IP Camera

Article number 36-3389   Model RC4020
18-2116   RC4020-UK

CLAS OHLSON

IP Camera

Art. no. 36-3389   Model RC4020
18-2116   RC4020-UK

Please read the entire instruction manual before using the product and save it for future reference. We apologise for any text or photographic errors and any changes of technical data. If you have any questions concerning technical problems please contact our Customer Service Department (see address on reverse.)

Table of Contents

1. Safety

- The camera is for indoor use only.
- Use only the supplied or recommended power adaptor (5 V DC).
- Never expose the camera to moisture or humidity.
- Always disconnect the camera from the electricity network before cleaning.
- Never dismantle the camera. Certain parts inside the casing carry dangerous currents. Touching these can give you an electric shock.

2. Product Description

2.1 Features

- CMOS Picture sensor.
- The MPEG 4 technology offers high video quality but reduced band width directly to pc.
- Built-in microphone and connector for speakers for two-way communication between computer and camera.
- Software program for configuration, monitoring, and recording.
- Configuration via installation guide.
- Alarm and recording at detecting of movements.
- Scheduled recording.
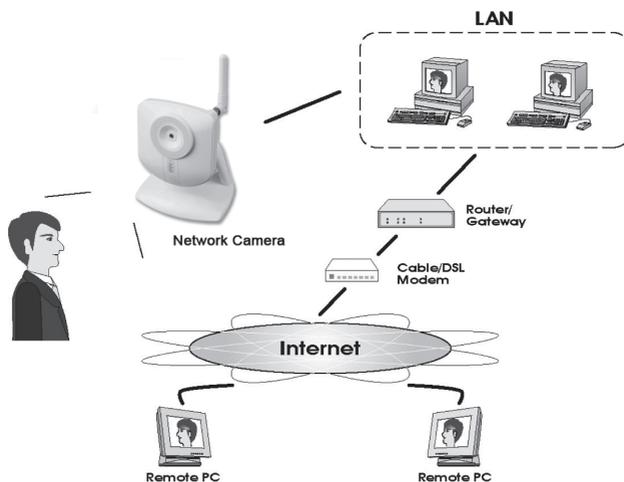
Internet functions

- **Definable http-port** – Allows the user to pick port for access via the Internet.
- **Support for DDNS (Dynamic DNS)** – Function for updates against Dynamic DNS-server.
- **NTP (Network Time Protocol)** – Synchronization of the clock against an Internet time server.

Safety Features

- **User verification** – The camera can be password protected for up to 20 users. Up to 5 users can be connected at the same time.
- **Password protected configuration** – Prevents unauthorized to change the camera's properties.

2.2 System requirements

- Network connection PC with Windows 2000 or XP
- Microsoft Internet Explorer 6.0 or later
- Router

2.3 The package contains

1. Network camera
2. Power adaptor (5 V DC)
3. Installation disc
4. Instruction manual

3. Features

3.1 Front of camera

Camera lens	The camera lens can not be adjusted. However make sure that it is clean from dirt and dust to obtain the best image.
Microphone	The built-in microphone is place in the front of the camera.
POWER (green)	LEDs light up with steady shine when the camera is turned on. When the camera starts the LEDs blink for 15-20 seconds.
ACTIVE (green)	When the LEDs blink, the camera image is transferred in real time to one or several users.
NETWORK (green)	LEDs light up with steady shine when the camera is connected to a network. The LEDs blink when the data is transferred to the network.

3.2 Back of camera

POWER	Connector for the included power adaptor (5 V DC, plus on the centre pin).
SPKR Out	3.5 mm connector for connecting speakers.
LAN	Connect a standard network cable to connect the camera to your network switch or router.
RESET	Use a narrow object and push it in and hold for 10 seconds to reset the camera to factory settings.

4. Mounting & Installation

1. **Mounting the camera**
   Mount the camera on the included table stand. The table stand can also be ceiling or wall mounted.

2. **Connecting the network cable**
   Connect a standard network cable to the "**LAN"** connection to connect the camera to your network switch or router.

3. **Starting the camera**
   Connect the supplied power adaptor to the input marked **POWER**. The camera automatically starts up. Use only the included or recommended adaptor.

4. **LED-Indicators**

   - **POWER -** At start-up the indicator is lit for a short while before it changes to a flashing light for 15-20 seconds. Then the indicator shines steadily.

   - **ACTIVE -** Lights only when the camera image is transferred in real time to one or several users.

   - **NETWORK -** Lights when the camera is connected to the network.

5. Ground configuration

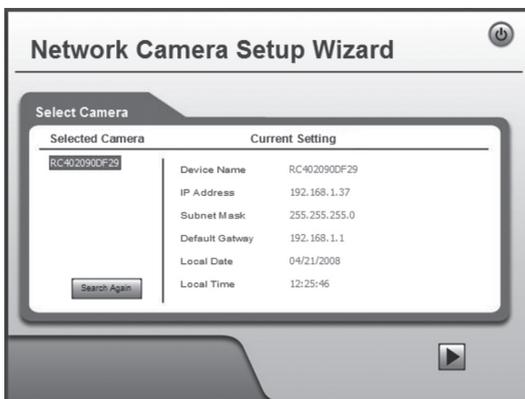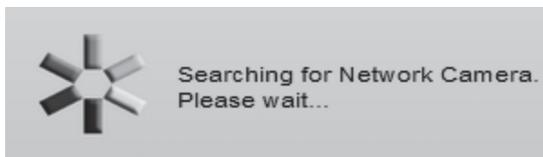## 5.1 Configure the camera with the configuration guide

To be able to use the camera it has to be configured first.
The installation instructions apply to Windows XP with Service pack 2 installed.

1. Connect the camera according to the instructions in chapter **4**.

2. Insert the supplied CD into the computer's CD-ROM drive. If the installation does not start automatically, use the file **NetworkCamera.exe** application found directly under the root folder on the CD-ROM.

