



QT SERIES

NVRS



USER MANUAL

QT
SERIES



Thank You for Choosing a Q-See Product!

All of our products are backed by a conditional service warranty covering all hardware for 12 months from the date of purchase. Additionally, our products also come with a free exchange policy that covers all manufacturing defects for one month from the date of purchase. Permanent upgrading service is provided for the software and is available at www.Q-See.com.

Be certain to make the most of your warranty by completing the registration form online. In addition to warranty and technical support benefits, you'll receive notifications of product updates along with free downloadable firmware updates for your NVR. Register today at www.Q-See.com!

Please see the back of this manual for exclusions.



© 2010-2014 Q-See. Reproduction in whole or in part without written permission is prohibited. All rights reserved. This manual and software and hardware described herein, in whole or in part, may not be reproduced, translated, or reduced to any machine-readable form without prior written approval.

Trademarks: All brand names and products are trademarks or registered trademarks of their respective owners.

Q-See is a registered trademark of DPS, Inc.

Disclaimer: The information in this document is subject to change without notice. The manufacturer makes no representations or warranties, either express or implied, of any kind with respect to completeness of its contents.

Manufacturer shall not be liable for any damages whatsoever from misuse of this product.

About this Manual

This manual is written for the QT family of NVRs. Not all features and capabilities are shared across all models so you may see features described which are not applicable or available on your machine. In addition you may see screen images that do not exactly match those on your display.

This manual was accurate at the time it was completed. However, because of our ongoing effort to constantly improve our products, features and functions may have been added or changed since that time and on-screen displays may change. We encourage you to visit our website at www.Q-See.com to check for the latest firmware updates and product announcements.

Throughout the manual we have highlighted warnings and other important information that will assist you in operating your new system in a safe and trouble-free manner. Please take the time to read and follow all instructions and pay attention to alerts as shown below:



IMPORTANT! Red boxes with this icon indicate warnings. To prevent possible injury or damage to the product, read all warnings before use.



NOTE! Text in blue boxes with the Information icon offer additional guidance and explanations about how to make the most out of your system.

TABLE OF CONTENTS

1. INTRODUCTION	7
For Your Safety	7
Features	8
2. CONNECTIONS AND CONTROLS	10
2.1 Connections	10
2.2 Mouse	12
2.3 Remote Control	13
2.4 Video Display	16
Connecting a Video Display	16
Multiple Monitors and Spot Out	17
2.5 IP Cameras	18
Using the POE Ports	18
On Your Local Network	19
Over the Internet	21
Camera Placement	24
Additional Considerations	25
3. BASIC FUNCTIONS	26
3.1 Power On/Off	26
Power On and Login	26
Power Off	26
3.2 The Control Bar	27
3.3 Live Viewing and Recording	30
Switching Video Output	30
Live Viewing	30
Recording	30
3.4 Quick Playback	31
4. MAIN MENU SETUP	34
4.1 Basic Configuration	34
Menu Navigation	34
Setup	34
4.2 Live Configuration	37
4.3 Record & Cameras	39
4.4 Schedule Configuration	42
4.5 Network Configuration	43
4.6 User Management	48
User accounts and Passwords	48
Time Search	50
Event Search	51
File Management	51
Image	52

5. BACKUP	53
Formatting a USB Drive in FAT32	53
Backing Up a File	54
Playing Back a Video File on a Computer	55
Important Considerations	55
6. NVR MANAGEMENT	56
6.1 Information	56
Event Information	57
Log Information	57
Network Information	57
Online User Information	58
6.2 Manual Alarm	58
6.3 Disk Management	59
Disk	59
Advanced	59
6.4 Firmware Upgrade	60
6.5 Logoff	61
6.6 Shut Down	61
7. ALARMS	62
7.1 Alarm Input	62
7.2 Alarm Output	63
7.3 Alarm Configuration	64
Sensor	64
Motion	65
Video Loss	66
Other Alarm	66
Alarm Out	67
8. HARD DISK DRIVE	68
8.1 Installation/Removal	68
8.2 Calculating the Recording Capacity of a Hard Drive	70
APPENDIX	71
A.1 Troubleshooting	71
Q-SEE PRODUCT WARRANTY	74
Questions or Comments? Contact Us	75

This page intentionally blank

FOR YOUR SAFETY

To prevent damage to your Q-See product or injury to yourself or to others, read and understand the following safety precautions in their entirety before installing or using this equipment. Keep these safety instructions where all those who use the product will read them.



WARNING! ELECTRIC SHOCK RISK!



- Check the unit and any accessories included in the package immediately after opening. If items are missing or damaged, repackaging and return to the point of purchase.
- Use the proper power source. Only use the power adapter supplied with your system. Do not use this product with a power source that applies more than the specified voltage (100-240V AC).
- Never insert anything metallic into the NVR. Inserting anything into the NVR or its case can be a source of dangerous electric shock.
- Do not operate in dusty areas. Avoid placing the NVR in places that are dusty.
- Do not expose this product to rain or use near water. If this product accidentally gets wet, unplug it and contact Q-See immediately.
- Keep product surfaces clean and dry. To clean the outside case of the NVR, gently wipe using a lightly dampened cloth (only use water, do not use solvents).
- Do not operate this NVR without the cover securely in place. Do not attempt to do any repairs to the NVR yourself. If there are unusual sounds or smells coming from the NVR, unplug it immediately and contact Q-See technical support. Under no circumstances should the cover be removed while the device is connected to a power source. You should only remove the cover to install/replace the hard disk drive (**See Chapter 8**) or replace the standard 3v lithium cell battery on the motherboard. These are the only user serviceable parts. You may need to replace the battery if the internal clock resets itself after a power outage
- Handle the NVR carefully. If you accidentally drop your NVR on any hard surface, it may cause a malfunction. If the NVR doesn't work properly due to physical damage, contact an authorized dealer for repair or exchange.
- Make sure there is proper air circulation around the unit. This NVR system uses a hard drive for video storage which generates heat during operation. Do not block air holes located on the bottom, top, sides and back of the NVR as they are designed to keep the system cool while running. Install or place this product in an area where there is ample air circulation.
- Provide proper ventilation. This NVR has a built-in fan that properly ventilates the system. Do not cover or impede this fan.

FEATURES

This NVR uses high-performance video processing chips and an embedded Linux operating system for quality image recording and ease of use. It utilizes numerous advanced technologies including the industry-standard H.264 compression to deliver high-quality, smooth videos and dual stream capability for remote viewing. A SATA hard-drive interface offers upgradability and two video outputs allows for the choice of viewing on a VGA monitor or a standard TV. In addition, some models include an HDMI video port for HD viewing.

Local control of the system utilizes a mouse and graphical user interface (GUI) as well as a remote control. Users can also remotely monitor and control their system using a web browser or select mobile device.

This NVR uses cutting-edge technology without compromising stability and reliability making it ideal for home use as well as in warehouse, factory, retail and other similar environments.

COMPRESSION FORMAT

Standard H.264 compression with low bit rate and high image quality

LIVE SURVEILLANCE

- Supports VGA and RCA output. Some models also support HDMI
- Supports channel security by hiding live display
- Displays the local record state and basic information
- Supports full control with USB mouse
- Supports digital zoom on live and playback view

RECORDING MEDIA

Supports A/V-Rated SATA hard disk drives up to 4TB each for longer recording times.

BACKUP

- Supports backing up to USB 2.0 devices
- Supports saving recorded files with AVI format to a remote computer through internet

RECORDING & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Supports recycle after HDD is full
- Resolution, frame rate and picture quality are adjustable
- Up to 128MB for every video file packaging
- Up to 16 audio channels available depending on model
- Two record search modes: time search and event search
- Supports multi-screen simultaneous playback
- Supports deleting and locking the recorded files one by one
- Supports remote playback in Network Client through LAN or internet
- Models support recording in 720P and/or 1080P HD resolutions.

ALARM

- 1-4 channel alarm output and up to 16-channel (depending on model) alarm input available
- Supports scheduling for motion detection and sensor alarm
- Supports pre-recording and post recording
- Supports linked channels recording once motion or alarm is triggered on designated channel

SECURITY

- Customize user rights: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback and remote live view
- Supports 1 administrator and 15 users.
- Supports event log recording and checking, events unlimited

NETWORK

- Supports Scan N' View quick connection service
- Supports TCP/IP, DHCP, PPPoE, DDNS
- Supports Internet Explorer and Safari browsers to do remote viewing
- Supports a maximum of 20 user connections simultaneously
- Supports dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Supports picture snap and color adjustment in remote live view
- Supports remote time and event search, and channel playback with picture snap
- Supports remote PTZ control with preset and auto cruise
- Supports remote full menu setup, changing all the NVR parameters remotely
- Supports mobile surveillance; Android phones and tablets, iPhone, iPad, Windows Phone
- Supports CMS & NVMS to manage multiple devices over the internet
- Administrator can limit user access to specific cameras
- Administrator can disconnect online users



NOTE! Depending on your point of purchase, your NVR may have the hard disk drive already installed. If your drive was packaged separately or if you wish to upgrade to up to a larger hard drive, please see **Chapter 8** at the back of this manual which covers installing the drive.

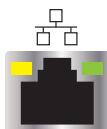
2.1 CONNECTIONS

The illustrations below show the ports found on the back of your NVR. Their location will differ by model, but their function will be the same. The **Connections and Specifications** sheet that came with your recorder will show the layout of your recorder's connectors along with any extra information that may apply to your model.



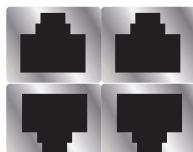
POWER

Your NVR will have an internal power supply that powers the system as well as its built-in POE block. Do not modify the power cord in any way or you may damage both the recorder and any attached cameras.



NETWORK PORT

Use this single Ethernet port to connect your NVR to your network router. Do not connect a camera to this port.



VIDEO IN POE PORTS

This block of ports is for use by your cameras. These ports will send power to your cameras and receive their video.



HDMI

Use the included HDMI cable to connect to a high-definition video display.



USB

Depending on the model of your NVR, these ports may be located on both the front and back panels. Connect your USB mouse to one of the ports on the back panel, leaving the other port available for use in backing up files.



VGA

For connecting your NVR to a VGA computer monitor. VGA cable not included.

Depending on your model, your NVR may have one or more of these ports as well:

AUDIO
IN



AUDIO
OUT



AUDIO

Standard RCA-type connectors. Audio In ports are for connecting microphones which have been located near a camera to capture audio. The Audio Out port is to connect to a speaker. The color of these ports may vary.

VIDEO
OUT



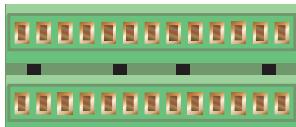
VIDEO OUT (RCA)

Connect to a standard television as a video display using an RCA cable (not included).



VIDEO OUT (BNC)

Also used for connecting a standard television as a video display. Requires a BNC-to-RCA adapter or cable.



ALARM BLOCK

This serves as a connection point for one or more external alarms or sensors. Full details are given in the **Alarms** section of this manual. The size of the block will vary.



ESATA

Models with this port can back up files to an external hard drive.

2.2 MOUSE

The mouse is the default tool for navigating through the menus. We have found that the majority of our customers prefer to operate their systems using the USB mouse because of its ease of use and flexibility and our manual is set up with this in mind. Certain functions can also be performed using the controls on the front panel of your NVR. The **Connections and Specifications** sheet that came with your recorder explains those functions.

Specific instructions on using the mouse within a function appear in the appropriate sections of the manual, but a basic overview is below:

In Live View:

Double-click the left button on any camera view in split-screen mode to bring it to full-screen display.

Double-click again to return to split-screen mode.

Right-click to show the control bar at the bottom of the screen.

Right-clicking again will hide the control bar.

In Setup:

Left-click to make a selection. Right-click to cancel setup or return to previous screen.



PICTURE 2-1

To Input Values:

Move the cursor to a blank field and click. A virtual keyboard will appear which supports numbers, letters and symbols. The Shift function will access symbols in addition to upper case letters.

Certain values, such as time settings, can be changed using the mouse wheel.



PICTURE 2-2

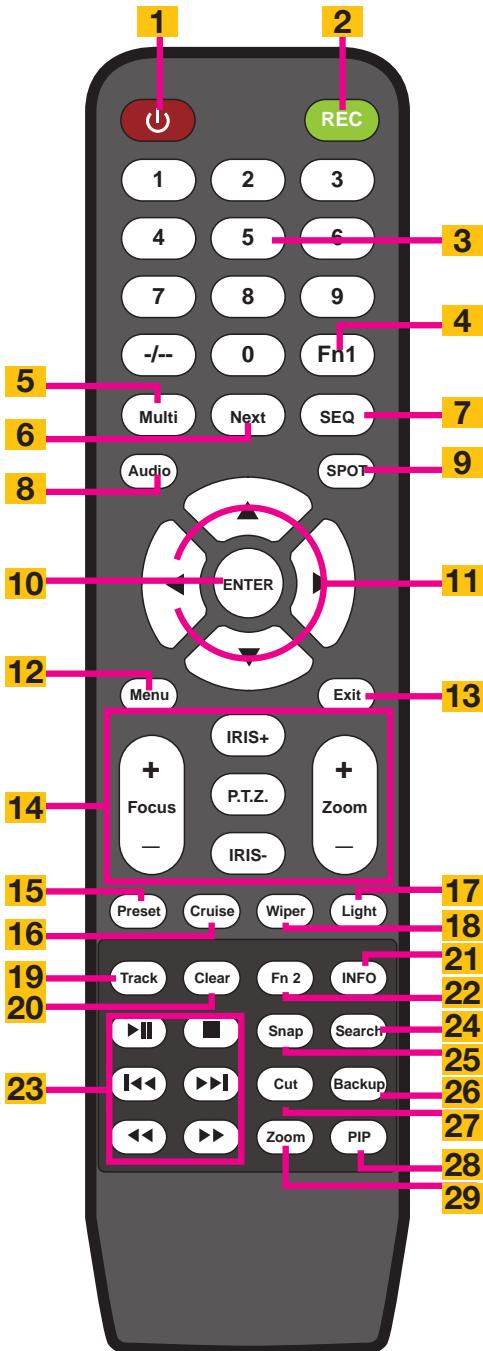
2.3 REMOTE CONTROL

The remote control allows you to perform most of the day-to-day functions from a short distance. It functions as a typical remote control with additional buttons allowing you to navigate through menus and control functions. We recommend that you configure your NVR using the mouse controls, reserving the remote control for operations such as live viewing, file search and playback.

