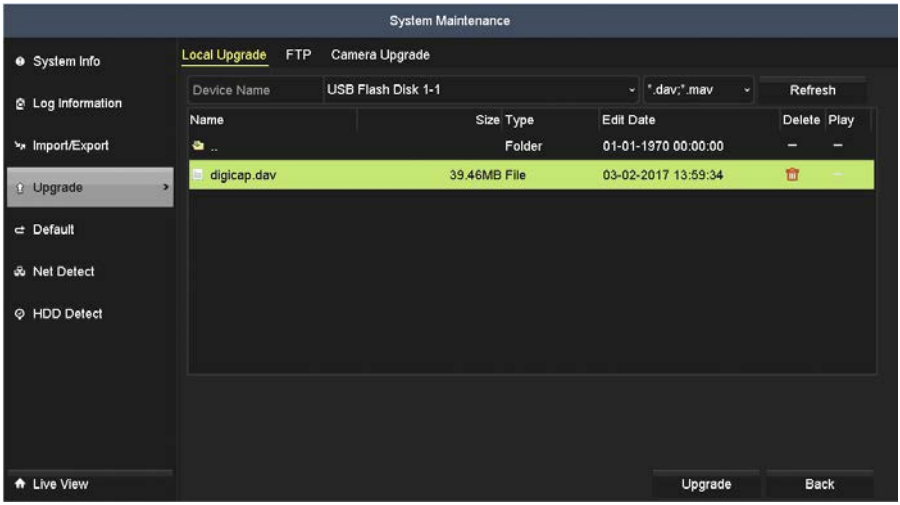
2. If installing the firmware from **Guarding Vision**:

    a. Click the **Check Update** button. If the current firmware version is the up to date, an Attention window will appear stating that your firmware "*.. is the latest available*". If a newer version is available, follow the onscreen instructions to install the new firmware.

3. If installing the firmware manually (with a USB drive):

    a. Attach a USB storage device, such as a USB flash drive or USB disk drive, contains the firmware upgrade file to a QVR USB port.

    b. Click the **Upgrade** tab on the left.



c. Navigate to and highlight the file containing the firmware to be install.

d. Follow the on-screen instructions to complete the installation before continuing.

4. If installing firmware from a local device such as a USB flash drive or disk:

a. Connect the local device to the QVR, if necessary.

b. Open the **Device Name** drop down list and select the device that contains the firmware.

c. Click the firmware file you want to load. The firmware file is often named **digicap.dav**. See the window above.

d. Click the **Upgrade** button, the follow the on-screen instructions for completing the upgrade before continuing.

5. If installing firmware from an **FTP server**:

a. Click the **FTP** upgrade tab at the top of the menu.

b. Enter the IP address of the FTP server in the menu.

c. Navigate to and then click on the firmware file you want to load.

d. Click the **Upgrade** button, the follow the on-screen instructions to complete the upgrade before continuing.

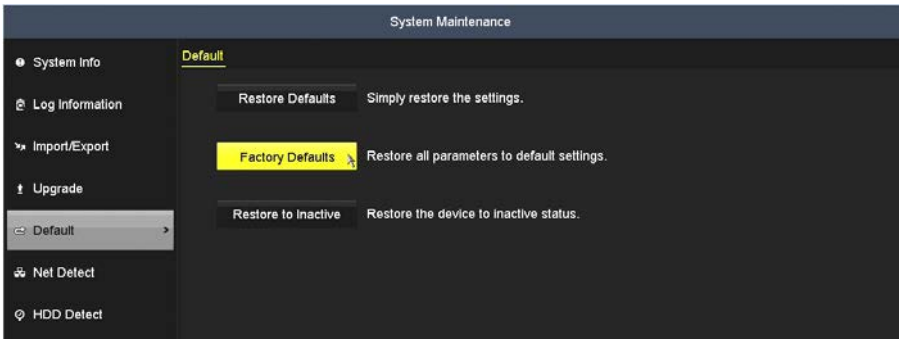
6. Open the System Information screen and verify that the new firmware version is installed.

11.5 Default

The default options enable you to revert the configuration to its original settings in one of three ways. A reboot is often required to complete the operation (see below).

To restore the device to a default configuration:

1. Open the Log Information menu. Go to: **Menu | Maintenance | Default**.



2. Click one of the following options:
   - **Restore Defaults**: Restore all parameters, except the network (including IP address, subnet mask, gateway, MTU, NIC working mode, default route, server port, etc.) and user account parameters, to the factory default settings.
   - **Factory Defaults**: Restore all parameters to the factory default settings.
   - **Restore to Inactive**: Restore the device to inactive status.

