webcam
W A T C H E R
PROFESSIONAL

USER MANUAL

Contents

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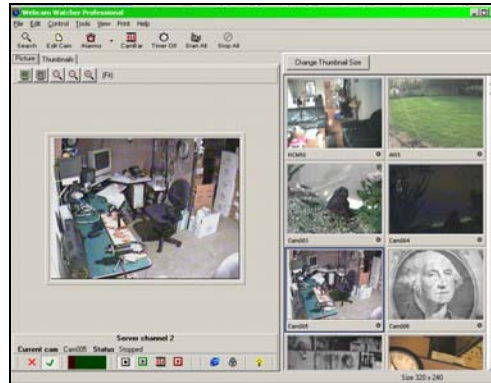
Version 1.2.2 05/June/2003

Getting Started

Overview

Webcam Watcher Professional is a full-featured Digital Video Recorder for Network Cameras that can record from multiple cameras simultaneously.

It can also record from conventional snapshot webcams, and Webcam32 streaming webcams.

Here is a summary of the Main Features of *Webcam Watcher Professional:*

- Easily reconfigurable display lets you see as many cameras as you like
- Masked motion detection allows precise control over Frame Recording and Alarms.
- Cameras can operate according to easily defined Schedules (e.g. "Office Hours").
- E-mail image when Alarm occurs.
- Disk Space Management optionally overwrites old archived images to allow for continuous operation.
- CamBar lets you keep a subset of cameras on screen at all times.
- Print utility allows multiple images per page to be printed.
- Built-in MJPEG player lets you view recorded images and display each frame's timestamp.
- Convert recorded MJPEG files to AVI format.
- Image Enhancer for poor quality or lighting.
- Search archived images and display motion graphically.
- Instantly jump to a particular motion event.

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Installing Webcam Watcher Professional

Webcam Watcher Professional is normally supplied on CD. To install, insert the CD and the installation process should automatically start.

If it does not automatically start, open **My Computer** and located the CD drive and double click.

If you downloaded from the Internet, save the file that you downloaded and then open it when the download is complete.

Installation is straightforward.
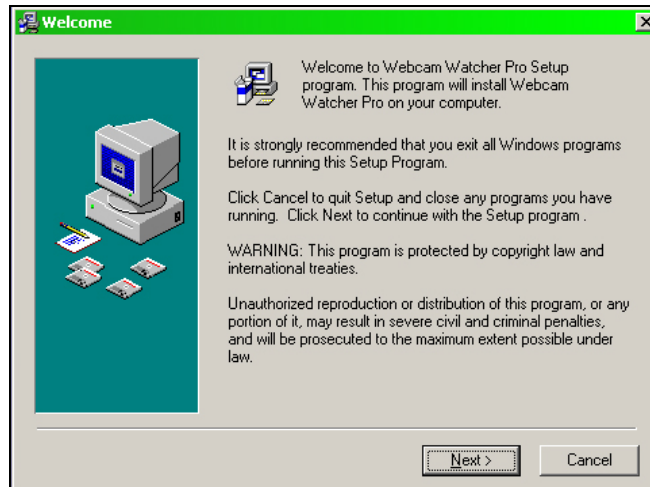
This is the initial screen of the Installer. Click **Next** to start the installation and then follow the on-screen instructions.
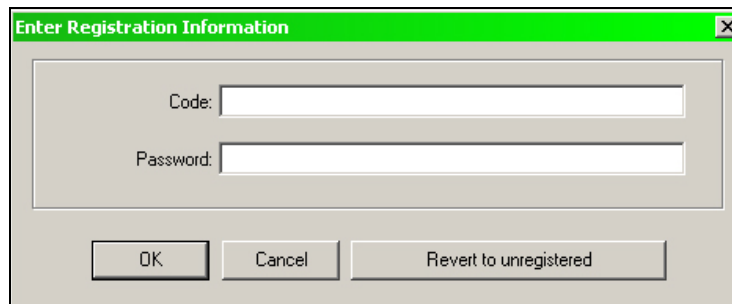
Registering Webcam Watcher Professional

Webcam Watcher Professional is licensed according to the maximum number of cameras that can be used.

When first installed, *Webcam Watcher Professional* runs in *demo* mode. This has limited functionality and only allows a maximum of 4 cameras.

To unlock *Webcam Watcher Professional* you need to enter the **Code** and **Password** that was supplied to you.

To do this, run *Webcam Watcher Professional* and select **Help** then **Enter Registration Code** from the main menu at the top of the screen.

If you reinstall *Webcam Watcher Professional* or **Windows** then you will need to repeat this procedure, so it is important to keep your registration code in a safe place.