3. When the installation program has started a welcome image is displayed. Click on **Setup Camera** to start the installation.

Network Camera Setup Wizard

Welcome !
Thanks for choosing this Network Camera!

Setup Camera   User Guide   Install Utility

4. The installation program searches for the camera on the network and then displays the camera in the list to the left.

Searching for Network Camera.
Please wait...

Network Camera Setup Wizard

Select Camera

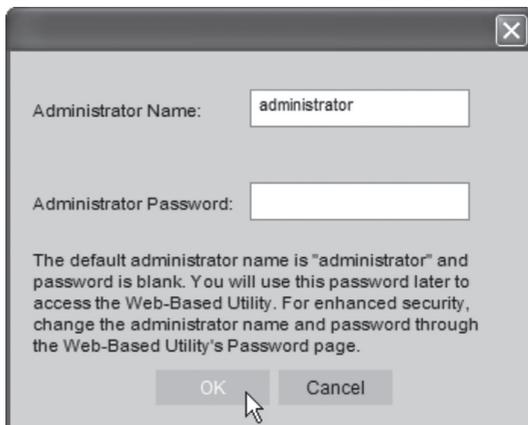| Selected Camera	Current Setting	
RC402090DF29	Device Name	RC402090DF29
	IP Address	192.168.1.37
	Subnet Mask	255.255.255.0
	Default Gatway	192.168.1.1
	Local Date	04/21/2008
Search Again	Local Time	12:25:46

If there is more than one camera connected to the network, you must first select thye camera from the list and then click on ►.

- In the next dialogue you enter the user name and password for the camera. Then click ►.

The default user name and password are:

User name:
Administrator

Password:
(no password)

Administrator Name: administrator

Administrator Password:

The default administrator name is "administrator" and password is blank. You will use this password later to access the Web-Based Utility. For enhanced security, change the administrator name and password through the Web-Based Utility's Password page.

OK   Cancel

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5. In the following dialogue box you set time zone and date. You can also indicate a name and description for the camera. Make your settings and then click ▶.

Network Camera Setup Wizard

Camera Settings

Selected Camera	Camera Settings	
RC402090DF29	Device Name	Camera1
	Description	
	Time Zone	(GMT+01:00) Amsterdam, Berin,
	Local Date	4 / 21 / 2008
	Local Time	1 : 30 PM

Network Camera Setup Wizard

Change Settings

Selected Camera	IP Address Settings
Camera1	⦿ **Fixed IP Address** - If you wish to set a fixed IP address to this device, or there is no DHCP server on the network, please select this item.
	○ **Dynamic IP Address** - If you wish to have this device obtains an IP address from your existing DHCP server automatically, please select this item.

6. Select if the camera is to use a fixed IP address **(Fixed IP address)** or to automatically obtain an IP address **(Dynamic IP address)** from e.g. a router with DHCP function. Select your choice and click next ▶.

7. If you have chosen to give the camera a fixed IP address in the earlier step **TCP/IP Settings** appears in the dialogue box.

•   Enter a vacant **IP address**, **Subnet Mask** and **Default Gateway** for your network.

•   Fill in **Primary DNS** and if **Secondary DNS** you wish to use the email and DNS functions. See information from your broadband supplier.

Network Camera Setup Wizard

TCP/IP Settings

Selected Camera	Current Settings			
SC90df29	IP Address	192 . 168 . 1 . 37
	Subnet Mask	255 . 255 . 255 . 0
	Default Gateway	192 . 168 . 1 . 1
	Primary DNS	192 . 168 . 1 . 1
	Secondary DNS	0 . 0 . 0 . 0

Attention: Please make sure that your PC and the Wireless/Ethernet Network Camera are on the same LAN segment, otherwise you may not be able to connect to the Wireless/Ethernet Network Camera.
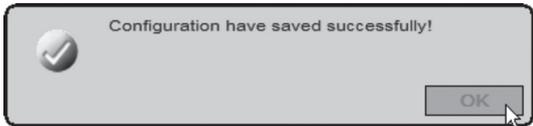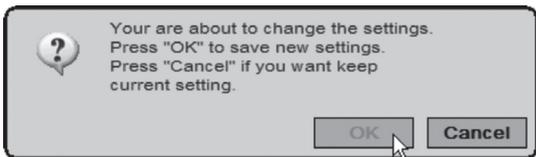
•   Click ▶ next to continue.

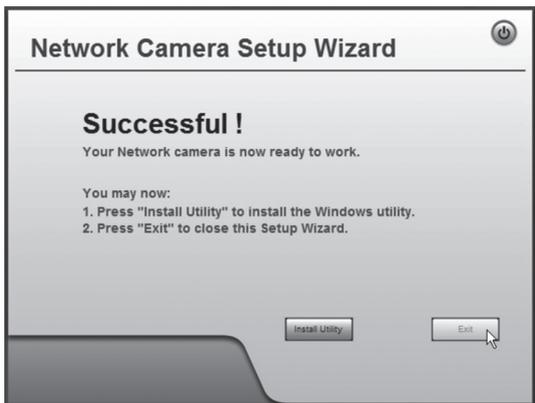   **N.B:** Note the IP address; you need it later to configure the camera.

8. The following dialogue box shows the settings you have just entered. Click on ►.

9. Click on **OK** to save and then **OK** again.


10. Click on **Exit** to complete the installation.

6. Show the camera image via the web browser

Via the camera's web interface the camera shows the picture in real time. Images in real time can only be shown if the web reader is ActiveX 8.0 – compatible (e.g. Internet Explorer 6.0).

