Qsee®
simplicity - quality - technology

User Manual

MODEL QT454
QT428
QT426
QT446

QT4 Series

H.264 NETWORK DVR

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 DVR. Register today at www.Q-See.com!

Please see the back of this manual for exclusions.

About this Manual

This manual is written for the QT4 family of DVRs. 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, additional features and functions may have been added 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.

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TABLE OF CONTENTS

FOR YOUR SAFETY

CHAPTER 1

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, repackage 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 DVR. Inserting anything into the DVR or its case can be a source of dangerous electric shock.
- Do not operate in dusty areas. Avoid placing the DVR 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 an authorized dealer immediately.
- Keep product surfaces clean and dry. To clean the outside case of the DVR, gently wipe using a lightly dampened cloth (only use water, do not use solvents).
- Do not operate this DVR without the cover securely in place. Do not attempt to do any repairs to the DVR yourself. If there are unusual sounds or smells coming from the DVR, 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 9**) 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 DVR box carefully. If you accidentally drop your DVR on any hard surface, it may cause a malfunction. If the DVR 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 DVR 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 DVR 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 DVR has a built-in fan that properly ventilates the system. Do not cover or impede this fan.

INTRODUCTION CHAPTER 2

This DVR 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 codec to deliver high-quality, smooth videos and dual stream capability for remote viewing. A SATA hard-drive interface offers upgradability and VGA output allows users to connect to any standard TV or monitor for 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 DVR 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.

MAIN FEATURES

COMPRESSION FORMAT

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

LIVE SURVEILLANCE

Supports HD VGA output

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 one SATA HDD up to 2TB 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

128MB for every video file packaging

4 audio channels available

Two record search modes: time search and event search

Supports multi-screen simultanious playback

Supports deleting and locking the recorded files one by one

Supports remote playback in Network Client through LAN or internet

Supports recording in CIF and D1 resolutions.

ALARM

1 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

Supports linked PTZ preset, auto cruise and track of the corresponding channel

PTZ CONTROL

Supports multiple PTZ protocols (PelcoP, PelcoD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, and RANGE)

Supports 128 PTZ presets and 8 auto cruise tracks

Supports remote PTZ control through internet

SECURITY

Customize user rights: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view

Supports 1 administrator and 15 users.

Supports event log recording and checking, events unlimited

NETWORK

Supports TCP/IP, DHCP, PPPoE, DDNS protocols

Supports IE browser to do remote viewing

Supports a maximum of 10 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 DVR parameters remotely

Supports mobile surveillance by smart phones, Win Mobile Pro, Symbian, and iPhones, iPads, Android, and Blackberry on 3G networks

Supports CMS to manage multiple devices on the internet

Administrator can limit user access to specific cameras

Administrator can disconnect online users

NOTE! Depending on your point of purchase, your DVR will have the hard disk drive already installed. If your drive was packaged separately or if you wish to upgrade to up to a 2TB drive, please see **Chapter 7** at the back of this manual which covers installing the drive.

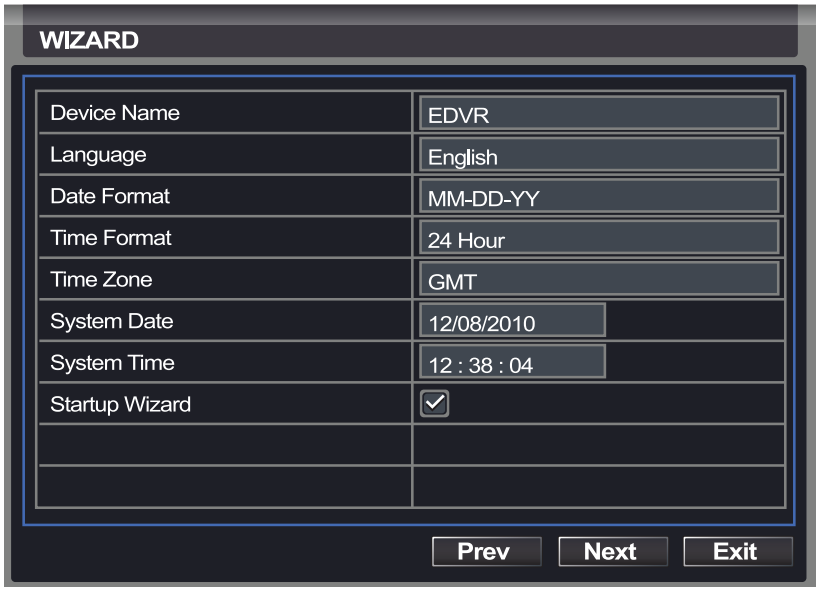
BASIC FUNCTIONS CHAPTER 3

3.1 POWER ON/OFF

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

POWER ON

Connect the power supply and the DVR will power up. The blue LED power indicator on the front will illuminate and an on-screen **WIZARD** dialogue box will open allowing the user to set up the time and time zone.



PICTURE 3-1

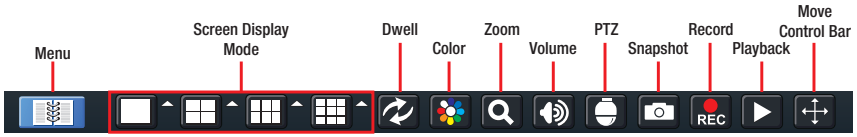
If the DVR displays the live image or doesn't display the menu on start up, the menu can be brought up by pressing the **ESC** button on the DVR or the **MENU** button on the remote control.

POWER OFF

The DVR 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 DVR be disconnected from power either by turning off the power at the surge protector or unplugging the device.

3.2 THE CONTROL BAR

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



PICTURE 3-2

The functions of the Control Bar are listed below. Each 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 the 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 DVR.

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

Snapshot: Captures a still image from all channels 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**.

3.3 LIVE VIEWING AND RECORDING

The normal mode of the DVR 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 4.3**.