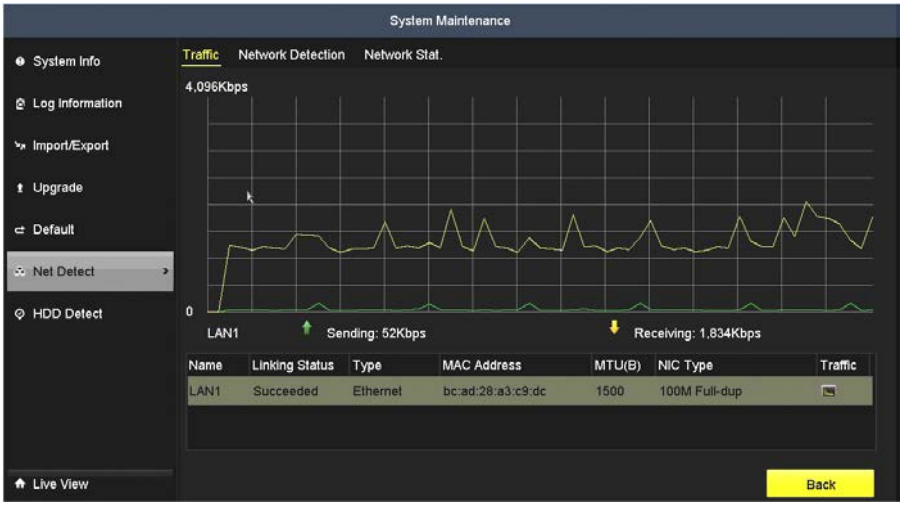
3. Follow the on-screen instructions to complete the restore operation.

11.6 Net Detect

11.6.1 Checking Network Traffic

You can see real-time information of your QVR network traffic, such as linking status, MTU, sending/receiving rate, etc. The traffic data is refreshed every 1 second.

Open the Network Traffic menu. Go to: **Menu | Maintenance | Net Detect**.



You can view the sending rate and receiving rate information on the interface. Traffic data is refreshed every 1 second.

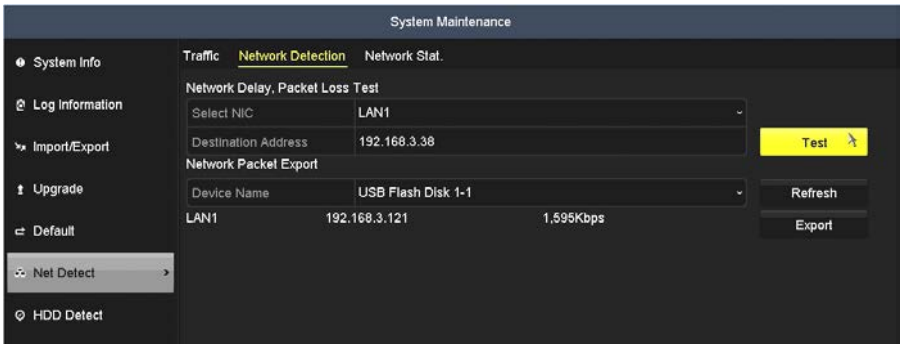
11.6.2 Testing Network Delay and Packet Loss

1. Open the Network Traffic menu. Go to: **Menu | Maintenance | Net Detect**.

2. Click the **Network Detection** tab to open the menu.

3. Click on the **Destination Address** field, then use the virtual keyboard to enter a address to connect (*ping*) to. In the field shown below, 1492.168.75.3 was entered in the destination field.

4. Click the **Test** button to begin the test for network delay and packet loss. The testing result appear in the window. If the testing is failed, the error message box will open.



11.6.3 Exporting Network Packet

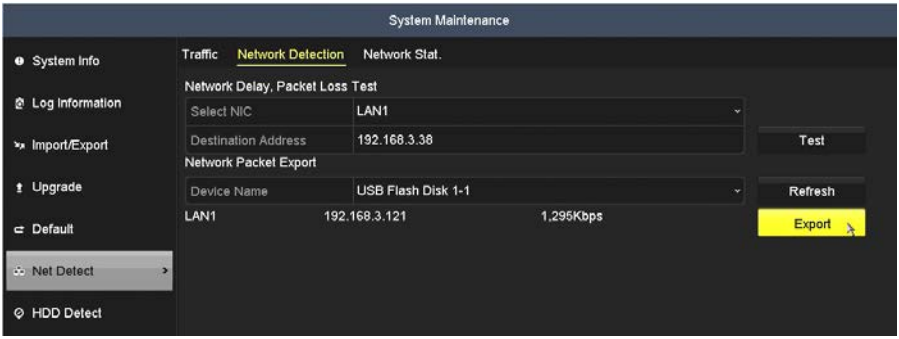
By connecting the QVR to network, the captured network data packet can be exported to a USB device such as a flash drive, HDD, DVD-R/W and other local USB backup devices.

1. Open the Network Traffic menu. Go to: **Menu | Maintenance | Net Detect**.

5. Click the **Network Detection** tab to open the Network Detection menu.

6. Select the backup device from the **Device Name** drop down list. In the example below, the packet is being exported to USB1-1.

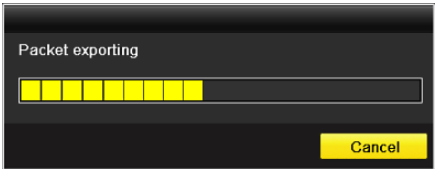
Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, verify that it is compatible with the QVR. Format the backup device if the format is incorrect.



Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, verify that it is compatible with the QVR. Format the backup device if the format is incorrect.

7. Click the **Export** button to start the export.

8. When the export is complete, click **OK**. Up to 1 M data can be exported during one operation.

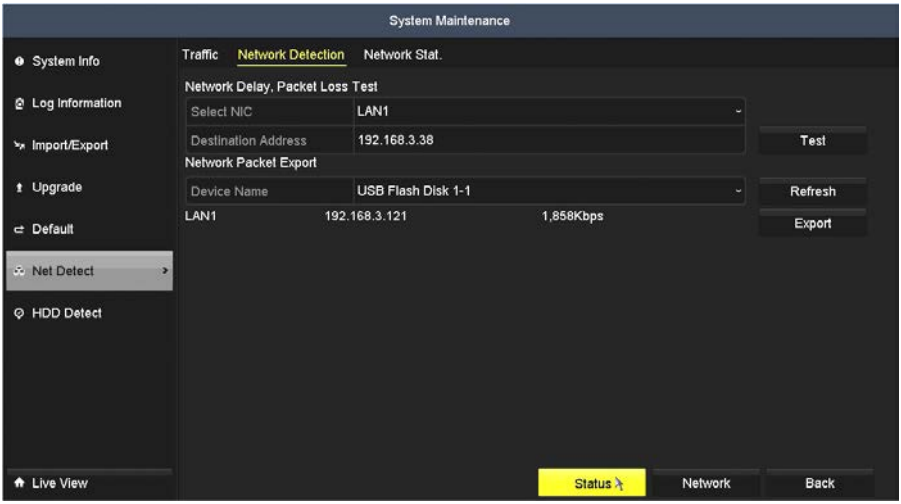


11.6.4 Checking the network status

You can also check the network status and quickly set the network parameters.

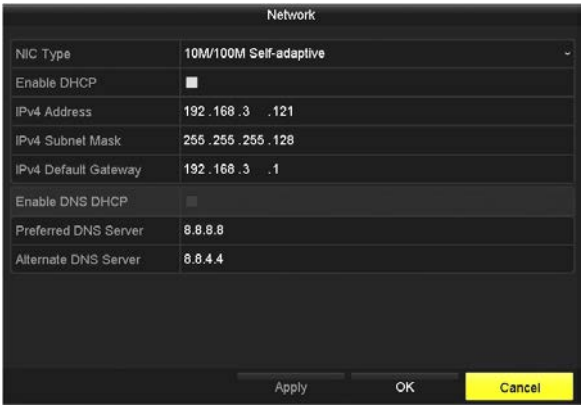
1. Open the Network Traffic menu. Go to: **Menu | Maintenance | Net Detect**.

2. Click the **Network Detection** tab to open the Network Detection menu.



3. Click the **Status** button at the bottom of the screen to report the status.

4. If the message box shows shows an error, click the **Network** button to open the **Network** parameters menu. After changing parameters, click **Apply**, and then click **OK** to save your settings.

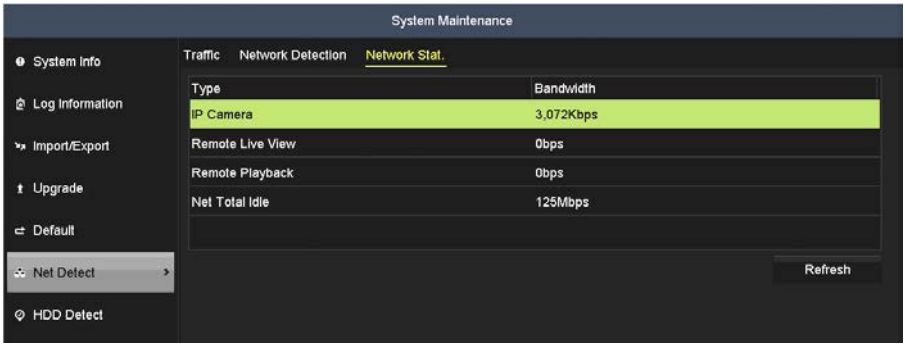


11.6.5 Checking Network Statistics

Use the following procedure to view real time network status of your QVR.

1. Open the Network Traffic menu. Go to: **Menu | Maintenance | Net Detect**.

2. Click the **Network Stat.** tab to open the Network status report.



Use this display to check the bandwidth of the IP Camera, bandwidth of Remote Live View, bandwidth of Remote Playback, bandwidth of Net Receive Idle and bandwidth of Net Send Idle.

3. Click the **Refresh** button to show the current status.

SECTION 12
Remote Access

If your QVR is connected to a local network (LAN), you can access it from another computer on the LAN through Microsoft® Internet Explorer® (only).

