SANYO

Lite Edition

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Chapter 1

Video Pilot Lite Terminology

Pane - Panel, window.

Toggle- To alternate between two or more electronic, mechanical, or computer-related options, usually by the operation of a single switch or keystroke.

Video Pilot Lite Icons-
Toolbar

Toolbar- The toolbar that you see at the top of your screen gives you various options such as open, save and various screen manipulations, at the click of a button.

Open Configuration- This button on the toolbar allows you to open previous Video Pilot Lite configurations. It is most useful if you are exporting configurations from one machine to another.

Save Configuration- This button on the toolbar allows you to save any changes that you have just made to your DVR, it will continue to save to the same file unless you click on *File* and *Save As* then you can save to a different file or even to a floppy.

Structure Pane- This button toggles whether you see or don't see the *structure pane* on the left side of your Video Pilot Lite window. The *structure pane* is most useful when you are looking at cameras from multiple locations and multiple Video Pilot Lite servers. We will discuss the *structure pane* later on in this chapter.

Events - This button toggles the events window. The events window gives you important notifications such as, when you are connecting to a server successfully. It lets you know if you have input improper user names and passwords and gives you error codes when needed.

PTZ Control- This button toggles the PTZ control pane. If you do not have a pan-tilt-zoom camera connected to your system then this button does no need to be pressed.

Video amplification- This button toggles the video amplification pane. When this button is pressed a pane will come up from which you will be able to adjust the brightness, contrast, saturation, sharpness, and hue for any camera.

Full Screen- This button toggles full screen mode. In full screen, none of the panes will be seen and the cameras will be expanded to their maximum size to fill the full screen of your monitor.

Wizards- The wizard's icon on the toolbar gives you a shortcut to various server, and camera options and configurations. You can also access these features through the right click menus in the software.

Views- These buttons on the toolbar allow you to manipulate your views and camera layouts to your own preference.

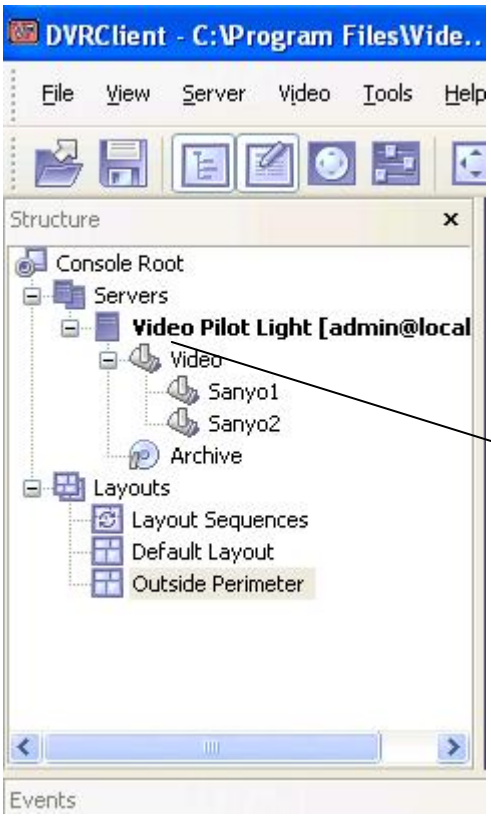
Screen Footer- The screen footer button on the toolbar allows you to display various information underneath each camera window. It can display frame rate, time, picture quality, recording, motion detection, and image size. The screen footer is the text below each camera

Stream Selection- The stream selection button allows you to pick which camera you would like to view in the selected camera window. This can also be done through the right click menus and by dragging the desired camera from the structure pane to the desired display window, or right click on any camera window and select stream.

Show Motion- The show motion toolbar button toggles whether or not you want the motion outlined on the selected camera screen. Note: Motion detection must be setup before this feature can be activated.

Maximize- When pressed the maximize button puts the selected camera into a single view, if pressed again it will return to the previous view. This can also be accomplished by double clicking on the camera of choice.

Structure Pane



The structure pane is the control center of your DVR. In the structure pane is where you will setup all of your cameras, and DVR's. The structure pane makes it possible for you to manage many DVR servers from one window by right click on the DVR of your choice.

Chapter 2

Installation

Lets Begin Installing- Insert your ***Video Pilot Lite CD*** into your CD drive, or if you have downloaded Video Pilot Lite begin the installation process by double clicking the Video Pilot Lite file.

1st Screen- "Welcome to the Video Pilot Lite Digital Video Recorder Setup Wizard"

Click next

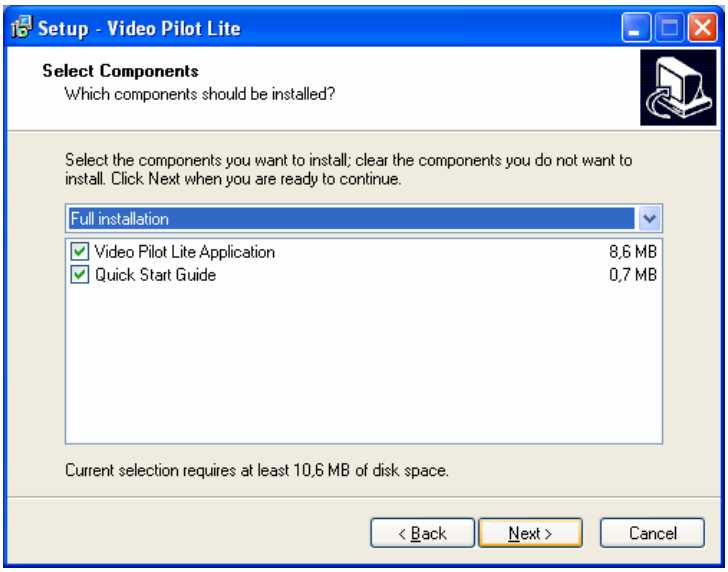
2nd Screen- "Software License Agreement" Please read and choose accept

Click next

3rd Screen- "Select installation Destination" changing the location is optional but not recommended.

Click next

4th Screen- "Select Components"



Click next

5th Screen- "Select Start Menu Folder" changing the location is optional but not recommended.

Click next

6th Screen- "Additional Icons" These are shortcuts and are recommended but optional.

Click next

7th Screen- "Ready to Install" Video Pilot Lite Application and options will now be installed.

Click Install

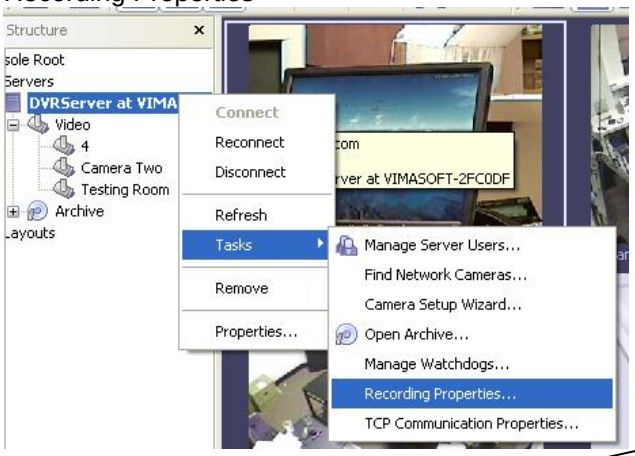
9th Screen- "Completing the Video Pilot Lite Recorded Setup Wizard"

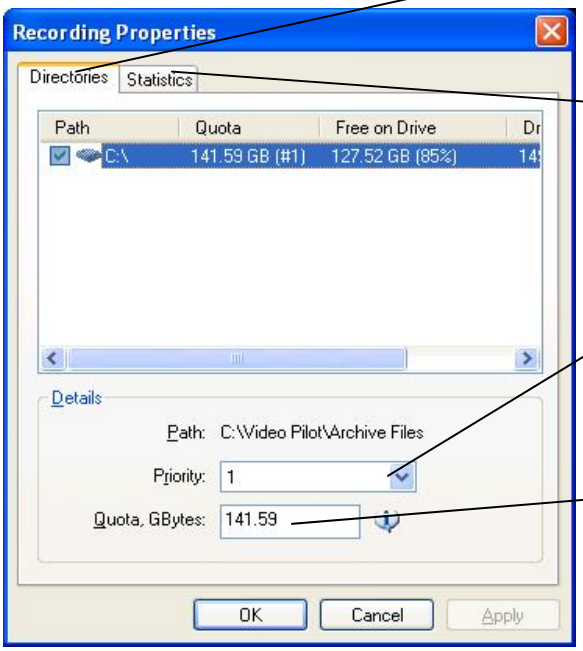
Click Finish

End of Installation

Chapter 3

Server Recording Properties-
Right click on your server
Choose Tasks
Recording Properties





Directories- This is where you will see your available hard drive space. When you check and highlight either drive, the details option below will become available for further data entry. If you do not want your C drive to be used for storage, do not check it. If you do but only wish for a small portion to be used, below is where we will define that need.