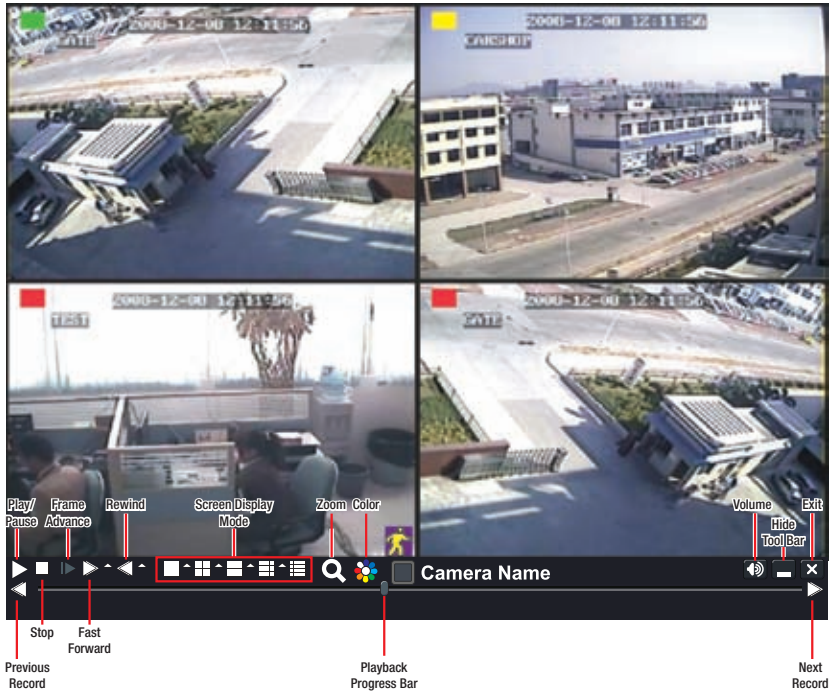
In addition to the camera images, the DVR will display symbols regarding the status of each camera.

PICTURE 3-3

Symbol	Meaning	Symbol	Meaning
	Recording Manually or on Schedule		Alarm Recording
	Motion Detection Recording		Motion Event

3.4 LIVE PLAYBACK

Pushing the playback buttons on the DVR or remote will enable you to play back what has been recorded. A toolbar will appear below the display allowing control via mouse as well.



PICTURE 3-4

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

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.

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 select a screen to bring it to full screen 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 DVR itself. It will not change the recording.

MAIN MENU SETUP

CHAPTER 4

4.1 BASIC CONFIGURATION

LOGIN

Before configuring the system, a user account needs to be created and a user must be logged in. The DVR can be configured to allow multiple users, each with their own level of access and authority. If not logged in, only the multi-screen display can be changed.

When starting for the first time, or when no one is logged into the device, pressing the **MENU** button on the DVR or remote control or right-clicking on the screen with the mouse will bring up the **LOGIN** screen. The default user name and password is ***admin*** and ***123456***. Both are case-sensitive.

For more on adding or deleting users, setting passwords and setting access levels, please see **SECTION 4.8**.

PICTURE 4-1

DISPLAY MODE

You can select whether to view a single channel at a time, or view mutlitple 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.

PICTURE 4-2

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

Users can check any or all channels between 1 and 16 (depending on your model) to display the live feeds. Click the ☑ box to confirm the settings before closing the **CHANNEL SELECT** menu by clicking on the ☒ button.

PICTURE 4-3

MAIN MENU

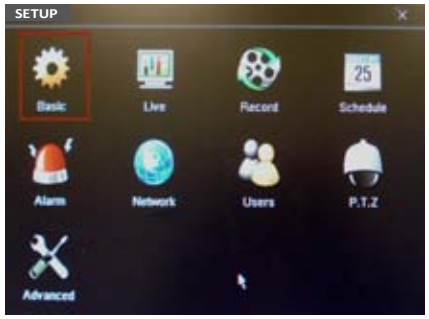
Selecting the **MENU** icon on the left of the **CONTROL BAR** or pressing the **MENU** button on the DVR and remote control open the **MAIN MENU**.

Clicking on any icon will open the relevant menu.

PICTURE 4-4

SETUP

From the **SETUP** menu select the **BASIC** menu to set device name, date, time and other settings. There are three tabs covering **System**, **Date & Time** and Daylight Savings Time (DST).



PICTURE 4-5

System Tab

The following settings can be changed in this menu:

Device Name: This will display on the client end or CMS. Naming the device will help users recognize the device when monitoring 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 time in Live View

Show Wizard: If this is enabled, a window to reset time and time zone will open upon system restart.

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

PICTURE 4-6

VGA Resolution: Chose the configuration that best fits your monitor. Options are: VGA800*600, VGA1204*768, VGA1280x1024 and CVBS. NOTE: VGA is for VGA monitors while CVBS is for TV monitors connected using a BNC/RCA adaptor. Switching between VGA and CVBS will change the menu output mode. Please be sure to have the correct monitor on hand when changing output mode.

Language: Select your preferred menu language.

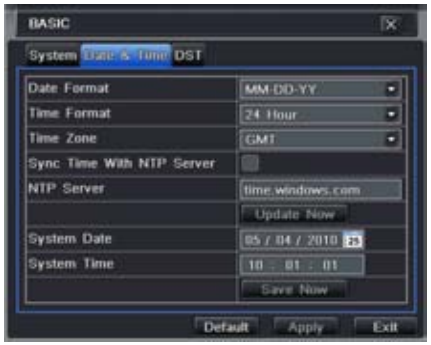
NOTE! When configuring your settings, you will always need to click **Apply** to save your current settings before closing the window with **Exit** otherwise your changes will be lost. You may click **Exit** or the close window box (**X**) in the upper right of the window to close without saving changes but an alert will pop up asking if you wish to save changes or not. 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.

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.