Your remote uses two AAA-sized batteries (included). If the remote's performance degrades, check the batteries as well as that the IR receiver window on the NVR is unobstructed. The layout of the remote is shown on the next page.



NOTE! The remote that shipped with your NVR will be compatible with that model. It may not be compatible with other models of NVRs or DVRs, even those from the same series. Your remote may contain buttons for features not available on your NVR.



PICTURE 2-3

Item	Button	Function
1	POWER	Soft power down switch. Use this before unplugging the NVR
2	REC	Begin recording
3	Numbers	Input numbers in fields or select camera
4	Fn1	Not functional at this time
5	Multi-Screen	Choose multi-screen display mode
6	Next	Switch to next live view group
7	SEQ	Switch to sequential channel display
8	Audio	Enables Audio in Live View Mode
9	Spot	Change video display mode
10	Enter	Confirms choice
11	Directional Controls	Move cursor Control PTZ direction in PTZ mode
12	Menu	Open Main menu
13	Exit	Exits menu or interface
14	PTZ Controls	Controls PTZ camera including zoom, focus, iris and speed
15	Preset	Opens PTZ preset settings
16	Cruise	Opens PTZ cruise settings
17	Light	Turns on PTZ cameras light
18	Wiper	Turns on PTZ camera wiper
19	Track	Opens PTZ track settings
20	Clear	Returns to previous menu/ interface
21	Info	Opens NVR Info menu
22	Fn2	Not functional at this time
23	Playback Controls	Play/Pause, Stop, Fast Forward, Rewind, Single Frame Forward/Backward
24	Search	Opens up video search window
25	Snap	Takes still image snapshot of active live view window
26	Backup	Opens Backup menu
27	Cut	Select start/end points to create a shorter video segment from a video being played back.
28	PiP	Picture-in-Picture mode
29	Zoom	Activates digital zoom

Press the PTZ button to enter the PTZ control panel. Choose a channel and then press the PTZ button to close the panel. Wiper and light functions only function if PTZ camera is so equipped.

2.4 VIDEO DISPLAY

QT-Series NVRs can use a television or a 19" or larger monitor as a main video display. Certain models also provide the option of using a high definition display, such as an HDTV. A video display is not needed for day to day use of your NVR if you are only monitoring it remotely via a mobile device or using a computer, but one is needed for initial setup. It should also be noted that, at present, it is not possible to change settings on the NVR itself using the QT View mobile remote viewing apps and certain settings cannot be changed using the remote monitoring software on the computer.

CONNECTING A VIDEO DISPLAY

Instructions on connecting a desired video display are included in the Quick Start Poster that came with your system but are included here for your convenience.

VGA Monitor

Using a standard VGA monitor - the type used with most computers - with your NVR is the preferred method and the NVR is configured with this in mind. Due to resolution restrictions, you must use a monitor that has at least a 19" diagonal display. This information is typically found on the back of the monitor if you are uncertain.

STEP 1. Plug a VGA cable into the port marked "VGA" on the back of the NVR.

STEP 2. Plug the other end of the VGA cable into the similar port on the back of the monitor.

STEP 3. Plug the monitor's power cable into a surge protector.



PICTURE 2-4

High Definition Television

Some QT-Series NVRs include an HDMI video out port allowing you to use a high definition television or other display that has an HDMI video input.

STEP 1. Plug an HDMI cable into the "HDMI" port on the back of the NVR.

STEP 2. Plug the other end into the "HDMI" port on the television.

STEP 3. Plug the television's power cable into a surge protector.



PICTURE 2-5

Changing Display Resolution

You can adjust the NVR to optimize its output to best match the capabilities of your monitor or HD display through the following steps:

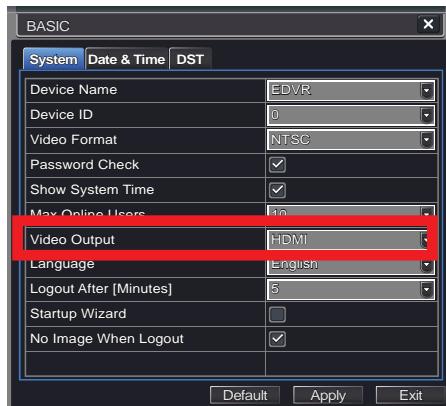
STEP 1. Open the **Basic** window in the **Setup** window which is located in the **Main Menu**.

STEP 2. Click on the **System** tab.

STEP 3. Use the **Video Output** pull-down to select your desired resolution.

STEP 4. Click on **Apply** to save your settings and then click **Exit**.

STEP 5. Your system will restart. You will have to re-log in afterwards.



PICTURE 2-6

Television

A third option for a video display is any television with an RCA video input. The NVR's **Video Out** port uses a BNC (British Naval Connector) type for coaxial cable. Depending on model, your NVR may include a BNC-to-RCA cable or adapter. The latter converts the BNC jack to an RCA port allowing you to connect the NVR to the television using a readily available RCA cable.



PICTURE 2-7

STEP 1. Connect a BNC-to-RCA cable to the "Video Out" port on the back of the NVR.

STEP 2. Plug the RCA end into the "Video In" port on the television.

STEP 3. Plug the television's power cable into a surge protector.

MULTIPLE MONITORS AND SPOT OUT

Some NVRs include a **Spot Out** BNC port on their back panel. This allows you to connect a second video display that will show selected channels in sequence, but will not display the menu and therefore cannot be used to control the NVR. This is covered in **Section 4.2 Live Configuration**. Some users will want to take advantage of the unused video display outputs (ie; using the BNC **Video Out** port when the **VGA** port is being used for the main display. This "extra" display will mirror whatever is shown on the primary display but it will not show the menu or cursor. It is not possible to divide channels across two displays.

2.5 IP CAMERAS

What makes Internet Protocol (IP) or Network cameras different is that they each have a little computer processor inside them that allows them to talk to the NVR over a network - including the Internet.

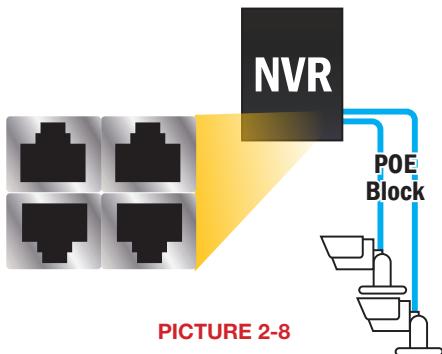
There are three ways you can connect your cameras to your NVR:

1. Directly through the PoE Ports
2. Through your local network
3. Remotely over the Internet

USING THE POE PORTS

This is the simplest method. These ports provide power to the camera while receiving their video signal.

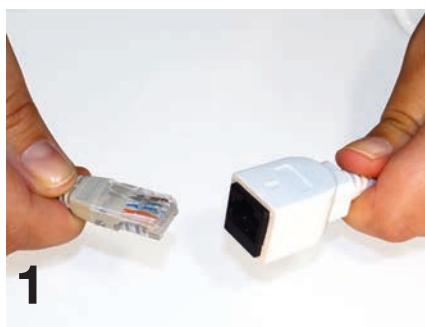
- Connect the camera and NVR using the RJ-45 Ethernet cable.
- The PoE port can power a camera up to 200 feet away.
- The camera's video will appear after a few seconds.
- Cameras will be assigned to a channel based on the order they were connected.



STEP 1. Connect one of the long Ethernet cables to the socket on the wire leading from the camera.

STEP 2. Plug the other end of the Ethernet cable into any of the Power over Ethernet (PoE) ports on the back of the NVR.

STEP 3. Repeat for additional cameras.



PICTURE 2-9

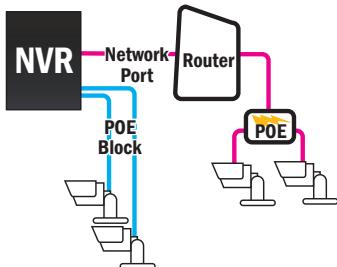


PICTURE 2-10

ON YOUR LOCAL NETWORK

Instead of running the cable directly between your camera and NVR, you can connect the camera to the same network used by your NVR.

- The camera will require its own power supply, called a “POE Injector” or a power supply at the camera’s location
 - Both the camera and NVR must be on the same network (ie; connected to the same router)
 - The camera’s video will be received by the NVR through the latter’s network connection.
- To view video from networked cameras, you will need to have the NVR search for the camera on the network.



PICTURE 2-11

STEP 1. Connect the camera to a POE Injector, such as Q-See’s QAPE model.

STEP 2. Plug the injector into a power outlet.

STEP 3. Use a network cable to connect the injector to a network port.

STEP 4. Select IP Camera from the Main Menu.



PICTURE 2-12

STEP 5. Click on Search.

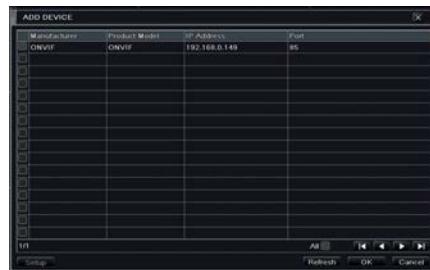
ID#	Device NetAddress	Manufacturer	Product Model	Status
1	10.151.151.100	Q-See	9222M_OHVI	Connected
2	10.151.151.145			Online

PICTURE 2-13

STEP 6. Select a camera or cameras from the list by checking the box to its left.

Click **Refresh**, if the camera you're looking for does not appear.

STEP 7. Click **OK** to return to the **Device Manager** window.



PICTURE 2-14

STEP 8. The camera is still disabled.

Select a camera and click on **Setup** in the lower left of the **Device Manager** window.

	Manufacturer	Product Model	Status
Q-See	9322M_ONVI	Connected	
ONVIF	ONVIF	Disable	

PICTURE 2-15

STEP 9. Check the box titled **Enable** and then click **OK**.

Repeat to enable other cameras.

Click **Apply** to save your cameras to your list and then click **Exit**.

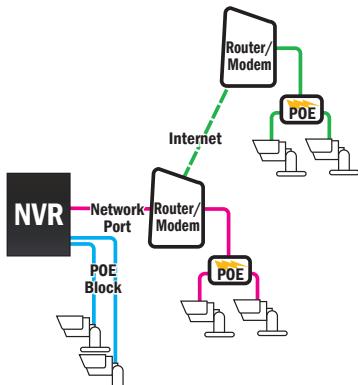


PICTURE 2-16

OVER THE INTERNET

This allows you to connect to cameras in a completely different location.

- You will need to use the **IP Tool** (PC) or the **NVMS** software (Mac) included on the **Manuals and Software CD** or by download from www.Q-See.com/support.
- Follow instructions in the **IP Camera Manual** (also on the CD) to get the IP address of the camera.
- Once you have the IP address of the camera, you can add it to the NVR through the following steps:



PICTURE 2-17

STEP 1. Connect the camera to a POE Injector, such as Q-See's QAPE model.

STEP 2. Plug the injector into a power outlet.

STEP 3. Use a network cable to connect the injector to a network port.

OBTAIN IP ADDRESS:

STEP 4. Install the **IP Tool** software

onto a Windows PC connected to the same network as the remote camera.



PICTURE 2-18

STEP 5. Launch the **IP Tool** software. It

will locate the camera and display its information.



NOTE! The IP address shown is only for your local network. The NVR cannot use this to connect to the camera over the Internet.



PICTURE 2-19

CONFIRMING THAT PORTS ARE OPENED

Like your NVR, your cameras feature UPnP technology that allows them to communicate with the network and through to the Internet. Two “ports” (think of them as doorways through the firewall) are used; 85 and 9008. You will want to verify that these have been automatically opened by using an online tool at [www.canouseeme.org](http://canouseeme.org) using the same computer.

STEP 6. Enter “85” into the box labeled “What Port?”

STEP 7. Click on the **Check** button.

STEP 8. You should see a green “Success” message.

STEP 9. Repeat for port 9008.



PICTURE 2-20

This website will also display your Public IP address near the top of the page above the box where you entered your port number. This is the number which you will use to access the camera using the NVR, a web browser or your mobile device from outside of your local network (away from the building in which your DVR is located).

You will enter this Public IP address into the NVR (see next page).

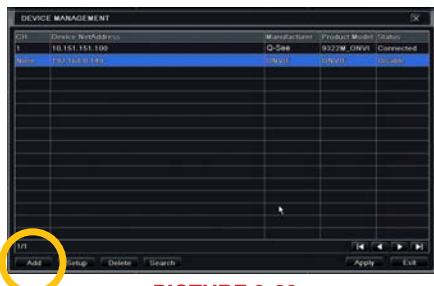
STEP 10. Return to your NVR. Select **IP Camera** from the **Main Menu**.

Click on **Add**.



PICTURE 2-21

STEP 11. Check the box titled **Enable**.



PICTURE 2-22

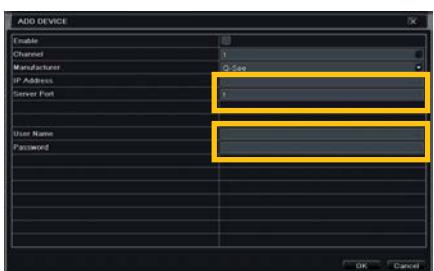
STEP 12. Enter the camera's information:

IP address: Shown on
CanYouSeeMe.org

Server Port: 85

User Name: admin

Password: 123456



PICTURE 2-23

STEP 13. Check the box titled **Enable**
and then click **OK** to return to the
Device Manager window.

Click **Apply** to save your cameras to your list
and then click **Exit**.



PICTURE 2-24

CAMERA PLACEMENT

When installing your camera, it is important to select a proper site not only for field of view, but for other considerations as well:

Distance from viewing/recording device. The further the camera is from the NVR or monitor, the higher the chances of signal degradation. The camera's power supply should be located as near to the camera as possible when the distance exceeds 200' as the power level will drop over extended distances resulting in a decrease in video quality.