1. Start the computer's web browser and type in the camera's IP address (in this case **http://192.168.1.37**) and press **Enter**.
   Tip! Enter a page in the web browser's favourites/bookmarks!
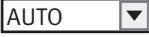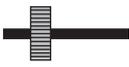
2. Click on **View Video**.
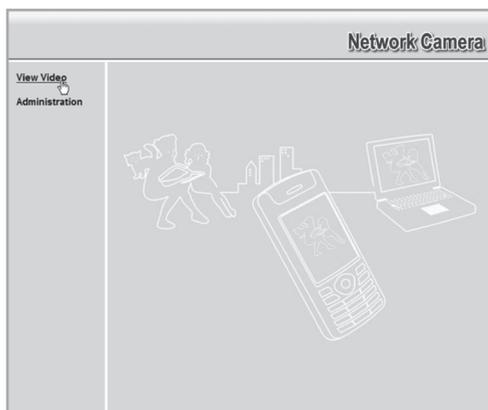
3. The image can be altered using the controls on the display.

   Obs!

   - Images in real time can only be shown if the web reader is ActiveX 8.0 – compatible (e.g. Internet Explorer 6.0).

   - You must accept and install the Active X component when the question comes up on the web browser window.

Explanation of buttons and options:

AUTO ▼	Chooses the camera picture's resolution/output frame size.
(⊕)	Zooms the picture.
(◎)	Takes a snapshot.
(⬍)	Turns the picture vertically.
(◀▶)	Turns the picture horizontally (mirror image).
(◀))	Turns on or off the sound from the camera's built-in microphone.
▬▬▬	Adjusts the microphone's sound strength.
(✖)	Options.

7. Configuration via the web browser

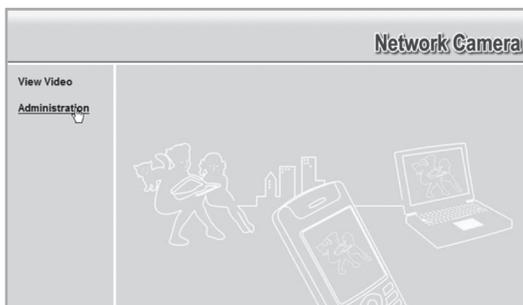## 7.1 Open the configuration interface

1. Start the computer's web browser and type in the camera's IP address (in this case **http://192.168.1.37**) and press **Enter**.

    Tip! Enter a page in the web browser's favourites/bookmarks!

◯ Bakåt ▾ ◯ ▾ 🗵 🖻 🏠
Adress	http://192.168.1.37
Länkar
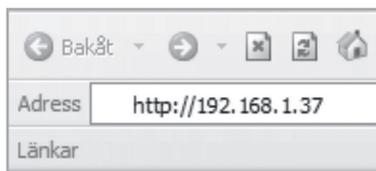
2. Click on **Administration** to get to the control panel.
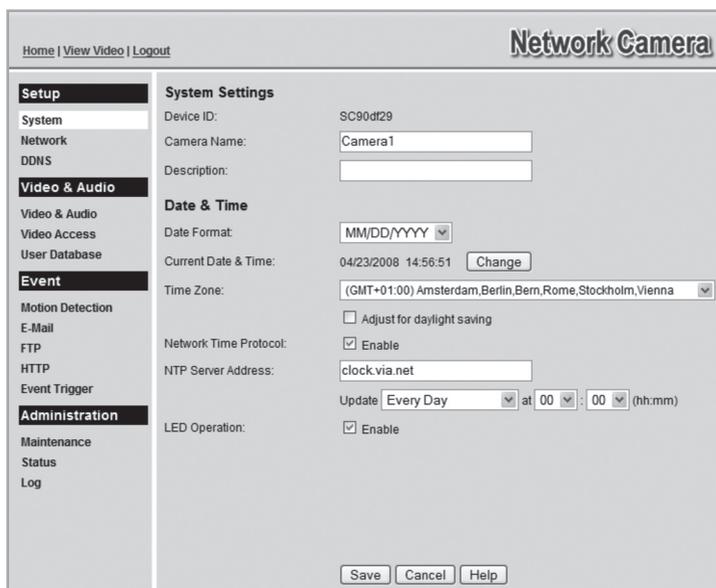
    Network Camera

    View Video
    Administration

3. To be able to change the camera's settings the correct password must be indicated. Log in with the preset username and password:

- **User name:** *administrator*
- **Password:** (no password)

4. In the menu to the left the configuration interface's options are shown.

5. The configuration is split up in menus which are described in chapter **7.2 Setup**.
6. Make your desired settings and then click in **Save** to save your settings. You can at any time click on **Help** to read the help chapter (in English) for each setting respectively.

7.2 Setup

7.2.1 System

System Settings	
Camera Name	Indicate desired name for the camera.
Description	Indicate possible description for the camera.
Date & Time	
Time Zone	Chooses time zone.
Network Time Protocol	Mark to synchronize the clock towards an Internet-time server.
NTP Server Address	Does not normally have to be changed (preset address: clock.via.net).
Update	Indicates the interval for time synchronization.
LED Operation	Deselect the marking to turn off the LEDs on the camera's front (for discrete surveillance).

7.2.2 Network

IP Address	Configures the camera's IP address.
Obtain an IP address automatically (DHCP)	Obtain an IP address automatically from a DHCP server.
Use the following IP address	Give the camera its own IP address.
DNS Server Address	Indicate desired DNS servers. Normally the router's DNS settings can be used, then type in the router's IP address here.
Secondary Port	Mark to activate a secondary http port for access to the camera (if port 80 is used for another application). Indicate desired port number.
RTP/RTSP	**RTSP (Real-time Streaming Protocol):**Indicates port for streaming of media over the Internet. **RTP (Real-time Transport Protocol):** Indicates port for streaming in real time of sound and picture over the Internet.
Multicast RTP/RTSP	Mark to activate Multicast. Indicate address and port number for video and sound.
UPnP	Mark to activate UPnP.
QoS	Activate QoS.