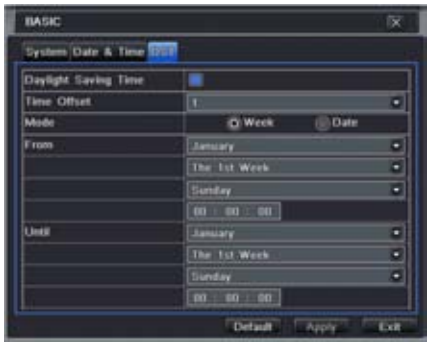
NTP Server: Using Network Time Protocol will keep your system's clock current by allowing it to occasionally receive updates from the selected server.



PICTURE 4-7

DST Tab

Allows your system to adjust for time changes due to Daylight Savings Time.



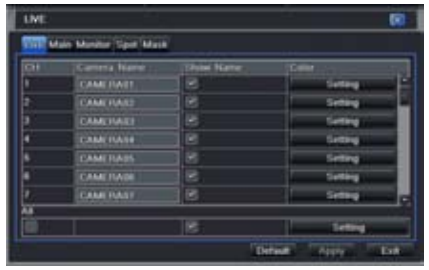
PICTURE 4-8

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.



PICTURE 4-9

You can individually name cameras by highlighting the field for each camera. A 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 configure the settings for image saturation, hue, brightness, contrast and colors individually 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.

PICTURE 4-10

Main Monitor Tab

Select the configuration of your display.

Split Mode allows you to choose from single view, 2x2, 2x3, 3x3 and 4x4 *(QT426 only)* views on a screen at one time. You can also select which channels will be displayed.

Channels can be grouped and 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.

PICTURE 4-11

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 DVR but may be in another room, for example. There will be no menu access on this auxiliary display.

Only one channel can be displayed at a time on this monitor. You can choose which channels (each channel is a "group"), the order and their dwell time. The left and right arrows allow you to move to the next group. A channel can appear in more than one group.

PICTURE 4-12

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 4-13

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.

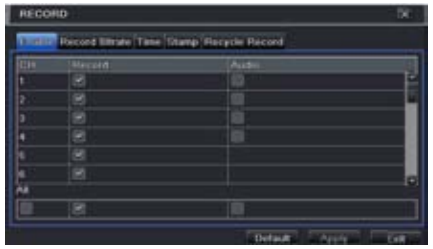
PICTURE 4-14

4.3 RECORD CONFIGURATION

Configure the recording settings for your cameras. 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 DVR. You can set up to four cameras to record audio in addition to video. You can globally select all the cameras regardless of their individual settings by selecting the **All** box below each column.



PICTURE 4-15

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 4-16

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

Parameter	Options	What it Means
Resolution	D1, CIF	D1 = Full TV resolution, CIF = 1/2 D1. D1 takes more room on the hard drive than CIF
FPS	1-30	Frames per second. More frames makes 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 compression, but issues may arise when streaming for remote viewing.
Quality	Lowest – Highest	Only available when VBR is selected. The higher the quality, the more drive space required.
Max Bitrate	256-2084kbps	Your network may not have enough bandwidth to handle maximum rates from all of your cameras. Adjusting these settings to suit your network will improve performance and on-screen image quality.

Time Tab

You can set the length of time the DVRs 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 (See **Recycle Record** below).

PICTURE 4-17

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 4-18

PICTURE 4-19

Recycle Record Tab

By selecting the box, you allow the DVR to record over old events when the hard drive is full. Otherwise, the DVR will stop recording when there is no more space available.

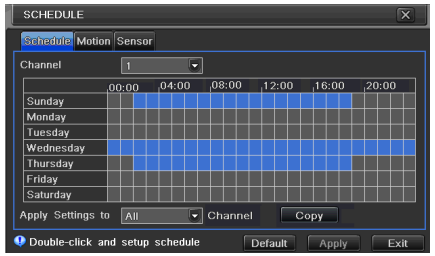
4.4 SCHEDULE CONFIGURATION

Configure your camera 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 4-20

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.

PICTURE 4-21

Schedules made in one mode can be altered in the other mode.

Motion Tab

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

PICTURE 4-22

Sensor Tab

This enables the DVR to record based on input from other sensors connected to the DVR. 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 4-23

4.5 ALARM CONFIGURATION

Alarm configuration allows the DVR 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 DVR 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.

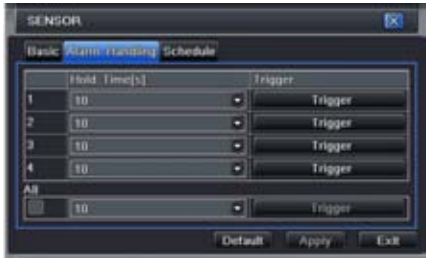
Set the alarm type according to whether the alarm is NO (Normally Open) or NC (Normally Closed). See your alarm's manual for details.

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

PICTURE 4-24

Alarm Handling Tab

Configure how you want the DVR 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.



PICTURE 4-25

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 DVR will continue recording before stopping – unless, of course, a subsequent alarm is activated within the hold time.

Trigger: This is what the DVR 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 4-26

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 4-27

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.

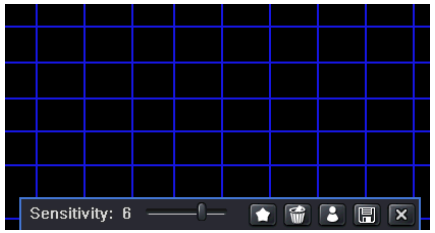
For example: If Camera 1 detects motion, you can have it trigger Cameras 2 and 3 to begin recording as well.