Do not place near high voltage wires or other sources of electrical interference. Electrical interference will degrade the quality of the signal.

Place camera out of reach to avoid damage.

Avoid direct exposure to weather. Do not place the camera where rain or snow will hit the lens directly nor should the camera be placed so that the sun or bright light shines directly into the lens. Your camera is weatherproof, but it will not work when submerged in water. Ensure that all power and video connections are not directly exposed to water and are protected from the elements.

Indoor cameras should not be used outdoors. Even if they are in a sheltered location, they can still suffer damage due to humidity, dust and other environmental factors. Each camera has an Ingress Protection (IP) rating which defines how protected the internal workings of the camera are from solid objects - such as fingers or bugs - dust and moisture. In an IP rating, there are two numbers that follow the letters "IP." The first represents the protection from solids while the second represents the housing's protection from moisture. A camera should have a minimum rating of IP65 for trouble-free use outdoors.

Mounting surface. The mounting surface must be sturdy and able to hold at least five times the camera's total weight.

Legal Considerations. Always check state and local laws before installing cameras. (2011 NEC 820.44)

Do not place camera behind a window. If there is a light source behind the camera, it can cause a reflection in the window that will obscure events on the other side of the glass. Likewise, the camera's infrared LEDs will reflect off the glass and shine into the lens, thus degrading the image.

Light levels should be approximately the same between camera and target area. A camera in a brightly-lit area looking into a shaded area, or vice versa, may produce inadequate results.

The above are guidelines and the optimal location for your camera will depend on your unique circumstances. As a general rule, the locations highlighted in **Green** in the picture to the right indicate the best locations to mount your camera. Both locations are sheltered from rain or snow and offer good sight lines to allow your camera to monitor a wide area.



PICTURE 2-25

Because your camera is weatherproof, it requires less protection than weather-resistant cameras and it can be placed in more exposed locations if needed. Keep in mind that most Q-See cameras are designed to operate between -40°F to 122°F (-40°C to 50°) with a relative humidity of up to 95%) and consider wind chill and other environmental factors when selecting your location.

Specialty cameras are also available from Q-See which are able to operate in more extreme environments.

ADDITIONAL CONSIDERATIONS

Most users prefer to operate their systems with the NVRs recording only when motion is detected. This provides the most efficient use of the hard drive's capacity, plus making it easier for a recording to be located. However, if the a camera's location has a lot of "environmental" motion, such as a fan, wind, or the like, you will receive a lot of "false alarms." Usually, these events can be avoided by simply adjusting the placement of the camera. Other situations may require some fine-tuning of your settings. **Chapter 8 Alarms**, covers these settings in detail, but some easily avoidable situations are presented below:

TV/Computer Screens. If the camera can see a video screen, it will trigger a motion alarm any time the screen changes, whether there is a video or simply a screen saver. The screen can be masked out as described in **Section 4.2**. You can also reduce the level of motion sensitivity in specific areas of the screen by following the instructions in **Section 8.3**.

Fans/Machinery. Motion is motion and if machinery within the camera's field of view starts automatically, it will cause an alert. Similarly, if the camera is mounted on a wall with machinery on the other side that causes it to vibrate, that can also cause it to detect motion. Moving machinery within the camera's field of view may be masked off as mentioned above, or motion detection may be turned off for that channel. If there is another camera that covers access to the area where the machinery is located, you can set it so that the first camera will only be recording when triggered by a motion event detected by this second camera. See "**Triggers**" in described in **Section 8.3**.

Bugs. An occasional insect flying through the field of view is usually not enough to trigger an alert. However, some flying insects are attracted to infrared light and will swarm the camera. This is usually a temporary situation that occurs at only a certain time of the year. Lighting the area with yellow "bug light" of sufficient brightness can keep the camera operating in daylight mode and keep the infrared LEDs turned off. A second solution is to set the channel to record all the time, and turn motion detection off at night until "bug season" is over. Reducing the motion sensitivity (**Section 8.3**) can also reduce alerts as can using another camera to trigger recording as described above.

Additionally, keep your cameras clear of spider webs as the movement of the webs due to wind or critters in the web will cause an alert. The reflection of the infrared off the webs and back into the camera will also reduce the night vision range.

Snow/Rain. As with bugs, this is usually a seasonal event and may require motion detection to be temporarily disabled to avoid false alarms. However, positioning the camera further under shelter, such as closer to the wall and away from the edge of the eaves, can make the rain or snow too small for the camera to notice. Adjusting motion sensitivity may also help in some situations.

3.1 POWER ON/OFF

Before turning on the NVR, ensure that all connections are good.

POWER ON AND LOGIN

Connect the power supply and the NVR will power up. The LED labelled **POWER** on the front will illuminate and the NVR will display the live image from Channel 1.

Before you can proceed, you will need to log into the NVR.

STEP 1. Right-click with the mouse anywhere on the screen

STEP 2. Press the **MENU** button on the remote or press the **STOP/ESC** button on the front of the NVR to open the **Control Bar** which will appear at the bottom of the screen (**Picture 3-3**).

STEP 3. Once the **Control Bar** appears, click the **Menu** icon on the far left to open the **Main Menu** (**Picture 3-2**).

STEP 4. The **Login** screen will appear.

Enter the User Name and Password, **admin** and **123456** respectively using the Virtual Keyboard described in the previous chapter. Click **ENTER** on the keyboard. You can change the password later as described in **Section 4.6 User Management**.



PICTURE 3-1

You are now logged in.



IMPORTANT! If you are logging into the NVR for the first time, it is essential that you set your NVR to the proper date and time at this point. Doing so will allow you to search for events based on when they occurred as well as avoiding complications by having multiple recorded files with the same date and time if you wait to make those settings. Complete instructions can be found in **Section 4.1 Basic Configuration**.

POWER OFF

The NVR will power down to a standby mode when the **POWER** button on the remote control is pressed, or when the **SYSTEM SHUT DOWN** icon is selected from within the **MENU**. In both cases, the **SHUT DOWN** window will appear and users must select **OK** to confirm. The hard drive will stop spinning and the system will shut down. For extended periods of inactivity, it is recommended that the NVR be disconnected from power either by turning off the power at the surge protector or unplugging the device.



PICTURE 3-2

3.2 THE CONTROL BAR

When a user is logged in, pressing the **ESC** button on the NVR or right-clicking on the screen with the mouse will display the **CONTROL BAR** on the bottom of the screen.



PICTURE 3-3

The functions of the Control Bar are listed below. Screen Display Modes are covered on the next page and the other functions will be covered in more detail in the following chapters.

Menu: Opens the **Main Menu**.

Screen Display Mode: Choose the number of channels you wish to view at once. Channels without attached cameras will display “Video Loss.” Clicking on the upward pointing arrows to the right of each icon will allow you to select which channels to view in that mode.

Dwell: Enable/disable automatic cycling between channels.

Color: Adjust the brightness, hue, saturation and contrast for any channel.

Zoom: Available in single screen display mode, this digitally enlarges a section of the display.

Volume: Adjust volume. This is only available if you have attached a microphone or audio-capable camera to the NVR.

PTZ: Opens the controls for optional Pan-Tilt-Zoom cameras.

Snapshot: Captures a still image from the selected channel (single screen mode) and saves it to the hard drive.

Record: Begin manual recording on all channels.

Playback: Switches to Playback mode and brings up the **Playback Control Bar**.

Move Control Bar: Clicking this will allow you to reposition the Control Bar anywhere on the screen. Right clicking on the screen will hide the **Control Bar**.

DISPLAY MODE

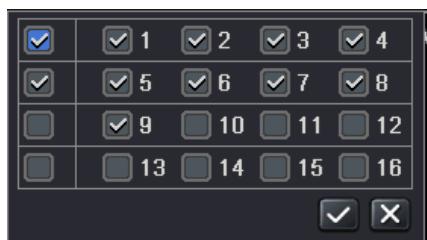
By clicking on the display mode buttons on in the **Control Bar** you can quickly configure how your cameras' video feeds are displayed. The settings here will temporarily override the default configuration made in the **Main Monitor** tab in the **Live** menu (see **Section 4.2 Live Configuration**) until the system reboots. You can select whether to view a single channel at a time, two channels in a picture in picture format, or view multiple channels in a split screen mode. In addition, users have the option to select how many channels to view at once as well as which channels will be shown in that multi-channel display. The number of display mode options and their configuration will depend up on the model of your NVR. With the exception of the nine-channel viewing mode on an eight-channel system, your NVR will not have the option to display more channels than it supports. If you have fewer than the maximum number of cameras connected to your NVR, the channels without cameras will remain black and display a "Video Loss" message.



PICTURE 3-4

Click the icon beside the desired screen display mode to open the **CHANNEL SELECT** menu.

Users can check any or all channels to display the live feeds (depending on the display mode chosen and the number of channels on the NVR). Click the box to confirm the settings before closing the **CHANNEL SELECT** menu by clicking on the button.



PICTURE 3-5

You can move camera views to a new position by clicking and dragging the desired channel's display. When a channel's view is dragged into another area, the view that it replaces will move to the vacated location.

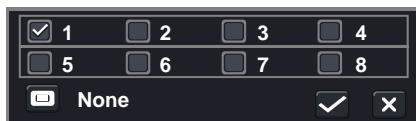
Double-clicking on any of the channels being displayed will bring that camera's video to full screen. Right clicking anywhere within the image will return the display to its previous mode.

Asymmetric Display

Users have the option of viewing cameras using an asymmetric display mode. This mode consists of one large image plus several smaller images. As described above, a camera's display can be dragged from one of the smaller windows into the larger window for easier viewing while maintaining a multi-channel display.

Picture in Picture

If you wish to only monitor two channels at a time, use the Picture-in-Picture mode. The icon for this display mode is shown at the far right of **Picture 3-4**.



PICTURE 3-6



PICTURE 3-7

Clicking on the Picture-in-Picture button will open a pop-up window (**Picture 3-6**) allowing you to select which channel will be the main video feed. Clicking on the button in the lower left of that window will open a second pop-up window (**Picture 3-7**) allowing you to select the channel that will be displayed within the larger image. Note that the channel currently being used for the larger display will be darkened and not selectable.

3.3 LIVE VIEWING AND RECORDING SWITCHING VIDEO OUTPUT

As described in **Section 2.4 Video Display**, the NVR is normally configured to output video signal to a 19" or larger monitor through the VGA port on the back.

LIVE VIEWING

The normal mode of the NVR is to display the live feed from the cameras. Configuring which channels will be displayed, naming the cameras and other display settings will be covered in **SECTION 4.2**.



PICTURE 3-8

In addition to the camera images, the NVR will display symbols regarding the status of each camera

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Scheduled Recording		Alarm Recording		Manual Recording
	Motion Detection		Audio Enabled		

RECORDING

Your NVR is configured to record whenever motion is detected. It is also set to record at the best setting possible. These settings work for most users, but each user's situation will be different and directions for adjusting these settings can be found in **Section 4.3 Record Configuration**.

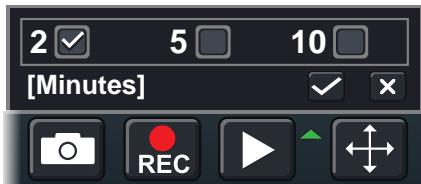
3.4 QUICK PLAYBACK

Pushing the playback button on the NVR or remote will enable you to play back what has been recently recorded by launching Quick Playback.



PICTURE 3-9

The time period for the Quick Playback can be set by clicking the upward-pointing arrow icon next to the **Playback** button. You can choose to go back 2-, 5- or 10 minutes. This setting will apply whether you've selected playback on the remote, the front of the NVR or by clicking on the **Playback** button.



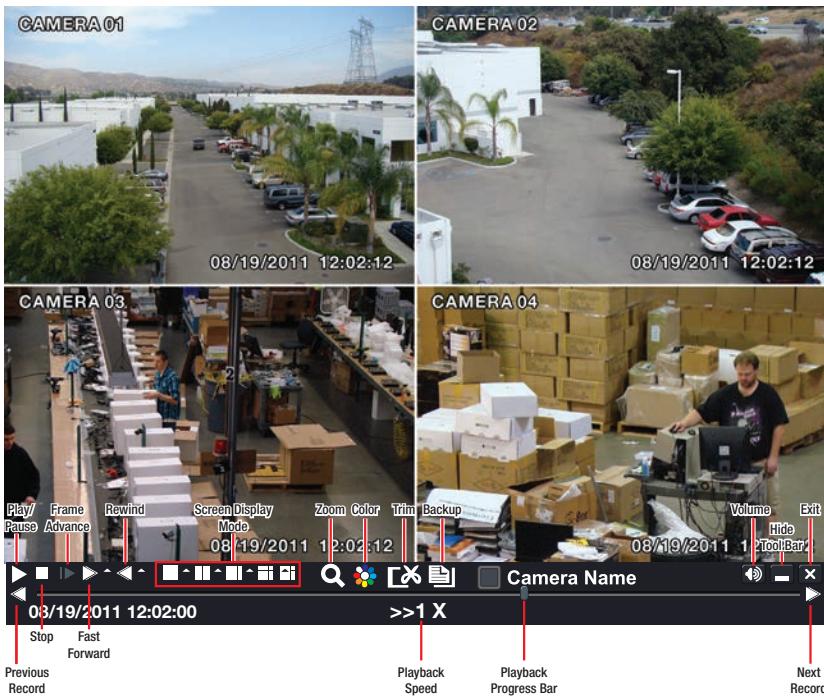
PICTURE 3-10

Only channels with recorded video will display their feeds and those without will be dark. As shown on the next page, a toolbar will appear below the display showing the playback controls. If you are using the mouse, clicking on the various controls will affect the video playback in a similar manner to using the front panel buttons or remote control.

There may be additional video recorded before your starting point and you can go back to the beginning of the recording within this playback. You will, however, need to use the search feature described in **Section 4.8** to locate video event recordings from other days, or earlier times.

PLAYBACK CONTROL BAR

The controls operate in a similar fashion to those of a conventional NVR or other video playback device but with a few additional commands available to you:



PICTURE 3-11

Previous/Next Record: Moves to the prior or following recorded event, respectively.