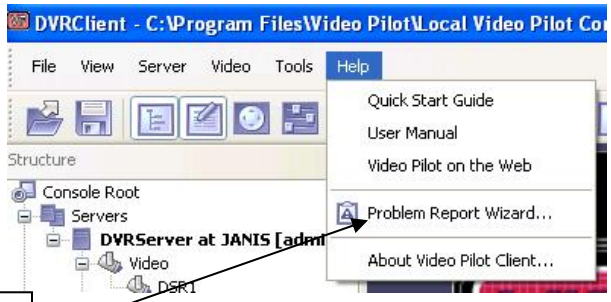
Statistics- Here you can check on used spaced and available space left on the hard drives being used by Video Pilot.

Priority- Your priority option, is for you to choose which of your drives records first. You must first check and then highlight (by clicking one time) the drive you wish to customize in this portion

Quota - Here you chose the amount of space you would like to designate for storage on that particular hard drive. NOTE: NEVER, choose 100% for the C Drive. This may cause your machine to eventually crash due to not available virtual memory for page.

End of Server Recording Properties

Submitting A Problem Report-



Manually- if you go to the Help icon, you will see
"Problem Report Wizard"
Click on it and fill in the information requested.
Video Pilot greatly appreciates your efforts and takes all problem reports seriously.
Thank you again for your cooperation.

End of Submitting A Problem Report

Chapter 4

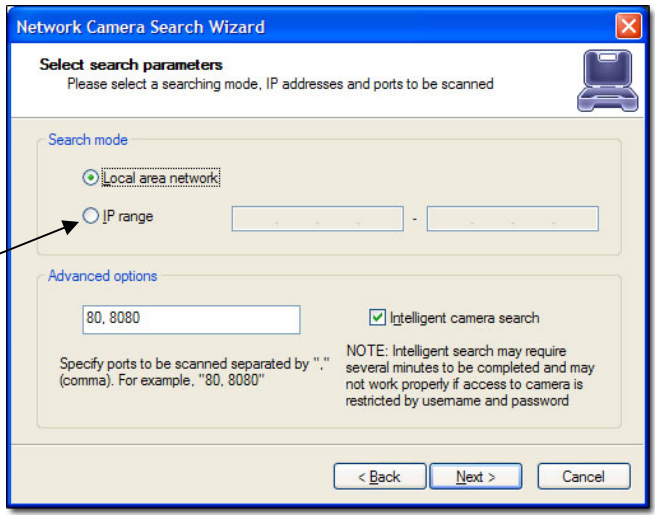
Setting up an Sanyo IP cameras…

There are two ways of setting up an IP camera to work with Video Pilot Lite:
One-way is to let the software find the cameras **automatically**
Another is to **manually** input all of the camera's IP information.

Configure your Sanyo IP cameras automatically.

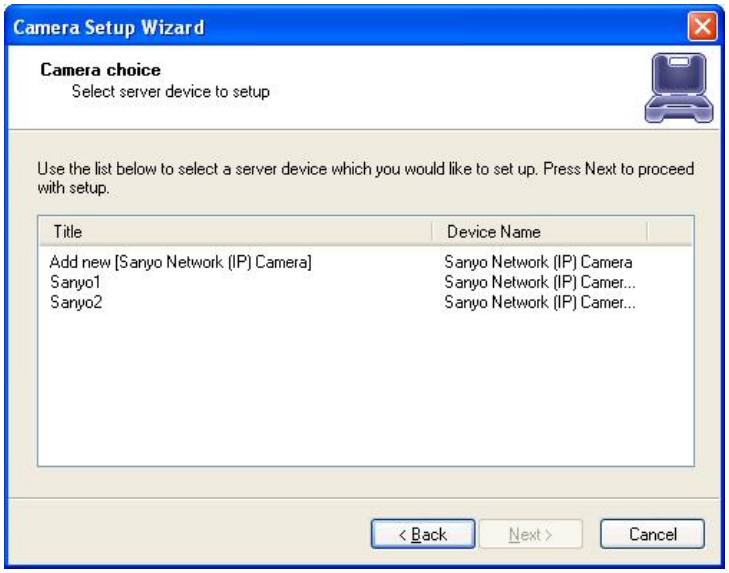
-Right click on your server name
-Left click tasks
-Left click find network cameras.
-Choose Local Area Network and check
-" Intelligent Camera Search"
-Click Next

Optional- if you know your networks IP range, you can search by the IP range for the cameras as well.



Video Pilot Lite will now begin scanning your network and specified ports for any IP cameras. Once it is finished it will give you a list of the cameras that it found and give you an option to add them to Video Pilot.

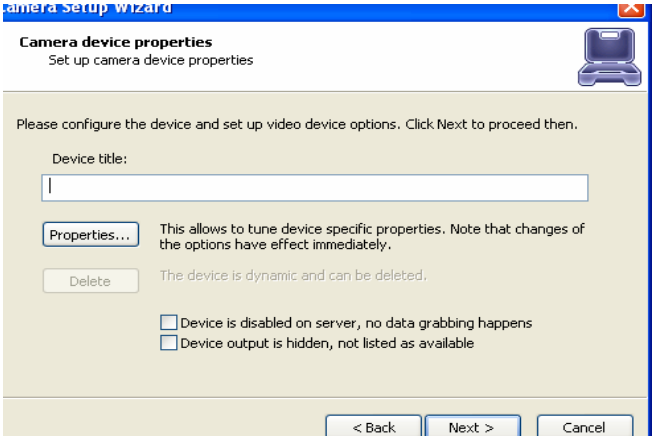
Configure your Sanyo IP cameras manually.



-Right click on the server name
-Choose tasks
-Choose camera setup wizard
-From the first window in the wizard select "Add new Sanyo Network (IP) Camera"
-Click Next.

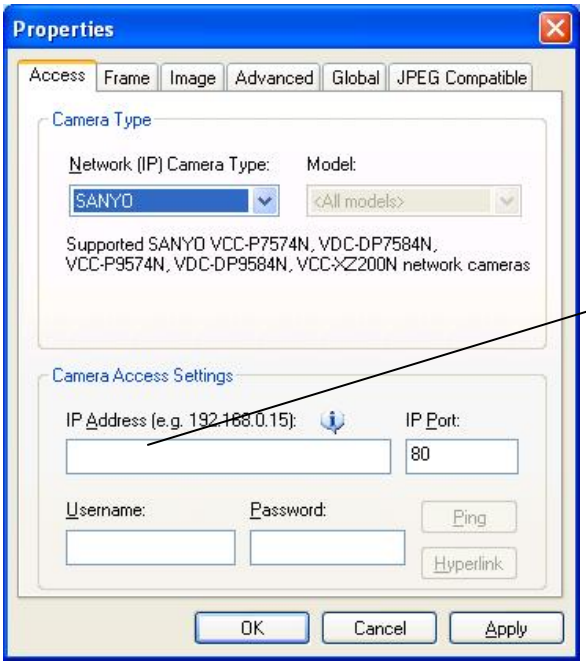
Device Title - Name the camera.
Click Properties

Properties- Tab Explanations

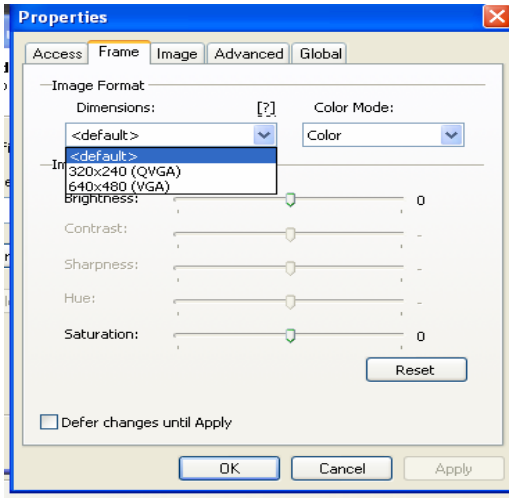


Access Tab

Note: If you are using a video server you can select the output channel for this camera from the advanced menu.



Input the IP address of the IP Camera



Frame Tab

Dimensions- Quality of the picture. The higher quality you choose the more space it will take
Color Mode- Color or black and white
Brightness, Contrast, etc… Change the appearance of your video quality.