PICTURE 4-28

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

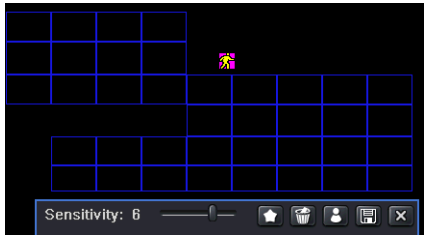
Specific areas can be made sensitive by applying a blue grid to the desired section of the screen. The blue grid can be applied to the entire screen – signifying that the entire field of view is sensitive - by clicking on the **star button**. The **trash can** button will remove the grid completely.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

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.



PICTURE 4-29

Click on the icon showing a silhouette of a person and an illustration of a walking figure will appear on the screen. Test your settings by dragging the figure across the blue grid to see if the sensitivity value and motion area are suitable to current conditions. If they are, click the **o** icon to save before exiting using the **X** button.



PICTURE 4-30

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

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 4-31

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.

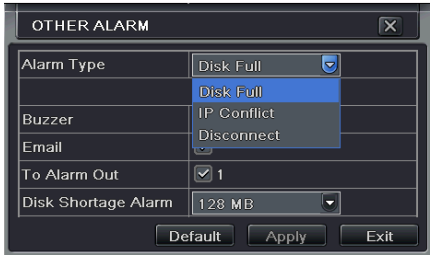
Like the **Trigger** tab in the **Alarm Handling** section of the **Sensor** menu, you can select the events that you wish to occur in the event that a video input is lost. Both Alarms and PTZ events can be scheduled as in the **Sensor** menu above.

PICTURE 4-32

OTHER ALARM

In this menu you can set the DVR 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.



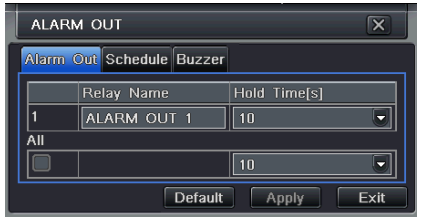
PICTURE 4-33

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 DVR. 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 4-34

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.

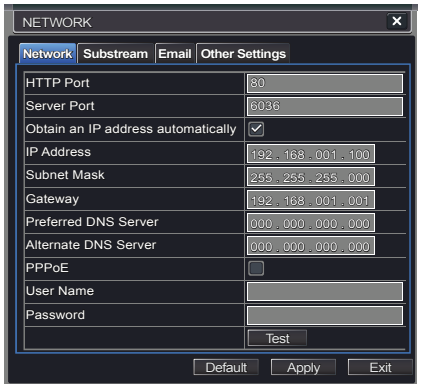
4.6 NETWORK CONFIGURATION

The **Network Configuration** window is used to control how your DVR works in a networked environment. This section offers a brief overview of how to set up your DVR so that it can be remotely monitored from another computer on your network, over the Internet or from mobile wireless devices. 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. The four tabs in this window are **Network**, **Sub-Stream**, **Email** and **Other Settings**. If you will only be monitoring the DVR from another computer on your network, you will only need to use the first three tabs.

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

Network Tab

HTTP Port – This is the port the DVR will occupy on your computer network. When accessing the DVR remotely from the Internet, you will need to enter your network's IP address (obtained in the next step) in the address bar of an Internet Explorer window. For example: http://192.168.0.25



PICTURE 4-35

NOTE! The default value is 80. If port 80 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://192.168.0.25:82

Optain 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 DVR to the Internet through your modem. Do not use this unless required by your Internet Service Provider (ISP) or if you are already connected to 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 DVR via Internet Explorer. The default port is 80
Server Port	The port number for data. The default port is 6036
Static IP	
IP Address	The IP address of the DVR 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

Substream Tab

The substream is the data that is sent to remote monitoring devices. Due to bandwidth concerns, these data streams are generally smaller than those sent directly to the DVR itself. These streams run in parallel with the main stream sent to the hard drive and they do not affect each other.

Substream settings are configured in the same manner as that used for the primary stream settings in the **Record Bitrate** tab in **Section 4.3** Certain settings will be grayed out and cannot be changed due to throughput concerns. The definitions are repeated for your convenience:

PICTURE 4-36

Parameter	Options	What it Means
Resolution	D1, CIF	D1 = Full TV resolution, CIF = 1/2 D1. D1 takes more room on the hard drive than CIF
FPS	1-30	Frames per second. More frames makes 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 compression, but issues may arise when streaming for remote viewing.
Quality	Lowest – Highest	Only available when VBR is selected. The higher the quality, the more drive space required.
Max Bitrate	256-2084kbps	Your network may not have enough bandwidth to handle maximum rates from all of your cameras. Adjusting these settings to suit your network will improve performance and on-screen image quality.

Email Tab

This tab allows you to set how your DVR 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 e-mails to go to a different account than the one sending them. This will ease your management of these alerts.

If you do not have your own e-mail system, please set up a free account which the DVR 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

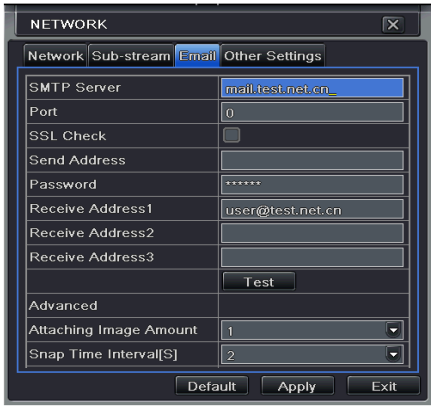
Port: 465 (standard port for Gmail - others may vary)

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 e-mails sent from the DVR

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 DVR is using to send alerts.



PICTURE 4-37

Advanced

Attaching Image Amount: The alert e-mails can include up to three images

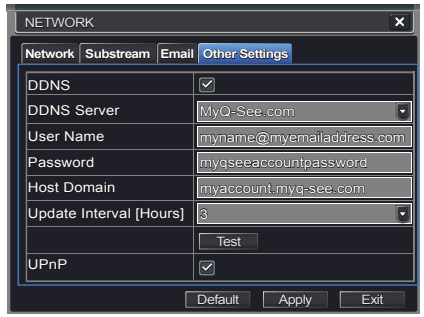
Snap Time Interval: The interval of the images can range from every second to every five seconds.