It is recommended that you make a note of your codes here:

CODE:..

PASSWORD:...

System Requirements

Webcam Watcher Professional requires Windows 98, ME, XP or 2000 with a minimum of 128Mb of RAM and SVGA display (800x600) or better.

For serious use you should consider using Windows 2000 or XP with 256Mb or more of RAM.

The amount of disk space required depends entirely on how much you want to record, how many cameras you have, what frame rates you use, and many other factors. For assistance in determining your disk space requirements, contact your distributor.

Cameras Supported

This is a partial list of cameras that have been tested with *Webcam Watcher Professional*:

- *Axis* Network Cameras (eg 2100) and Servers (eg 2400)
- *Intellinet* Network IP Cameras
- *VivoTek* Network Cameras
- *Panasonic* WV-NP472, WJ-NT104, WV-NS324 and HCM Range
- *Webcam32* streaming format cameras.
- Any *Netscape*-style Motion JPEG streaming camera.
- Any network snapshot camera that uses JPEG images. This includes most Webcams on the Internet.

All Trademarks identified above are the property of their respective owners.

Webcam Watcher Professional has the ability to define new camera types, so some cameras can be supported simply by defining the correct URLs.

Beausoft intends to add support for new cameras. Check with your distributor for the latest compatibility list.

Main Screen
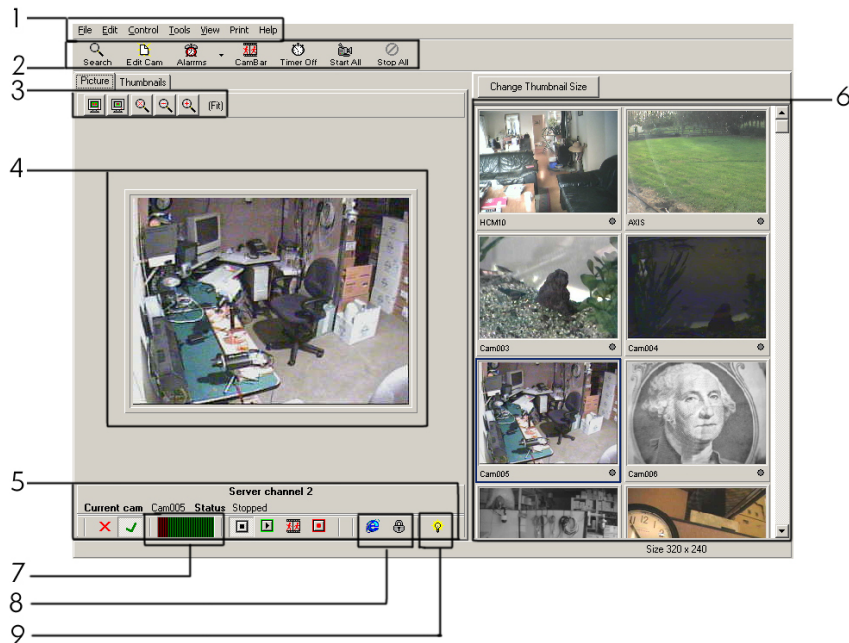
1. ***Main Menu***.
2. ***Main Toolbar***. Common commands. Master Timer and Alarm switches.
3. ***Image Zoom Controls***. These allow you to magnify or reduce the
    current image
4. ***Image for Current Camera.*** Shows the current image for the selected
    camera. If the camera is not currently running it shows the last saved
    picture.
5. ***Camera Status and Control Toolbar***. Controls to start and stop
    recording the current camera.
6. ***Camera Thumbnails***. Shows the last picture for every camera. Use this
    panel to select a camera.
7. ***Motion Detection Bar*** Shows the amount of motion detected.
8. ***Camera Access Buttons*** Allows one-click access to the current
    camera's homepage and admin page.
9. ***Image Enhancer*** Dynamically enhances images. Special enhancement
    for low light conditions. Right click to adjust.

