

# User Guide

DVS-800i  
STARTER KIT

Digital Video Surveillance System



February 2006

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# Welcome to LukWerks

## Introduction

Thank you for purchasing the LukWerks Video Surveillance System.

As you already know, LukWerks is a robust video monitoring system for your home or small business allowing you to view live, streaming video from up to six cameras.

State-of-the-art Luk Cameras capture digital-streaming, full-color video and transmits the live feed to the Werks software application, which provides a user interface that is both user-friendly and powerful.

Homeplug® technology uses your electrical wiring to create a high-speed network for communicating with each camera without the complexity of wireless networks and without the need to run network cables.

There are many great features offered in this LukWerks system. For example, consider these:

- 15-minute installation of the entire system.
- Monitor and record up to six locations in real-time.
- Search for, view, and manage recorded video events.
- Receive email alerts when a camera detects motion.
- Set motion detection zones for each camera.
- View video over the Internet or on Smart Phones.

The ability to customize camera settings is highlight of the Werks application. Setup controls allow you to view and modify settings for cameras, motion detection, video, system statistics, email, recording schedule, recently recorded video segments, and disk usage.

Moreover, the system's portable viewing architecture; unique capturing, storing, and reporting functionality; and ability to customize camera settings make it one of the most versatile, usable, and affordable surveillance systems in the industry today.



Here are a few great monitoring applications:

- Monitor your small business
- Watch over a second property
- Record people at your front door
- Monitor the children
- Keep an eye on your pets

## Overview of LukWerks

LukWerks has three primary components: Smart Cameras, Powerful Software, and Remote Viewing. Luk is the name of our cameras and Werks is the name of our software, together they make LukWerks. We call remote viewing My LukWerks.

At the center of the Werks software are components to view live camera video; search for, and view recorded video; and tools to configure system options. These components, respectively, are Live Mode, Search Mode, and Setup.

## BASIC CONCEPTS

Before we dive into the overviews and how-to's, let's spend a few minutes explaining some basic concepts of the LukWerks system.

### 1. Easy Setup

One of our first design goals was to deliver a system that you could setup in 15 minutes without special tools, drilling holes, running wires, or configuring networking equipment. It is important to us that you have a great experience right out of the box – one that exceeds the capabilities possible even with a professionally installed home video system.

You complete the setup process in four easy steps:

- Step 1 – Install the Werks Software
- Step 2 – Connect the USB Receiver module
- Step 3 – Mount Your Luk Cameras
- Step 4 – Register for Remote Viewing

With these easy steps you are up and going. Jump to the chapter on *Getting Started* for more details on the LukWerks setup process. One key to our system is our use of Homeplug technology. Homeplug allows you to turn your existing wiring into a powerful network capable of delivering rich live video from around your property to your PC and from there anywhere you need it.

### 2. Powerful Cameras

At the heart of each Luk Camera is an imbedded computer that actively encodes, adjusts, and manages your video feed – Luk Cameras are the smartest surveillance cameras available. Because our cameras are so powerful, they provide you with rich features without overwhelming the CPU on your PC.

Some of the one-of-a-kind features available on the Luk Camera include:

- High-quality video imaging
- Digital motion detection
- User definable motion detection zones
- Auto-image lighting management
- Onboard Windows Media Video encoding

Consider these system scenarios:

Camera	A new way to look
Camera 1	It looks out over the driveway, has Auto Brightness set to on allowing it to automatically adjust to changing light conditions.
Camera 2	It looks out over the backyard, has a defined Motion Detection Zone set allowing it to capture motion only along the top of the fence line.
Camera 3	It monitors the front door and has an Email Alert set, which will send a notification if anyone comes into the house e.g. when the kids come home from school.

Setup allows you set each camera differently, based on its mission.

### 3. Powerful Software

At the center of the LukWerks system is the Werks software. It is the most powerful video surveillance software available. Werks can manage full-motion video from six concurrent cameras. Providing you



with stunning live views into every camera while simultaneously recording any motion or scheduled events.

Additionally, Werks uses a powerful alerts engine that communicates with your email server to notify up to ten e-mail addresses or cell phones that a camera has detected and recorded motion. When Werks detects motion on a specific camera, Werks will send out an email message, and at your option, you can set Werks to attached either a frame from the captured video or the video segment. The Werks alerts are excellent news for you, but perhaps bad news for your sixteen-year-old son who wants to play around with your new sports car. Your garage camera can send you an email alert if anyone gets close to the car.

Some of the great features of Werks include:

- 6-Camera live view
- Concurrent recording of video from all cameras
- User definable email and cell phone alerts
- Automatic disk storage management
- Powerful video archive search and playback
- Password system security

Werks uses a portion of the disk space on your PC to store the video captured by your Luk Cameras. In the default setup, Werks only records video when there is motion detected by a camera or during times when you have set a fixed recording schedule. In either case, Werks stores each video event as a separate clip to your PC hard drive. Some of these clips may be only a few seconds, while others could last hours. As a Setup option, you specify the maximum amount of disk space allocate to Werks. Once Werks reaches this limit, it makes space for new video clips by removing the oldest clips. With the default camera settings, a typical home system with four cameras will use approximately 2GB of disk space per week.

#### *4. Anywhere Anytime Access*

Werks coupled with our My LukWerks services deliver a unique Internet services component, which powers the ability for you to view live video from your cameras over the Internet and on video enabled cell phones. At the center of My LukWerks is the LukWerks Remote Viewing Service, which intelligently links you to all of your cameras at each site where you have installed a LukWerks system.

To access the video you first create a My LukWerks user account at [www.lukwerks.com](http://www.lukwerks.com). This is part of the normal process of registering you product. With each new LukWerks setup, you register the new site with your existing account. Then when you want to check in on your property, simply login to your My LukWerks account from a Web browser or Windows Mobile cell phone and link to the video feed.

With My LukWerks it is easy to monitor your Home, Office, Cabin, or even Grandma's House – anytime anywhere – all from your My LukWerks account.

The following chapters describe in detail each component of the LukWerks system. Two chapters in this book describe in full each of these modules— Chapter 3: Using the Werks Application and Chapter 4: Werks Application Setups, which introduces you to the Werks Setup dialogs.

We have also provided you with online help and support and service pages on our website. In any case, we are committed to your success.

We are glad to share with you our passion for build great video surveillance products. Over the next months and years, you can expect to see additional cameras, services, and software targeted at giving you – a whole new way to look. Welcome to LukWerks.