7.2.3 DDNS

If you via your Internet provided have a dynamic IP address instead of a permanent IP address you may with help of a dynamic DNS server connect a domain name to your external IP address.

The camera automatically contacts and updates the DNS server with the new IP address if your Internet provider is assigned a new IP address. The dynamic domain name that way becomes always updated towards your IP address. An example on a dynamic DNS server is dyndns.org where you can register free of charge for a dynamic domain name.

N.B:

- If your router has a feature for dynamic DNS this may be used instead for the camera's DDNS feature.

Enable DDNS	Mark to activate the feature.
Service Provider	In the list choose the dynamic dns server you are using.
Web Site	Click to open the website for chosen dns server.
Domain (Host) Name	Type in your dynamic domain name.
Account/E-Mail	Username/login name for the account.
Password/Key	Password for the account.
Check WAN IP Address	Indicate how often the camera should search for changed IP address.

7.3 Video & Audio

7.3.1 Video & Audio

MPEG-4 Settings	
Resolution	Resolution of the camera picture.
Video Quality Control	**Constant Bit Rate:** Choose desired Bit Rate. **Fixed Quality:** Choose quality.
Max Frame Rate	Choose frame rate per second.
MJPEG Settings	
Resolution	Resolution of the camera picture.
Fixed Video Quality	Choose quality.
Max Frame Rate	Choose frame rate per second.
Mobile Settings	
Enable Mobile Streaming	See chapter 8.2 Streaming to mobile phone.
Video Adjustments	
Power Line Frequency	Choose the frequency that agrees with the power supply's frequency (for fluorescent tube lighting).
White Balance	Indicates the white balance.
Lighting Condition	Lighting condition
Brightness	Light
Sharpness	Acuity
Options	
Enable Microphone	See chapter 10. Use microphone and speakers.
Enable Speakers	
Flip	Turn the picture upside down.
Mirror	Mirrored images.
Enable Time Stamp	Add actual time in the image.
Enable Text Display	For identification of the camera when several cameras are used. Type in desired text to show the image (up to 20 characters).

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7.3.2 Video Access

User Access:	☐ Enable Security Checking
Video Access:	☐ Enable Scheduled Video Access

Access Schedule

Delete

Add New Schedule

Day:	Every day ⌄
Start Time:	00 ⌄ : 00 ⌄ (hh:mm)
End Time:	00 ⌄ : 00 ⌄ (hh:mm)
	Add Clear

User Access	Protected access to the camera. The users must provide username and password to access the camera image. Add users in the menu **User Database**.
Video Access	Activate scheduled access to the camera. Access to the camera is only given during specified times. Note: Regardless of setting the administrator always has access to the camera.
Access Schedule	
Delete	Removes marked schedules from the list.
Add New Schedule	
Day	Choose desired days for the schedule.
Start Time	Indicate a start time.
End Time	Indicate a stop time.
Add	Adds schedule in the list.

7.3.3 User Database

Existing Users	
Edit	Edits user.
Delete	Deletes user.
Delete All	Deletes all users.
User Properties	
User Name	Type desired username.
User Password	Password for the user.
Confirm Password	Enter the password again.
Add	Adds the user in the user database.

7.4 Event

7.4.1 Motion Detection

See section **8.3. Motion detection.**

7.4.2 E-mail

Settings to send the camera image as an attached file to one or several email addresses.

• See the settings for email which has been provided from you Internet provider.

Primary SMTP Server	
SMTP Server Address	Enter the smtp address which is used to send email. *
Authentication	Indicates if the smtp server requires authorization.
SMTP Login Name	Username (only at authorization)
SMTP Password	Password (only at authorization)
POP server name	Only at authorization.
Show "From" as	Type in an email address which is displayed in the "from" field when the email reaches the receiver.
Secondary SMTP Server	
Indicate settings for a secondary smtp server if the primary smtp server cannot be reached.	
E-mail Setup	
E-mail Address	Type in at least one email address to send the camera image to.
Subject	Indicate a subject for the message.

* Some Internet providers require a special smtp server to be used if you have your own email server or if you are using email from an external provider. Contact your Internet provider.

7.4.3 FTP
Settings for automatic uploading of
camera images to an FTP server.

Primary FTP	
FTP Server	The FTP server's address.
Port	The FTP server's port number (usually 21).
Login Name	Username.
Password	Password.
Enable Passive Mode	Mark to activate passive mode.
File Path Name	Indicates which catalogue the image file will be saved in.
Secondary FTP	
Indicate settings for a secondary FTP server if the primary FTP server cannot be reached.	

7.4.4 HTTP

Settings for HTTP Notification.

HTTP Notification	
Enable	Mark to activate the feature.
URL	Indicate the server's url.
Proxy Server Name	Possible proxy server for indirect connection.
Port Number	Indicate the proxy server's port number.
Method	Choose method for http notification. GET or POST.

7.4.5 Event Trigger

Sets the schedule for actions and how the image will be sent, via email, ftp, or http.

Event Schedule	
Shows created schedules for actions.	
New Schedule	
Effective Time Frame	Indicates which days the schedule will include.
Day	Choose desired days for the schedule.
Start Time	Indicate a start time.
End Time	Indicate a stop time.
Add	Adds schedule in the list.
Trigger Event	
Motion Detection	Mark to activate motion detection. Detection of a move.
Actions	Mark chosen action at motion detection: E-Mail, FTP, or HTTP.
Attachment Type	Choose type of attached file: JPEG image or video.