Clicking the **Recordings** tab shows the recorded MJPEG files for the current camera. You can view a recording by double-clicking it.
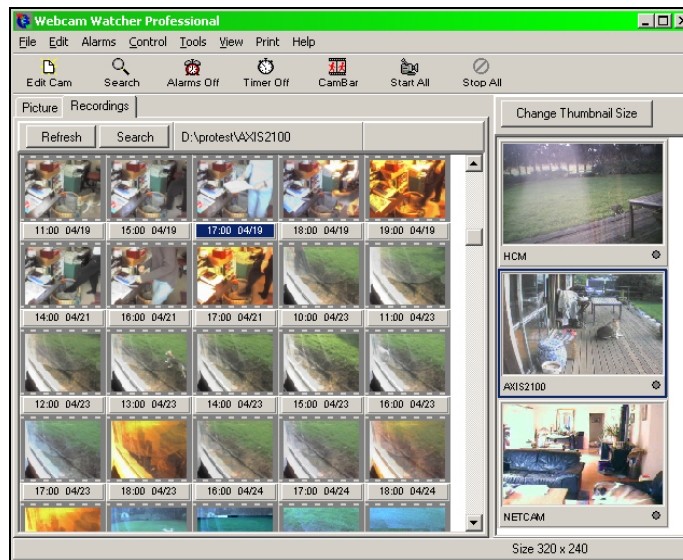
You can change the size of the **Camera Thumbnails** by clicking the button at the top of the panel.
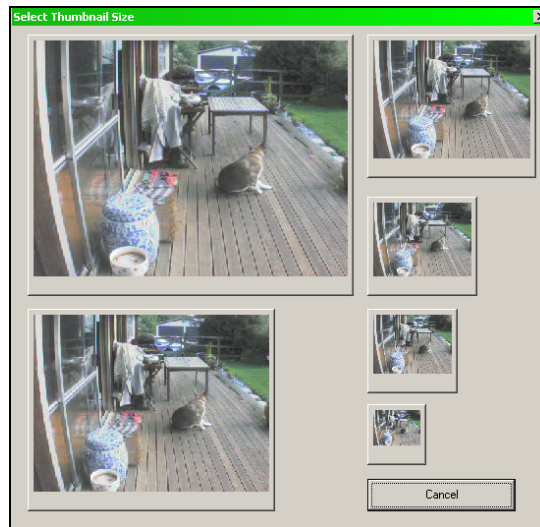
Configuring Cameras

Selecting a Camera Folder

Webcam Watcher Professional uses a Camera Folder to store details of your cameras, and to store recordings. You can select the location of the camera folder by using **File > Select Camera Folder** from the main menu.

Initially the camera folder is set to be the same as the program folder. Unless you want to store your camera database here, it is a good idea to change this before creating any cameras.

New Camera / Edit Camera Dialog

To create a new camera, select **Edit > Create New Camera** from the main menu. This opens the **Edit Camera** dialog. You can also edit an existing camera by selecting the camera and clicking the **Edit Camera** button.

Camera Details

This section lets you define the Camera's and characteristics:

- **Camera Name**: A short name used for tagging the thumbnails. Also used for camera sub-folder name.
- **Description**: Optional longer description.
- **Location**: Optional location string.
- **Camera Address**: IP address of camera. This can be a dotted IP address like:

  192.168.0.253 or it can be a named address:
  camera1.mydomain.com. ...or a non-standard port:
  camera.mydomain.com:8080
- **Camera Type**: Select from one of the predefined types or choose **User Defined** (in which case you can click the **Define** button to define the camera's URLs)
- **Camera Channel**: For camera servers, select the channel number here.

Monitoring Type

This section lets you specify how the image is fetched from the camera, and the image size and quality.

- **Full Motion** means that the camera is sending a stream of images.
- **Snapshot** means that *Webcam Watcher Professional* fetches a snapshot at regular intervals.

Security

If the camera needs a **Username** and **Password** to view the image, you need to enter them here, and check the **Use Authentication** box.

Default Saving Mode

When you Start All cameras, the camera is started in the mode specified here:

- **Monitor**: The camera is running (in other words, *Webcam Watcher Professional* is fetching pictures) but no pictures are saved.
- **Motion Detect**: The camera is running and saving frames where motion is detected. If **Use Mask** is checked then the motion detection mask for this camera is used.
- **Record Every Frame**: The camera is running and every frame is recorded.

Disk and CPU Usage Limits

Webcam Watcher Professional can limit the amount of Disk and CPU that a camera uses.

If you enable automatic disk space management (by checking the **Limit Disk Usage** checkbox) then *Webcam Watcher Professional* will delete old MJPEG files if the limit specified here is exceeded.

If you specify a non-zero value for **CPU Throttle** then *Webcam Watcher Professional* will sleep for this period of time after each frame is received from this camera.

Note that you can also specify a **Global CPU Throttle** on the **Preferences** dialog. The camera's throttle is applied in addition to the global throttle.

Schedule

You can specify a **Schedule** to use for this camera. See the section on **Schedules** to see how this works.

Extra Functions

User-defined Extra functions can be useful for providing additional functions like activating switches or browsing to a related web page.

You can specify up to 16 extra User Defined Functions for a camera. These are URLs that can be accessed by clicking the **User Defined Functions** button on the **Camera Status and Control Toolbar**.