## System Components

## LUK CAMERAS



Luk Cameras are the smartest cameras on the market. At their core is a 400MHz processor. Using the processor they perform automatically adjust the video picture for changing light conditions (auto-brightness), detect motion, and encode video using Windows Media 9 Video file format.

When the camera detects motion within zones you specify it alerts Werks to record the event, which it saves to the LukWerks Video folder.

The camera lens sits on bubble, which you can move to change its viewing angle. Additionally, you can adjust the focus by gently turning the lens clockwise or counter-clockwise as necessary. You should find the focus setting works for most locations.

We designed this Luk Camera for indoor use. However, we specifically designed it to peer out of a window to monitor the out-of-doors using the included suction cup, which you can mount to the front or the back of the camera. Luk cameras can also sit on top a desktop, bookshelf, wall or ceiling using the Desktop Mount or Wall Mount.

The Werks application supports up to six cameras.

## CAMERA POWER SUPPLY

The power supply connects to the camera using the provided CAT 5e cable. It serves two functions.

First, the power supply provides power for the camera. Second, it is the network bridge connecting the digital video feed from the camera to the PC running Werks.

There are a few rules you should know about using this unit.

Do not plug the power supply unit into a surge suppressor, a UPS, or some other filtering unit. It can be plugged into a regular extension cord or non-surge power strip.

Likewise, do not connect the power supply unit or the WiLife camera into other Ethernet or Power-Over-Ethernet (POE) hardware. The Luk Camera and the Luk Camera power supply operate as a pair.

The camera will not operate with non-WiLife POE equipment.

The unit is designed to be used indoors.



## CAT 5E CABLE

The CAT 5e Cable carries DC power from the Camera Power Supply to the camera and provides the network connection for digital data communications to and from the camera. The cable supplied with the LukWerks system was specifically selected because it was small, flexible, and unobtrusive, in comparison to a typical CAT 5e cable.

Note: You can find longer CAT 5e cable cables in our online store at [www.lukwerks.com](http://www.lukwerks.com).

## RECEIVER

The Receiver module provides the interface between the PC and the power line data link. It communicates with the PC via the USB. The PC sends commands to the cameras to configure and control them. It receives status from these units, as well as the compressed video streams.

The receiver is not powered by the plug.



## USB CABLE

The USB connects the Receiver to your PC allowing the network to communicate with the Werks application. It transfers configuration commands to the cameras and receives compressed video streams from them. Communication with the PC is accomplished using a standard USB 1.1 interface.

### CAMERA SUCTION CUP



Use the large suction cup to hanging the camera in a window. The suction cup connects to the back or front of the camera. If you screw the suction cup onto the back, the camera's lens points into the house. If you screw the suction cup onto the front of the camera, the camera's lens can be directed to monitor a zone outside of the house.

### DESKTOP MOUNT BASE

The Desktop Mount Base included in the installation kit is used to place the Luk camera on a flat surface such as on a windowsill, bookshelf, or any other place that is flat and stable.



### WALL MOUNT (NOT SHOWN)

Using a few screws, the Wall Mount allows you to hang the Luk camera from a wall, ceiling, or other surface to watch a room from a discrete location.

## User's Guide Chapters

We designed this manual to be the ultimate resource for learning, understanding, and using the multi-faceted features within the Werks application to meet your personal or small business expectations.

The content of the User's Manual is laid out into five chapters, the first of which you have nearly completed. Here is a brief description of the remaining chapters:

Chapters	Descriptions
Getting Started	This chapter provides comprehensive installation instructions for the Werks software and the Luk Cameras.
Using the Werks Application	Complete description of the great features behind the Live and Search mode screens. Additionally, this chapter includes "how to" instructions to assist you in learning the system more easily.
Setting Application Options	This chapter introduces you to the Setup and its comprehensive set of configuration options. Here you will learn how to setup: <ul style="list-style-type: none"> <li>• cameras</li> <li>• motion detection</li> <li>• video capture</li> <li>• email alerts</li> <li>• remote viewing</li> <li>• and other options</li> </ul>
Troubleshooting	We do not expect you will have any trouble. However, if you do have a problem, you can find many useful solutions in this chapter.
Configuring Your Firewall	Most PC firewalls automatically prompt you to allow Werks to access the network. Nevertheless, if you find any problems this chapter walks you thorough both automatic and manual configuration options.
Appendices	Finally, we include a few appendix chapters that cover other topics like: System Specifications; Software License and Hardware Warranty; and Safety and Regulatory

## The Werks Help System

Click on the [?] icon in the upper-right corner of Werks in order to access the online Help System. The Help System allows you to view topics by clicking through a table of contents, by searching for them using the Search option, or by locating them via a comprehensive Index.







# Getting Started

## Overview

WiLife's Werks application is very easy to deploy because of an installation process that we designed to be user-friendly. Depending on how comfortable you feel installing the application, you can choose to use the QuickStart instructions (found in the Installation Kit) or the comprehensive installation instructions provided in this chapter.

Once Werks has been setup, all you need to do is plug in the cameras and you are on your way to using your security system. The Werks application automatically discovers all the cameras throughout the home and displays the live video stream.

## System Requirements

Below you can find the minimum requirements for systems using cameras set to the factory default configuration; recommended systems include faster CPU's, more computer RAM, and more video RAM.

Cameras		1	2	3	4	5	6
Compatible CPU	Minimum	700 MHz	700 MHz	900 MHz	900 MHz	1.0 GHz	1.2 GHz
	Recommended	1.4 GHz	1.4 GHz	1.8 GHz	1.8 GHz	2.0 GHz	2.4 GHz
Computer RAM (MB)	Minimum	256	256	256	256	512	512
	Recommended	256	512	512	512	512	512
Video Card: (VRAM MB) DirectX 9 compatible		32	32	32	32	64	64
		32	32	64	64	128	128
Display Resolution:		1024 x 768 or higher					
Hard Drive Space (MB):		100 MB for program and a minimum of 200+ MB with 10+ GB recommended for video recording					
Operating System:		Microsoft® Windows® 2000 or; Microsoft® Windows® XP Home Edition, XP Professional or, XP Media Center Edition					
USB:		One free USB port					
Media Player:		Microsoft Windows Media® Player 9					
Other:		CD ROM drive for installation					

### STARTER KIT CONTENTS

Before you begin the installation process, please review the contents of the kit to verify that all of the components necessary for a successful install are inside. If any of these listed items are not in the kit, please contact WiLife Customer Support for assistance.