End of IP Camera Setup

PTZ Control Pane

Click on the this Icon on the main toolbar to get the PTZ control pane

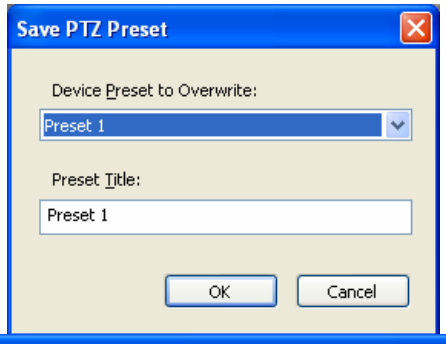
Zoom IN

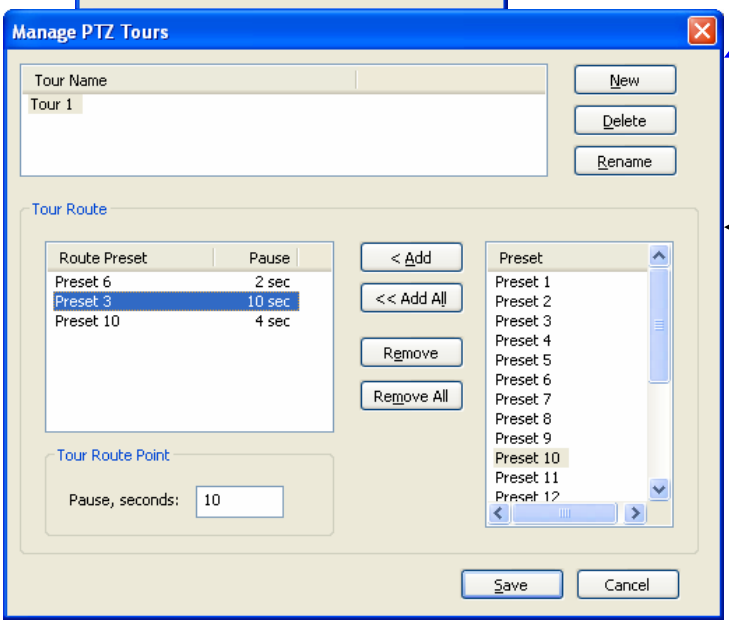
Zoom OUT

Manual and Auto Adjustments for Focus and Iris

Save Presets, and Tours for PTZ Cameras

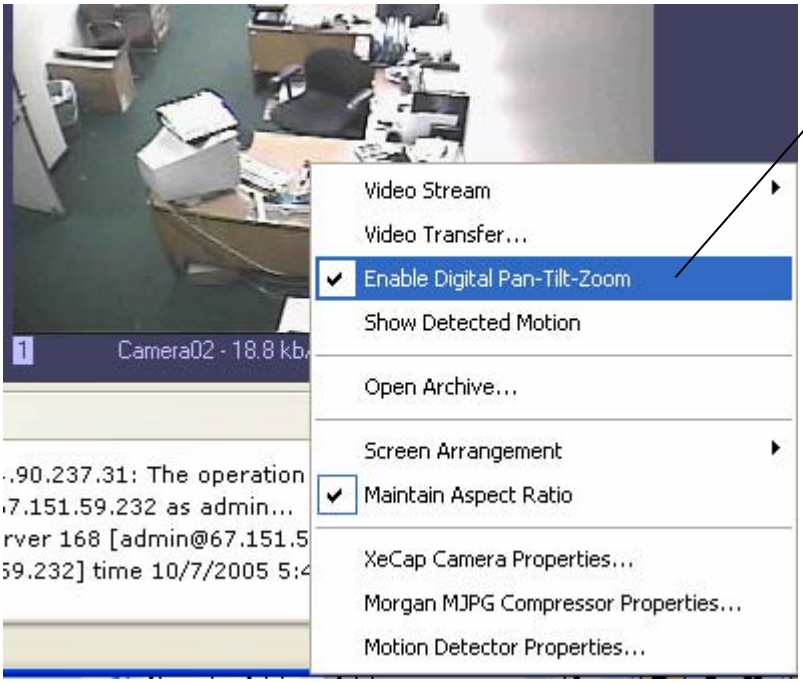
Presets and Tours can be configured from the PTZ control window.





Manage PTZ tours camera by camera by selecting the presets of your choice and time between them.

Digital PAN-Tilt-Zoom on live view



Right-Click on any camera to Activate the Digital Pan-Tilt and zoom function.

Then by activating the PTZ control pane live streaming video can be digitally enhance.

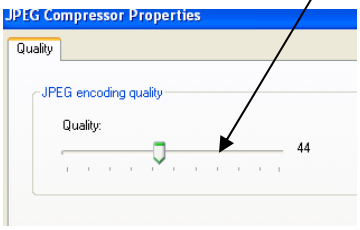
Digital PAN-Tilt-Zoom on Playback

To Activate the Digital Pan-Tilt and zoom function on already recorded video just activating the PTZ control pane from the archive window.

Click Next

Video Compression

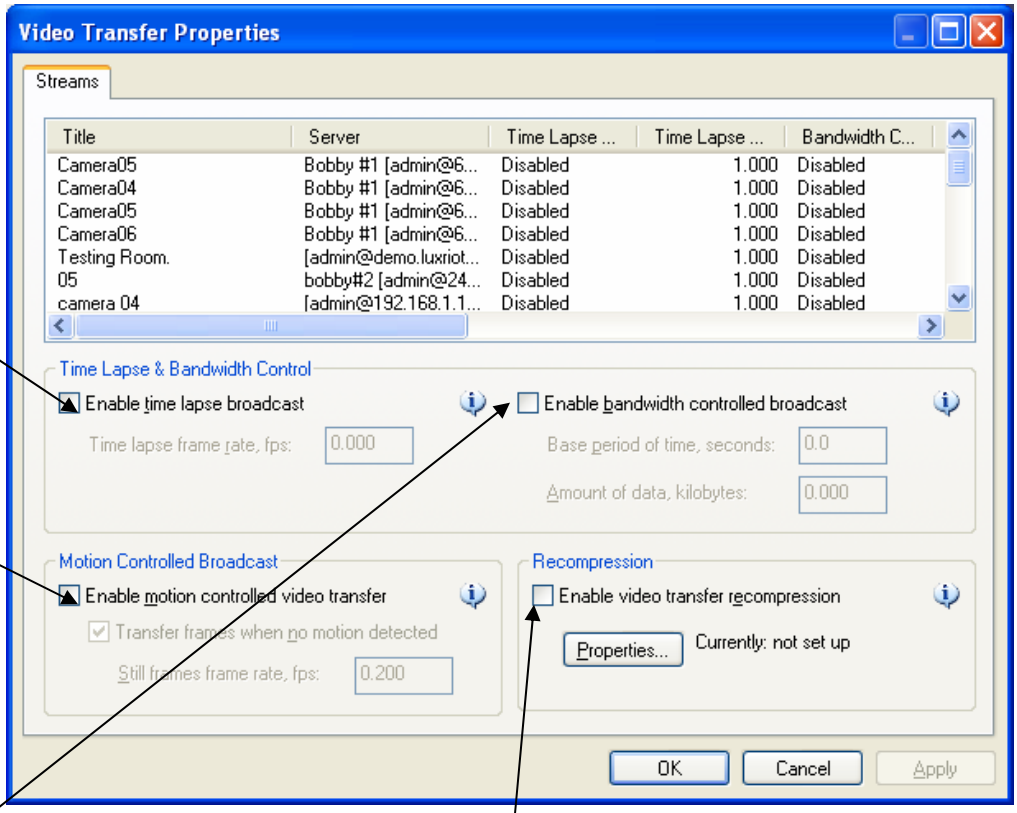
Enable Server Side Compression- Compresses video according to the compression you choose. Video Pilot Lite continuously integrates compressions so feel free to check here every so often.



Enable Video Transfer Properties:

Enable time lapse broadcast on your remote connection only if needed.

Enable this feature remotely if want to see video on motion only. This is very helpful because frame rate is distributed to the cameras that have motion only.



Adjust data controlled broadcast if needed.

Enable Video transfer recompression, can be very useful for **remote connections only.** The Video Pilot server can record up 3 mega pixel images, but remotely using this feature a user can receive more framerate with less image quality without changing the server properties.