For each extra function you can specify a Name, URL and Hint. The Name is displayed on the Extra Function button, and the hint is displayed when the mouse pointer hovers over the button.

If the URL starts with "http" then a direct address is assumed. Otherwise the URL is constructed by appending the string to the camera's Address. Note : No leading "/" is required.

If **Browse To** is checked, a Browser window is opened to the specified URL.

Otherwise *Webcam Watcher Professional* simply fetches the URL internally (i.e. it issues a http GET). Any errors are ignored.

Defining Camera Types

You can add new camera types to *Webcam Watcher Professional* using the **Edit Camera Definitions** dialog.

Load Definition loads an existing Camera Definition.

Save Definition lets you save a definition. This then becomes available on the *Edit Camera* dialog.

Camera Definitions are stored in files with the extension **.CDF**

For detailed information about how to define camera types, contact Beausoft Technical Support.

Monitoring and Recording

The **Camera Control Toolbar** lets you control the current camera.

1. **Motion Detection Bar** shows the amount of motion currently detected. Clicking on this allows you to adjust the motion detection settings for the current camera.

   Then there are four VCR-style buttons to control the camera:

2. **Stop** button
3. **Monitor** button
4. **Motion-Detection** button
5. **Recording** button

   And some other buttons:

6. **Camera Home Page** button
7. **Camera Admin Page** button
8. **Image Enhancer On/Off**. Right click to Adjust
9. Show / Hide **User Defined Functions**

When *Webcam Watcher Professional* records images, it records into MJPEG files (Motion JPEG).

One file is created per hour. All frames recorded for that hour go into that file. You can see the MJPEG files saved using the Recordings tab. If you double click on a recording it plays it in the MJPEG Player.

MJPEG Player
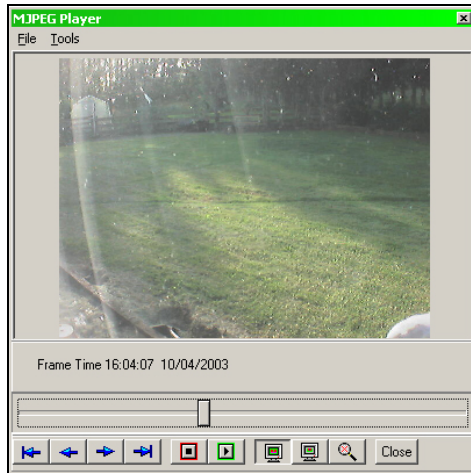
If the recordings that *Webcam Watcher Professional* makes are like videos, then this is the Video Player.

The VCR-style buttons at the bottom let you start and stop playing.

The blue arrows let you go to the start and end of the recording. Also forward and back single frames.

The slider lets you set the position anywhere in the recording.

The Main Menu on the MJPEG Player lets you perform additional functions:
- **Save** the current MJPEG file
- **Copy** or **Save** the current frame
- **Print** the current frame
- **Extract** the individual JPEGs from the MJPEG file
- **Convert** the MJPEG file into an AVI file

The last option, Convert to AVI, uses the codecs that are currently installed on your system. Not all codecs perform as expected.

Hint: Press *Escape* to close the MJPEG player.

Motion Detection

When a camera is running, *Webcam Watcher Professional* is constantly comparing frames, looking for motion. It displays the amount of motion on the **Motion Detection Bar** at the bottom of the screen.

You can adjust the motion detection settings by clicking on the bar graph.
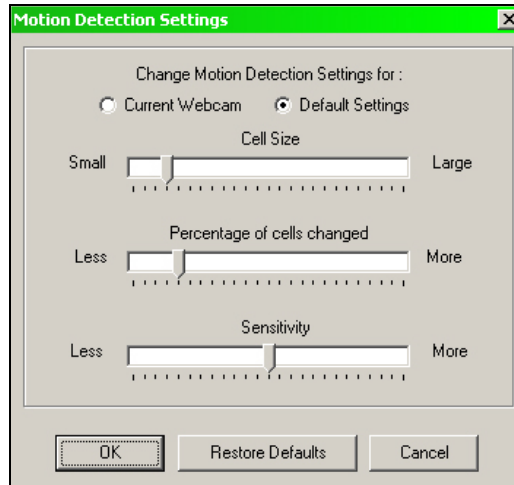
There are three sliders that let you control three parameters:
- **Cell Size.** The picture is divided into square cells, and each cell is compared. This slider controls how large the cells are. This can range from 4x4 pixels to one large cell that covers the whole picture. Smaller cell sizes mean more CPU required, but better motion discrimination.
- **Percentage of cells changed** determines how many cells need to be changed before the picture is considered different. This slider adjusts the position of the red and green bars on the *Motion Detection BarGraph*.
- **Sensitivity** controls how sensitive to motion the bargraph is.