7.5 Administration

7.5.1 Maintenance

General settings for administrator password, software update, and backup and resetting.

```
Administrator Login

Administrator ID:              administrator

Administrator Password:

Verify Password:

                               [ Save ] [ Cancel ]


Firmware Upgrade

Upgrade File:                                        [ Bläddra... ]
                               [ Start ] [ Clear File Name ]


Backup & Restore

Backup Configuration File:     [ Backup ]

Restore Configuration File:                          [ Bläddra... ]
                               [ Restore ] [ Clear File Name ]


Restore Factory Defaults:      [ Defaults ]

Restart Camera:                [ Restart ]
```

Administrator Login	
Administrator ID	Change the preset administrator name (preset username: *administrator*) which is used before login.
Administrator Password	Indicates a password for administrator login.
Verify Password	Verify the password by typing it again.
Firmware Upgrade	
Upgrade File	Click on browse to choose an upgrade file for upgrading the camera's software.
Start	Click on Start to start the upgrading. The camera restarts when the upgrading is completed.
Clear File Name	Clears the field Upgrade File.

Backup & Restore	
Backup	Click on **Backup** to save the camera's actual configuration to a text file.
Restore Configuration File	Click on **Restore** to resume the configurations file.
Restore Factory Defaults	Restores the camera to the factory default settings.
Restart Camera	Press to restart the camera.

7.5.2 Status

Displays the camera's software version and the camera's network and video settings.

System
Device Name: Camera1
Description:
F/W version: V1.0.04

Network
MAC Address: 00:c0:02:90:df:29
IP Address: 192.168.1.37
Network Mask: 255.255.255.0
Gateway: 192.168.1.1

MPEG-4
Resolution: 640*480
Video Quality: Very High
Frame Rate: 30

MJPEG
Resolution: 640*480
Video Quality: Very High
Frame Rate: 30

7.5.3 Log

Displays the camera's log file for settings and actions.

04/28/2008 09:06:10 LOG: Clear all messages

[Refresh] [Clear Log]

☐ Enable Syslog Service
Syslog Server Address [   ]
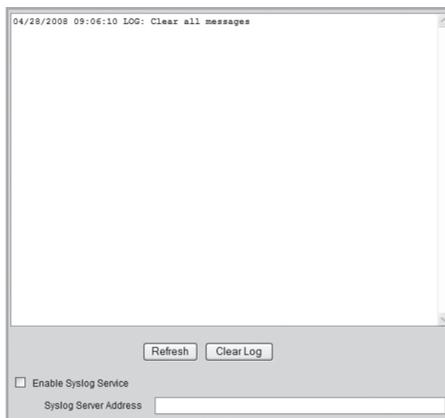
8. Advanced use

8.1 Connecting to the camera via Internet

If the camera is installed in the network behind e.g. a router, the router must be configured for the camera to be able to be reached from internet.

8.1.1 Prepare your router/firewall

- If you are using a e.g. router or firewall in your network it is required that the camera's ports open in the router or firewall and is controlled to the camera's internal IP address. See the router/firewall instruction manual for help.

- Preset port number to connect the camera is: **80**.

  If you want to connect with a different port number a secondary port number can be indicated in the menu **Setup** > **Network**.

Secondary Port:	☑ Enable HTTP Secondary Port	1024	(1024-65535)

- You must also acquire the IP address for your Internet connection. A simple way of doing that is to indicate in your web browser "*What's My IP"* as a search word in a search engine for links that display your external IP address.

8.1.2 Connect to the camera

1. Start the computer's web browser and type in the Internet connections IP address (**http://xxx.xxx.xx.xx**) and press **Enter**.

   N.B:
   This can normally not be made from a computer on the same network as the camera. Use a computer on another network or with another Internet connection to connect to the camera (from the internal network you instead connect to the camera's internal IP address).

2. Click on **View Video** to display the camera image or choose **Administration** to configure the camera.

8.2 Streaming to mobile phone

The camera image can be streamed to most 3G mobile phones which support video streaming via the rtsp protocol.

8.2.1 Prepare the camera for streaming to a 3G mobile phone

Mobile Settings

☑ Enable Mobile Streaming

Resolution: 160*120

Video Quality Control:

◉ Constant Bit Rate   32 Kb ps ▾

○ Fixed Quality   Normal ▾

Max Frame Rate: 15 ▾ fps

Access Code: 1234

1. Mark the alternative **Enable Mobile Streaming** in the menu **Video & Audio**.

2. Choose video quality (Constant Bit Rate) and image frequency (Max Frame Rate).

3. Indicate a access code for the camera (Access Code), in this case **1234**. This code shall then be indicated at the end of the web address you indicate in the mobile phone.

4. Click on **Save** to save your settings.

Note:

- If you are using a e.g. router or firewall in your network it is required that the camera's ports open in the router or firewall and is controlled to the camera's internal IP address. See the router/firewall instruction manual for help.

- The preset port numbers for video streaming can be used in the camera's network settings in the menu **Setup** > **Network**:

RTP/RTSP:	RTSP Port:	554	(554,1024-65535)
	RTP Data Port:	5000	(mobile phone only)
	Max RTP Data Packet:	1400	bytes (400-1400)

Preset ports in the camera:
RTSP: 554 (TCP)
RTP: 5000 (UDP)

- You must also acquire the IP address for your Internet connection. A simple way of doing that is to indicate in your web browser "*What's My IP"* as a search word in a search engine for links that display your external IP address.

8.2.2 Connect to the camera with a 3G mobile phone

1. In the mobile phone's web browser you type **rtsp://** followed by the camera's/router's external IP address followed by the access code.

   Example: **rtsp://XXX.XXX.XXX.XXX/1234** where **X** stands for the camera's external IP address and **1234** is the access code.

2. If the camera and the router/firewall are correctly configured the camera image should be displayed in the mobile phone.

   Important:

- The mobile phone must support the RTSP protocol to be able to receive the camera's video streaming. See mobile phones operating instructions. The mobile phone plan must also be activated for data traffic via the 3G net.