Other Settings

Commercial ISPs provide their customers with dynamic addresses (IP numbers). These numbers can change from time to time depending upon your service provider. Doing so can cause you to lose the ability to remotely access your DVR 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**.

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 in days at which the DDNS checks to see whether your IP address has changed. Intervals range from every 30 minutes to once a day.



PICTURE 4-38

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

4.7 USER MANAGEMENT

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 DVR. Additional accounts can be created for users but only one administrator account is allowed.

PICTURE 4-39

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 DVR 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 4-40

Authority Tab

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

PICTURE 4-41

Setup button – Modify user's name, type, binding PC Mac address and etc. 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 may be changed. The default is ***123456***.

4.8 PAN-TILT-ZOOM (PTZ) CONFIGURATION

If you are connecting optional Pan-Tilt-Zoom cameras, the controls are set from this window in the **Serial Port** and **Advanced** tabs.

Serial Port Tab

You will need to consult your PTZ camera's manual for details regarding protocol and baud rate. Please note that the DVR may support more features than your camera offers including protocol and number of preset programs.

Cameras can be individually configured or a global set-up can be implemented through the **All** button.

PICTURE 4-42

PTZ Definitions and Descriptions:

Parameter	Settings	What it Means
Address	1-255	The address of the PTZ camera
Baud Rate	110-21600	The speed that data is transmitted
Protocol		The communication protocol used by the camera. Supported protocols are; NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY

Advanced Tab

You can set your camera to follow a preset program or set cruising or tracking behaviors by selecting the **Setting** button in the **Preset**, **Cruise** or **Track** columns respectively.

PICTURE 4-43

Preset

Clicking a **Setting** button in the **Preset** column will bring up another window

PICTURE 4-44

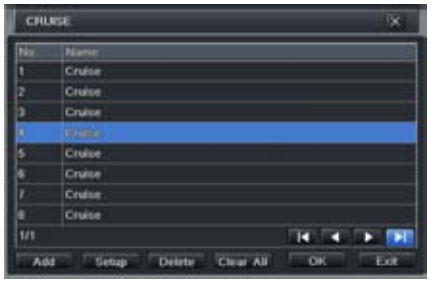
And, selecting **Setting** will bring up the camera view along with a control panel to program the camera's motion.

PICTURE 4-45

The dome's rotation can be controlled vertically, horizontally and diagonally along with its speed. The lens zoom, focus and iris (light level) can be set as well. Select the number for this program and click the **Save** button to save the settings. You can hide the control panel by clicking on the "**-**" button or right-clicking on the screen. The control panel can be unhidden by right-clicking on the screen again. The **X** button will exit the control interface.

Cruise

Selecting a **Setting** button from the **Cruise** column will open the **Cruise** window.

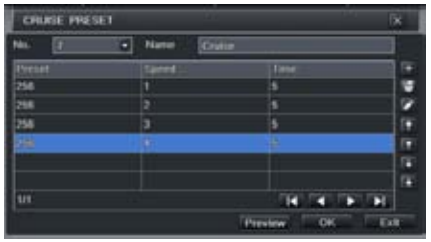


PICTURE 4-46

Select **Add** or double-click on an existing line to modify and the **CRUISE PRESET** window will open.

Delete will remove a selected cruise line

Clear All will remove all of the cruise lines.



PICTURE 4-47

The set of icons to the right of the screen are used to configure each cruise setting.

Preview – Preview the cruise to ensure that you have the desired results.

Name	Symbol	What it Does
Add	+	Opens a window to allow the user to set the speed and time of a new preset point
Delete		Deletes a preset point
Modify		opens the settings window for the selected preset point allowing you to change the settings
Arrows		Enables the user to alter the position of a setting in the cruise order.
		Move a preset point all the way to the top of the order
		Move a preset point up one position in the list
		Move a preset point down one position in the list
		Move a preset point to the bottom of the order

Track

This interface is used to program the tracking routine for the camera. Clicking on the **Track** button will bring up the live view for that camera plus a control panel:

PICTURE 4-48

The user can control the dome's rotation direction, plus speed as well as the zoom, focus and iris.

Start Record – The system will begin recording the sequence of movements you perform on the PTZ control panel. Clicking this again will stop the recording.

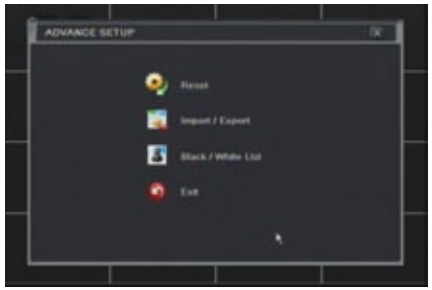
Start Track – This will play back the tracking sequence you just recorded. Clicking on this button again will stop the playback.

4.9 ADVANCED

In this set of commands, the user can erase all the settings, import or export data files to and from the DVR and control who can remotely access the DVR through three submenus: **Reset**, **Import/Export** and **Black/White List.**

RESET

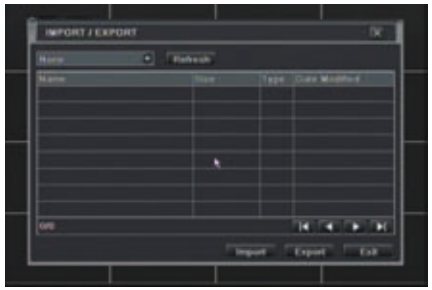
Clicking on this option will open a warning dialogue asking you to confirm that you wish to remove all settings and reboot the system. You must select **OK** to continue with the reset or hit **CANCEL** to exit without changes.



PICTURE 4-49

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 DVR.