Fast Forward/Rewind: In addition to their normal operation, clicking on these buttons multiple times will speed up or slow down the rate or progression - forwards or backwards - through the file. The speed can also be selected directly by clicking on the small upward pointing arrows to the right of each button. You can select from 1/4 speed to 16-times normal speed forward and rewind speeds of 8-times, 16-times and 32-times normal speed. The current speed will be displayed at the bottom center of the Playback bar.

Screen Display Mode: As with the **Control Bar**, these icons allow you to choose the number of channels you wish to view in playback. Clicking on the upward pointing arrows to the right of each icon will allow you to select which channels to view in that mode. Channels with no recordings will appear blank.

Zoom: Available in single screen display mode, this digitally enlarges a section of the display. Select this tool and then click-and-drag to select a portion of the video feed to enlarge it. Clicking and dragging within the zoomed-in area will allow you to move to other areas of the image. Right-clicking will return the video to regular display mode.

Color: Adjust the brightness, hue, saturation and contrast for any channel. Please note that this will only effect the playback for this channel on the NVR itself. It will not change the recording.

Playback Progress Bar: The slider moves along the Playback Progress Bar as the video plays. Moving this with the mouse will go to another segment of the video. You can move to another point in a single video by first clicking on that channel and then moving the slider to the desired time. Other channels will continue progressing normally.

Trim: Using this tool allows you to save a segment of the video record rather than having to back up the entire file.

To select a segment move the **Playback Progress Bar** to before the desired location in the video and begin playback. Once you reach the desired starting point, click on the **Trim** button to set the beginning of the clip. The button's icon will flip indicating that it is waiting for you to select the ending point. When you have reached that point, click the button again to complete your edit. The starting and ending times will be displayed at the bottom of the **Playback Control Bar**.

Backup: Once you have created your video clip, the **Backup** button will turn white indicating that you can save your clip directly to a USB drive connected to the USB port on the front of the NVR. The drive must be connected before clicking on the **Backup** button.

When the **Backup** button is clicked, the **Backup window** will open. It will list details about the file and the storage media that you have connected. If you have more than one drive connected - including ESATA, USB CD/DVD burners or other external media, you can chose the desired destination in the **Storage Media** pull-down.

If you do not have enough space on the disk to save your file, you may select **Disk Cleanup** to remove all files from that disk.

Choose the format in which you want to save your video clip. The .NVR format requires a special player program which will be included in a second folder on the drive if you also check the box "**Backup Player**". The .AVI format will work with most standard media playback software on PC or Mac computers. If selecting .AVI as the format for your files then you should deselect the **Backup Player** box.

Click **Start** to begin the download and the progress bar at the bottom will fill up as the file is transferred.

For more information regarding backing up files, please see **Chapter 5**.



IMPORTANT! If you have audio recorded along with the video, you **MUST** select the **.NVR** format in order to preserve it. Be sure to check the box next to **Desktop Player** to also download the player program which can then be used to convert the file - with audio intact - to the more conventional .AVI format.



PICTURE 3-12



PICTURE 3-13



PICTURE 3-14

4.1 BASIC CONFIGURATION

This chapter is intended to help you get your NVR up and running before you activate any advanced features which are covered in later chapters. You can use the mouse, remote control and the buttons on the front of the NVR to operate your system, but for convenience, we will be discussing operations using the mouse. Information on P.T.Z. cameras and alarms will be found in their own chapters, **Chapters 7** and **8**, respectively.

MENU NAVIGATION

Navigation through the user interface is point and click. Double-clicking on an icon within a given menu will open that menu, or a submenu. The Main Menu is the starting point to reach all of the NVR's settings and features. Selecting the **Menu** icon on the left of the **Control Bar** or pressing the **Menu** button on the NVR and remote control open the **Main Menu**.

Main Menu



PICTURE 4-1



PICTURE 4-2

Clicking on any icon will open the relevant menu.

SETUP

From the **Setup** menu select the **Basic** menu by clicking on its icon.



PICTURE 4-3



NOTE! When configuring your settings, you will always need to click **Apply** to save your current settings before closing the window with **Exit** otherwise your changes will be lost. You may click **Exit** or the close window box (X) in the upper right of the window to close without saving changes but an alert will pop up asking if you wish to save changes. Click **OK** to save changes or **Cancel** to continue without saving. You may select the **Default** button to restore your settings to those set at the factory.

BASIC MENU

There are three tabs covering **System**, **Date & Time** and **Daylight Savings Time (DST)**.

System Tab

The following settings can be changed in this menu:

Device Name: This will display when you access the NVR remotely via your mobile device, a web browser or through the CMS software. Naming the device will help users recognize the device when monitoring numerous NVRs remotely.

Device ID: If you have multiple systems, you can give this device a numerical ID.

Video Format: Select between NTSC (North America) or PAL (Europe) video standards.

Password Check: By enabling this, a user will need to enter name and password when performing configuration operations.

Show Time: Displays the time on-screen in Live View.

Max Network Users: Set the maximum number of network connections - up to 10.

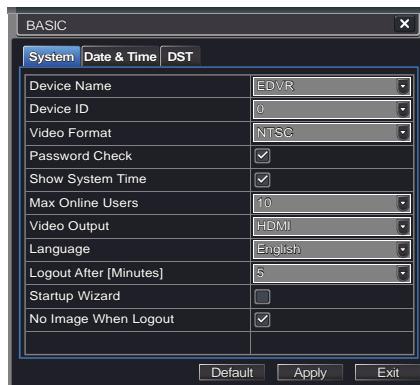
VGA Output: Choose the configuration that best fits your monitor. Options are: VGA 800x600, 1024x768, 1280x1024 and HDMI.

Language: Select your preferred menu language. The NVR will have to restart for this change to take effect.

Logout After... : You can have the NVR automatically log a user out after a period of inactivity. The period can range from 30 seconds (.5), 1, 3 or 5 minutes or never.

Startup Wizard: When checked, the Startup Wizard will launch whenever the NVR reboots.

No Image When Logout: The monitor will not display the Live View when this box is checked.



PICTURE 4-4



IMPORTANT! After changing the Language or Video Format, the device will need to be restarted.

Date & Time Tab

Set date, time, time format and related configurations in this menu.

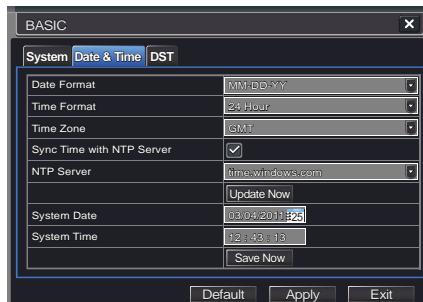


IMPORTANT! To maintain the integrity of recorded video, you should set the NVR to the correct date and time before making changes in other menus.

Setting the correct date and time before proceeding is essential to maintaining the integrity of your video records - especially for purposes of evidence. Making these straightforward settings should be your first priority before proceeding further within this manual. Changing the date and time after important videos have been recorded could result in the loss of those files.

Most of the options within this menu are self-explanatory. If you are unsure of your time zone, the date and time settings on your computer or searching online for "Time Zones" will quickly provide you with the information you need.

NTP Server: Using Network Time Protocol will keep your system's clock current by allowing it to occasionally receive updates from the selected server. Your NVR must be connected to the Internet for this feature to work. Please see the Remote Monitoring Guide for instructions.



PICTURE 4-5

DST Tab

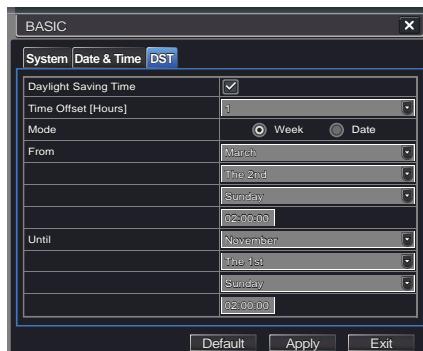
This setting allows your system to adjust for time changes due to Daylight Savings Time. As of this writing, Daylight Savings Time begins in most areas of North America on the 2nd Sunday in March and ends on the first Sunday in November. Both changeovers happen at 2 am. Allowing the NVR to make the change automatically ensures that files will not be lost as could happen by manually changing the hour.

Checking the box marked **Daylight Saving Time** will enable the NVR to switch the hour automatically.

The starting and ending periods must be set using the pull down options along with entering the hour manually. The **Week** radio button should be selected for this method.

If your region switches to and from DST on a specific date, then chose the **Date** radio button and enter the needed information.

Click **Apply** to save your settings and **Exit** to close the menu.



PICTURE 4-6

4.2 LIVE CONFIGURATION

Live configuration includes four submenus: **Live**, **Main Monitor**, **Spot** and **Mask**.

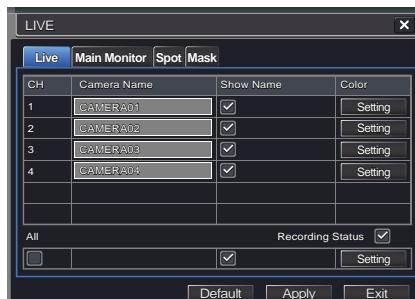
Live Tab

Use this menu to set camera names and adjust picture colors, brightness, hue saturation and contrast for optimal picture results.

You can individually name cameras by highlighting the field for each camera. The virtual keyboard will appear allowing you to enter characters, numbers and symbols with case sensitivity. **ENTER** will save the name and return to the **LIVE** menu. **ESCAPE** will exit the keyboard without saving.

You can enable or disable the display of the cameras' names and j status (**see Section 3.3**) by using the check boxes.

You can configure the color settings for each channel individually. Adjust image saturation, hue, brightness, and contrast by clicking on the Setting button for each individual camera or for all of them simultaneously by selecting the All button before making the settings. This window can also be reached by clicking the color button on the **Control Bar**.



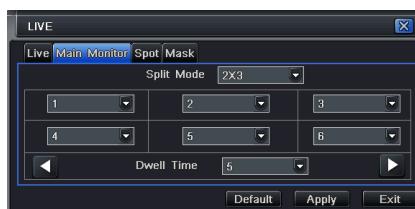
Main Monitor Tab

Select the configuration of your display.

Split Mode allows you to choose from single view, 2x2, 2x3, 3x3, 4x4 (*depending on model*) views on a screen at one time. You can also select which channels will be displayed.

Channels can be grouped by selecting their channel below the split mode. The display will cycle between groups. Any individual channel can be shown in more than one group.

Dwell Time: This is the time interval the display will spend showing a group before moving on to the next group.



NOTE! If viewing remotely on a computer with dual monitors, the display must be on the main monitor.

Spot Tab

This allows select feeds to be viewed on a separate monitor that is connected to the NVR but may be in another room, for example. There will be no menu access on this auxiliary display.

The channel groups in the Spot monitor can be different than those in the main monitor. You may create groups of channels or designate a single channel as a group. A channel may be placed within more than one group. Select the order of the channels and their dwell time. Use the left and right arrows to switch between groups.



PICTURE 4-10

Mask Tab

Set up masks on individual cameras to block out select areas on each screen. This is to grant privacy in situations when other users may be able to view the camera feeds and you wish to restrict viewing of certain areas or activities.

Click on the **Setting** button next to a given camera to apply a mask to its view.



PICTURE 4-11

Up to three areas may be masked in an image. Simply click and drag to cover the area. To delete, double-click on a mask.

Right-click to exit the screen, your masks will be saved.

The masks will appear on that channel's image in the live area as well as on recordings.



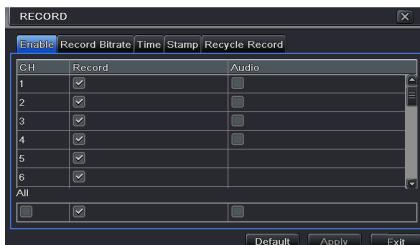
PICTURE 4-12

4.3 RECORD & CAMERAS

Depending on your model, your NVR will record at 720p and/or 1080p resolution. There are five sets of options: **Enable**, **Record Bitrate**, **Time**, **Stamp** and **Recycle Record**.

Enable Tab

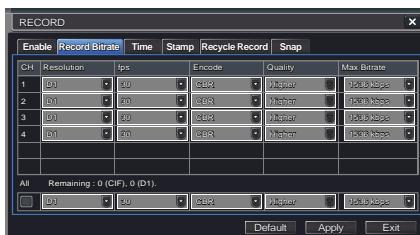
Select some or all of the cameras to record to the NVR. Depending on your NVR model, you can set up to 16 cameras to record audio in addition to video. This will require cameras equipped with microphones or separate microphones connected to the camera(s). You can globally select all the cameras regardless of their individual settings by selecting the **All** box below each column.



PICTURE 4-13

Record Bitrate Tab

Set up the resolution, quality, encoding, quality and maximum bitrate of the video stream according to your needs. You can set each camera individually, or globally by using the **All** function at the bottom of the window.



PICTURE 4-14



NOTE! While each camera can have its resolution and frame rate set independently of the other cameras, the NVR may limit the frame rate available to a camera based on the settings of other cameras.

Parameter	Options	What it Means
Resolution	D1 720P 1080P	D1 = Full TV resolution, this is an option available on some cameras and can be used when bandwidth is limited in order to get a smooth video stream from remote cameras. 720P, 1080P = HD resolutions.
FPS	1-30	Frames per second. More frames make for smoother video but takes up more room on the hard drive.
Encode	VBR, CBR	Variable Bit Rate versus Constant Bit Rate. VBR provides better image quality for video with motion in it, but at the potential expense of a larger file size, based on settings.
Quality	Lowest – Highest	Only available when VBR is selected. The higher the quality, the more drive space required. CBR's default setting is for higher quality.
Max Bitrate	256-2084 kbps	This sets the maximum bitrate that each camera will record at with VBR encoding selected.

Time Tab

You can set the length of time the NVRs record an event before and after a motion detection or alarm is triggered as well as how long an individual record is preserved.

Pre-alarm record time: This sets the length of time showing events prior to a motion detection or sensor-triggered event that is included in the record.

Post-alarm record: Sets the length of time - from 10 to 60 seconds - that is added to the record after the event is finished.