Motion Detection Mask

Motion Detection can be restricted to a certain area by using a **Motion Detection Mask**. You can edit a camera's mask by selecting the camera and choosing **Edit Motion Detection Mask for Current Camera** from the **Edit** menu.


The Mask Editor is easy to use. Select either **Mask** or **Unmask** and the brush size.

The **Red** area defines the masked area, which is ignored when detecting motion.

The **Motion Detection Mask** is *enabled* and *disabled* by the **Use Mask** checkbox on the **Edit Camera** dialog.

Searching

Webcam Watcher Professional lets you search for motion graphically. Click the **Search** button to open the Search dialog.
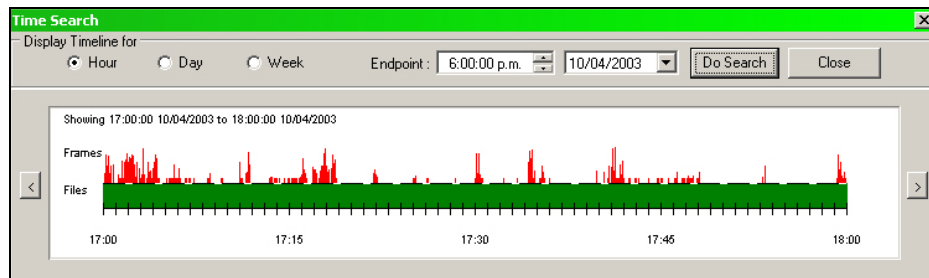
The **Green** area (below the line) shows the presence or absence of MJPEG files that cover the time period.

The **Red** area (**above** the line) shows where frames have been recorded. If Motion Detection recording was used, this gives a graph of the motion detected.

Select the **Endpoint** for the search, Select the period, Hour, Day or Week, and click **Do Search**. The results are displayed. (Note: this may take some time).

You can double click on the results to open the corresponding MJPEG file at the correct place.

Right clicking opens a menu that lets you:
- **Open in MJPEG Viewer** (same as double clicking)
- **Set Endpoint Here** – sets the end of a subsequent search where you click.

You can also click the **<** and **>** buttons to perform searches for the previous and next periods.

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The CamBar

Webcam Watcher Professional's **CamBar** lets you keep some or all of your cameras on-screen (much like the Windows taskbar). This remains visible even when *Webcam Watcher Professional* is minimized.

To Open the CamBar click the **Cambar** button.

The CamBar will open at the top of your screen. Initially it will be empty.

You can drag webcams from the **Thumbnails** panel (either individually, or you can select several and drag them all).

The CamBar can be dragged to dock on any edge of the screen. It can also be made to float anywhere on the screen. Move the CamBar by dragging the *handlebars*, the thin vertical bars at the left of the CamBar.

Clicking on a camera on the cambar restores the main screen and selects the camera.

Right click on a camera and a menu opens that lets you:
- Start or Stop the camera
- Edit the camera
- Remove the camera from the CamBar
- Open the camera's homepage
- Copy the current image to the clipboard

Clicking on the CamBar Icon opens a menu that lets you:
- Start or Stop all cameras
- Start or Stop all cameras on the CamBar
- Empty the CamBar
- Close the Cambar
- Quit the program

Alarms

Webcam Watcher Professional includes an Alarm facility. Alarms are generated when more than a certain amount of motion occurs. The Alarms for a camera are configured by clicking the **Alarms** button on the **Edit Webcam** dialog, or by selecting **Edit Alarms for Current Camera** from the **Edit** menu.
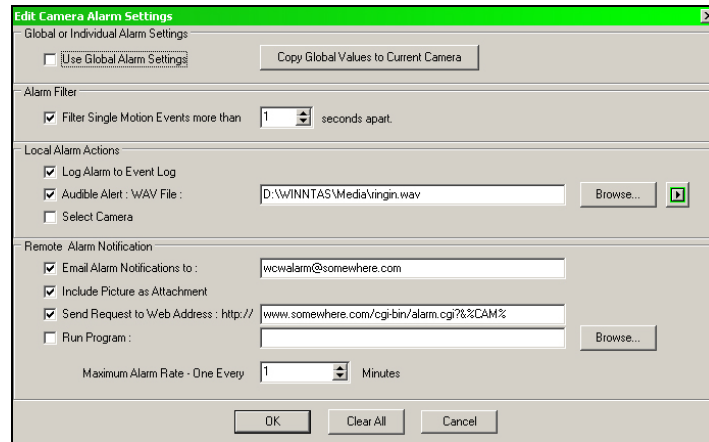
The top panel, **Global or Individual Alarm Settings** selects whether you use the default settings for this camera, or use individual settings.