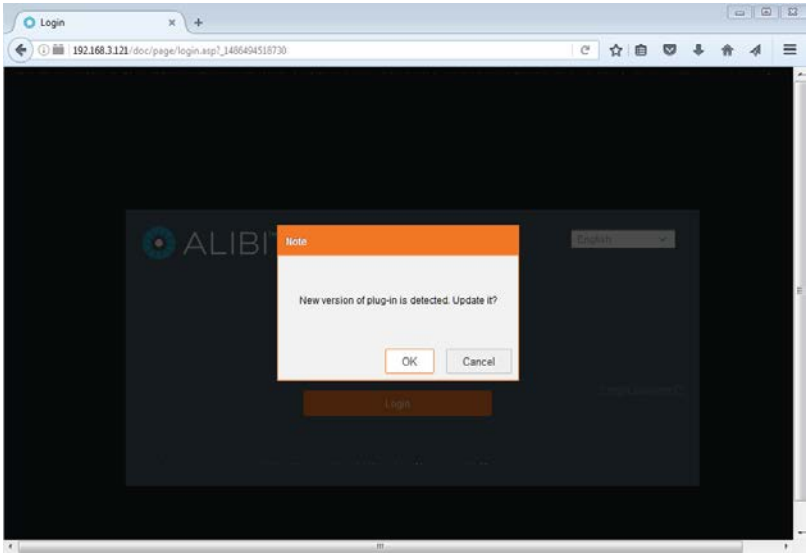
When connecting to the QVR, you must enter a User Name and Password. Note that some user permissions disallow remote access and/or features of this access method.

When logging into the QVR from a remote computer for the first time, you must install a plug-in program named WebComponents. The procedure for installing the program using Internet Explorer 11 is shown below. Subsequent log ins do not require you to reinstall WebComponents.

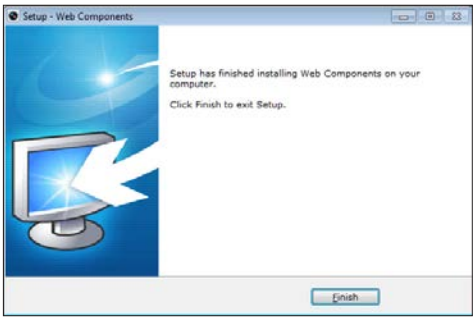
12.1 Login

To access the QVR from a computer on the LAN:

1. Open an Internet browser on your remote compute and enter the IP address of the QVR in the URL field. In the example below, the IP address of the QVR is 192.168.3.121. If this is the first time you log into an Alibi recorder with this version of firmware, the following screen will appear, requiring you to install a plugin. If not, go to step 3 below.

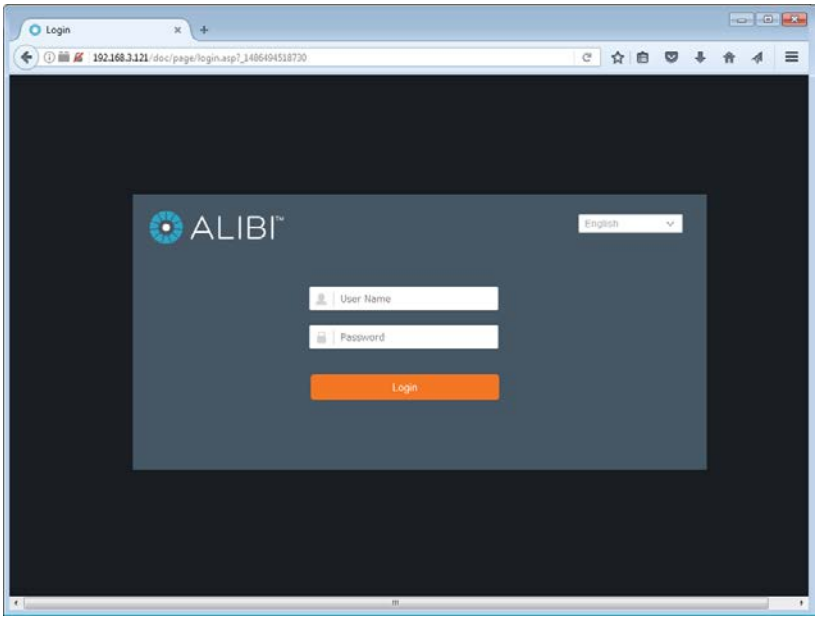


2. If the screen above appears, click **OK** , close the browser, and follow the on-screen instructions to install the plugin. When the plugin is successfully installed, the following screen will open.