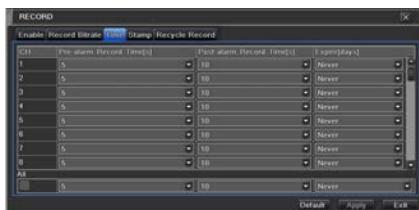
Expire time: The time - up to 60 days - that an event is saved on the drive before it could be overwritten assuming there's enough disk space (See **Recycle Record** below).

You can set up all channels with same values by selecting **All** and then configuring one channel.

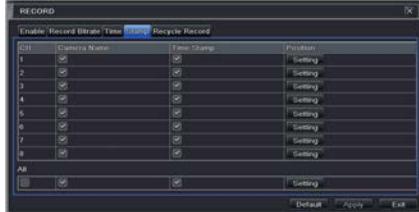
Stamp Tab

Select which cameras will display their ID and date stamp and where it'll appear on the screen.

Drag and drop the location of the camera name and date/time stamp to your desired location on the screen. This can be done individually or globally. A "Before" and "After" example is shown below.



PICTURE 4-15



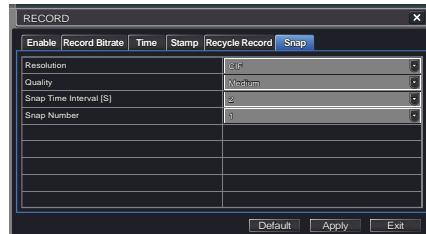
PICTURE 4-16



PICTURE 4-17

Snap Tab

In this tab, you can configure how many still images are taken, the quality of the images and the timing between them when the **Snapshot** button is pushed on the **Control Bar**.



PICTURE 4-18

Recycle Record Tab

This is selected by default. Recycle record allows the NVR to record over old events when the hard drive is full. Otherwise, the NVR will stop recording when there is no more space available.

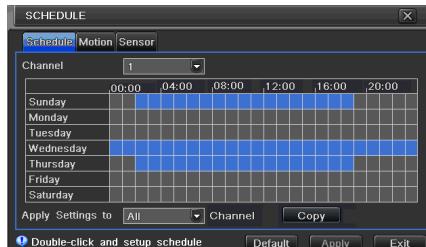
4.4 SCHEDULE CONFIGURATION

Your NVR is configured to record whenever motion is detected. If this is your desired setting then you will not need to make any changes. However, you may configure each channel to record at specific times based on time of day, motion detection or other sensor input. There are three tabs; **Schedule**, **Motion** and **Sensor**

Schedule Tab

The schedule for automatic recording can be set either of two ways.

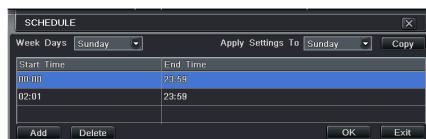
1. By highlighting individual hours for specific days by using the pencil tool in the upper right of the window. The adjacent eraser tool removes the highlighting in a block. Double click on either the pencil or eraser tool to turn them off. Settings can be copied and applied to any or all of the channels and to any other day.



PICTURE 4-19

2. Blocks of time to be recorded can also be set up by double clicking on a field adjacent to a day. Multiple schedules can be created and saved with start and stop times down to the minute. These can then be applied to multiple days and cameras.

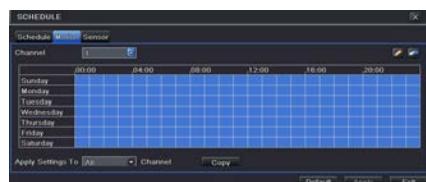
Schedules made in one mode can be altered in another mode.



PICTURE 4-20

Motion Tab

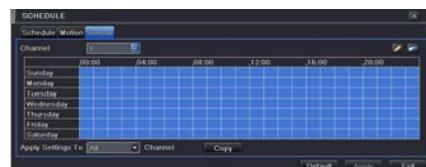
Motion detected during the highlighted hours will cause the NVR to start recording. Setup is similar to that used in **Schedule** above. The default mode is for 24/7.



PICTURE 4-21

Sensor Tab

This enables the NVR to record based on input from other sensors connected to the NVR. Like motion detection, it is default scheduled to be able to record at any time. It is also configured in the same manner as explained under **Schedule**.



PICTURE 4-22

4.5 NETWORK CONFIGURATION

The **Network Configuration** window is used to control how your NVR works in a networked environment. Much of this is now handled through the Scan N' View service and the average user will only need to edit settings in the **Email** tab.

However, if you wish to remotely monitor your NVR using the CMS or NVMS software, you will need to ensure that the NVR's ports have been forwarded. This section will provide a general overview of the settings, Full, in-depth instructions on the functions and settings available in this window are presented in the **Remote Monitoring Guide** which is on the disk that came with your system or which can be downloaded from our website at www.Q-See.com/Support.

The four tabs in this window are **Network**, **Sub-Stream**, **Email** and **Other Settings**. If you will only be monitoring the NVR from another computer on your network, you will only need to use the first three tabs.

It is important that your NVR is connected to your network router and that the router is powered on before proceeding.

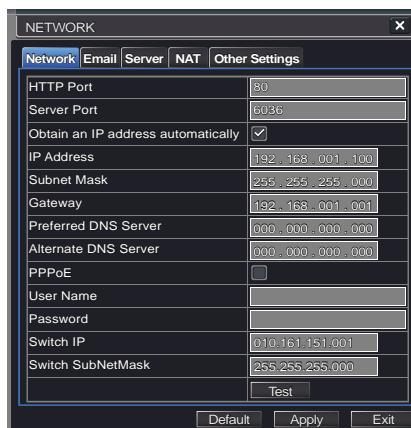
This window displays the information on the NVR's local network and Internet addresses which will allow you to access the NVR on a network. As discussed in the Remote Monitoring Guide, you will use the local network address to access your system from the same wireless or intranet network that the NVR is connected to. When you are outside of that area, you will use the Internet address shown (obtained in the steps below) or the DDNS address that you will set up.



IMPORTANT! The majority of routers available on the market since 2008 have Universal Plug and Play (UPnP) capability, which allows the NVR to connect automatically to the network. Consult the **Quick Networking Poster** or the **Remote Monitoring Guide** before changing Network settings.

NETWORK

HTTP Port – This is the port the NVR will use to communicate through the router. When accessing the NVR remotely from the Internet, you will need to enter your network's remote IP address (obtained in the next step) in the address bar of an Internet Explorer window. For example:
http://88.116.0.25



PICTURE 4-23



NOTE! The default value is 85. If port 85 is already occupied by another device on the network, then another port will need to be selected. Choose another number in the same range; 81-89. In this case, you will have to add the port to the IP address when entering it into the Internet Explorer window. For example, if the port is now 82, then you will need to enter http://88.116.0.25:82

Obtain IP Address Automatically – Clicking this box will obtain the IP address, subnet mask, and gateway IP from the router.

PPPOE – Selecting this enables Point-to-Point Protocol over Ethernet (PPPoE) which allows you to directly connect your NVR to the Internet through your modem. Do not use this unless you are connected to a modem instead of a router. Contact your ISP for your account information including user name and password. The **TEST** button will verify that your information is correct.

Definitions and descriptions of network configuration:

Parameter	Definition
HTTP Port	The network port number for accessing the NVR from a remote location. The default port is 85
Server Port	The port number for data. The default port is 6036
Static IP	
IP Address	The IP address of the NVR on your network
Subnet Mask	The server's subnet mask
Gateway	The gateway of the router
DNS Server	The address of the Domain Name System (DNS) server
PPPoE	
User Name	User name of the broadband account
Password	Password for broadband account

EMAIL

This tab allows you to set how your NVR will send out e-mail alerts. You will be able to send e-mail alerts to three addresses.



NOTE! Depending upon your settings, the system can generate a lot of e-mail alerts. For that reason, we recommend setting up a dedicated e-mail address specifically for the system to send alert notices. If you do not have your own e-mail system (such as a corporate mail server) you should consider using a free e-mail provider. However, because many free e-mail services allow only a limited amount of e-mail traffic we specifically recommend using Google's Gmail service with its higher limit. Similarly, you will want the alert emails to go to a different account than the one sending them. This will ease your management of these alerts and help keep your mail account from overflowing.

If you do not have your own e-mail system, please set up a free account which the NVR can use to send out alerts before proceeding.

For the example below, we will use Gmail. The settings can be found under **Options** when logged into your Gmail account.

Clicking on any of the fields will bring up the virtual keyboard allowing you to enter the data. The virtual keyboard is capable of handling upper and lower case letters as well as numbers and symbols. Click the **ENTER** button to enter your input or **ESC** to exit the field without applying any changes.

SMTP Server: smtp.gmail.com

Port: 465 (standard port for Gmail - others may vary)

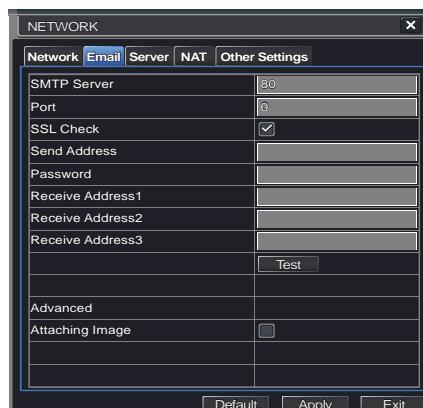
SSL Check: You will need to select this for Gmail. Other ISPs may vary.

Send Address: Enter your new address. This will appear on alert emails sent from the NVR

Password: Enter the password you created for this account. Remember, it will be case-sensitive.

Receive Addresses: You may set up to three e-mail addresses to receive alerts. It is strongly advised that you do not use the same address that the NVR is using to send alerts.

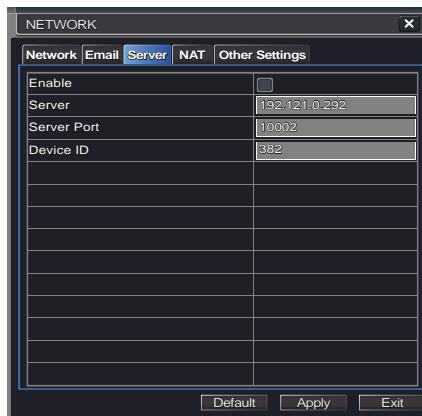
Attaching Image: Check this box if you want still images attached to the email. The quantity and time between each image is set in the **Snap** tab in the **Recording** menu (**Section 4.3**).



PICTURE 4-24

SERVER

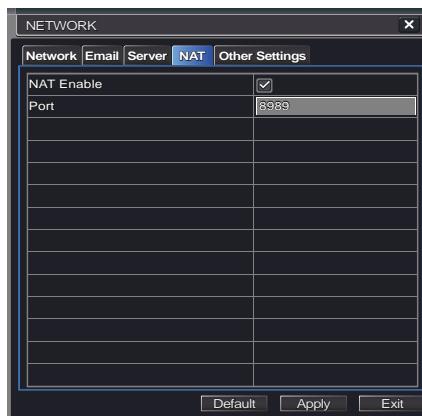
You can stream video and send notifications to a computer on the same network as your NVR. This is set up using the CMS or NVMS software which is covered in their own manuals. The free software is included either on the CD that came with your system, or it can be downloaded from www.Q-See.com/custhelp along with the manuals.



PICTURE 4-25

NAT

The settings in this tab allow the NVR to connect to the network and Internet through the Scan N' View service. **No changes should be made in this tab.**



PICTURE 4-26

OTHER

DDNS

Commercial ISPs provide their customers with dynamic addresses (IP numbers). These numbers can change from time to time depending upon your service provider. This will not affect your connection using Scan N' View. However, if you are using the CMS or NVMS software - or another method of remote monitoring - these changes will cause you to lose the ability to remotely access your NVR from your mobile phone or other out-of-network device. To prevent this from happening, we recommend using a Dynamic Domain Name Service (DDNS). This will give you a domain name that can be linked to your IP address and will automatically – and invisibly – forward remote connections to your network when the IP address changes.

Q-See offers DDNS for free at **MyQ-See.com**. Create a domain name, user name and password before proceeding. **DynDNS.com** also offers a similar free service. This is covered in-depth in the **Remote Monitoring Guide**.



PICTURE 4-27

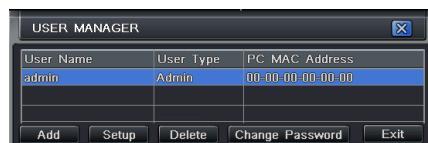
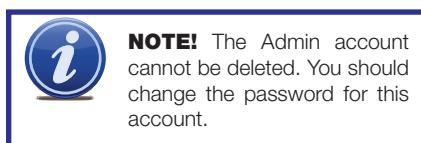
Select the box in the DDNS field to enable DDNS. You will then enter the user name, domain name and password you created into the appropriate fields. You can also select the interval at which the DDNS checks to see whether your IP address has changed. Intervals range from every 30 minutes to once a day.

You can now access the NVR remotely by inputting that domain name into the web browser.

4.6 USER MANAGEMENT

USER ACCOUNTS AND PASSWORDS

You can set up accounts for each individual user and grant them control of select parts of the surveillance system. An administrator account is already created on the NVR. Additional accounts can be created for users but only one administrator account is allowed.



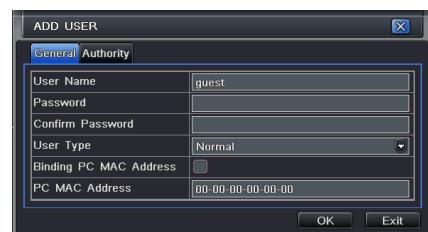
PICTURE 4-28

To add a user select the **Add** button and the **ADD USER** window will open. It will have two tabs; **General** and **Authority**

General Tab

Input the name, password and select the type of user – normal or advance.

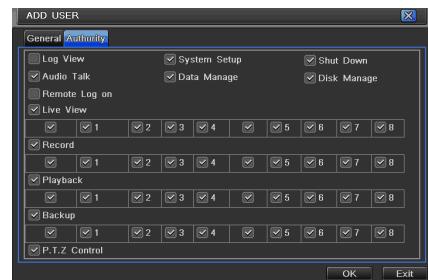
If you only want this user to be able to access the NVR from a specific computer on the network then select the **Binding PC MAC Address** option and then enter the MAC address of that computer.