Image Quality

Properties- Here you adjust the quality. The higher you go the better your image quality will be for that camera, however, it will give you slower frame rates and takes more storage space. (If you make changes hit ok)

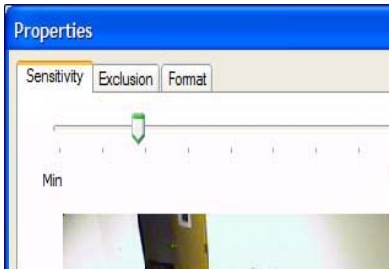
Click Next

5th Screen-

Motion Analysis-

Use Motion- This box should be checked if you are interested in using Motion Detection. We recommend you use motion detection for it will save you an abundance of well-needed storage space. Choose Properties

Properties- Tab Explanations

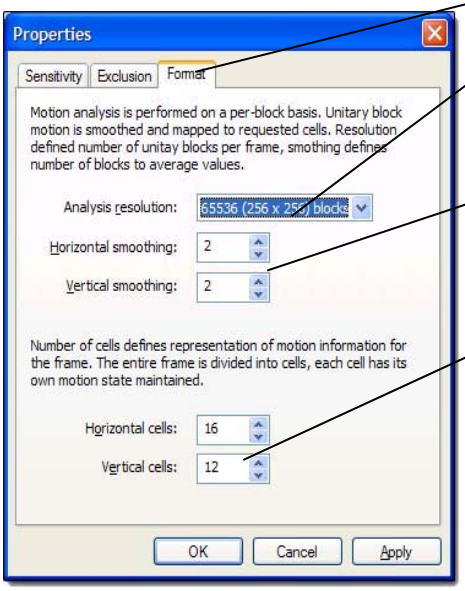


Sensitivity Tab-

The sensitivity should be adjusted to a point where motion is only seen by people and not by blinking lights, reflections, or shadows, otherwise you will get “false motion” and Video Pilot Lite will be recording based on motion that does not exist.

Exclusion Tab-

If you are still getting motion from lights,
trees or things moving from an air-conditioner
or an open door then you can click on exclusion and block the object out from the motion detection grid. You simply click on the grid boxes around the object that you would like to exclude, to remove them from being seen by the motion detection engine in Video Pilot.



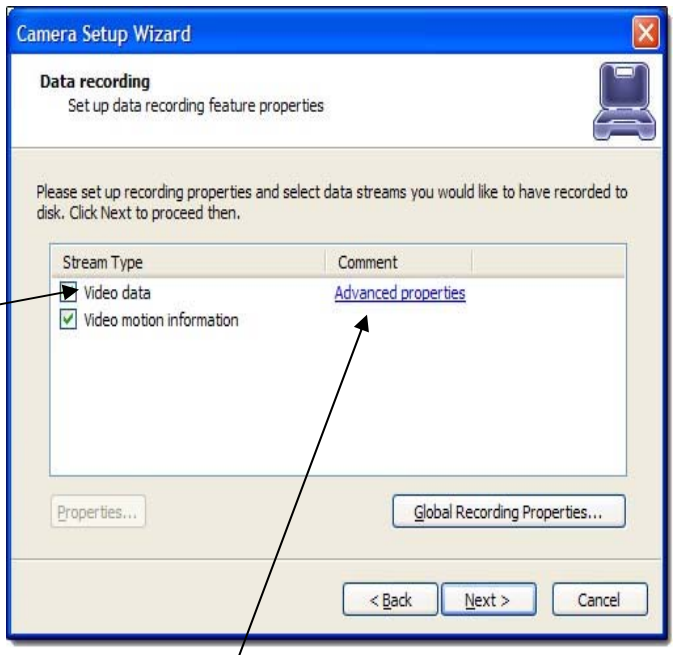
Format Tab- This controls the internal motion detection analysis properties.

Analysis resolution- controls precision of the detection process, the more resolution blocks is selected, the better precision is, and however, the greater CPU consumption is needed.

Smoothing- feature averages preliminary detection result so that neighboring area is included into motion area as well. Smoothing, however, slightly decreases motion detection sensitivity.

Horizontal and vertical cell number- Defines the dimensions of the target grid, which is used as output of the motion detection algorithm. The defined cells are shown. Click ok when finished

Click Next



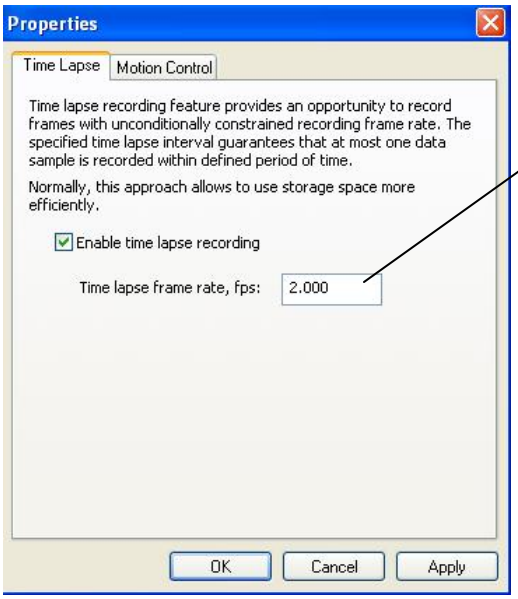
6th Screen-
Data Recording

Here you can specify whether or not you would like motion information and video recording to be written to the hard drive. It is recommended that you write both to the hard drive, because it will make it much easier to review your recordings with motion information. With out motion being recorded to the hard drive you will not be able to search by general motion or defined motion regions (Smart Search, **see Page 22**).

Advanced properties- Allows you to setup **time-lapse** recordings, and Enable **Motion control recording**. Time lapse creates a small delay between every frame that is written to the hard drive, this will use the space you have on your hard drive more efficiently.

Time Lapse Recording:

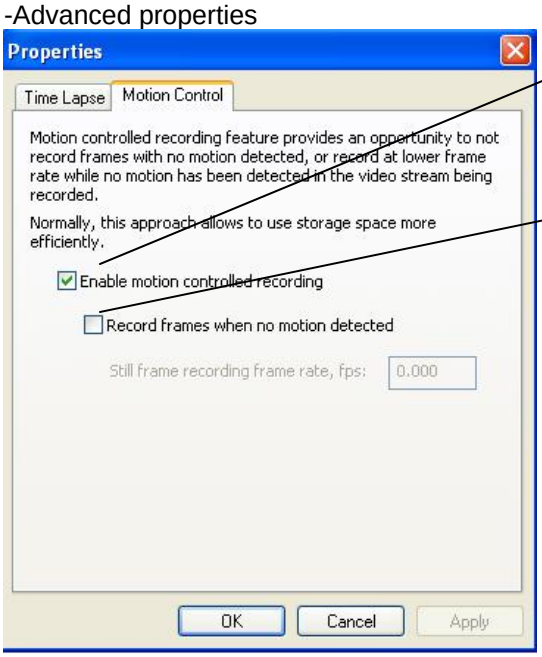
Time Lapse recording properties can be accessed:
-Right click on your server
-Choose Tasks
-Camera setup Wizard
-Data recording
-Advanced properties



Time Lapse recording: The number of frames to be record camera by camera. It gives you the opportunity to use HD space more efficiently. Less important cameras can be set to record less frames than others.

Motion Control Recording:

Motion Control Recording can be accessed:
-Right click on your server
-Choose Tasks
-Camera setup Wizard
-Data recording
-Advanced properties



Enable Motion control recording to save disk space and make playback more efficient.

Enable recording when motion is not detected at selected frame rate. **When Motion** occurs recording frame rate goes to maximum automatically.

Click Next

7th Screen- "**Action Summary**"
This page of the camera setup wizard gives you a summary of all of the changes that you have made throughout the wizard. You should set up every camera that you have connected to your DVR one by one and disable the inputs that have nothing connected to them. The camera setup wizard only has to be run the first time that you install Video Pilot Lite to setup all of your inputs or afterwards to make changes to camera names and/or motion detection, recording, etc, properties.

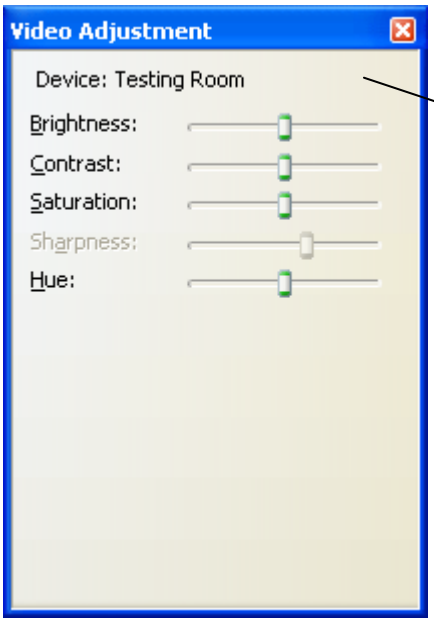
Click Next

8th Screen- "Wizard Complete" Congratulations, you have now setup your camera.