Werks Installation CD Quick Start Guide USB Receiver	USB Cable (8 ft.) Luk Camera Camera Power Supply	Cat5 Cable (8 ft.) Camera Suction Cup Cable Suction Cup	Desktop Mount Wall Mount Window Decals
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## Installation Procedures

The following procedures assume that you verified that all of the components of the installation kit are accounted for and that your PC and operating system meet the system requirements described above.

### OVERVIEW

Installing Werks in four easy steps:

- 1) Run the Setup Wizard
- 2) Install the USB Receiver Module
- 3) Place your Luk Cameras
- 4) Register for Remote Viewing

It is that simple – 1, 2, 3, 4 and you are done.

### Step 1 - Run the Set-up Wizard

Insert the Werks PC Software CD into your PC's CD-ROM drive. The LukWerks setup menu will automatically start.

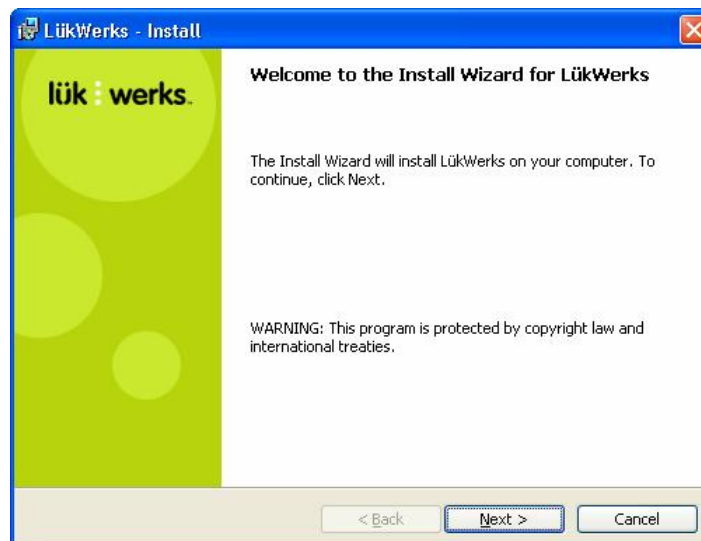


Note: If the Install Wizard does not automatically load, you can manually start the wizard by double-clicking on the setup.exe file on the CD-ROM (i.e. D:).

Review the menu choices (as shown) and click "Install Werks Software" options.

### A. WELCOME TO THE INSTALL WIZARD

The Werks install is ready to start. Simply click the NEXT> button to begin.





## B. IF NECESSARY, WERKS WILL GUIDE YOU THROUGH THE INSTALLATION OF MICROSOFT .NET FRAMEWORK 1.1

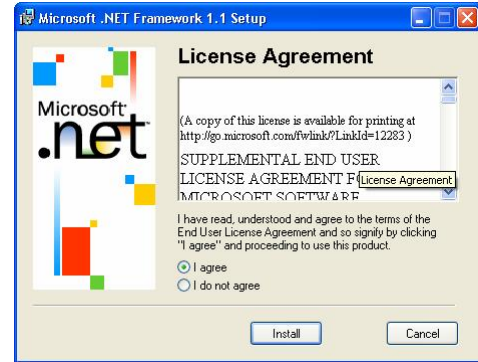
The Microsoft .NET Framework is a collection of tools used by many software programs. Some computers already have Microsoft's .NET Framework installed as part of other applications. For those that do not yet have .NET installed, we will install it now. (Note that installing .NET will require a restart of your computer.)

The first screen you will see in the Microsoft .NET Framework Wizard is its license agreement screen, as shown in this graphic.

Complete the License Agreement by clicking on the "I agree" radio button, followed by the INSTALL button.

The system downloads .NET Framework in preparation to moving on with the installation process. A status bar displays, allowing you to view the progress of the .NET Framework install. The install will take several minutes.

When the .NET Framework download is complete, you will need to click the OK button to continue with the LukWerks Install wizard.

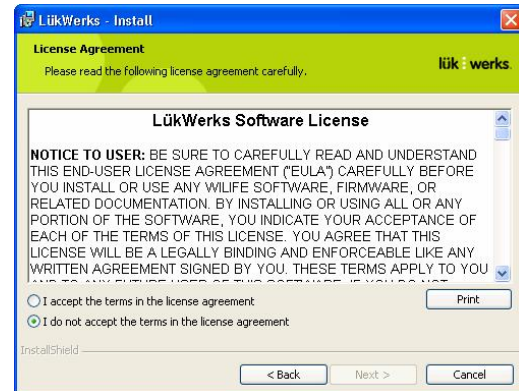


## B. COMPLETING THE WERKS WIZARD

Follow the on screen instructions of the Werks installation wizard. Click the NEXT> button to advance through the installation process.

One of the early steps is the LukWerks License Agreement screen.

Please take a moment to review the license agreement. If you accept the terms of the agreement, click the "I accept the terms in the license agreement" radio button and then click NEXT>. If you do not agree with the terms of the agreement, click the "I do not accept the terms in the license agreement" radio button and the installation will be terminated.



Note: A copy of the license agreement can be found in two places: 1) In this user guide; and 2) on the program CD. The filename is License.htm.

## Step 2 - Install the USB Receiver Module

Now, with most of the software installed, you are ready to plug in the receiver and camera. The install will prompt you to plug the receiver into the wall and connect it to a USB port on your PC.

- 1) Plug the USB Receiver Module directly into a wall outlet near your PC.

Note: The USB Receiver Module has built in surge protection and must be plugged directly into your wall outlet. It is highly recommended that you do not plug the USB Receiver Module into a surge protected power strip. Plugging the USB Receiver Module into a surge protected power strip may reduce the quality and performance of the LukWerks system.



- 2) Use the included USB Cable to connect the USB Receiver Module to one of the available USB ports on your PC.
- 3) Click the NEXT> button when you are done.

### Step 3 - Mount the Luk Camera

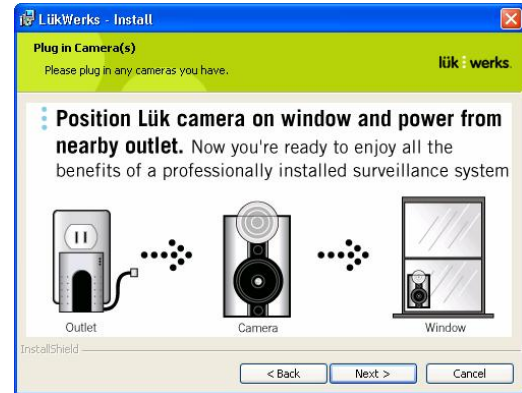
With the receiver connect to your electrical outlet; you are ready to connect your cameras.