PICTURE 4-29

Authority Tab

In this tab you can give this user access to all or part of the system and its functions.



PICTURE 4-30

Setup button – Modify user's name, type, binding PC Mac address (optional) and etc. With the exception of changing the password, the Admin account may not be modified.

Delete button – Remove a user from the system

Change Password button – Modify a user's password. The admin password should be changed. The default is **123456**.

To change a password, simply click on the button and enter the current password in the pop-up window, along with the desired new password in the **New Password** and **Confirm Password** fields before clicking **OK** to save and **Exit** to close the window.

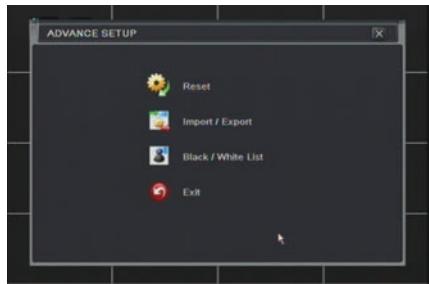
4.7 ADVANCED

In this set of commands, the user can erase all the settings, import or export data files to and from the NVR and control who can remotely access the NVR through three submenus:

Reset, Import/Export and **Block/Allow List**.

RESET

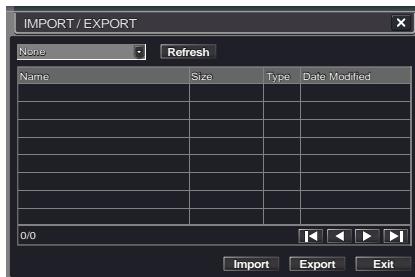
Clicking on this option will open a warning dialogue asking you to confirm that you wish to remove all settings and reboot the system. You must select **OK** to continue with the reset or hit **CANCEL** to exit without changes.



PICTURE 4-31

IMPORT/EXPORT

Use this interface to export select data files to mobile Flash drives or an external USB drive through the backup function. Specific data files can also be retrieved from mobile or external storage devices and recorded onto the NVR.



PICTURE 4-32

BLOCK/ALLOW LIST

From here, an authorized user can control which computer users are allowed to access the NVR.



PICTURE 4-33

The **Block List** is used to deny access to remote computers within a certain IP address segment.

The **Allow List** is used to permit access by users from select IP address segments.

EXAMPLE: You wish to block access to the NVR from computer users within the IP address segment ranging from 196.168.000.002 to 196.168.000.004. Select the **Block** button and then enter the first segment in the **IP From** field and the last address within the segment in the **To** field. You may add additional segments before hitting **Apply** to save your settings and then exiting this window.

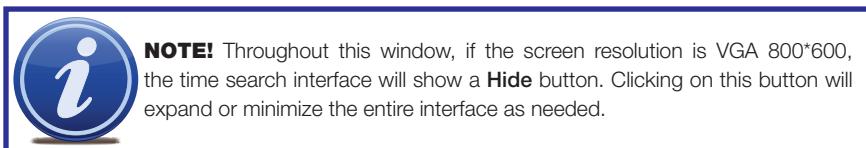
4.8 FILE SEARCH, PLAYBACK AND MANAGEMENT

Access the recordings on the NVR, play them back and backup the recordings to an external storage device.

Four submenus appear in this section: **Time Search**, **Event Search**, **File Management** and **Image**.

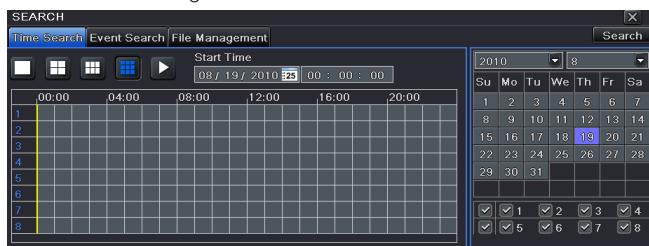


PICTURE 4-34



TIME SEARCH

Search for an event within a range of dates and times.



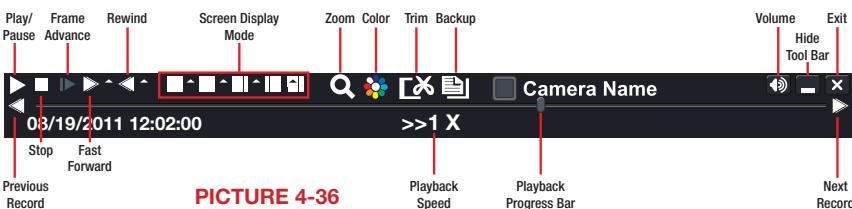
PICTURE 4-35

Select which channel you wish to search and the screen display mode. The **Calendar** icon in the **Start Time** window allows you to select a start date. Highlighted dates indicate that there is recorded data for those days.

The vertical column of numbers to the left of the grid are the available channels. The horizontal headings are blocks of time within the day.

You can select which time to begin the review by entering it in the start time window or clicking on the time grid and moving the yellow line to the approximate start time.

Clicking on the **PLAY** button will begin the playback from the time selected. It will also bring up a playback toolbar allowing finer control of the playback process.



PICTURE 4-36

EVENT SEARCH

Selecting this tab will bring up a list of recorded events. Your NVR is configured by default to record when motion is detected. You can choose whether to display events triggered by Motion, Sensor or both. These files are saved as events.

Select the date you wish to search and click the **Search** button. You will be presented with a list of recorded events.

Select the channel and click the Double-click the event file you wish to play back.

PICTURE 4-37

FILE MANAGEMENT

From within this tab you can lock, unlock or delete recorded events from the drive.

Clicking the **Search** button in the upper right of the window will bring up a list of events to be displayed. Results can be filtered by selecting date and channels if desired.

PICTURE 4-38

LOCK – Selecting a file and then clicking the Lock button will protect the event from being overwritten or deleted unless the entire drive is reformatted

UNLOCK – This will remove the file protection and the event recording can be deleted or overwritten normally.

DELETE – If the event is not Locked, this will remove the selected event from the NVR.

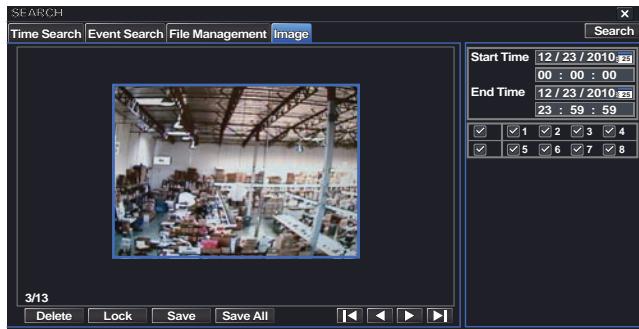


NOTE! If the status shows "Writing" it means that the sector on the hard drive where the file is located is still being written to. You cannot delete the file until the file is completed and the word "Writing" disappears.

IMAGE

This tab functions much as the **Event Search** tab by allowing you to search for and view the still images captured when you click on the **Snapshot** icon on the **Control Bar**. These images are stored on the NVR's hard drive just as with video files.

Select the date to search, along with the start and end times to search between. You can also select which channels you want to include in the search. Clicking the **Search** button in the upper right of the window will bring up a list of available images.



PICTURE 4-39

After the search is completed, a count of available images will be displayed along with the first still image. The buttons at the bottom of this tab allow you to navigate through the images as well as save them for use outside the NVR.

DELETE – This will remove an unwanted image from the hard drive.

LOCK – This will prevent a file from being deleted. If a file is locked, this button will read **UNLOCK**. This file will still be deleted if the hard drive is reformatted.

SAVE/SAVE ALL – These buttons allow you to save individual or all of the images in the group to an external USB flash drive inserted in the USB port on the front of the NVR.

ARROW BUTTONS – Navigate to the first, last previous or next image in the group.

This NVR supports backing up files to USB flash drives and USB hard drives through the USB port on the front panel. Remote backups can be performed over the Internet. Refer to Section **2.4 Remote Backup** in the **Remote Monitoring Guide**.



NOTE! External USB hard drives used for backing up data will need to be in the FAT32 format. Most new drives will need to be reformatted before use with this NVR.

FORMATTING A USB DRIVE IN FAT32

Windows XP to Windows 7:

STEP 1. Connect drive to PC

STEP 2. Go to **My Computer** to locate the drive's icon.

STEP 3. Right click on it and select **Format** in the list of available options.

STEP 4. Select **FAT32** and check the box marked **Quick Format**

STEP 5. Click **Start**.

Windows 8 and 8.1

STEP 1. Connect drive to PC

STEP 2. Click the **Start Button**

STEP 3. Click **Control Panel**

STEP 4. Click **System and Security**

STEP 5. Click **Administrative Tools**

STEP 6. Double-click **Computer Management**

STEP 7. In the left pane, click **Disk Management** (under **Storage**)

STEP 8. Right click on the disk or partition to be formatted

STEP 9. Click **Format**

STEP 10. Select **FAT32** under **File System**.

STEP 11. Click **OK** and then click **OK** again.

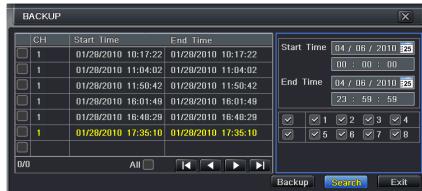
For USB drives over 32GB in size, you should use a FAT32 format utility such as those available through **CNET.com**.

BACKING UP A FILE

Selecting **BACKUP** in the **Main Menu** will open the **Backup** configuration window.

The search for files to backup is much like the method used to search for files to play back as was covered in the previous chapter.

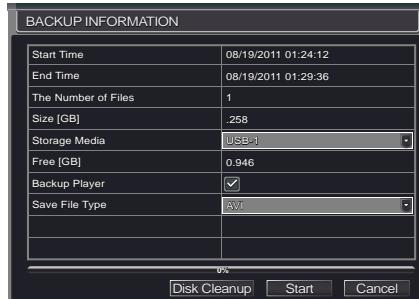
Set the start and end times as well as channel(s) you wish to back up. Clicking the **Search** button will bring up the search results in the **Data Backup** list box.



PICTURE 5-1

Select specific events or select the **All** button. Clicking the **Backup** button will bring up the **Backup Information** window:

This window will present a summary of the number of files, starting and ending times, total size of the files and whether you have space available on the receiving storage media. **Disk Cleanup** will erase the contents of the storage media to make room. You can select which type of device you are recording to as well as what type of file you will be creating.



PICTURE 5-2

Save File Type: Choose between **DVR** and **AVI**. The former will save the video in a proprietary format while the latter will create a standard .avi file usable by most media playback software. If you choose the **NVR** format, you need to select the **Desktop Player** option (see **Picture 5-2**) as well. This will save a stand-alone playback program in a separate folder labeled **Video Play** on the same drive.

Clicking on the **Start** button will begin the backup and the progress bar will display the progress.

PLAYING BACK A VIDEO FILE ON A COMPUTER

Windows PC - You may play AVI formatted files using Windows Media Player, QuickTime, DIVXplayer or other media players. The files can be opened and played in a similar manner to any other media file.

The **Superplay.msi** program is a PC-only application and is saved onto the same drive as video files when the Backup Player option is selected. Launch the software in the normal manner and then click on **Open Path** and navigate to the folder containing the video files and select the file you wish to play back. It will only play files in the .DVR format and it can be used to convert that format to the more common .AVI format.

As a reminder, files with audio must be backed up using the .DVR format and then converted to .AVI in order to retain the audio portion.

Apple Macintosh - At this time, you must use the **Remote Backup** feature to save the file to your computer through the remote viewing software. See **Section 2.4** of the **Remote Monitoring Guide** for instructions on this process.

You **MUST** select the **AVI** format when backing up the video file for playback on a Mac computer. You can use the QuickTime player or other video player and open the video file in the normal manner.

IMPORTANT CONSIDERATIONS

Audio

If you have recorded audio with the video file that you wish to back up, you **MUST** select the **.DVR** format for your file. You will also need to ensure that the box next to **Desktop Player** is selected as well. If you are sharing the video with anyone, such as law enforcement, the player will allow them to hear the audio along with seeing the video. You may also use the player to convert the file to the more conventional .AVI format and the audio tracks will be included in the video. Please note that files backed up via a Macintosh computer will not retain audio.

Locking the file

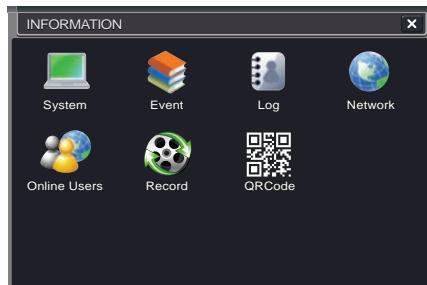
In situations where the video file is to be used as evidence, we recommend **locking the file first** as described in **Section 4.8 File Search, Playback and Management**. This can be done either locally on the NVR, or remotely through your mobile device or computer. Please see the **Remote Monitoring Guide** for instructions on performing this function away from the NVR. Once it has been locked, it cannot be erased or overwritten unless the entire hard drive is reformatted.

6.1 INFORMATION



PICTURE 6-1

This window enables the user to monitor the status of the system, its network connection, online users, history and events through five submenus: **System**, **Event**, **Log**, **Network** and **Online Users**.



PICTURE 6-2

SYSTEM INFORMATION

Data on the system's hardware, MCU (MicroController Unit), kernel (if applicable) and firmware versions can be found here along with the device's name and ID.

Device Name	EDVR
Device ID	0
Hardware Version	302.0.X-
MCU Version	
Kernel Version	
Firmware Version	3.1.0.D
Launch Date	2010-07-31 11:07:00

PICTURE 6-3

EVENT INFORMATION

This window lists recorded events. This list can be searched by date, time, type of event and channel.