8.3 Motion detection

Note: Motion detection can besides moving objects also react on rapid changes in light. It is therefore recommended that the function is only used on cameras indoors.

1. Mark the box for one or several areas (**Window 1-4**). **Up to four detection areas can be defined for detection of movement.**

2. **Use the curser to move** the detection area to the one the motion detector should react to.

3. Adjust the **Threshold** for the detection.

4. Click on **Apply** to confirm your settings.

5. Follow chapter **7.4.2 E-mail** to set one or several email addresses to send the image to.

6. Activate **Motion Detection**, type of action (e-mail, FTP or HTTP) and type of attached file in the menu **Event Trigger** (see chapter 7.4.5).

9. Monitor Manager

With the included program **Monitor Manager** several other similar cameras may be monitored simultaneously.

9.1 Installation

The installation instructions apply to Windows XP with Service pack 2 installed.

1. Connect the camera according to the instructions in chapter **4**.

2. Insert the supplied CD into the computer's CD-ROM drive. If the installation does not start automatically, use the file **NetworkCamera.exe** application found directly under the root folder on the CD-ROM.

3. When the program has been installed, Wellcome! will apppear on the screen. Click on **Install Utility** to start the installation.
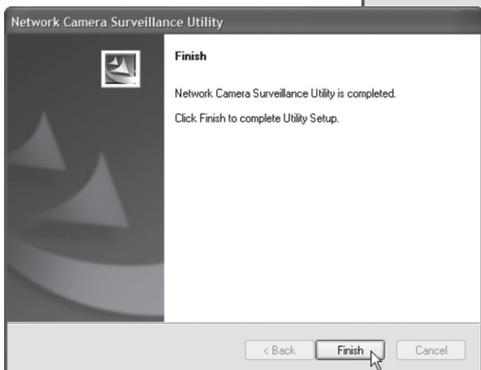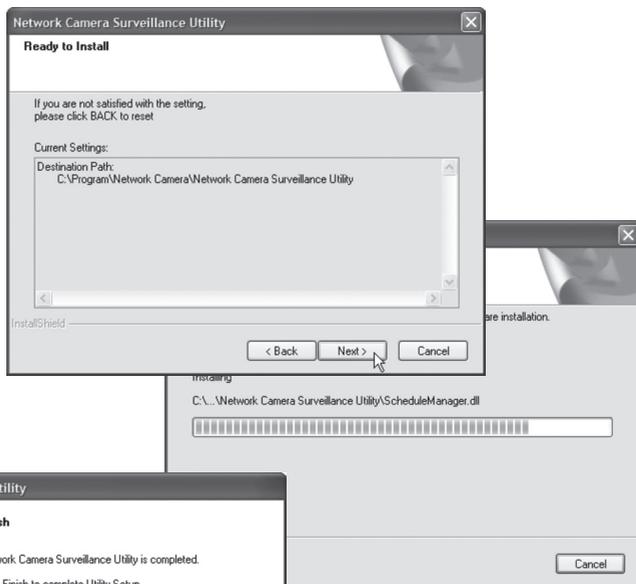

4. **Click on Next to continue.**
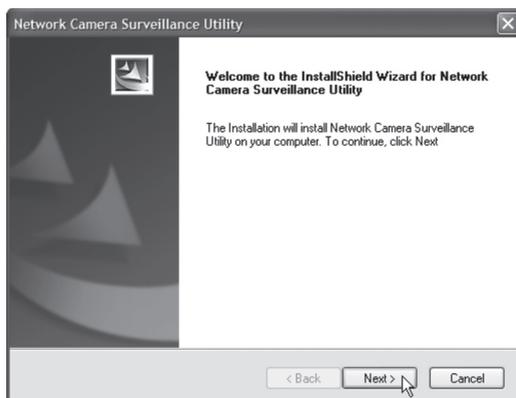
5. Click on **Browse** if you choose to install the program in another catalogue than the suggested, otherwise click on **Next**.
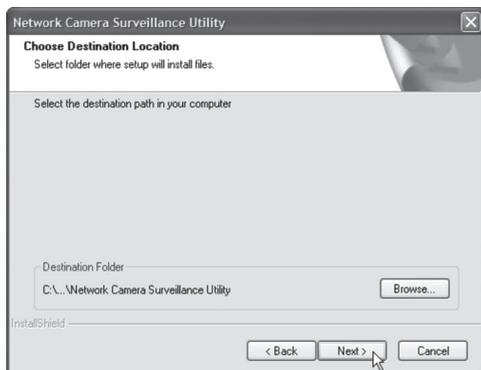

6. Click on **Next** to confirm.

7. Click on **Finish** to complete the setup. Program will run automatically.

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9.2 Using Monitor Manager

9.2.1 Connect to the camera and show the camera image
To be able to show the camera in the program it must first be connected and assigned its own channel number.

1. Install and start the program according to the instructions in step **7.1**

2. Click on 🛠 to change the program's properties and search for the camera on the network.

3. Mark **Lan** (the camera is on the network) and click on **Refresh** to search for connected cameras.

4. Mark the camera in the list.

5. Assign the camera a channel number (in this case **1)** and click on **Add** to add the camera in the list.
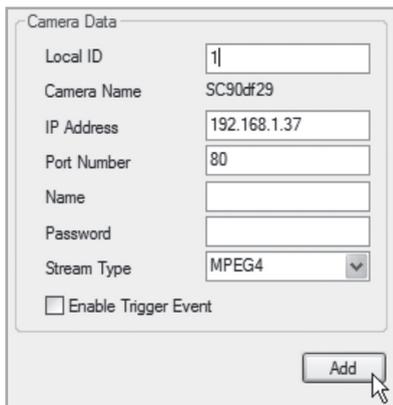
Camera Data
Local ID   1
Camera Name   SC90df29
IP Address   192.168.1.37
Port Number   80
Name
Password
Stream Type   MPEG4
☐ Enable Trigger Event
                              Add