3. In the screen above, click **Finish**.

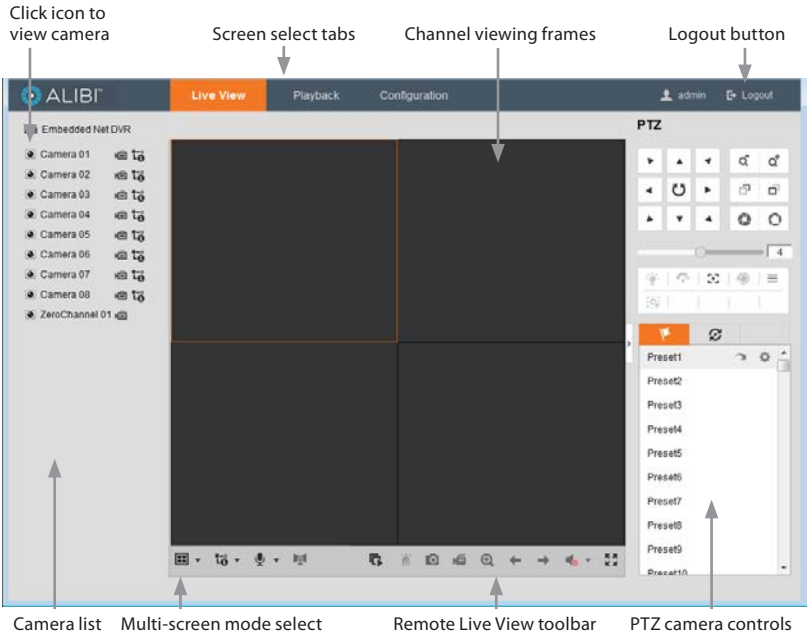
4. Reopen **Internet Explorer** and then enter the IP address of the recorder in the URL field.



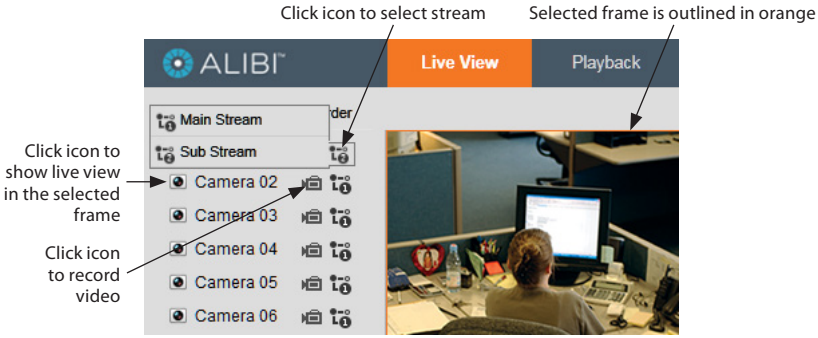
5. In the Login screen shown above, enter your *admin* username and password, and then click **Login**. A **Live View** window will open.

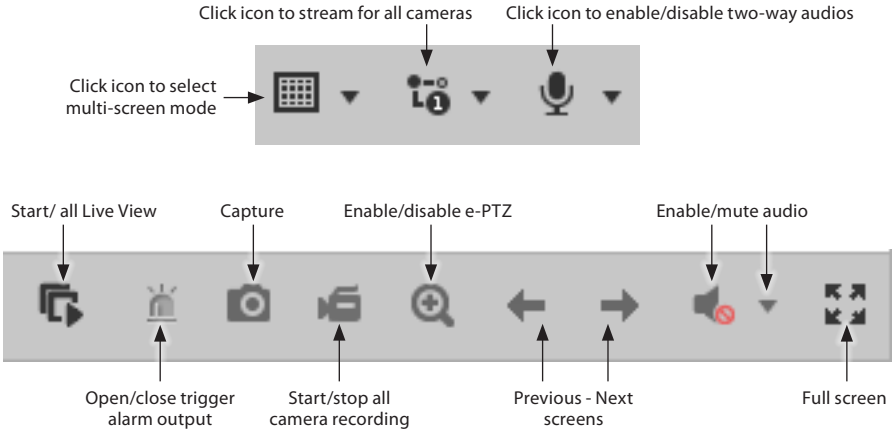
12.2 Live View screen

The Live View window initially appears in a multi-screen configuration with no live view images shown. The display lists only the cameras configured in the QVR. In this tab, you can change the viewing screen layout by clicking the multi-screen select button and selecting the icon for a 1 screen a 2 x 2 layout, or other layouts depending on how many channels the recorder supports.



Screen icons



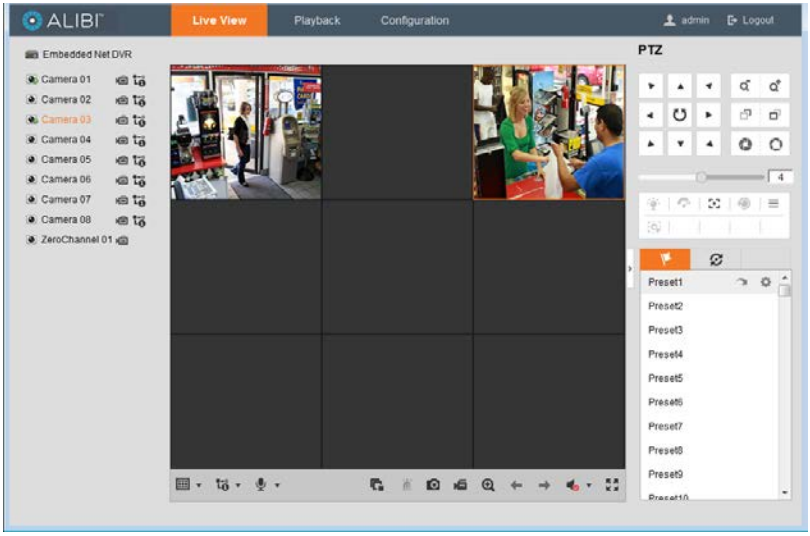


* POS - Point of Sale

For **PTZ controls**, refer to "5.1 PTZ Control Panel" on page 50.