You can *Copy* the current global settings by clicking the button in this panel.

The **Alarm Filter** panel enables *single event filtering*. If enabled, more than one motion event is required to trigger an alarm. The time box lets you specify how far motion events must be apart to be considered single events.

The **Local Alarm** panel lets you configure alarms that produce actions on the PC that *Webcam Watcher Professional* is running on:
- Log to Alarm Log
- Play a sound
- Select the camera

You can view the Alarm Log using **Show Alarm Log** on the **Alarms** menu.

The **Remote Alarm** panel lets you configure alarms that can send messages, etc:

- Email Alarm Notification to a specified e-mail address
- Attach the last image to the e-mail message
- Send GET request to a particular web address. The URL specified can have expandable parameters: %CAMNAME% for the camera name. %CAMNUM% for the camera number.
- Run an external program, passing the camera name and camera number as parameters.

For Email Alarms to work you must set up an SMTP mail server on the main *Preferences* dialog.

There is a **Maximum Rate** that can be set for remote alarms, to prevent too many being generated.

Note that Alarms are only generated when the Alarms button on the main Toolbar is down.

Alarms can be set according to an **Alarm Schedule**. This operates similarly to regular schedules. Edit this using **Edit Alarm Schedule** on the **Alarms** menu.
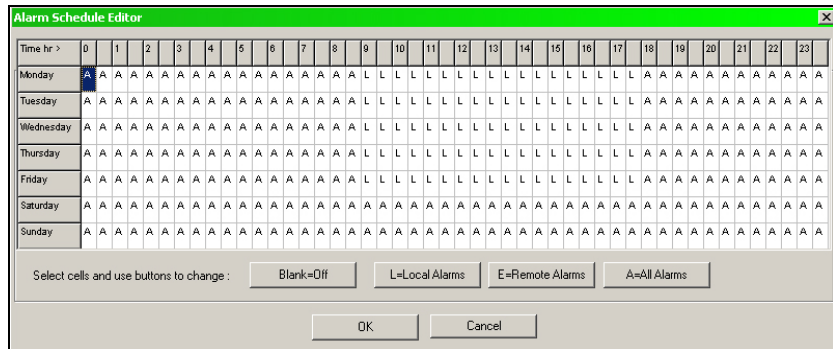
This defines a schedule of when the Alarms (local and/or remote) should be Enabled or Disabled.

Like regular schedules, the Alarm Schedule only operates when the Timer button on the main toolbar is down.

Schedules

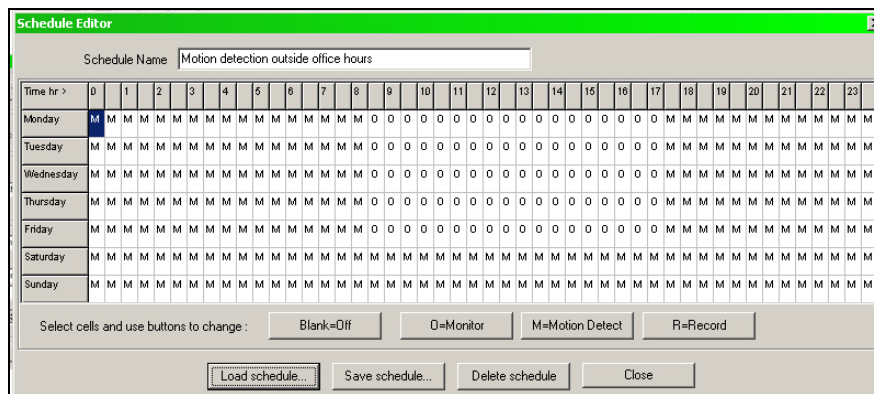*Webcam Watcher Professional* includes a scheduling facility.

This lets you set schedules for each camera, and for alarms. Think of this as similar to setting programs on a video recorder.

To actually **Run** the schedules, the **Timer** button on the main toolbar must be Down. This is analogous to pressing the **Timer** button on a video recorder.

Some things to note about the **Timer** button on the main toolbar:
- If you quit *Webcam Watcher Professional* with the **Timer** button down, it will be down when the program next starts.
- You can force the **Timer** and/or **Alarm** buttons to be down on program start-up by selecting this on the main **Preferences** dialog.
- You can force the **Timer** and/or **Alarm** buttons to be down on program start-up by passing the parameters –*TIMER* and/or –*ALARMS* when running the program.
- Pressing the Timer button Down will start scheduling; this may cause cameras to start or stop.
- Pressing the Timer button Up will stop scheduling, but will not cause cameras to start or stop. They simply carry on as they were.