⦿ Lan   ◯ Internet
Camera List
SC90df29

Refresh

6. Click on **Exit** to close the window.

7. Click on ► to start playback. The image from the camera will appear on the program.

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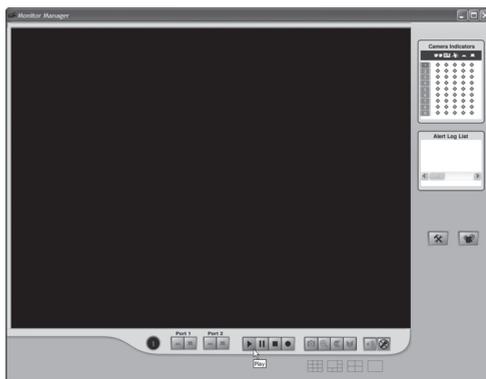
Explanation of the program's controls and features

Button		Function
1	**Channel**	Displays the camera's channel number.
▶	**Play**	Start the playing of the camera image for chosen camera.
❚❚	**Pause**	Freezes the camera image.
■	**Stop**	Stops the playing of the camera image.
●	**Record**	Press to record current camera image. At recording the button switches colour to red.
📷	**Snapshot**	Press to take a snapshot image of the camera image.
🔍	**Zoom**	Click on the icon and then click in the area in the camera image you want to enlarge.
◀	**Flip**	Turns the camera image horizontally.
▮	**Mirror**	Mirrors the camera image.
🔊	**Sound On/Off**	Turns the sound on or off (can only be chosen when the functions is activated according to chapter **8**).
🎙	**Microphone On/Off**	Turns the microphone on or off (can only be chosen when the functions is activated according to chapter **8**).
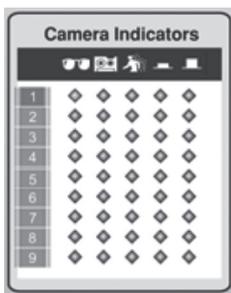
Camera Indicators

Camera Indicators

Used to quickly switch between connected cameras. Also displays status for chosen camera.

- **Column 1**: Green indicator is displayed when the camera is available.
- **Column 2**: Red indicator is displayed when recording.
- **Column 3**: Yellow indicator is displayed when the motion detector is activated.
- **Column 4 & 5:** Indicates I/O-status.

Alert Log List

Alert Log List

Displays history over possible alarms at motion detection.

	Setup	- Searching and connecting network connected cameras. - Sets scheduled recordings. - Chooses properties for recording.
	Playback	Opens the program to play recorded camera sequences. See chapter **7.4 Playback**.
	One Video Layout	Displays only chosen camera.
	Four Video Layout	- Displays up to four cameras simultaneously (if several cameras are connected). - Use the "drag and drop" method to move the camera image to the desired box.
	Six Video Layout	- Displays up to six cameras simultaneously (if several cameras are connected). - Use the "drag and drop" method to move the camera image to the desired box.
	Nine Video Layout	- Displays up to nine cameras simultaneously (if several cameras are connected). - Use the "drag and drop" method to move the camera image to the desired box.

9.3 Recording and playing

Recordings can be made as you are watching the camera image, or
at scheduled times.

9.3.1 Prepare the computer for recording
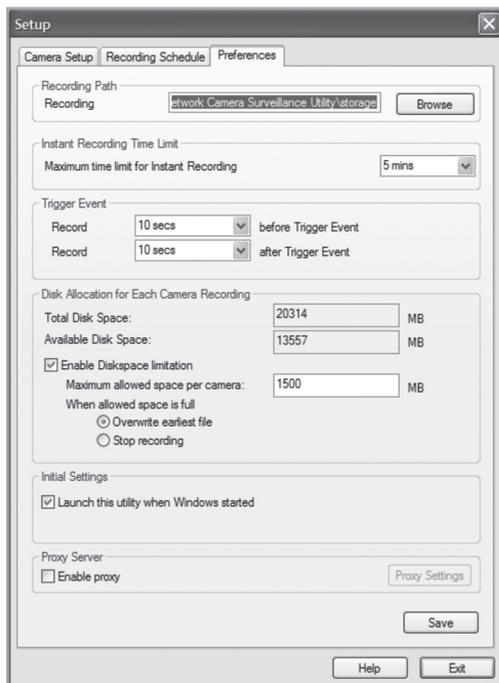
1. Click on **Setup** 🛠 to change the program's properties.

2. Choose the tab **Preferences** and make desired settings:

   ■ **Recording Path** – Choose in which catalogue on the computer the record-
      ings will be saved in.

   ■ **Instant Recording Time Limit** – Indicates a limit for longest recording length.

   ■ **Trigger Event**

      ● **before Trigger Event** – Indicates the time for recording before the
         camera has detected movement. The program can be saved up to
         30 seconds history in the memory.

      ● **after Trigger Event** – Choose how long the recording time will be after
         the camera has detected movement.

- **Disc Allocation for Each Camera Recording** – Indicate how much disc space should be allocated for recorded files.
- **Initial Setting** – Mark if the program should start when Windows is started.
- **Proxy Server** – Indicates settings when using a proxy server.

3. Click on **Save** to save your settings and **Exit** to return to Monitor Manager.

9.3.2 Scheduled recording

1. Click on **Setup** ![icon] to change the program's properties.

2. Choose the tab **Recording Schedule** to start a scheduled recording. Make desired settings. See below:

- **Local ID** – Choose which camera the schedule will include.
- **Interval** – Chooses an interval for the schedule.
- **Start Date** – Start date for the recording.
- **Start Time** – Start time for the recording.
- **Duration** – Indicates the recording time's duration (up to 24 hours).

3. Click on **Add** to add the created schedule in the list. The program will now automatically start the recording at a scheduled time.