PICTURE 4-50

BLOCK/ALLOW LIST

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

PICTURE 4-51

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

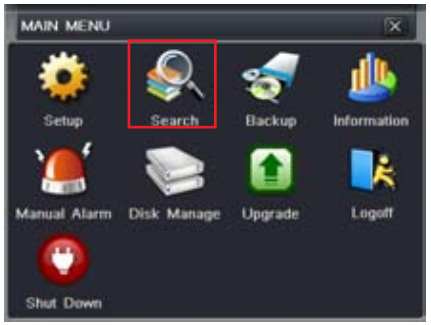
The **Allow List** is used to permit access by users from select IP address segments.

EXAMPLE: You wish to block access to the DVR 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.

4.10 FILE SEARCH, PLAYBACK AND MANAGEMENT

Access the recordings on the DVR, 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**.

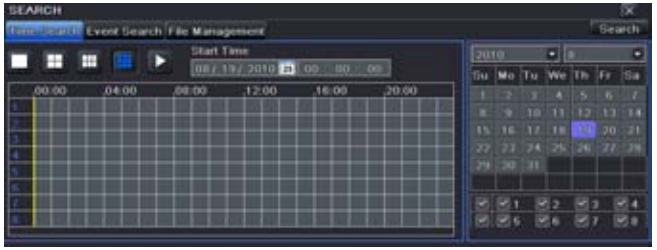


PICTURE 4-52

NOTE! Throughout this window, if the screen resolution is VGA 800*600, the time search interface will show a hide button. Clicking on this button will expand or minimize the entire interface as needed.

TIME SEARCH

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



PICTURE 4-53

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.

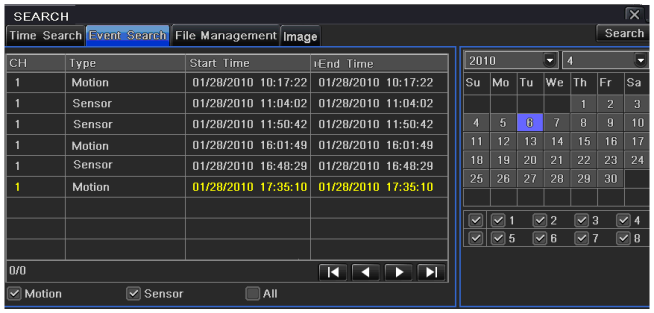
Clicking on the **PLAY** button will begin the playback from the time selected. It will also bring up a playback toolbar allowing finer control of the playback process.

PICTURE 4-54

EVENT SEARCH

Selecting this tab will bring up a list of recorded events. You can choose whether to display events triggered by Motion, Sensor or both.

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



PICTURE 4-55

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 4-56

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

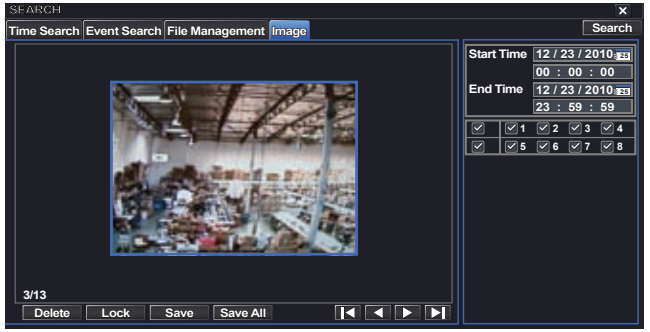
DELETE – If the event is not Locked, this will remove the selected event from the DVR.

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 DVR'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 4-57

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 DVR.

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**.

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 DVR.

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

BACKUP CHAPTER 5

This DVR supports backing up files to USB flash drives, USB hard drives and USB DVD burners through the USB port on the front panel. Remote backups can be performed over the Internet. Refer to Section **7.6 Remote Backup**.

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 DVR.

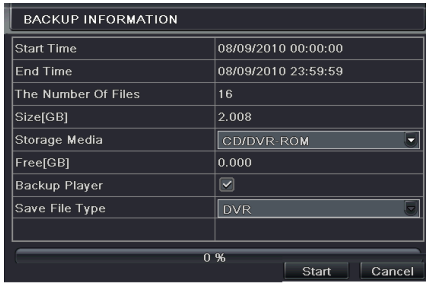
Selecting **BACKUP** in the **Main Menu** will open the **Backup** configuration window.

PICTURE 5-1

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.

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. 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.

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

NOTE! If you save the file(s) using the **DVR** selection, two folders are created when backing up the events to a USB storage device. One will contain the video files while the other, labeled **Video Play** contains the software needed to playback the videos on a PC. To view the video files, open the **Video Play** folder, and run Videoplay.exe. Click on **Open Path** and navigate to the folder containing the video files to begin playback.

DVR MANAGEMENT CHAPTER 6

6.1 INFORMATION

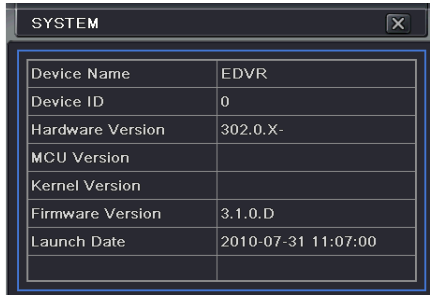
PICTURE 6-1

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 and firmware versions can be found here along with the device's name and ID.



PICTURE 6-3

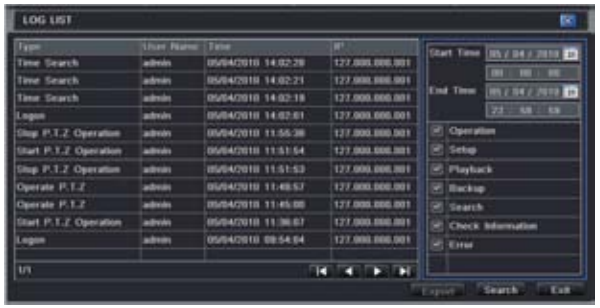
EVENT INFORMATION

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

PICTURE 6-4

LOG INFORMATION

This window lists user activity within the system.