- 1) Start by installing your cameras in a location near your PC. This makes it easier to adjustment focus if necessary. Once you have configured your camera, select a new location for the camera and use one of the convenient mounting options to place your camera on a desktop, window, or wall.

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Installation Note: If mounting the camera on a window, clean the area of the window where the suction cup will be attached. Let the area dry completely before mounting camera.

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The Window Mount Suction Cup has been tested and proven to hold the weight of objects heavier than the camera for extended periods of time. To ensure long term connection, you can spread a very small drop of vegetable or olive oil on the under-side of the cup before applying it to the window. This increases the suction power of the cup.

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CAUTION: The Luk camera should be mounted indoors or in a weatherproof enclosure. Additionally, you should not point the camera directly at the sun. Failing to follow either of these warnings will damage your camera

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- 2) Plug the Camera Power Supply into a nearby outlet. Then, use the included Camera Cable (8 ft. Standard Ethernet Cable) to connect the power supply to the camera.

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Note: The Camera Power Supply has built in surge protection and must be plugged directly into your wall outlet. Plugging the Camera Power Supply into a surge protected power strip may reduce the quality and performance of the LukWerks system.

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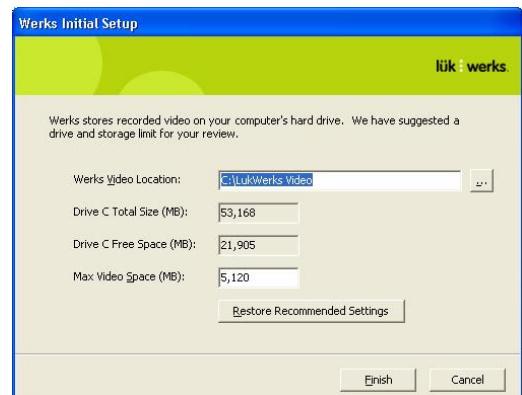
- 3) Click the NEXT> button to proceed.

You are now ready to run the Werks application.

### Step 4 - Start Using Werks

- 1) The install program will automatically start Werks. When Werks runs for the first time, the Werks Initial Setup screen opens, allowing you to configure the system to meet your home or small business needs.
- 2) Review the disk storage options by accepting the default settings recommended by the setup.

If you wish, you can modify the Werks Video Location and the Max Werks Space. Ideally, you want a drive and location where you have plenty of disk space to record the video. Werks is smart enough to only record when there is motion and to automatically delete old clips to make room for new ones.



## Firewall Setup

It is very likely that you have one of many Firewall applications running on your computer. These applications protect your computer from unwanted network connections, which sometimes are the result of viruses. Because Werks creates a new network using your home wiring and uses your Internet connection for email and remote viewing, you will need to configure your firewall to allow these connections.

We have provided an entire chapter on the subject name *Configuring your PC Firewall*. If you find the steps below are insufficient, please use this chapter as an aid.

Most firewalls will prompt you to Allow or Block access to the network by Werks. You should always choose Allow when the program reads "Werks."

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ATTENTION: If you are using Norton Firewall or Norton Internet Security, you must review the *Norton Internet Security by Symantec* section of the chapter *Configuring your PC Firewall*. Simply accepting the automated prompts is insufficient.

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- If you are running Windows XP Service Pack 2, the Windows Security Alert screen may appear. Click on the Unblock button to allow Werks to run properly. (A sample screen shot of the Windows Security Alert displays below.)
- If McAfee Personal Firewall Plus or Standard is running on your Windows XP, a warning message is going to display as Werks starts. This message is going to inform you that Werks wants access to the Internet. You need to click "Grant Access" in order for Werks to run properly. (A sample screen shot of this McAfee Firewall message displays below.)
- If you are using other anti-virus or firewall software, similar warning messages may appear, asking you whether you want to allow Werks to perform certain functions. You should allow the requested permissions so that Werks runs properly.
- If you find you are having problems reference the chapter on *Configuring your PC Firewall*.



## Create Your My LukWerks Account

Before you can start using remote viewing, you need to create a My LukWerks account and register your installation. In addition to remote viewing, registering gives you access to these benefits:

- Updates to Werks software and Luk Camera firmware
- Access for warranty and support service, if necessary
- News on upcoming cameras and events

To register, follow these instructions:

- 1) Go to [www.lukwerks.com/register](http://www.lukwerks.com/register)
- 2) Follow the instructions

## Additional Cameras

You can have up to six Luk Cameras in each LukWerks system. Adding new cameras is easy and you can watch our website for new types of cameras that we will release over the next months.

### STEP 1 – POSITION YOUR CAMERA

#### *a. Select a location for your camera.*

Use one of the convenient mounting options to secure your camera to a desktop, window or wall.

---

Note 1: If mounting the camera on a window, clean the area of the window where the suction cup will be attached. Let the area dry completely before mounting the camera.

Note 2: The Window Mount Suction Cup has been tested and proven to hold the weight of objects heavier than the camera for extended periods. To increase the suction power of the cup, spread a small drop of vegetable or olive oil on the underside of the cup before applying it to the window.

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#### *b. Plug the Camera Power Supply into a nearby outlet.*

Use the included Camera Cable (8 ft. standard Ethernet cable) to connect the power supply to the camera.

---

Note: The Camera Power Supply has built-in surge protection and must be plugged directly into your wall outlet. Plugging the Camera Power Supply into a surge-protected power strip may reduce the quality and performance of the LukWerks system.

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### STEP 2 – IDENTIFY THE NEW CAMERA IN WERKS

There are two choices of setup paths – a and b. So, read both before moving on with the procedure:

#### *a. You did NOT set a custom password*

If you have NOT set a custom camera password, then you do not need to do anything more. Werks will automatically recognize the camera within 1-2 minutes.

Once the camera appears, you can change its configuration, set a name, or adjust the picture options. (See the chapter on *Setting System Options* for information on these settings.)

*b. You did set a custom password*

If you HAVE set a custom camera password, you need to complete a few additional tasks. This is necessary because new cameras are shipped with no password (different from the custom password you have set). Therefore, Werks will not automatically identify it.

Follow these instructions to include the new camera into your Werks system:

- 1) Go to the Werks > Setup > Advanced dialog screen.
- 2) Click the Add New camera button.
- 3) Wait 1-2 minutes while Werks locates the camera.

If after a few minutes, Werks does not recognize the camera, turn to the Specifications chapter located in the online user guide or at [www.lukwerks.com/support](http://www.lukwerks.com/support).

---

Note: We recommend that you set a custom password because a custom camera password provides you with security from others having access to your streaming video.