To view video from a camera in the Live View screen:

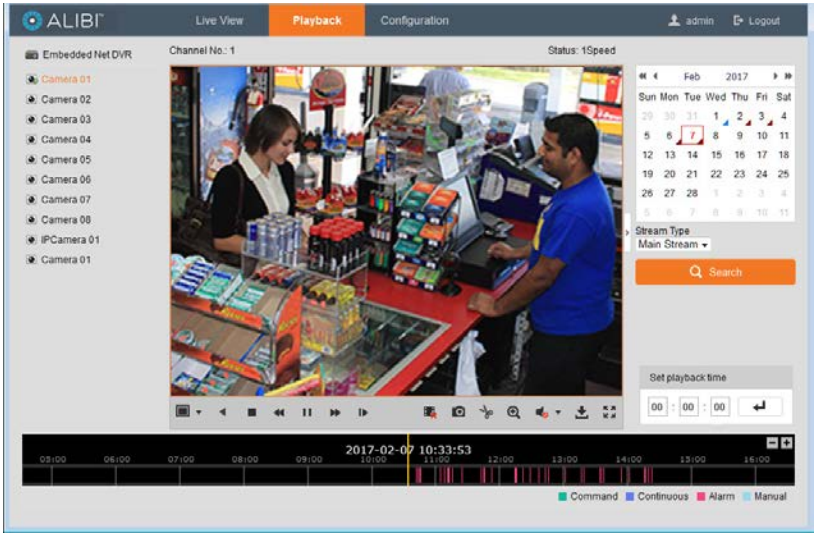
- Click a viewing frame to select it. When selected, the frame is surrounded by a bright box.
- Double click the camera channel you want to see.

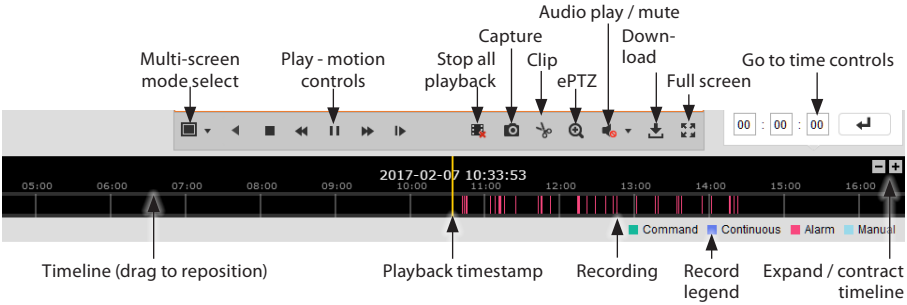


- To expand the image to full frame, double click the image in the viewing frame. To return to normal viewing mode, press **ESC** (keyboard escape key).

12.3 Playback screen

Open the Playback screen by clicking **Playback** in the screen header. The Playback screen allows you to review video recorded from one camera or several cameras concurrently. Also, video can be downloaded to your local computer.





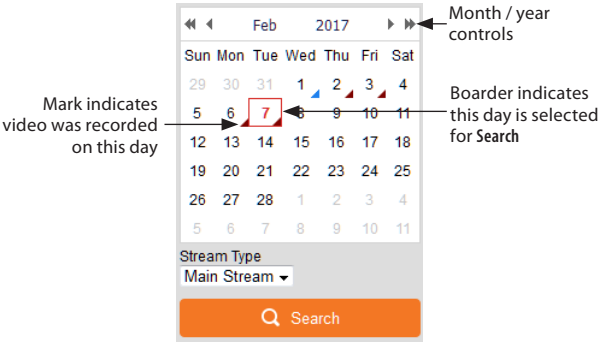
To playback recorded video:

1. Click the multi-screen mode button to select the number of viewing frames you need to display. You can select either a 1, 2 x 2, or 3 x 3 frame pattern, depending on the number of channels in the QVR you are using.

2. In the left frame, click the camera channel you want to play recorded video from. In the example above, *Camera 03* was selected.

3. Select the **Stream Type** you prefer from the drop-down list.

4. In the right frame, click the date when the video was recorded, then click the **Search** button. In the example above, February 7, 2017 was selected.