Click Finish

Video Adjustments:

Toggle Video Amplification Pane

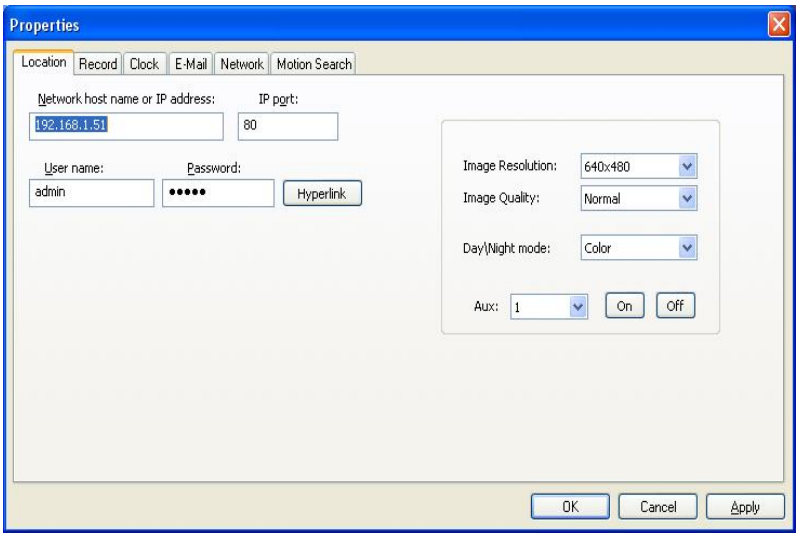


Video adjustment can adjust every individual camera with its own settings.

End of Camera Configuration

Chapter 5 - Sanyo Network Camera Settings

Camera Settings



Specify Network Host name or IP Address of Network Camera
Specify IP Port
Provide User name and Password for access to Network (IP) camera
Select Image resolution from pull-down menu
Select Image quality from pull-down menu.
Set Day/Night mode from pull-down menu. There are 3 options: AUTO-Switches the video display automatically between color and black–and-white depending on daytime or nighttime brightness, COLOR – Always displays the color video image, and B/W – Always displays the black-and-white video image.
AUX – These buttons are reserved for additional functions. The function corresponding to the number selected in the pull-down menu will be performed. The function allocated to respective numbers depends on the camera models.

Recording Settings

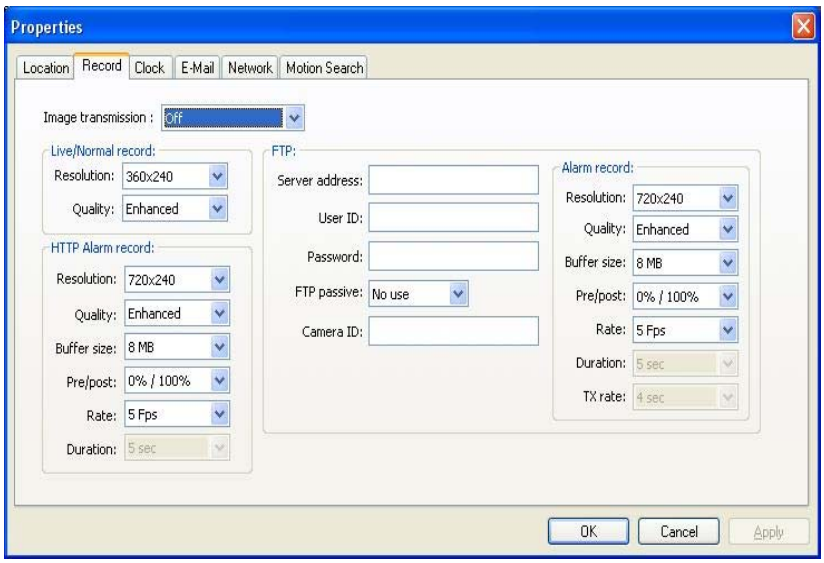


Image Transmission – Set the image transmission mode to “HTTP”

Live/Normal Record
Configure the preferences for the live video display and normal recording format (Resolution and Quality)

HTTP Alarm Record
Configure the preferences for alarm recording format
Resolution – Image resolution
Quality – Image quality
Buffer Size – select the option for specifying the buffering capacity on the camera used for recording the alarm image.
Pre/Post – Configures the recording capacity ratio between the pre- and post-alarm image recording.
Rate – Configures the recording rate for the alarm image.
Duration – Specifies the duration of each alarm image to transfer.

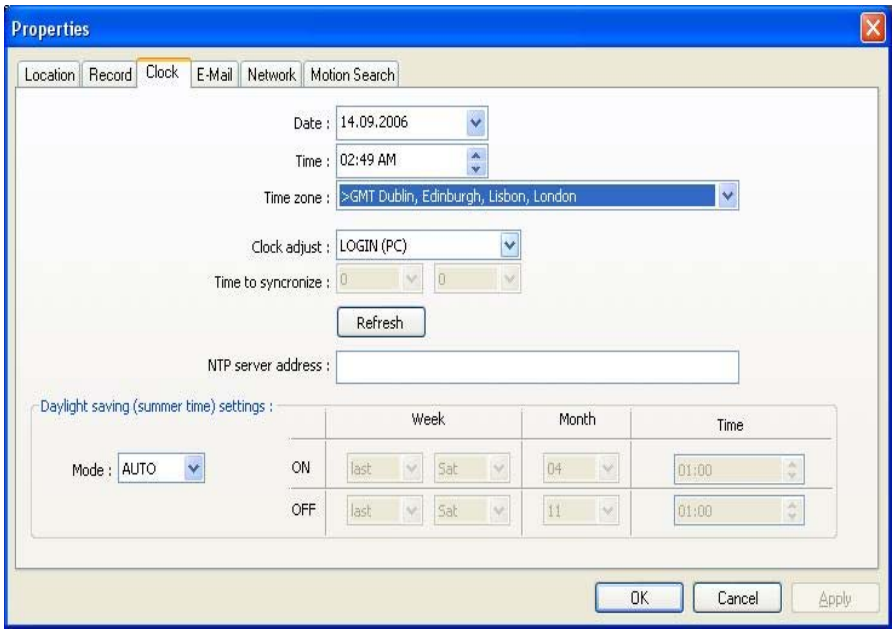
FTP Connection (Set the image transmission to “FTP”)
Please provide following information for FTP transmission:

- **Server Address**
- **User ID**
- **Password**
- **FTP passive**
- **Camera ID**

Alarm Record
Configure the preferences for alarm recording format.
- Resolution
- Quality

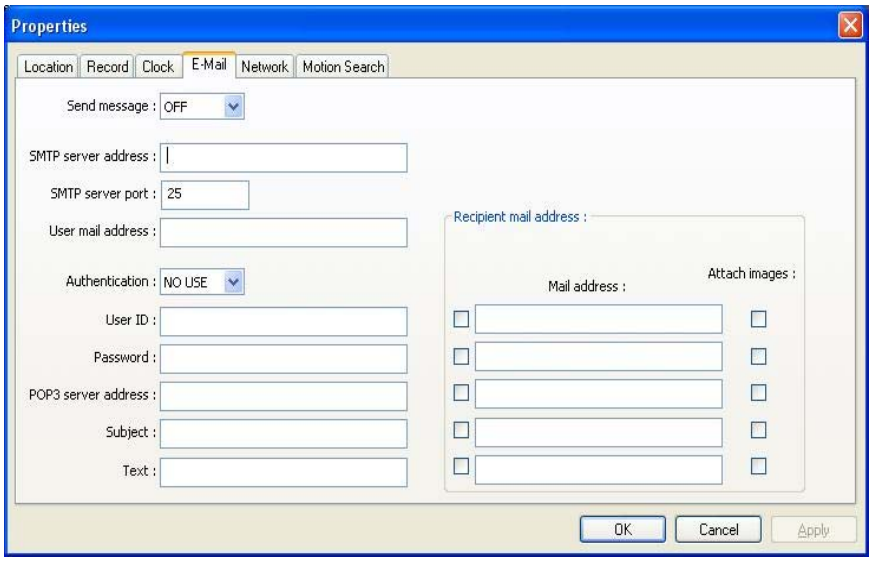
Buffer Size – select the option for specifying the buffering capacity on the camera used for recording the alarm image.
Pre/Post – Configures the recording capacity ratio between the pre- and post-alarm image recording.
Rate – Configures the recording rate for the alarm image.
Duration – Specifies the duration of each alarm image to transfer.
TX Rate – Configures the interval for transferring the alarm image.