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## Camera Focus and Aim

The factory default settings work great for most applications. However, if you find you need to adjust the camera it only takes a few minutes. It is easiest to focus and adjust the camera from an outlet near your computer. The Luk Cameras have two components that allow you to adjust the camera's viewpoint and focus: the camera eyeball and the lens.

On the back panel, you will notice an adjustable eyeball. Use this ball to change the angle of the camera lens.

To adjust the focus, gently twist the lens on the front of camera to the right or left. You may find it easiest to take your camera back to your PC to do this work – saving you the trouble of walking back and forth.

## Product Support

If you have any questions about the installation procedures, please check out the support section of our website for the most recent information. If you still need help contact LukWerks Technical Support via email at [support@lukwerks.com](mailto:support@lukwerks.com), or by phone at 877- LUKWERKS [(877) 585-9375] (for customers within the United States and Canada) .



# Using the Werks Application

## Overview

Werks provides a powerful-but-simple interface for managing cameras, recording video, tracking alerts, and configuring remote viewing. Once you learn a few of the basic elements, most operations are easy and intuitive.

### TWO OPERATING MODES: FULL AND BACKGROUND

The Werks application has two operating modes: Full and Background. In Full Mode, Werks provides you with a complete Windows interface, making it easy to monitor and manage your video feeds. In Background Mode, Werks closes its Windows interface and displays a small icon in the system tray. While running in Background Mode, Werks continues to record video, using very little CPU. This allows you to use all of your normal applications, even on a minimally configured machine. Background Mode is another great feature of the LukWerks system.

### TWO MAIN VIEWS: LIVE AND SEARCH

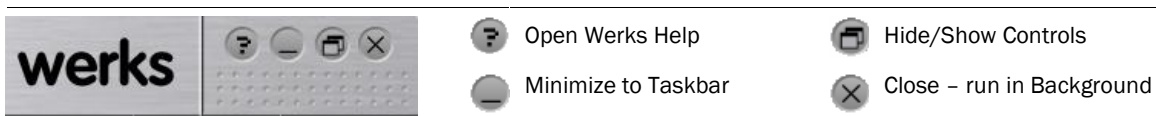
The Werks Windows interface has two main views: Live and Search. The Live View allows you to monitor and manage the live camera feeds. The Search View allows you to find, view, and manage recorded video segments.

The title bar and the main feature buttons Setup, Live/Search, and Web, appear in both the Live and Search Views.

Some Application Features	
Live View	Search View
View live video	Play video clips
Arm email alerts	Delete segments
Turn cameras on/off	Protect segments
Email a current image	Print images

## Title Bar Controls

The Werks Title Bar in the upper-right corner of the application lets you view Help, Hide the on screen controls, Minimize Werks, or run Werks in Background Mode.



When you click the X button, Werks changes to Background Mode. A system message will let you know that Werks is still running and recording in the background.

## Main Feature Buttons



These three buttons control some of the key functions of the Werks application. The SETUP button opens the Setup Control Panel where you control all of the configuration options. The Search/Live button switches between the Search View and the Live View. (Notice that in Live View, the middle button reads SEARCH, and when in Search View, the middle button reads LIVE – thus allowing you to switch back and forth.) The WEB button takes you to the LukWerks website, where you can login to your My LukWerks account. (See the *Werks Setup* chapter to learn more about camera and program configuration options.)



## Live View

The Live View is the first screen that appears when you open Werks. From here, you can monitor live video feeds, change screen layouts, and enable and disable cameras and email alerts. This is a screen shot of the Live View, showing the components of the screen.



### Inspect the Video Windows

Werks can display between 1 and 6 video windows depending on your choice of Viewing Modes. Each video window in the Live View displays live feeds from your cameras. The text in each video window shows the camera order (C1-C6), camera name, and camera status. If the camera is recording, the status message reads (Live/Rec) in place of just (Live).

### Choose a Multiple-Camera View

Werks allows you to select between 3 viewing modes: single-camera, quad-camera, and six-camera. Video feeds are tiled and sized to fit in the available display area. Quickly switch between multi- and single-camera views by clicking on the video window.



### Use the Camera Activity Panel

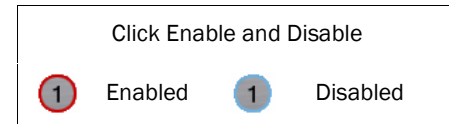
The Camera Activity Panel allows you to monitor all your cameras at a glance. It shows you which cameras are connected, set for email alerts, and recording. From this panel you can also quickly turn cameras on/off and enable/disable email alerts.



<p><b>1</b> Blue circle shows email alerts are disabled; click to enable.</p>	<p><b>1</b> Red circle shows email alerts are enabled; click to disable.</p>
<p><b>Green</b> light shows camera is connected</p>	<p>Grey (no light) shows camera is not connected</p>
<p><b>Red</b> light shows Camera is recording</p>	<p>Grey (no light) shows camera is not recording</p>
<p><b>ON</b> Camera is ON; click to turn OFF</p>	<p><b>OFF</b> Camera is OFF; click to turn ON</p>

## Enable and Disable Alerts

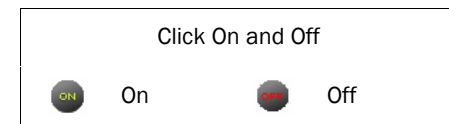
Once you setup your email alerts you can quickly set the alert state from the main view. This feature is great for enabling email alerts as you leave for work or on a vacation, and turning them back off once you get home (no need getting email indicating you're moving around your house).



From the main Live View you Enable and Disable Email Alerts by clicking on the camera number - **1**. When the outer circle is blue, email alerts are disabled. When the outer circle is red, email alerts are enabled. You can also enable and disable alerts from the Enable Alerts checkbox from the Setup...Email options dialog. (See *Email Options* in the *Werks Setup* chapter for more details.)