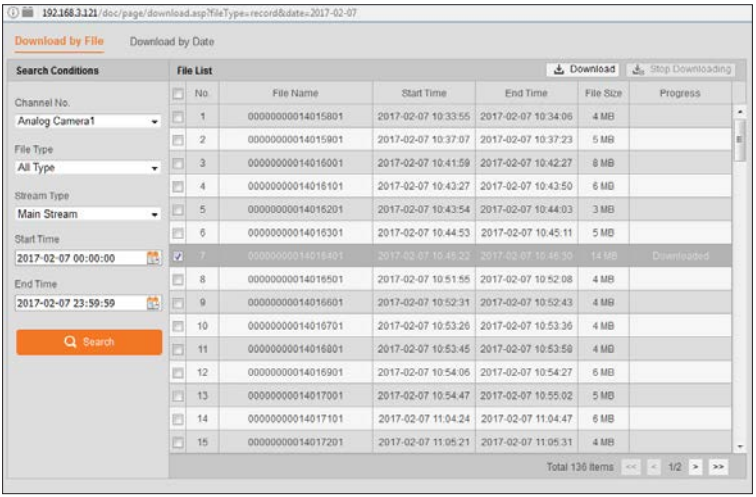


5. At the bottom of the screen, drag the timeline left or right to find when video was recorded for the camera selected. The condition that caused video to be recorded is indicated by a colored band on the timeline. The color legend is shown at the lower right corner of the window.

6. Click the **Play** icon om the toolbar to begin playing video.

To Download recorded video:

1. Click the **Download** icon.



2. Click on the box to check mark the video segment you want to download.

3. Click the **Download** button at the top of the window. Download status is shown in the **Progress** column. Downloaded files are saved in the location shown on the **Configuration | Local** screen. Allow the download to complete before closing the browser.

12.4 Configuration screen

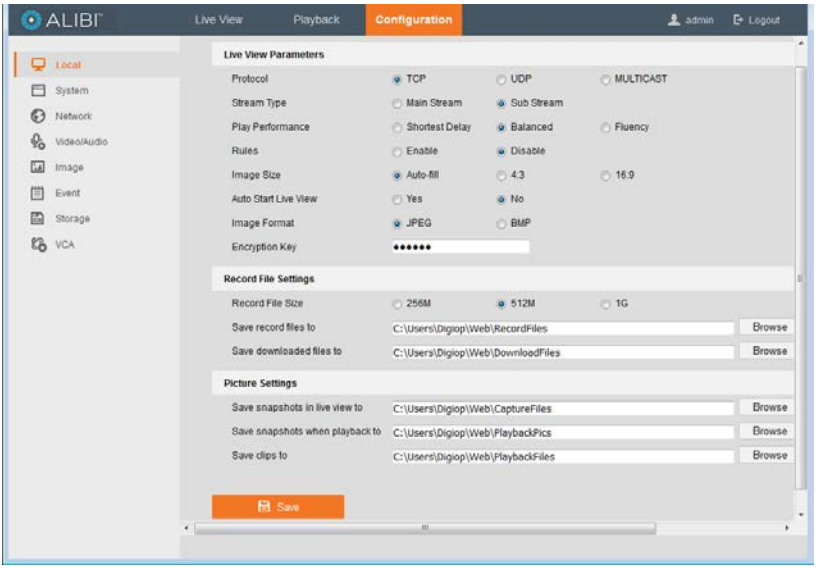
Open the Configuration screen by clicking **Configuration** in the screen header. The Configuration menu enables you to view the QVR configuration and make configuration changes. The User Name you use to login to the QVR must have administrative privileges to change the QVR configuration.

Options in the configuration menu are identical to those in the embedded QVR **Menu** system. For more information on how to use these options, refer to the QVR **Menu** descriptions in previous sections of this manual. After making configuration changes click **Save** to apply your changes.

12.4.1 Local Configuration

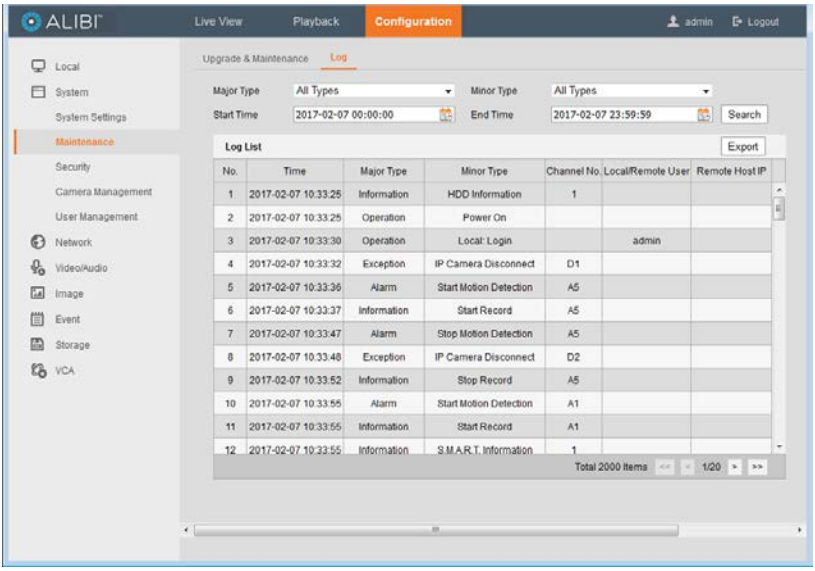
The Local configuration menu is used to set the Live View parameters, and define the location where Recordings and Pictures are stored on the local computer (computer you use to remotely log into the QVR).

To open the Local Configuration screen, go to: **Configuration | Local**.