You can Create and Edit schedules using the Schedule Editor. Select **Edit Schedules** from the **Edit** menu.
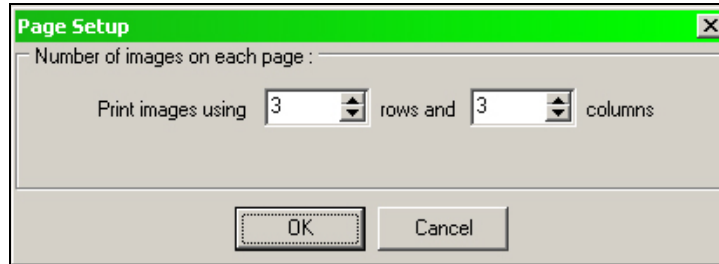

You can assign each camera a schedule on the **Edit Camera** dialog.

Printing

Webcam Watcher Professional includes a printing utility.

You can print up to **6** rows and **6** columns of pictures per page, allowing a maximum of **36** pictures per page. You select the page layout using the **Page Setup** dialog on the **Print** menu.

When printing, the page is filled left to right, top to bottom. When a page is full it is printed. You can see the current status of a page by using the **Print Status** dialog on the **Print** menu
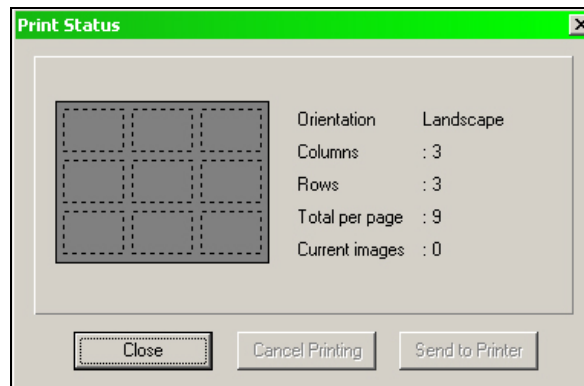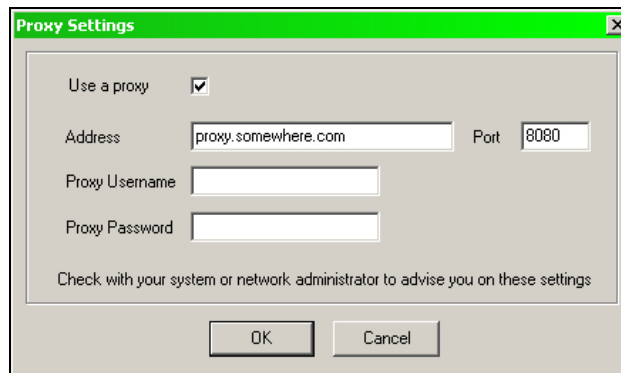

You can print pictures either from the current camera by using **Print Current Image** from the **Print** menu, or you can print frames from within the MJPEG player.

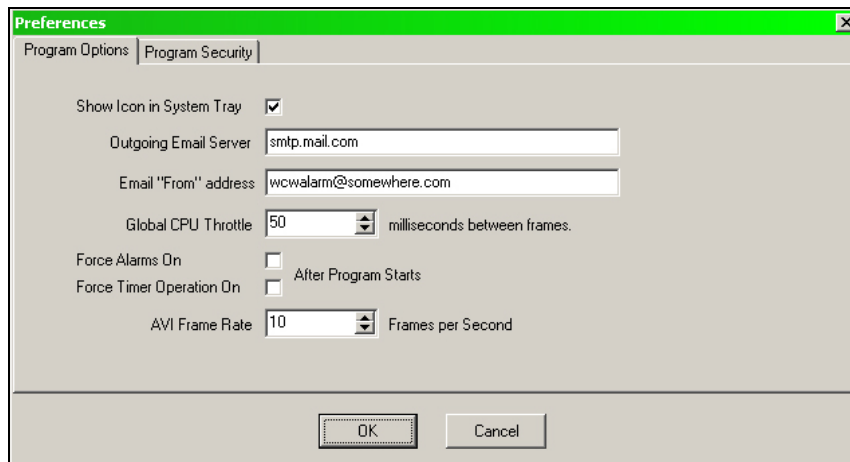The **Print** menu also has options to print or cancel an incomplete page.