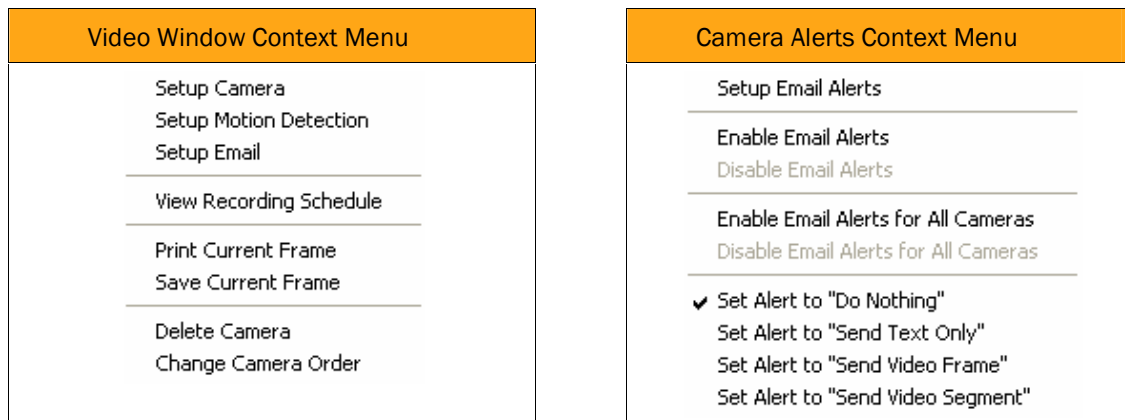
## Switch Cameras On and Off

At times, you may want to easily turn cameras off. Perhaps you are having a family party in the backyard and there is no reason to record all the activity. To turn a camera On and Off, click the On/Off button below the camera number. When the button reads On - **ON** - the camera is operating normally. When the button reads Off - **OFF** - the camera video feed is disabled until you click the button again.



## Open the Video Context Menus

Werks provides quick access to common functions through context menus on the Video Windows and Camera Alerts buttons. To access the context menus simply right-click on the object and choose between the various commands. Here's what they look like:



## Print or Save Live Video Frames

Using the Video Window context menu (right-click on live window), you can choose to print or save the current image in the window. When choosing Save, Werks will let you choose the location and filename for the image, which it stores as a JPEG. By default, Werks will choose your My Pictures folder. Werks uses the Windows print spooler, which automatically adjusts the picture to match your printer's capabilities. You find these options only on the Live View context (right-click) menu.

## Delete a Camera

From time to time, you may remove a camera from your system. Werks, by default, saves the settings and position of this camera, expecting that you may add it back to your system later.

There are two methods for permanently deleting a camera. First, you can go to the Setup...Camera dialog box, and click the DELETE CAMERA button. Second, you can use the Live Windows context (right-click) menu and choose Delete Camera.

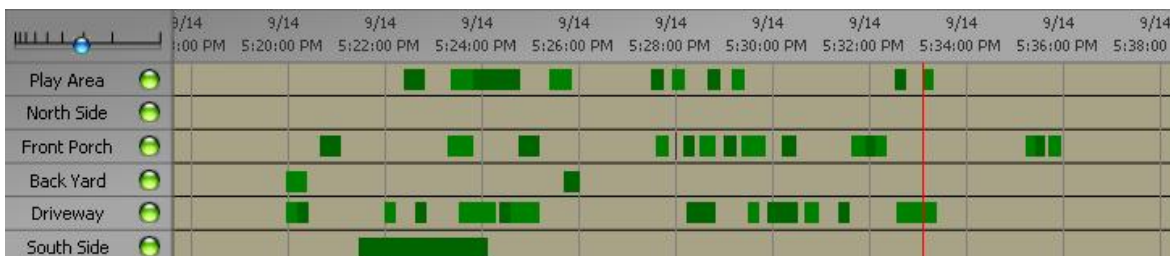
## Search View

Search View allows you to find, view, and manage your recorded video segments, which Werks stores in a database on your computer. Your cameras create these segments according to your settings. By default, each camera is set to record when motion is sensed. You can also set the camera to record continuously during specific times using the Recording Scheduler. (See *Recording Options* in the *Application Setup* chapter for more details.)



## Review Stored Video Segments

The Search Navigation window provides fast access to recorded video segments using the mouse or keyboard. Each camera has a row on the screen. Each recorded segment is displayed as a green bar. A vertical red line shows the current position of playback.



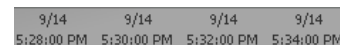
To navigate through the segments, use one of these operations:

- Click on the desired date and time
- Click and drag the red position line to the left or right, beyond the edge of the window
- Click on a date in the calendar
- Use ← and → to step forward and backward through video segments

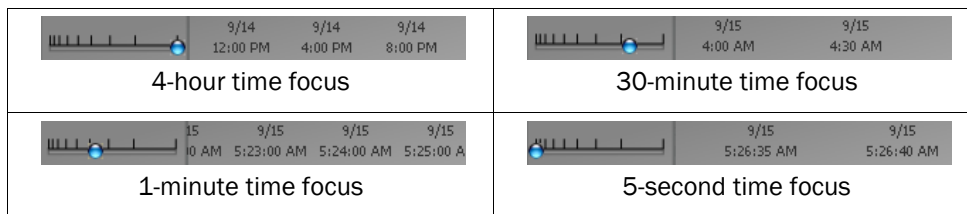
See the section on *Hot Key Assignments* for more keyboard controls.

### CHANGE WINDOW TIMESCALE

The top of the Search Navigation window displays dates and times for each time division. These divisions can be easily changed to zoom in to specific minutes of a day or zoom out to view an entire day.

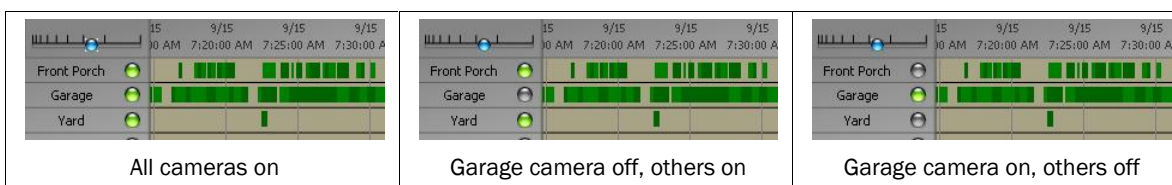


Change the time focus by clicking on the timeframe guide to select your focus. A tool tip message informs you of the time division you have selected. Notice the position of the focus indicator (blue ball) in these examples:



### SELECT CAMERAS TO REVIEW

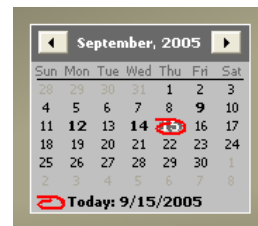
When playing video segments, you can select one, several, or all cameras for review. By default, all cameras are selected. Selecting only a few cameras reduces the volume of video that must be loaded into memory before playing clips. This may improve performance on minimally configured machines. Here are a few examples:



To turn on or off the video for a camera, click the green button next to the camera name.