EVENT LIST			
CH	Type	Start Time	End Time
1	Sensor	01/28/2010 10:17:22	01/28/2010 10:17:22
1	Motion	01/28/2010 11:04:02	01/28/2010 11:04:02
1	Video Loss	01/28/2010 11:50:42	01/28/2010 11:50:42
1	Motion	01/28/2010 16:01:49	01/28/2010 16:01:49
1	Sensor	01/28/2010 16:48:29	01/28/2010 16:48:29
1	Motion	01/28/2010 17:35:10	01/28/2010 17:35:10

0/0

Motion Sensor Video Loss

Start Time 04 / 08 / 2010 25
00 : 00 : 00

End Time 04 / 08 / 2010 25
23 : 59 : 58

1 2 3 4
 5 6 7 8

Search Exit

PICTURE 6-4

LOG INFORMATION

This window lists user activity within the system.

LOG LIST			
Type	User Name	Time	IP
Time Search	admin	05/04/2010 14:02:29	127.000.000.001
Time Search	admin	05/04/2010 14:02:21	127.000.000.001
Time Search	admin	05/04/2010 14:02:19	127.000.000.001
Logon	admin	05/04/2010 14:02:01	127.000.000.001
Stop P.T.Z Operation	admin	05/04/2010 11:58:30	127.000.000.001
Start P.T.Z Operation	admin	05/04/2010 11:51:54	127.000.000.001
Stop P.T.Z Operation	admin	05/04/2010 11:51:53	127.000.000.001
Operate P.T.Z	admin	05/04/2010 11:48:57	127.000.000.001
Operate P.T.Z	admin	05/04/2010 11:45:00	127.000.000.001
Start P.T.Z Operation	admin	05/04/2010 11:36:07	127.000.000.001
Logon	admin	05/04/2010 09:54:04	127.000.000.001

1/1

Operation
 Setup
 Playback
 Backup
 Search
 Check Information
 Error

Export Search Exit

PICTURE 6-5

This record can be searched by type of operation, date and time, and etcetera. It can also be exported to external USB storage devices using the backup function.

NETWORK INFORMATION

This window shows the status of the NVR on the network including its assigned port, and other networking configurations.

NETWORK	
HTTP Port	0
Server Port	0
IP Address	000.000.000.000
Subnet Mask	000.000.000.000
Gateway	000.000.000.000
Preferred DNS Server	000.000.000.000
Alternate DNS Server	000.000.000.000
Networking Approach	Static IP
Status	Unconnected
DDNS	Unconnected
MAC	00-00-00-00-00-00

PICTURE 6-6

ONLINE USER INFORMATION

Information on remote users currently connected is displayed in this window.

ONLINE USER LIST		
User Name	IP	Status
0/0		
Refresh		Disconnect

PICTURE 6-7

Refresh – Updates the list of online users

Disconnect – The Administrator can disconnect a selected user from the NVR. That PC will not be able to access the device for five minutes thereafter.

You can also permanently block a user by using the Block/Allow list in the Advanced menu.

See Section 4.7.

RECORD INFORMATION

This window provides information on your camera's recording resolution, the recording speed and what mode the camera is operating in. At the bottom is a bar indicating the percentage of the hard drive's capacity that has been used.

RECORD						
CH	Resolution	fps	Sensor	Motion	Manual	Schedule
1 D1	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 D1	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 D1	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 D1	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 D1	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
6 D1	30	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7 CIF	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
8 CIF	30	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Disk						
ID	1					19%
Status	<div style="width: 19%;"></div>					

PICTURE 6-8

6.2 MANUAL ALARM

This displays the configuration of the manual alarm. See **Chapter 8** for information on connecting and setting up alarms.

MANUAL ALARM				
Index	Alarm Name	IP	Trigger	
1	ALARM OUT 1	127.0.0.1	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> All			<input type="button" value="Alarm"/>	<input type="button" value="Clear"/>
				<input type="button" value="Exit"/>

PICTURE 6-9

6.3 DISK MANAGEMENT

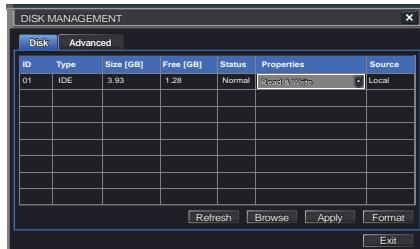
This window displays information on the drive or drives mounted within the NVR including size, available space and status.

DISK

The Disk tab shows the capacity of the hard drive, its type and status.

The drive can be set to read only, which will disable recording, but will preserve the data currently stored within it.

If you have upgraded your system by installing a new drive (**See Chapter 8**) you will need to first format the new hard disk before recording. You can reformat the current drive if desired by selecting the Format option in the drop down menu.



PICTURE 6-10

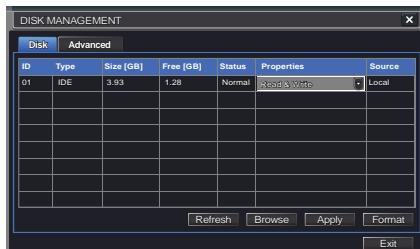


WARNING! Reformatting the drive will delete all recorded files stored on the hard disk regardless of whether they are Locked!

Refresh will update the information about the drive as well as search for additional drives.

ADVANCED

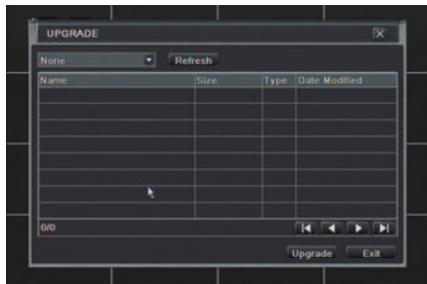
S.M.A.R.T. stands for Self-Monitoring, Analysis and Reporting Technology and this is used to show more detailed information about the mounted hard drives which can help anticipate a drive failure or show the cause of one.



PICTURE 6-11

6.4 FIRMWARE UPGRADE

This window will display firmware updates that are loaded on a USB flash drive in the front USB port.



PICTURE 6-12

Firmware upgrades are available from Q-See at www.Q-See.com/Support and may be found by looking up your specific model. Firmware should only be upgraded to fix a specific problem or add features as ongoing development may result in features being replaced or changed.

The firmware download should be loaded onto an empty USB flash drive from the downloading computer and then transferred to the NVR using a USB port.



IMPORTANT! Please make note of your settings before updating the firmware on a QT426 or QT446 as the upgrade process will restore factory defaults. Other models will retain their user settings.



NOTE! While a Macintosh computer can read and write to a drive in the FAT32 format, it cannot reformat a USB flash drive to that standard. We suggest that you use a PC to reformat your USB flash drive to FAT32 and it is recommended that you download firmware updates on a PC. Beginning with version 3.1.71, you can use the Upgrade feature in the Remote Monitoring software (see **Section 2.5** of the **Remote Monitoring Guide**) to upgrade without a USB flash drive.



WARNING! Updating the firmware incorrectly or using the wrong update can permanently damage the chipset on the NVR and render it unusable. Updates are written to either resolve issues or add features to the NVR. If you are not experiencing performance issues or do not need a feature added by the update, we recommend not running the update.

6.5 LOGOFF

Logging out of the NVR is recommended when there are multiple users or when physical access to the NVR is not restricted. Clicking on the **Logoff** icon will bring up a window asking for confirmation.

After logging off, a user can log back in by clicking on the **Menu** icon and entering their user name and password.

6.6 SHUT DOWN

This is a “soft power down” of the NVR. It shuts down the firmware and hard drive, but does not power down the NVR itself.



WARNING! It is vital that the NVR be instructed to shut down using the **Shut Down** menu option prior to unplugging the device in order to avoid damaging the firmware or hard drive itself.

Many QT Series NVRs feature connections for external alarms – both input and output. Please consult **Chapter 2 Connections and Controls** to determine whether your model includes this feature and where the connection block is located. The alarm connector block shown in **Picture 7-1** is only a representation and your actual connector may look different.

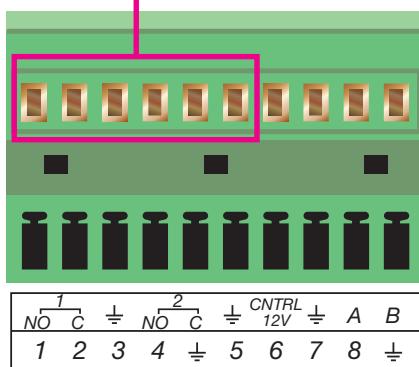
When an event is detected the system can notify local users or send notification to a monitoring service. At the same time, the system can accept signals from motion detectors, smoke detectors or other alarms and begin recording based on that input and your settings. You will need to have the manual for your alarm(s) handy to ensure the proper settings within the NVR.

ALARM IN

7.1 ALARM INPUT

When attaching alarms, the following criteria must be met:

1. The alarm input must be grounded.
2. A grounding signal is required for the alarm input
3. When connecting the NVR to another device - including another NVR - through the alarm input, a relay should be used to separate them.



PICTURE 7-1

Parameter	Grounding Alarm
$\frac{1}{\pm}$	Ground line
Alarm Input	1, 2, ..., 8 becomes valid in low voltage.
1-NO C 2-NC C	Two NO activation outputs.

Consult your alarm's manual to ensure proper connection. Some common terms and guidelines are shown below:

- Normal open or Normal close type
- Parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Parallel connect the Ground of the combo NVR and the ground of the alarm detector.
- Connect the NC port of the alarm sensor to the combo NVR alarm input(ALARM)
- Use the same ground with that of combo NVR if you use external power to the alarm device.

7.2 ALARM OUTPUT

The alarm output port should not be directly connected to a higher power load (greater than 1A) to avoid high current which may damage the relay. Use the co-contactor to establish the connection between the alarm output port and the load.

- 2 way relay alarm output (NO contact). Provides external power to external alarm device.
- To avoid overloading, please read the following relay parameters sheet carefully.

Relay Specification

Model:	JRC-27F	
Material of the contact	Silver	
Rating (Resistance Load)	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch currency	1A
Insulation	Between contacts with same polarity	1000VAC 1minute
	Between contacts with different polarity	1000VAC 1minute
	Between contacts and winding	1000VAC 1minute
Surge voltage	Between contacts with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×106 times (3Hz)
	Electrical	200×103 times (0.5Hz)
Temperature	-40°C ~+70°C (-40°F to +158°F)	

7.3 ALARM CONFIGURATION

Alarm configuration allows the NVR to begin recording based on input from other remote sensors such as infrared motion detectors or contact alarms which are connected to it.

There are five submenus; **Sensor**, **Motion**, **Video Loss**, **Other**, and **Alarm Out**.

SENSOR

In this window you can setup optional external sensors to cause the NVR to begin recording.

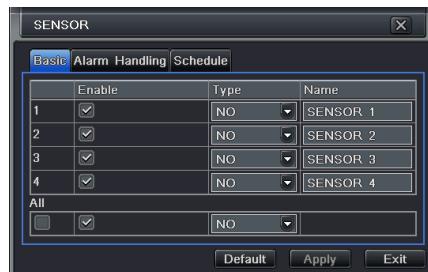
There are three tabs in this window: **Basic**, **Alarm Handling** and **Schedule**.

Basic Tab

This allows you to enable the input from attached sensors. You can also identify the sensors by name for ease in determining location.

Set the alarm type according to whether the alarm is NO (Normally Open) or NC (Normally Closed). See your alarm's manual for details.

Alarms can be individually configured or globally set using the **All** button.



PICTURE 7-2

Alarm Handling Tab

Configure how you want the NVR to handle the input from an activated alarm. Each sensor input can be set to launch individual sequences of action or they may be globally set through the **All** button to have the same results.

Hold Time: determines the time allowed between consecutive alarm events. If the alarm is triggered again within this time, it will be treated as a single event and the NVR will continue recording before stopping.

Trigger: This is what the NVR will do once activated by an alarm. Selecting **Setting** will open a new window with three tabs; **Alarm**, **To Record**, **To PTZ**

Alarm allows you to set whether a buzzer will sound, which camera (if any) will display in full screen mode, whether an e-mail will be sent and whether a signal will be sent via the ALARM OUT port.



PICTURE 7-3



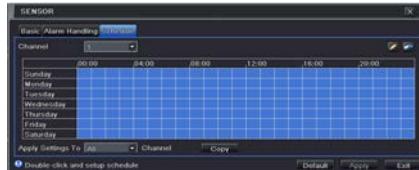
PICTURE 7-4

To Record allows you to determine which cameras will begin recording. Cameras can be set to record individually, in blocks, or all cameras can be activated.

To PTZ activates preset, cruise or track functions on selected Pan-Tilt-Zoom cameras. Depending on your model of PTZ camera, one of up to 128 pre-set actions can be engaged. Check your camera's manual for details.

Schedule Tab

Set by default to always on, the schedule can be altered in the same manner as that used in **Schedule** in **SECTION 4.4**.



PICTURE 7-5

MOTION

Motion Tab

As with the **Alarm** function above, it incorporates hold time and can trigger procedures.

Select which cameras you wish to start recording on motion detection. Set the holding time which determines the length of time the cameras continue recording after motion stops.

In the **Trigger** setting, you can set multiple channels to record when motion is detected by a camera that has been set to activate upon motion detection.

For example: If Camera 1 detects motion, you can have it trigger Cameras 2 and 3 to begin recording as well.

CH	Enable	Holding Time(s)	Trigger	Area
1	<input checked="" type="checkbox"/>	10	Setting	Setting
2	<input checked="" type="checkbox"/>	10	Setting	Setting
3	<input checked="" type="checkbox"/>	10	Setting	Setting
4	<input checked="" type="checkbox"/>	10	Setting	Setting
5	<input checked="" type="checkbox"/>	10	Setting	Setting
6	<input checked="" type="checkbox"/>	10	Setting	Setting
7	<input checked="" type="checkbox"/>	10	Setting	Setting
8	<input checked="" type="checkbox"/>	10	Setting	Setting

PICTURE 7-6

In addition, the user can set the sensitivity of certain areas within the field of view by clicking on the **Select** button selecting the **Area** field for the respective camera.

Specific areas can be made sensitive by applying a blue grid to the desired section of the screen. The blue grid can be applied to the entire screen – signifying that the entire field of view is sensitive - by clicking on the **star button**. The **trash can** button will remove the grid completely. Click and drag with the mouse on the screen to draw or erase the grid in select areas.