Clock Settings



Date – Set the date for the clock build into the camera
Time - Set the time for the clock build into the camera
Time Zone – Selects the time zone where the camera is used
Clock Adjust – Can be used to adjust date and time automatically.
OFF – Automatic clock adjustment is not used
ON (NTP) – Adjust the clock automatically by retrieving the date and time information from NTP server.
LOGIN (PC) - Performs the automatic clock adjustment during login process by retrieving the date and time information from the PC used for accessing the Camera
Time to Synchronize – Specify the time for performing the automatic clock adjustment
NTP Server Address – Enter the domain name or IP address of the NTP server used for retrieving the date and time information
Daylight Saving Mode - When you set this setting to “USE”, the time schedule switches between the standard tie and the daylight saving time automatically according to the Time Zone area specified above

E-Mail Settings



Send Message – When sending the alarm notification e-mail, set this value to "ON"

The following mail server information is specified in these setting items

SMTP Server Address
SMTP Server Port

User mail address – Specifies the sender's e-mail address

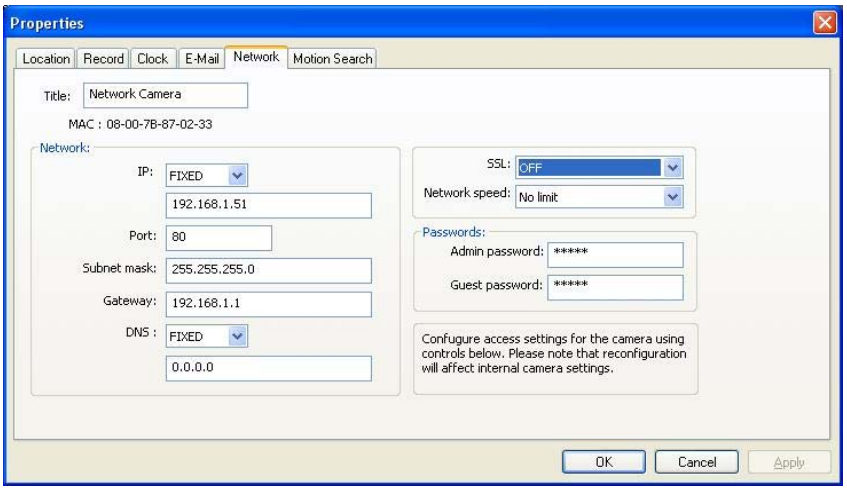
Recipient mail address – Specifies the recipient's e-mail address to which the alarm notification is sent. You can specify up to five e-mail addresses.

Authentication Settings

Authentication
User ID
Password
POP3 Server Address

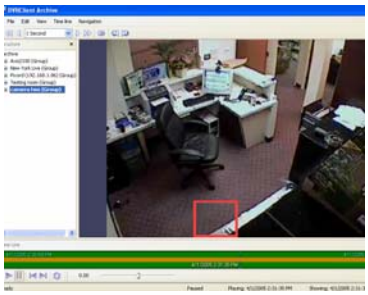
Subject – the title appearing at the beginning of the message
Text – Additional comment appended to the basic message

Network Settings



Title – Specifies the camera title. The title can be up to 16 alphanumeric characters.
IP – Select the method for configuring the camera IP address
FIX – Manually configure the IP address.
DHCP – Automatically allocates the IP address
Port – You can assign a value between 1 and 65535 to SSL port number
Subnet Mask – When the [IP Address] setting is "FIX", enter the subnet mask
Gateway - When the [IP Address] setting is "FIX", enter the subnet mask
DNS - When the [IP Address] setting is "DHCP", select the method for configuring the DNS server address.
FIX – Manually configure the DNS server address
DHCP – Automatically allocates the DNS server address
DNS Server Address – When the [DNS] setting is "FIX", enter the DNS servers address
SSL – Select "ON" when you want to use SSL encryption for the video signal.
Network Speed – Select the data transfer speed in consideration of the network environment
Password – Specify the login password according to each user name (guest/admin)

Chapter 6



How to Playback Video-
To playback recorder video
Right click on your server name
Choose tasks
Open archive

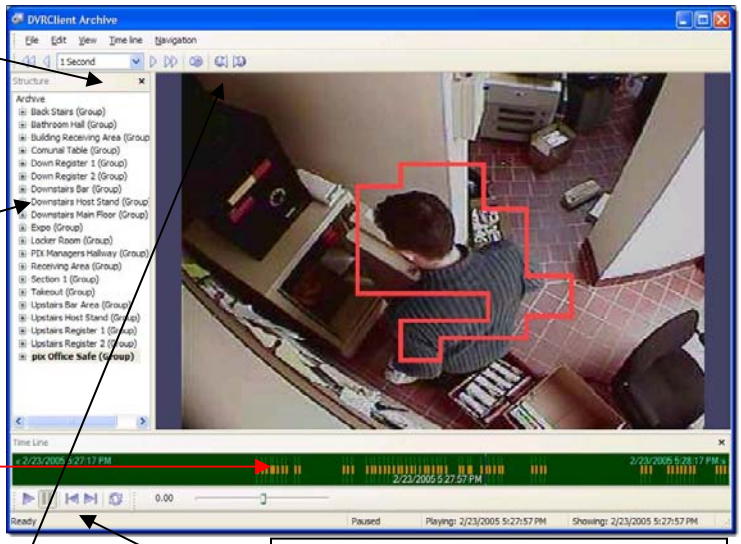
You can also

Right click on any camera view and
Choose open archive

Your archive pane will now open

Playback Window Structure-

Now that you are in the playback screen, the structure pane on the left
lists all of the cameras that you have recordings for

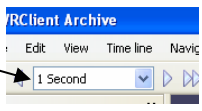


To Navigate through the Video -
Double click on the camera you wish to playback (This camera will now appear with footage on the video screen)

The solid **green line** on the bottom represents time. The **light green lines** represent recorded video. The **orange lines** represent motion information.

There are basic VCR controls on the bottom of the playback screen, which you can use to play, pause, forward, and rewind.

Fast forward & Rewind
You have a jog dial on the bottom of the screen, which you can drag in either direction to browse through your video in high speeds.
Another way to fast forward is to use the arrow controls on top of the screen in which you can define how many increments of time you would like to move through the video.



Playback Motion Only-

Located at the top of your Archive Pane, there are two buttons that allow you to seek video with actual motion in return saving you time.

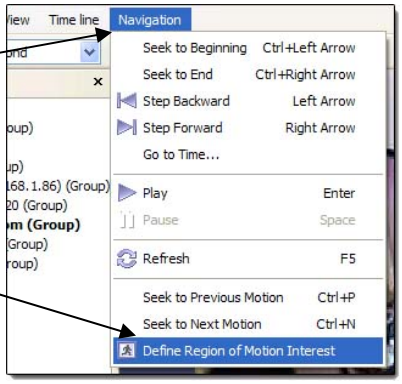
With the camera you wish to review selected and showing in your video screen
Choose either "seek previous motion" c  "seek next motion" 

Smart Search-

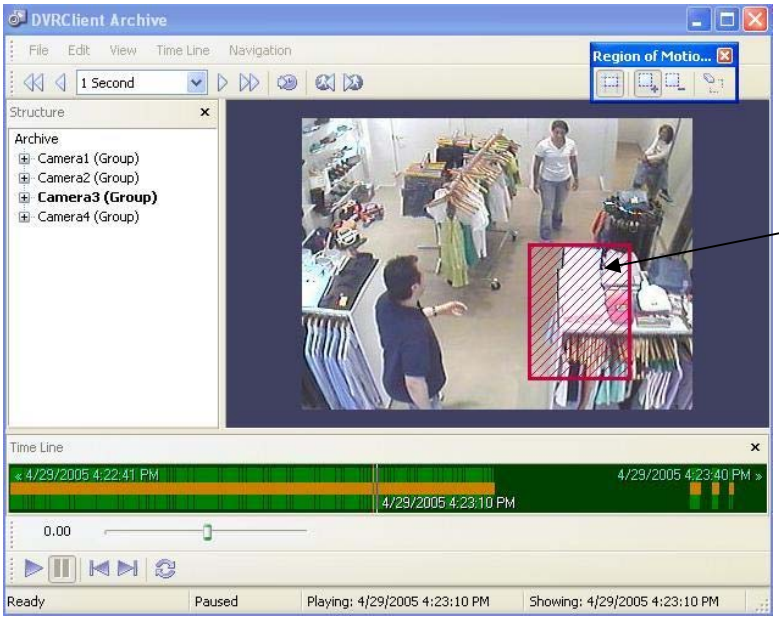
You can also search through video not only by motion in the screen, but also by ***motion in a specific part of your camera screen***. Through Video Pilot's playback screen, you can define a specific object in your view, or define a path, and seek through motion only in that specific region. This process is very commonly referred to as "smart search".

Define motion of interest –

Click on the navigation menu at the top of the playback screen



Click on "Define region of motion interest".



While having the left button continuously pressed, drag the mouse over the area you would like to see motion in (This will create a grid in that area). You can also select multiple regions.

Click on "seek to previous motion"  or "seek to next motion"  to search through motion in the defined area or areas.