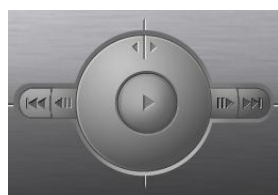
### CHANGE REVIEW DATE

In Search mode, the Calendar is on the right side of the display. The current day is circled in red. Days in which video segments were recorded appear bold. You can click on any of those days to display all of the video segments in the time grid.



The Calendar has arrow buttons at the top to navigate forward or backward through the months.

### Play Video with Onscreen Controls



Like any DVD player, the Playback Controls allow you to play, pause, adjust speed, and step-through your video segments. You use the controls by clicking on each one. If you hold your mouse over the control, Windows will display a tool tip, indicating the name of each control. We also provide keyboard controls which we describe below.

Use the following list of icons and descriptions to help you understand how to navigate through recorded video segments.

Button	Description	Button	Description
	Play video		Pause video
	Go to the start of the last video segment		Go to the start of the next video segment
	Go back one step		Go forward one step
	Video slow motion (turn jog dial counter-clockwise)		Video fast motion (turn jog dial clockwise)

## Use Keyboard Playback Controls

Werks has several keyboard shortcuts, which allow you to quickly navigate through video clips. Some navigation features are only available through the keyboard controls.

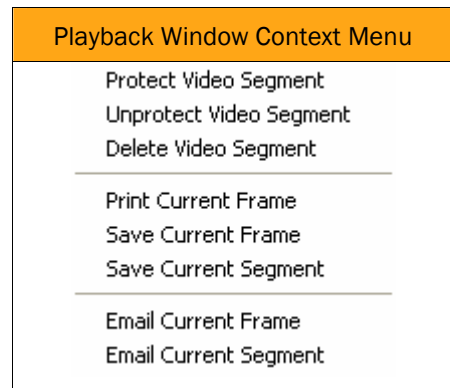
Hot Key	Description	Hot Key	Description
S	SWITCH MODE. Change to Search Mode from Live Mode	L	SWITCH MODE. Change to Live Mode from Search Mode.
P or CTRL P	PLAY and PAUSE. Start and stop playing recorded video.	F1	HELP. Display Werks online help files.
C or CTRL C	CENTER CURSOR. Sets timeline origin so cursor is centered	N or CTRL N	NOW BUTTON. Sets cursor time to now.
SHIFT +	PLAY FASTER. Increase playback speed	SHIFT -	PLAY SLOWER. Reduce playback speed
- or CTRL -	INCREASE MAGNIFICATION. Increase timeline magnification	+ or CTRL +	REDUCE MAGNIFICATION. Reduce timeline magnification
CTRL ←, ←, or CTRL B	PREVIOUS SEGMENT. Move cursor to start of next earlier recorded segment	CTRL →, →, or CTRL F	NEXT SEGMENT. Move cursor to start of next later recorded segment
SHIFT ← or ↓	SLIDE CHART EARLIER. Slide chart to earlier time	SHIFT → or ↑	SLIDE CHART LATER. Slide time chart to later time
CTRL-SHIFT ←	JUMP CHART EARLIER. Move timeline one screen earlier	CTRL-SHIFT →	JUMP CHART LATER. Move timeline one screen later in time
PAGE UP	NEXT DAY. Move timeline to next day.	PAGE DOWN	PREVIOUS DAY. Move timeline to previous day

## Open the Context Menu

While playing through recorded video segments in Search Mode, you can right-click on an active video window to access the context menu.

This menu allows you to perform some operations that are not available from any other screen. These choices include options for managing segments, printing and saving, and emailing.

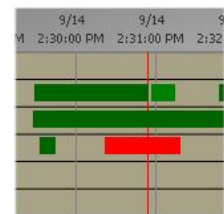
Each of these operations applies to executes the current video segment. To manage a different video segment, click on the segment in the Search Navigation window.



## Protect a Recorded Video Segment

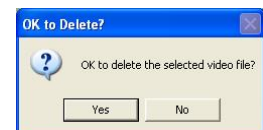
Werks automatically deletes old files when it reaches its disk storage limit. The oldest video is deleted to make room for the new video. In some cases, you may have a video segment that you want to protect for an extended length of time.

To protect a segment, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose Protect Video Segment. You can easily identify a protected video segment because it will show red rather than green in the navigation window. (See *Managing Disk Usage* in the chapter on Werks Options for more details on disk space usage.)



## Delete Recorded Video

To quickly delete a video segment that you do not want to keep in your library, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose Delete Video Segment.



## Print or Save Recorded Video

Printing or saving (save as) a video is simple. First, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose the Print Current Frame, Save Current Frame, or Save Current Segment option. If printing, you will be asked which printer to use. If saving, you will be asked to specify a location and file name for the frame or segment.

## Email Recorded Video

Werks makes it easy to email a clip to the addresses in the email recipients listed in the Email Setup dialog. To use Email functions, you need to configure your email server in the Setup>Email dialog box. Once you have defined an email server, sending a video frame or segment is easy.

To send a video segment or frame, navigate to the segment so that it is paused in the playback window. Next, right-click on the video window to reveal the playback context menu and choose Email Current Frame or Email Current Segment.

## Remote Viewing with My LukWerks

With My LukWerks, you can monitor nearly-live video feeds from all of your LukWerks Systems over the Internet to Windows Mobile enabled cell phones, Internet Browsers, and other devices that support Windows Media 9 Video. To use this functionality you must complete these steps:

- 1) Connect your Werks PC to the Internet using a high-speed service like DSL or Cable Broadband.
- 2) Create a My LukWerks user account at [www.lukwerks.com/register](http://www.lukwerks.com/register).
- 3) Setup the Remote Viewing options on the Werks Setup>Remote dialog.

Additionally, you can register several sites – your second home, the office, and grandma’s house – with your account. This allows you to quickly check all of your LukWerks installations.

Once you have configured your PC and online account, you are ready to enjoy remote viewing. Remote viewing lets you monitor your property from anywhere anytime.

## Use Remote Viewing


When you enable Remote Viewing, the Werks PC becomes a video server ready to publish video through the secure LukWerks network over the Internet to you, wherever you are. LukWerks intelligently creates the most efficient path through your local routers to your remote device. You connect to your video feed by going to [www.lukwerks.com](http://www.lukwerks.com) and logging into your My LukWerks account – using your username and password (or PIN for cell phones). Once connected to your account, you select the site and cameras you want to view. The LukWerks server then routes a live video feed to your device. For more information, please go to the chapter Remote Viewing.