4. Repeat steps 2-3 if you want to add more schedules.

N.B:
In order for scheduled recording to work it is required that the program **Recorder** is started. The program Recorder starts automatically when the program Monitor Manage is started, and is kept active when Monitor Manager is closed.

9.3.3 Playback of recorded files

Click on [🛠] to open the player.
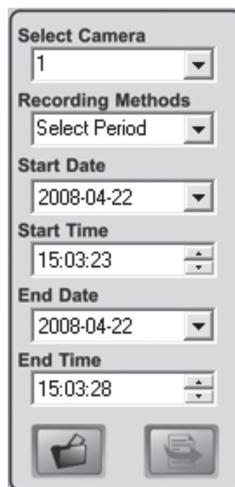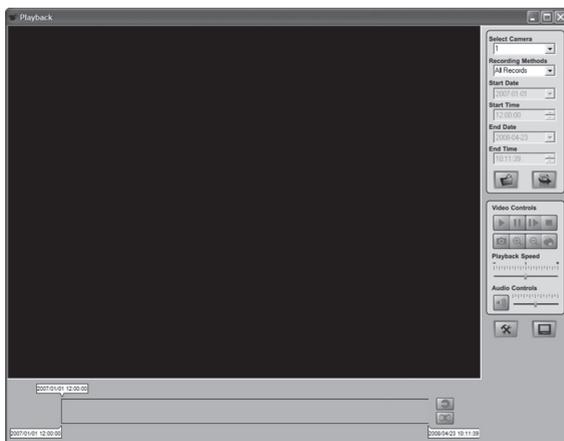
Video Menu Key

Select Camera	Choose desired camera number.
Recording Methods	Choose which type of recording you want to show.
Start Date/Time	Indicate date and time for the time span you want to show playback from.
End Date/Time	Indicate date and time for the end of the time span you want to show playback from.
Load other Cameras	Add other cameras from the network.
Submit	Start the playing according to your criteria above.

Play	Starts the playback after it has been stopped paused.
Pause	Temporarily stops the play-back/freezes the image.
Frame by Frame	Each click plays the sequence frame by frame.
Stop	Stops the playback.
Snapshot	Takes a snapshot from the video sequence.
Zoom In	Enlarges the image.
Zoom Out	Reduces the image.
Print	Skriver ut aktuell bild.
Playback Speed	Playback speed.
Audio Controls	Volume control.
Setup	Changes the program's prop-erties.
Monitor	Switches to the program Monitor Manager.
Convert	Converts chosen video sequence to AVI-format.
Delete	Erases chosen video sequence.

Video Controls

Playback Speed

Audio Controls

9.4 Using the microphone and speakers

The camera is equipped with a built-in microphone for monitoring the sound in the camera's surrounding. The sound is played in the computer where the camera image is monitored.

9.4.1 Activate the camera's microphone
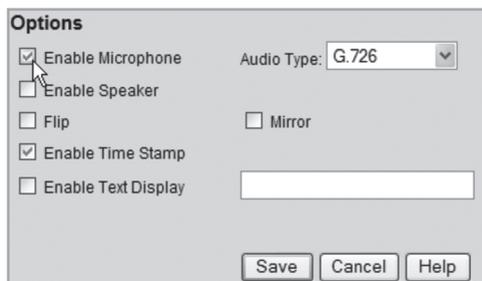
1. Mark the alternative **Enable Microphone** in the menu **Video & Audio**.
2. Click on **Save** to save your settings.
3. Click on **View Video** to show the camera image. The sound from the camera's microphone is now played in the computer's speakers.

9.4.2 Activate the camera's speaker output
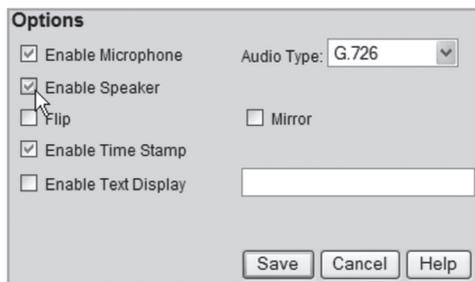
1. Connect a speaker (e.g. computer speaker) to the output marked **SPKR Out** (3.5 mm mono) on the back of the camera.
2. Connect a computer microphone to the computer's microphone input.
3. Mark the alternative **Enable Speaker** in the menu **Video & Audio**.
4. Click on **Save** to save your settings.
5. Click on **View Video** to show the camera image. The sound from the computer's microphone shoud noq be heard in the speaker connected to the camera.

10. Care and Maintenance

Use a soft damp cloth to wipe the product. Never use solvents or strong detergents.

11. Troubleshooting

Not able to connect to the camera / The program does not have contact with the camera

- Check that any firewalls in your computer are not blocking the camera connection to the network. Shut off or configure the firewall.
- Make sure that the IP address you gave the camera corresponds with the network series of IP addresses. Connect the camera and run the configuration program again.
- Check that the network cable you are using is whole and also of the same type as the one supplied with the camera.
- Disconnect the camera's power supply a short while and try again later.
- Try to restore the camera by pressing ín the reset button on the bottom of the camera.

12. Disposal

Follow local ordinances when disposing of this product. If you are unsure about the disposal of this product contact your municipality.

13. Specifications

Power supply	5 V DC, 1 A via included adaptor
Network	LAN with support for TCP/IP, DHCP, SMTP, NTP, HTTP, RTP, RTSP, UPnP, DDNS
Network connection	1 Ethernet 10/100BaseT (RJ45)
Lens	F2.8 mm @F2,8 Fixed Focus
Max resolution	640x480 (VGA)
Dimensions	90x35x90 mm (WxHxD)
Operating Temperature	0 °C to 40 °C
Storage climate	0 °C to 40 °C

SVERIGE

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