12.4.2 Log information

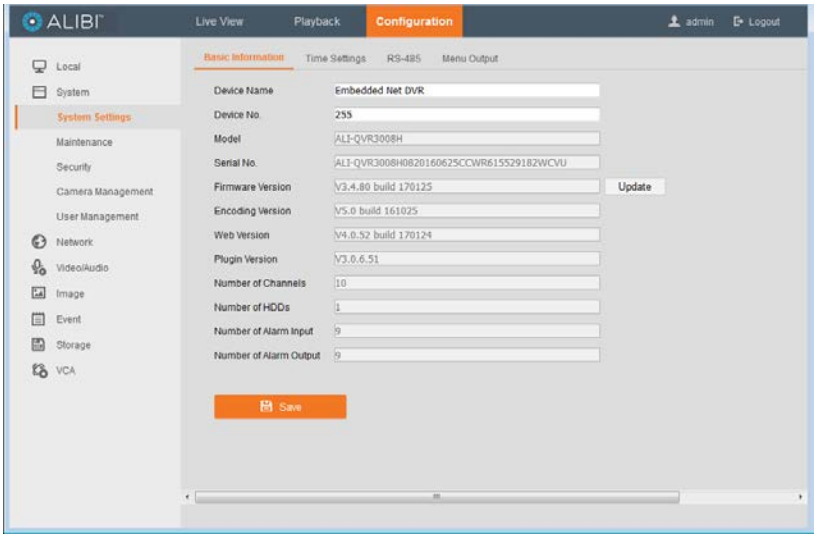
Open the Log screen by clicking **Configuration | Maintenance | Log**.



The QVR Log report is created by specifying a search criteria using the options at the top of the window, and then clicking the **Search** button. The search criteria menu includes filters to search for Major and Minor type events, and specify the start and end time of the report. Log reports can be saved in either text or Excel formats by clicking **Export**.

12.4.3 Basic Information

Open the Basic Information screen by clicking **Configuration | System**.



The Basic Information screen shows the device Model , serial number and firmware versions installed in the QVR. In this screen you can also change the default **Device Name** and **Device No**.

SECTION 13
Cleaning

Clean the QVR and camera lenses a with a mild glass cleaning solution and a lint free cloth.

- Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.
- Dust can be removed from equipment by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.

Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surfaces. Before using any chemical product, read the instructions carefully.

APPENDIX A Glossary

Dual Stream: Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the QVR, with the main stream having a maximum resolution of 1080p and the sub-stream having a maximum resolution of 960H (WD1).

HDD: Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.

DHCP: Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.

HTTP: Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network

PPPoE: PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.

DDNS: Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.

Hybrid DVR: A hybrid DVR is a combination of a DVR and NVR.

NTP: Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.

NTSC: Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60 Hz.

DVR: Acronym for Digital Video Recorder. An DVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.

PAL: Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50 Hz.

PTZ: Acronym for Pan, Tilt, Zoom. PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.

USB: Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

APPENDIX B FAQ

Q Why does my QVR make a beeping sound after booting?

A The possible reasons for the warning beep are:

a. There is no HDD installed in the QVR.

b. The HDD is not initialized.

c. HDD error

To cancel the beeping sound and use the QVR without HDD, open the **Configuration | Exception** menu and de-select the Audible Warning.

Q Why does the QVR seem unresponsive when operating with the IR remote control?

A Please read through the section Using the IR Remote Control, then check:

a. Nothing is blocking the IR sensor on the front of the QVR.

b. The batteries are installed correctly in the remote, making sure that the polarities of the batteries are not reversed.

c. The battery power is not depleted.

d. The remote has not been tampered with.

e. There are no fluorescent lamps in use nearby.

Q Why is there no video recorded after setting the motion detection?

A If there are no recorded video after setting the motion detection, please check the guidelines in Chapter 5.

a. The recording schedule is setup correctly. See **Menu | Record | Schedule**.

b. The motion detection area is configured correctly. See **Menu | Cameras | Motion**.

c. The channels are being triggered for motion detection. See **Menu | Cameras | Motion**, check the Enable Motion Detection option, the Sensitivity setting, motion detection zones.

Q Why doesn't the QVR detect my USB export device for exporting recorded files?

A There's a chance that the QVR and your USB device is not compatible. Please refer to our company's website to view a list of compatible devices.

Q Why doesn't my remote control doesn't work?

A There may be several reasons. Begin by checking the following:

- Make sure you have installed batteries properly in the remote control.
- Make sure you are aiming the remote control at the IR receiver on the front panel, and the sensor is not obstructed or dirty.

If there is no response after you press any button on the remote, follow the procedure below to troubleshoot:

a. Go to: **Menu | Settings | General | More Settings** menu using the mouse.

b. Check and remember the device ID#. The default ID# is 255. This ID# is valid for all the IR remote controls.

c. Press the **DEV** button on the remote control.

d. Enter the device ID# from step b.

e. Press the **ENTER** button on the remote control.

If the remote control is operating properly, but there is still no response from the remote, replace the remote control and try again, or contact your QVR provider.