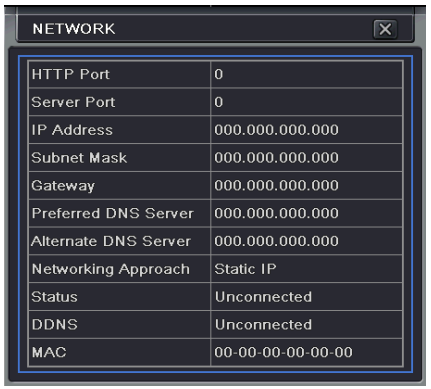


PICTURE 6-5

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 DVR on the network including its assigned port, and other networking configurations.



PICTURE 6-6

ONLINE USER INFORMATION

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

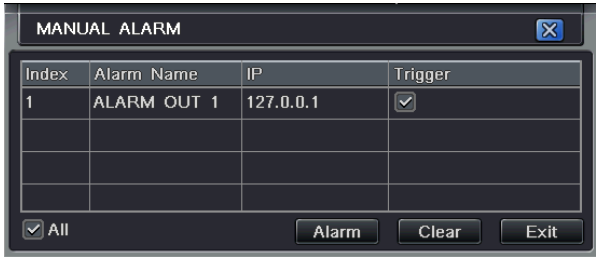
PICTURE 6-7

Refresh – Updates the list of online users

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

6.2 MANUAL ALARM

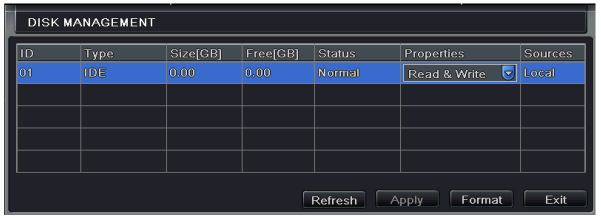
This displays the configuration of the manual alarm.



PICTURE 6-8

6.3 DISK MANAGEMENT

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



PICTURE 6-9

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

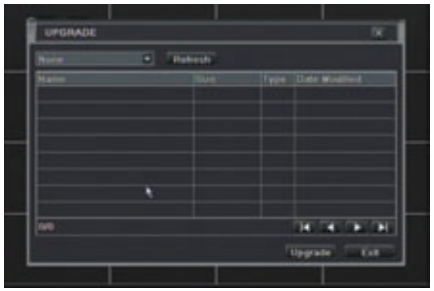
If you have upgraded your system by installing a new drive (**See Chapter 9**) you will need to first format the new hard disk before recording. You can reformat the current drive if desired.

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.

6.4 UPGRADE

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



PICTURE 6-10

Firmware upgrades are available from Q-See at ***www.Q-See.com*** 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 removed.

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

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 7.9**) to upgrade without a USB flash drive.

WARNING! Updating the firmware incorrectly or using the wrong update can permanently damage the chipset on the DVR and render it unusable. Updates are written to either resolve issues or add features to the DVR. 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 DVR is recommended when there are multiple users or when physical access to the DVR 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 DVR.

WARNING! It is vital that the DVR 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.

HARD DISK DRIVE

CHAPTER 7

Your DVR uses a standard SATA (Serial Advanced Technology Attachment) hard disk drive and will support drives up to 2TB (terabytes). These drives are the current industry standard and may be purchased wherever computer parts are sold. Depending on where you purchased your DVR, 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 DVR is designed to make installation and replacement easy for the average user.

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.

WARNING! ELECTRIC SHOCK RISK!

The DVR **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 DVR or its components as well as injury or death.

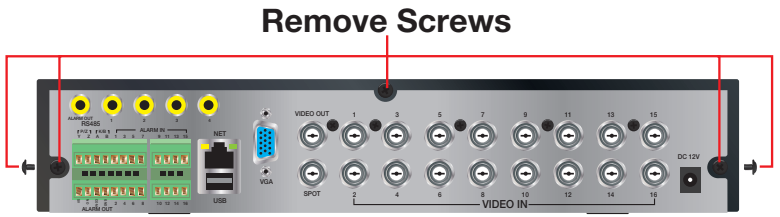
7.1 INSTALLATION/REMOVAL

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 DVR from the power source as well as any other connections.

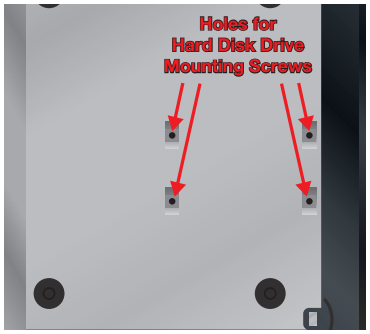
STEP 2. Remove screws (the number will vary depending on your model) from the side and rear of your DVR as indicated in **Picture 7-1**



PICTURE 7-1

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 DVR.

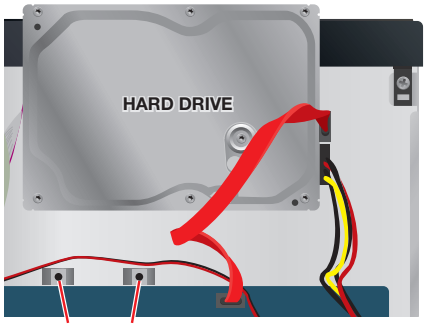


PICTURE 7-2

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 DVR with screws using the four mounting holes.

STEP 6. Replace the DVR cover and secure.



PICTURE 7-3

7.2 CALCULATING THE RECORDING CAPACITY OF A HARD DISK 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 DVR to record for more frequently will fill it up more rapidly.

To determine the optimal capacity for your purposes, the chart below to estimate the size of hard drive that you'll need.