PICTURE 7-7

As sensitivity is influenced by color and light level, you can adjust its values according to your specific conditions. The default value is "4." A setting of "8" is most sensitive while a setting of "1" is minimally sensitive.

Right-clicking in the screen will show or hide the control menu at the bottom of the screen.

Test your settings by moving something or someone through the grid area in the camera's view. Motion should not be detected outside of this area but you should see a yellow humanoid figure appear in the screen once the NVR detects movement within the grid. Removing the grid where there is a flag or trees that frequently move in the wind will prevent false alerts. Click on the **Disk** button to save your settings before exiting the setup process by clicking on the **X** button.



PICTURE 7-8

Schedule Tab

This is also set to be on all the time by default and it can be adjusted in the same manner as the **Schedule** configuration in **SECTION 4.4**.



PICTURE 7-9

VIDEO LOSS

In the event that signal is lost by one camera, others can be activated to record while additional devices can also be triggered.

Like the **Trigger** tab in the **Alarm Handling** section of the **Sensor** menu, you can select the events that you wish to occur in the event that a video input is lost. Both Alarms and PTZ events can be scheduled as in the **Sensor** menu above.



PICTURE 7-10

OTHER ALARM

In this menu you can set the NVR to alert you to a full Hard Drive, IP Conflict on the network or a Disconnection.

You can set the response as well as at what threshold of remaining disk space you wish to be alerted.



PICTURE 7-12

ALARM OUT

Set how the alarms are handled and transmitted in this window. This controls any device attached to the ALARM OUT port on the back of the NVR. There are three tabs; **Alarm Out**, **Schedule** and **Buzzer**.

Alarm Out Tab

You can set the relay alarm out name as well as the hold time. Hold time is the interval between consecutive alarm activations so multiple events within the interval will not cause the alarm to sound again.



PICTURE 7-12

Schedule Tab

The default setting is for the ALARM OUT to be active all the time, but this can be changed to meet your particular requirements in a similar manner to **Schedule** in **SECTION 4.4**.

Buzzer Tab

As with the **Alarm Out** hold time, the internal buzzer can be enabled and given a hold time.

Your NVR uses a standard desktop or 3.5" SATA (Serial Advanced Technology Attachment) hard disk drive and will support drives up to 3TB (terabytes). These drives are the current industry standard and may be purchased wherever computer parts are sold. Depending on where you purchased your NVR, your hard drive may already be installed. But, we recognize that you may wish to upgrade or replace your drive in the future so this NVR is designed to make installation and replacement easy for the average user. An AV-rated drive is recommended for optimal performance.

It should be noted that while this is the only user-serviceable part within the case besides the battery and you will not void your warranty by installing or upgrading your hard disk drive, care must be taken to avoid damage to the other components within the case. Such damage will not be covered.



WARNING! ELECTRIC SHOCK RISK!

The NVR **MUST** be unplugged from all power sources as well as from the cameras before opening the case. Failure to do so can result in damage to the NVR or its components as well as injury or death.



8.1 INSTALLATION/REMOVAL

It is strongly advised against opening the case when atmospheric conditions present the risk of static discharge which can damage electronic components.

Whether installing the drive for the first time or removing the old one to install a new one, the steps are largely the same:

STEP 1. Disconnect the NVR from the power source as well as any other connections.

STEP 2. Remove screws (the number will vary depending on your model) from the side and rear of your NVR as indicated in **Picture 8-1**

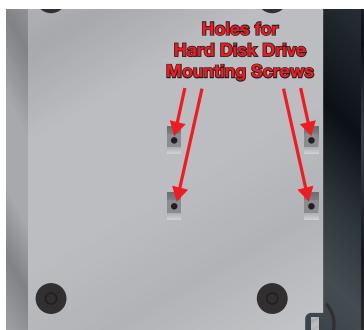
Remove Screws



PICTURE 8-1

STEP 3. Remove the case by sliding it backwards and then lifting off.

STEP 3A. If removing a hard drive, you will need to unscrew the four drive mounting screws at the bottom of the NVR or on the internal mounting rack.

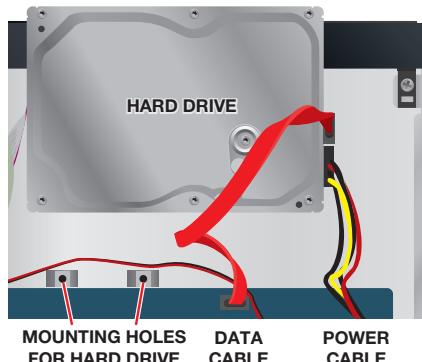


PICTURE 8-2

STEP 4. Connect the power and data cables. Press firmly, but do not force them onto the pins or you may damage them. The connectors are “keyed” to ensure they are connected in the proper position.

STEP 5. Attach hard drive to the base of the NVR with screws using the four mounting holes.

STEP 6. Replace the NVR cover and secure.



PICTURE 8-3

8.2 CALCULATING THE RECORDING CAPACITY OF A HARD DRIVE

While the physical data capacity of a hard drive is fixed, how much video you can record upon it depends on your recording configurations. Higher quality recordings will take up more space on the drive and setting the NVR to record for more frequently will fill it up more rapidly.

The chart below shows how long it would take to fill up a hard drive if the NVR was recording on all channels 24/7.

#Channels/Resolution	1TB	2TB	3TB
4 Channel			
1080P	1.5	3	4.5
720P	1.75	3.5	5.25
960H	5.25	10.5	15.75
D1	6	12	18
8 Channel			
1080P	0.75	1.5	3
720P	0.87	1.75	3.5
960H	2.5	5.25	10.5
D1	3	6	12
16 Channel			
1080P	0.37	0.75	1.5
720P	0.43	0.87	1.75
960H	1.25	2.5	5.25
D1	1.5	3	6

APPENDIX

A.1 TROUBLESHOOTING

1. The NVR does not start after connecting the power, what is wrong?

- The power adapter may have been damaged, or is not providing enough power. Please change the adapter.
- The NVR may not be getting enough power from the outlet or surge protector it is attached to.
- There could be a problem with the system board on the NVR

2. The indicator lights of the NVR are on, but no output. Why?

- The power adapter may have been damaged, or is not providing enough power. Please change the adapter
- The video format of the NVR is different from that of the monitor.
- Connection problem. Please check the cable and the ports of the monitor and NVR.

3. Why are no images displayed on some or all of the channels of the NVR?

- Connection problem. Please check the cables and the ports of camera and NVR.
- Camera problem. Please check the cameras by attaching them directly to a working port on NVR.
- The video format (NTSC/PAL) of the NVR is different from that of the cameras. Please change NVR video format.

4. The NVR cannot find the hard disk drive.

- The power adapter is not providing enough power, or the adapter is not getting enough power from the outlet
- Connection problem. Please check the power and data cables on the HDD.
- The HDD is damaged and will need to be replaced.

5. I cannot record, what could be the problem?

- The HDD is not formatted. Please format it manually first.
- The record function is not enabled or setup correctly. Please refer to **Section 4.3 Record Configuration**.
- The HDD is full and recycle function is not enabled. Please refer to **Section 4.3 Record Configuration** and the **Recycle Record Tab** in the **Record Menu**.
- The HDD is damaged and will need to be replaced.

6. I cannot use the mouse, what could be the problem?

- Wait 5 minutes after connecting the mouse and then try again.
- The mouse is not securely connected. Plug/unplug several times.
- The mouse is incompatible with the system. Please try another mouse.

7 What can I do when the NVR starts and displays "please wait....." all the time?

- First possible reason: hard drive power cable and/or data cable are not securely connected.
Solution: Please check the cable connections and make sure they are secure; if still not working, please unplug them and then plug them in again.
- Second possible reason: The system is having problems reading the hard drive.
Solution: Try reformatting the current drive or re-placing it.
- Solution:** Try connecting the NVR to a different surge protector and power outlet.

8. How do I input letters and numbers?

To input letters (such as passwords) and numbers click the box behind where text is to be entered, and then a small keyboard will appear. Please select number or letter to input (the default password is **123456**), or you can use the digital keys on the front panel, or the digital keys on the remote control.



PICTURE A-1

9. How do I upgrade the firmware on the NVR?

After you download the new firmware from the Q-See website at www.Q-See.com/Support and copy it onto a USB flash drive. Then select **Upgrade** in the menu.



WARNING! Do not turn the system power off during the upgrade process! Doing so may damage the chipset and prevent the NVR from starting.

10. What is the minimum configuration of a PC for remote connection?

COMPONENT	MINIMUM REQUIRED
CPU	Intel Celeron 2.4G or later
HDD	100G
RAM	1GB
VGA	1GB Full Direct Draw Support
OS	Windows XP(SP2 above) /VISTA/Win7/ Win8 Mac OSX 10.7/10.8/10.9
DIRECTX	9.0

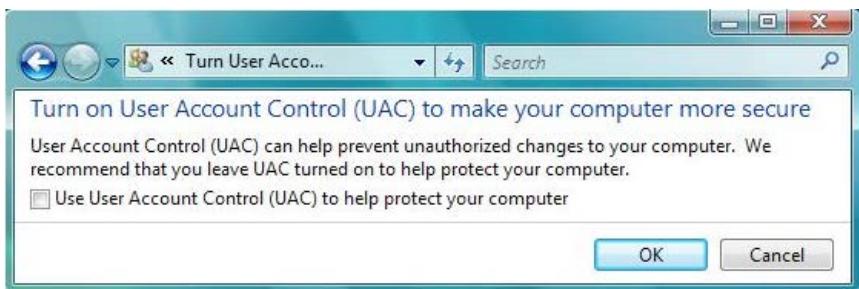
11. What are the PC configurations for 16-channel real time access with fully open mainstream channel?

PC MODULE	PARAMETERS
CPU	Intel Core(TM)2 Duo CPU E4600
HDD	500G
RAM	2GB
VGA	1GB Video RAM, Full Direct Draw Support
OS	Windows XP(SP2 above)/ VISTA/Win7/8, Mac OSX 10.7, 10.8, 10.9
DIRECTX	9.0

12. On Vista and Win7 I am getting an error message that Codec can't be installed or is missing, how do I solve that?

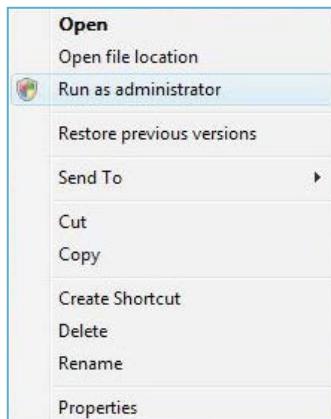
There are two ways to fix it:

- In Windows, go to your **Control Panel** select **User Account and Family Safety** and then choose **User Account Control**.
Click **Turn User Account On or Off**. Uncheck the box next to **Use User Account Control (UAC)** to help protect your computer.



PICTURE A-2

- Right-click on an Internet Explorer browser window. Select **Run as Administrator** to run browser.



PICTURE A-3

Q-SEE PRODUCT WARRANTY

Q-See is proud to back all of our products with a conditional service warranty covering all hardware for 12 months from the date of purchase. Additionally, our products also come with a free exchange policy that covers all manufacturing defects for one month from the date of purchase. Permanent upgrading service is provided for the software.

Liability Exclusions:

Any product malfunction or abnormalities in operation or damage caused by the following reasons are not within the free service scope of our company:

1. Equipment damage caused by improper operation.
2. Improper equipment operation environment and conditions (e.g., improper power, extreme environmental temperatures, humidity, lightning and sudden surges of electricity).
3. Damage caused by acts of nature (e.g., earthquake, fire, etc).
4. Equipment damage caused by the maintenance of personnel not authorized by Q-See.
5. Product sold over 12 months ago.

In order to fulfill the terms of your warranty, you must complete the registration process after purchasing our product. To do this, simply fill out the User's Information Card on our website at www.Q-See.com



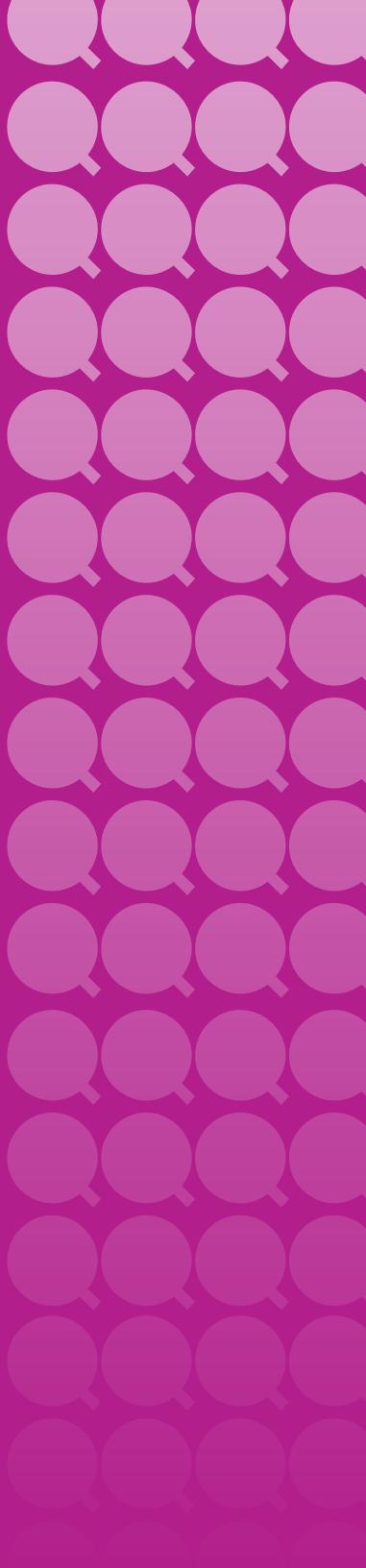
QUESTIONS OR COMMENTS? CONTACT US

**PRODUCT SUPPORT, DOWNLOADS,
FIRMWARE UPDATES & MANUALS**

24/7 Technical Resource Data Base

Live Chat (M-F, 6am - 7pm Sat & Sun 9am - 5pm PST)

www.Q-See.com/Support



simplicity - quality - technology

Q.see®

Digital Peripheral Solutions, Inc.
8015 E. Crystal Drive
Anaheim, CA 92807