Proxy Setup

Webcam Watcher Professional can communicate using a *proxy server.* To set this up use **Proxy Setup** on the **File** menu.

Note that currently **Intellinet** cameras do not work via a Proxy.

Preferences

Set global preferences and options using the **Preferences** dialog on the **File** menu.

- **Show Icon in System Tray**: the program minimizes to a small icon in the system tray.
- **Outgoing Email Server**: You need to specify an email (SMTP) server to use if you want to send e-mail alarms.
- **Email From Address**: used to identify outgoing email alarm messages.
- **Global CPU Throttle**: Number of milliseconds paused between each frame received.
- **Force Alarms, Timer On**: If checked forces these buttons to be down on program startup.
- **AVI frame rate:** When converting MJPEG to AVI this specifies the frame rate.

Security

Webcam Watcher Professional can be set up to require **Admin** and/or **User** passwords.

If an *Admin* password is set, the following functions require the *Admin* password to be entered:

- Editing Cameras or Motion Detection Masks
- Editing Schedules
- Editing Alarm Schedules
- Changing Preferences
- Changing Proxy Setup

If a **User** password is set then either this or the *Admin* password must be entered to run the program.

Set and configure the Security settings on the **Program Security** tab on the global **Preferences** dialog.
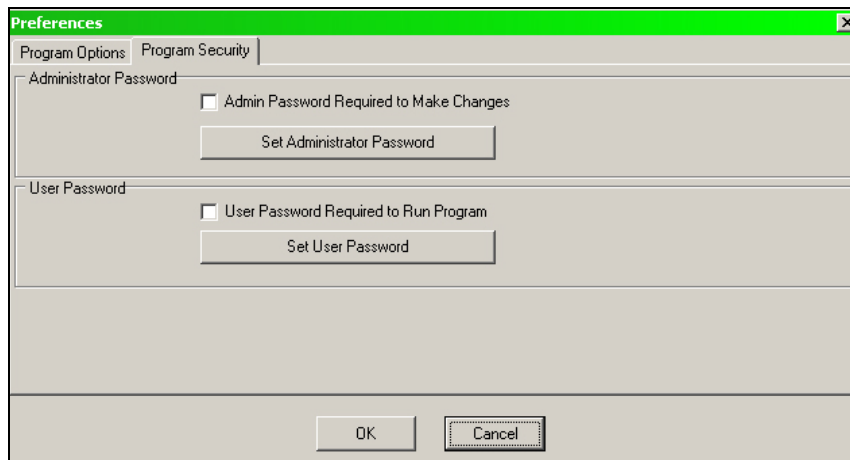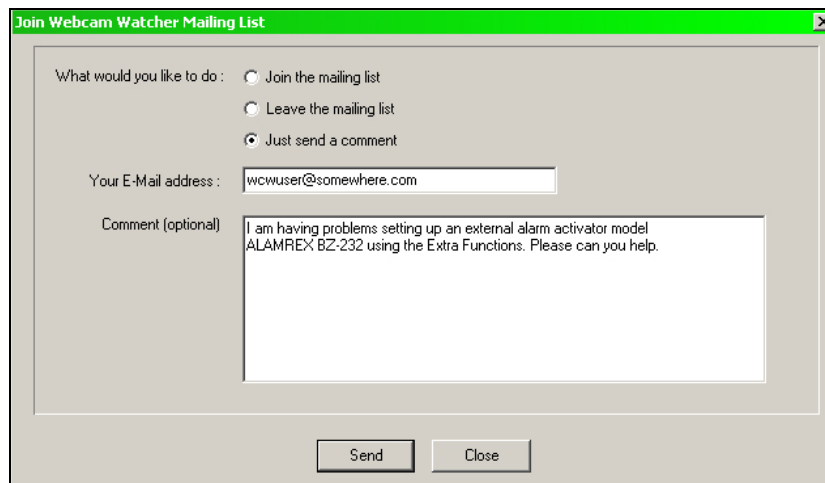
Importing and Exporting Cameras

You can save your current camera definitions (i.e., the current cameras that you have configured) by using *Tools > Export Camera Definitions*. This creates a coded file with the default name *webcams.def*

You can also load cameras from a *def* file, using *Tools > Import Camera Definitions*. In this case any cameras in the *def* file that you open are added to the current set of cameras.

Help and Support

Webcam Watcher Professional can send an email message directly to the support center. Use **Send Us a Comment** on the **Help** menu.

You can send technical support or other questions and we will get back to you as soon as possible.

You can also use this dialog to join our mailing list. This list is never shared with anyone. It is only used to give news about *Webcam Watcher Professional.*