End of Playback Video

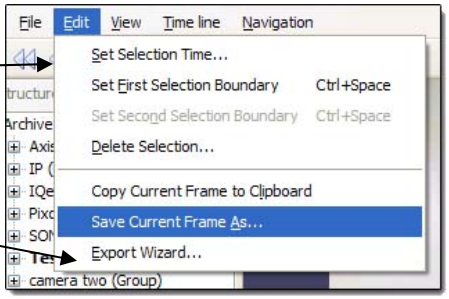
Export Video-

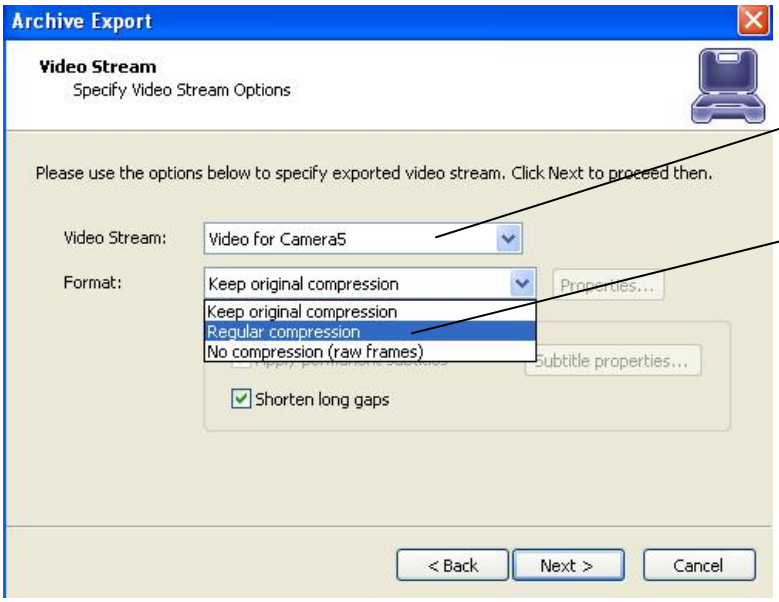
To export video, you first have to select the section of recordings that you want to export to a different location (This will also prevent it from getting overwritten).

To select video

Click on Edit at the top of the playback screen

Click on Export Wizard



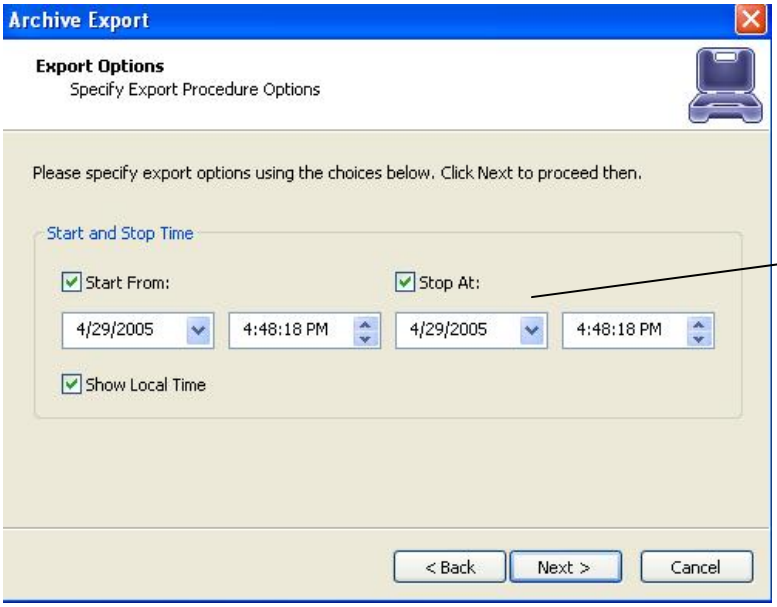


Choose which camera to export.

Choose compression.

.

Click next.



Select the start and finish times of the video clip that you want to export.

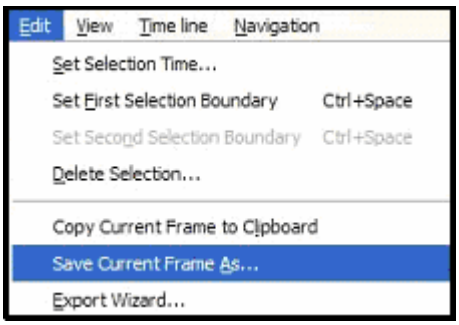
The Wizard will guide to the next step for you do designate to which drive or folder to save the export video.

Note: To play back the Video Pilot AVI file, a codec (a small executable file) will have to be installed in order for your media player to recognize the Video Pilot video file. The codec can be downloaded from http://www.sanyocctv.com

Export Snapshots.

Another way to export video is to save one frame at a time, like a snapshot.

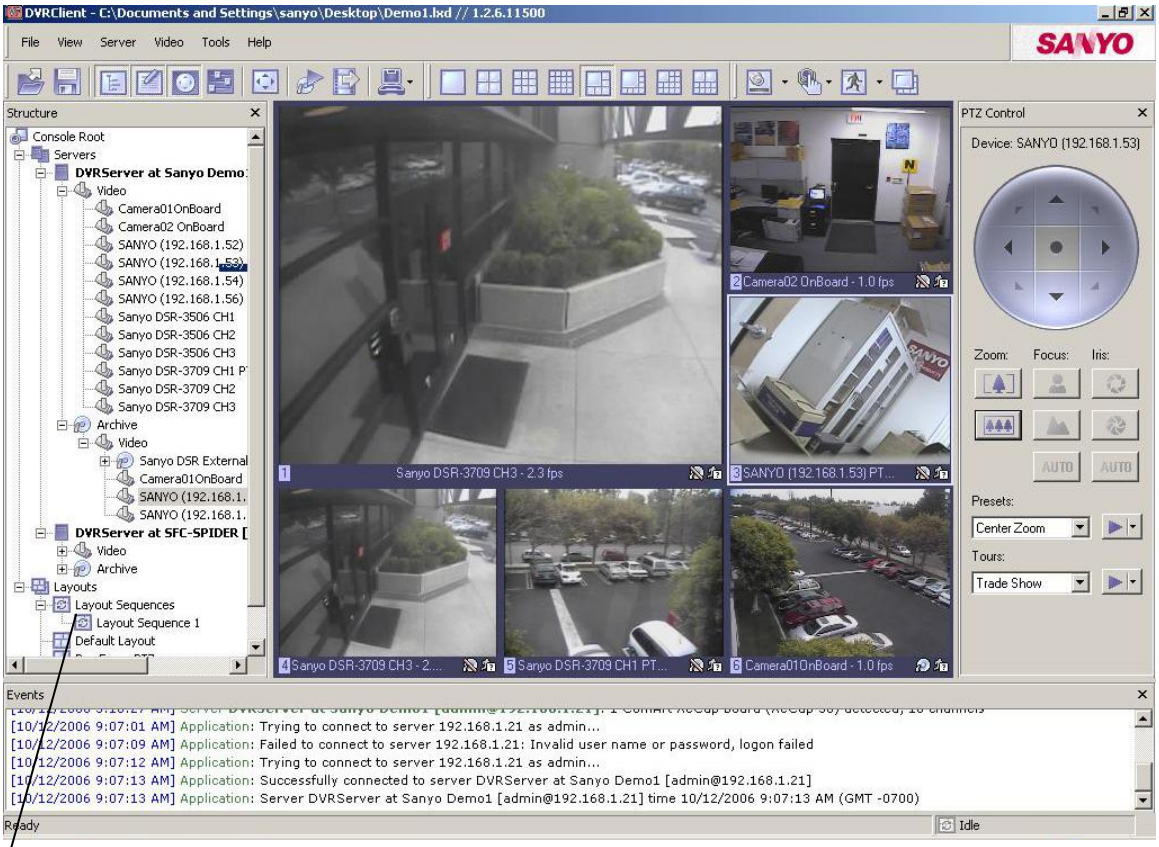
First pause the video on the picture that you would like to copy,
Click on edit
Choose “save current frame as…”
Pick a location and filename for your image and
Click save.



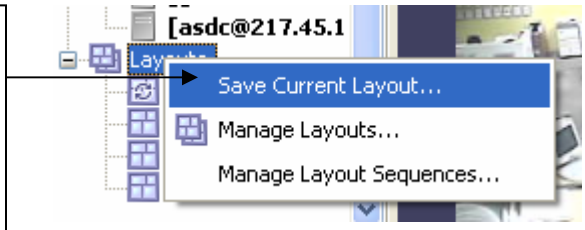
Now you will have the image stored so that you can print, e-mail, or enhance that snapshot.

End of Export Video

Layouts



Create custom Layouts by grouping cameras from into groups for more efficient monitoring, and better management.
For example group together all out-door cameras from different location or all POS cameras from all registers.