VIDEO FORMAT	RESOLUTION	FRAME RATE (FPS)	VIDEO QUALITY	BIT RATE (kbps)	SPACE USED (MB/h)
NTSC	CIF	30	Highest	1000k	465
			Higher	768k	297
			Medium	512k	230
			Low	384k	173
			Lower	256k	115
			Lowest	128k	56
	D1	7.5	Highest	500k	228
			Higher	375k	128
			Medium	250k	117
			Lower	192k	75
			Lowest	128k	61
PAL	CIF	25	Highest	1000k	466
			Higher	768k	295
			Medium	512k	235
			Low	384k	175
			Lower	256k	112
			Lowest	128k	56.4
	D1	7.5	Highest	500k	228
			Higher	375k	128
			Medium	250k	117
			Lower	192k	75
			Lowest	128k	61

The formula for calculating the required disk space is:

Total Recording Capacity = Used space per hour (MB/h) x Recording time (hour) x number of channels

Example: A customer is using the NTSC format (30 frames per second), CIF resolution with video quality set to Lowest and a total of 16 Channels. He wants the unit to record continuously for a month. Therefore, the calculation will look like this:

56(MB/h), x 24 (hours/day) x 30 (days) x 16 (channels) = 645,120MB or 650GB

Installing a 750GB SATA hard drive should provide enough space for one month's continuous recording time at those settings.

APPENDIX

A.1 TROUBLESHOOTING

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

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

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

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

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

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

4. The DVR cannot find the hard disk drive.

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

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

a. The HDD is not formatted. Please format it manually first.
b. The record function is not enabled or setup correctly. Please refer to **Section 4.3 Record Configuration**.
c. 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**.
d. The HDD is damaged and will need to be replaced.

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

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

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

a. 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.
b. Second possible reason: The system is having problems reading the hard drive.
Solution: Try reformatting the current drive or re-placing it.

8. Why isn't the mouse I have plugged into the front USB port working?

The front USB port is only for backup to USB flash drive, and does not support a USB mouse. Please use the USB port on the rear panel if using a mouse.

9. 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

10. How do I upgrade the firmware on the DVR?

After you download the new firmware from the Q-See website at ***www.q-see.com***, 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 DVR from starting.

11. I can get a live image on the display but I can't get the menu to display. How can I pull up the menu?

Hold down the **ESC** key to wait for login dialog box to appear.

12. I hooked the DVR up to a TV through the BNC video out port and I do not see anything on the screen. How do I get the video to display?

By default the DVR is setup to use a VGA monitor, if you want to use a TV instead then push the ESC button on the front panel and hold it until you hear a beep, if you still do not get a display then hold the ESC button down again until you hear a beep, the display should come up.

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

COMPONENT	MINIMUM REQUIRED
CPU	Intel Celeron 2.4G
MOTHERBOARD	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200 ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) / Windows XP(SP2 above) /VISTA/Win7
DIRECTX	9.0

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

PC MODULE	PARAMATERS
CPU	Intel Core(TM)2 Duo CPU E4600
MOTHERBOARD	G41/P41 chip
HDD	80G
RAM	1GB
VGA	GMA3100/NVIDIA GeForce 8400/ ATI RADEON HD3450
OS	Windows 2000(SP4 above) /Windows XP(SP2 above)/ VISTA/Win7
DIRECTX	9.0

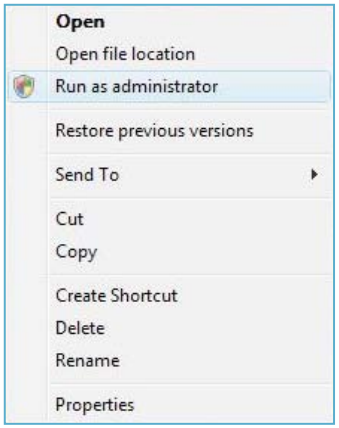
15. On Vista and Win7 I am getting an error message that Codec can't be installed or is missing, how do I solve that?

There are two ways to fix it:

a. 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

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



PICTURE A-3

A.2 SPECIFICATIONS

Parameter		QT454	QT426	QT428
COMPRESSION	Compression Format	Standard H.264 Baseline		
VIDEO	Video In	Composite 1.0V p-p/75Ω, BNC x 4	Composite 1.0V p-p/75Ω, BNC x 8	Composite 1.0V p-p/75Ω, BNC x 16
	Video Out	COMPOSITE 1.0V p-p/75Ω, BNC x 2, VGA x 1		
	VGA Resolution	1280x1024, 1024x768, 800x600		
	Record Resolution	NTSC: 352x240, 704x480 PAL: 352x288, 704x576		
	Display Frame Rate (per camera)	704x480 at 30FPS		
	Record Frame Rate (per camera)	NTSC: D1 7.5FPS CIF 30FPS PAL: D1 6.25FPS CIF 25FPS		
AUDIO	Audio Input	-8dB~ 22k, RCA X4		
	Audio Output	-8dB~92dB, RCA X1		
ALARM	Alarm Input	NO or NC 4CH	NO or NC 8CH	NO or NC 16CH
	Alarm Output	1CH		
STORAGE	Record Mode	Manual/Sensor/Timer/Motion Detection		
	Multi-Function	Pentaplex		
INTERFACE	Network Interface	RJ45 (LAN, Internet)		
	Communication Interface	RS485, USB 2.0 x 2 (One for Backup, One for USB Mouse)		
CONTROLS	PTZ Control	Yes		
	Remote Control	Yes		
DISK INFO	Disk Type	SATA x 1 (up to 2TB)		
OTHER INFO	Voltage	12V3A	12V3A	12V4A
	Optimal Temperature	50°F to 104°F 10°C to 40°C 10% to 90% Humidity		
	Average Power Consumption	<30W (Excluding Hard Drive)		

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

Qsee

QUESTIONS OR COMMENTS? CONTACT US

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