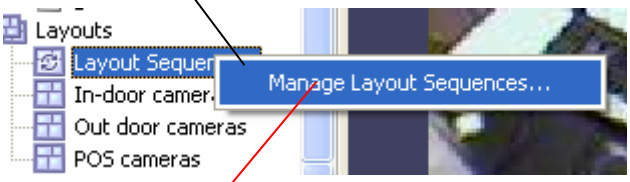


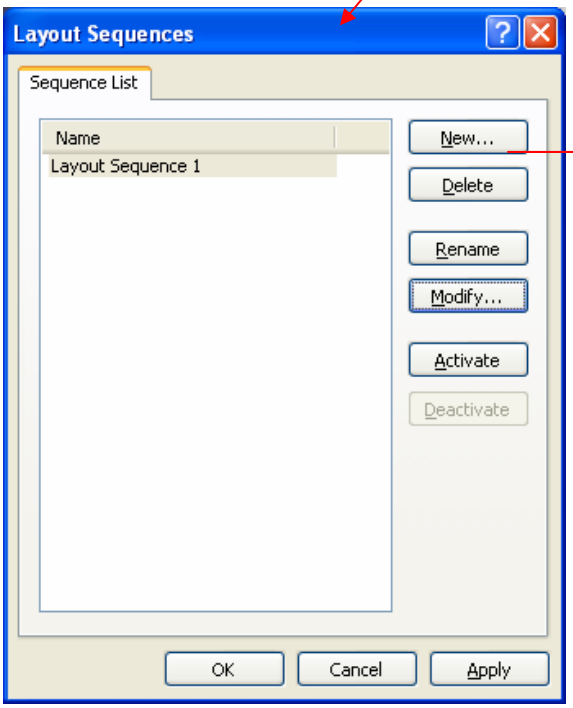
Individual Layouts can be activated by double-click on them with the mouse.

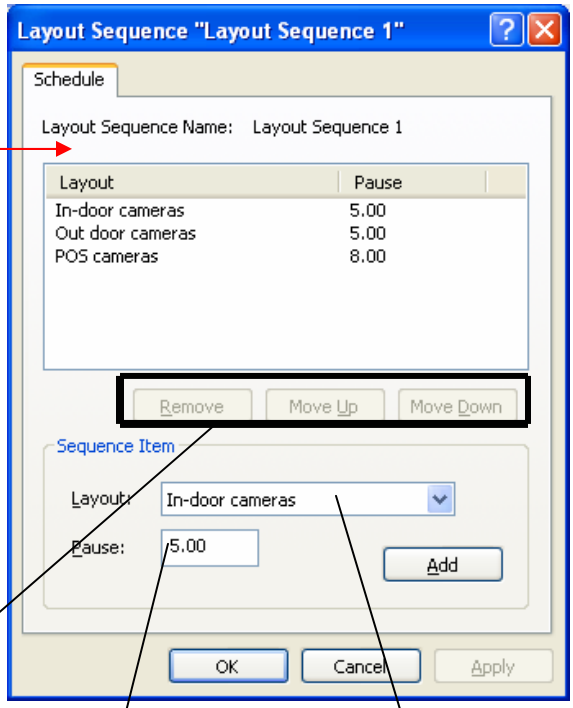
Users now can perform playback and other function by Right-click on the camera of their interest.

Layout Sequences

When Layouts are created, they can be used for Sequencing.
To create Sequences Right mouse click on Layout Sequences.







Set time interval between layouts

Choose given Layouts for adding them in a sequence.

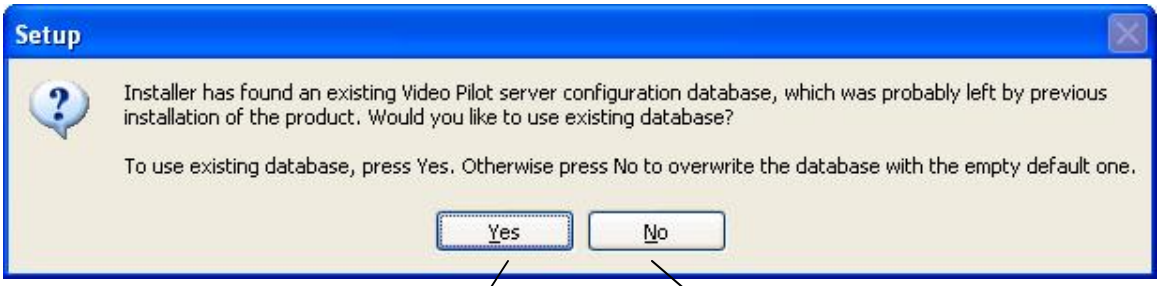
Manage priority or remove layouts of your choice.

Chapter 7

Upgrading Video Pilot Lite software to a newer Version.

To check for upgrades and new free versions you can always visit www.sanyocctv.com.

Updating the software requires all DVR services to stop before Installation. During the installation of the new version you will encounter the following message:



Recommended
To keep all current configurations of your server

To start a new database. By doing that all previous settings and configurations will be erased and a new database will be created.

After the above step you can continue with the installation. See Chapter 2

Specifications

Table of Recording rate and size

This product's recording time can be changed by modifying the recording rate and the frame size. The following table provides reference values for frame resolution and recording rate for individual camera in a situation where video is recorded to the normal recording area of this product's hard disk.

Frame Resolution Definition (in Pixels):

QCIF -160x120, 176×120, 180x120
CIF - 320x240, 352×240, 360x240
2CIF - 640x240, 704×240, 720x240
4CIF - 640x480, 704×480, 720×480
1.3 Mpixel - 1280x1024
2.1 Mpixel - 1600x1200
3.0 Mpixel – 1920x1080
5.0 Mpixel - 2560x1600

Recording rate, FPS	GB per day at defined frame resolution							
	QCIF	**CIF**	**2 CIF**	**4 CIF**	**1.3 MPixel**	**2.1 MPixel**	**3 MPixel**	**5 MPixel**
30.00	3.885	15.54	31.08	62.21	324.00	519.00	777.00	1231.50
25.00	3.237	12.95	25.90	51.84	270.00	432.50	647.50	1026.25
20.00	2.590	10.36	20.72	41.47	216.00	346.00	518.00	821.00
15.00	1.942	7.770	15.54	31.10	162.00	259.50	388.50	615.75
10.00	1.295	5.180	10.36	20.74	108.00	173.00	259.00	410.50
7.50	0.971	3.885	7.770	15.55	81.00	129.75	194.25	307.88
5.00	0.647	2.590	5.180	10.37	54.00	86.50	129.50	205.25
4.00	0.518	2.072	4.144	8.294	43.20	69.20	103.60	164.20
3.00	0.388	1.554	3.108	6.221	32.40	51.90	77.70	123.15
2.00	0.259	1.036	2.072	4.147	21.60	34.60	51.80	82.10
1.00	0.129	0.518	1.036	2.0736	10.80	17.30	25.90	41.05
0.50	0.065	0.259	0.518	1.037	5.400	8.650	12.95	20.53
0.25	0.032	0.129	0.259	0.518	2.700	4.325	6.475	10.26
0.10	0.013	0.052	0.104	0.207	1.080	1.730	2.590	4.105
0.05	0.006	0.026	0.052	0.052	0.540	0.865	1.295	2.053

Example: How many days can I record if I have 20 cameras and 500GB hard disk?

- 16 cameras record at CIF resolution and 7.5 FPS on each camera.
- 2 Cameras record at 4CIF resolution and 5 FPS on each camera
- 1 Camera records at 1.3 MPixel and 5 FPS
- 1 Camera records at 5 Mpixel and 1 FPS

Calculation:

16 Cameras x 3.885 GB/per day = 62.16 GB
2 Cameras x 8.294 GB/per day = 16.59 GB
1 Camera x 54 GB/per day = 54.00 GB
1 Camera x 41.05 GB/per day = 41.05 GB

You need total: 62.16 + 16.59 + 54.00 + 41.05 = 173.80 GB to record video for one full day.
Using 20 cameras at different resolutions and 500 GB hard drive you can record video for 500/173.8 = 2.87 Days or 2 Days, 20 Hours and 52 Minutes

Minimum System Requirements

Number of video sources	*Camera and Video Stream Types*	*Recommended System*
16	16 DSR	Intel Pentium 4 3.0Ghz, 512Mb RAM.
18	16 DSR + 2 Mega Pixel Cameras	Intel Pentium Core 2 Duo 2.667Ghz, 1.5Gb RAM
24	16 DSR + 8 Pan Focus cameras	Intel Pentium D 3.4 GHz, 1Gb RAM
24	16 DSR, 6 Pan Focus, and 2 Mega Pixel Cameras	Intel Dual Xeon 3.4 GHz, 2Gb RAM
32	16DSR + 16 Pan Focus	Intel Pentium Core 2 Duo 2.667Ghz, 1.5Gb RAM

Enter Notes Here-

Additional References:

For Your Records

Dealer Name: _____

Dealer Address: _____

Date Of Purchase: _____

Purchase Location: _____

Dates Software Last Upgraded:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
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_____	_____	_____	_____
_____	_____	_____	_____

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