## Background Mode and Exit

As mentioned earlier, Werks has two operating modes: Full and Background. While running in Full Mode you have full access to the complete Windows interface. In Background Mode, Werks runs silently in the background and displays a simply icon in the system tray.

## Switch between Background and Full Screen

From the full screen view, you can tell Werks to run in Background Mode using one of two methods:

- 1) Click the close box –  – in the upper right-hand corner of the screen
- 2) Click the Werks icon in the system tray and choose Hide Werks

In Background Mode, Werks continues to record video, but uses only a small amount of system resources. This allows you to use all of your normal applications on a minimally configured machine. Background Mode is another great feature of the LukWerks system.

From Background mode, you open the full user interface by following these steps:

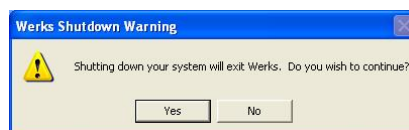
Click on the Werks icon in the system tray

Choose the Show Werks option (as shown)



## Exit Werks


It is obvious that Werks does not record when your computer is not running. If you shutdown your computer while Werks is running, you will see a message reminding you that you are closing Werks as well. The goal is to remind you that you are also closing your surveillance system.



To exit Werks follow these steps:

Click on the Werks icon in the system tray

Choose Exit from the menu

Remember that clicking the close box -  - only closes the Windows interface, and Werks will continue to run in Background Mode.

# Setting System Options

The default configuration of your LukWerks system provides you with all of the basic features activated allowing you to have your own professional video surveillance system running in minutes. However, Werks gives you the ability to change the settings in order to enable additional features like email alerts and remote viewing. You find these options in the Werks Setup dialog, which you access by clicking the SETUP button from the Live or Search windows.

## Overview of Werks Settings

Using Setup is really quite simple and intuitive. Simply click on the SETUP button on the main window. You find this button next to the LIVE or SEARCH button. Additionally, you can right-click on one of the video windows and choose one of the options we display. They too will lead you into Setup.

Setup is like any other tabbed dialog in modern Windows applications. It consists of a title bar and various tabs that show feature specific fields and buttons, which allow you to set and modify camera and system settings. Additionally, you view information and statistics regarding the cameras, network, and system.

## Werks Setup Tabs

Setup is divided into five tabs— Camera, Recording, Email, Remote, and Advanced. To further introduce you to these tabs, here is a table that describes each one:

Tab Screens	Descriptions
Camera	View and edit camera properties such as brightness, contrast, and sharpness for the selected camera. Here you can perform these and other operations: <ul style="list-style-type: none"> <li>• Changing camera names</li> <li>• Adjusting video quality attributes</li> <li>• Adding new cameras</li> <li>• Changing the camera display order</li> </ul>
Recording	Manage camera motion detection, define fixed recording schedules, and control disk allocation. <ul style="list-style-type: none"> <li>• Set motion detection sensitivity</li> <li>• Create and modify motion detection zones</li> <li>• Schedule specific recording times</li> <li>• View disk usage</li> </ul>
E-mail	Setup and edit email account information and define email and cell phone alerts for individual cameras.
Remote	Enable Remote Viewing and record your My LukWerks user account information.
Advanced	Add new cameras, display and edit advanced properties, passwords, and view system information. <ul style="list-style-type: none"> <li>• Add a new camera to the system</li> <li>• Change your system password</li> <li>• Update system software and firmware</li> </ul>

With the introductions out of the way, it is time to dive into each tab individually and become familiar with the features you can use.



## Camera Options

Use the Setup Camera dialog to view and modify properties for each camera— e.g. define a name, flip the display orientation, and adjust the image quality. You will find the default image settings work for most conditions. However, adjusting these options when conditions require is easy and straightforward.

### Launch the Camera Setup Dialog

From the main Werks screen click the SETUP button and choose the Camera tab to modify the camera settings:

Dialog	Item	Usage
	Camera Buttons	Click the camera buttons 1-6 to select the camera you wish to adjust.
	Camera Name	Set the name to display on the, video screen and setup camera button.
	Text Color	Click to change the color of the on screen camera name.
	Text Location	Click one of 9 positions within the box to set the screen location for the name.
	Auto Brightness	Check to allow camera to automatically adjust image brightness and contrast with changing conditions.
	Brightness +/-	Slide the bubble toward + to brighten and toward the - to darken the image.
	Contrast +/-	Slide the bubble toward the + or - to adjust image contrast.
	Flip Image	Check to flip image vertically when camera is mounted upside down.
	Mirror Image	Check to flip image horizontally like a mirror.
	Advanced Options	Set advanced options for the camera. (See the “Advanced Options” topic below for details.)
	Camera Information	View the details of the local Powerline adapter and camera.
	Delete Camera	Click button to remove all of your local camera configuration settings. However, it does not delete the stored video.

### ADVANCED OPTIONS

The advanced camera options allow you to change camera resolution, frame rate, and other options. We expect that you will rarely need to change these settings. Werks writes these advanced options to the Luk Camera for processing. Thus, when changing Advanced Options, remember to click the APPLY button.

The most common advanced option to adjust is Resolution, increasing it to 640 x 480. At the higher resolution you get a sharper image, but remember that to use this setting with live viewing, you will need a machine that matches or exceeds our Recommended Computer specifications. Using an underpowered PC with either higher resolution or higher bit rates may result in video that seems too jerky.

Here is a brief review of these options:

Option	Description
Resolution	The Resolution dropdown option allows you to set VGA or QVGA resolution. By default, your cameras are set at QVGA (320 x 240) resolution and 15 frames per second (fps). You can experiment with your camera resolution and frame rate to produce the ideal results given the capabilities of your PC. Choosing higher a resolution requires a faster CPU and Video Card to smoothly render live and stored video to the screen.
Frame rate	The Frame Rate option allows you to choose video capture speeds between 15 fps (frames per second) and 5 fps. Choosing a higher frame rate requires a faster CPU and Video Card to smoothly render live and stored video to the screen.
Bit rate	The Bit Rate option allows you to specify the speed at which the picture is transferred. Higher bitrate means bigger file size and generally better video quality while lower bitrate means lower file size but worse video quality.
Camera order	Change the order in which this camera displays in the Setup program and on the live video feed.
Enable Motion LED	Check this box to enable the front red LED on the camera. When activated, the red LED will blink when recording.

## Change Camera Order

Werks displays each camera in order of the camera's number. For example, if the video window is set to display a four-camera view, then the lowest camera number (i.e., camera 1) will display in the upper-left corner and camera #4 in the lower-right corner. You can change a camera's positioning on the video window using the change camera order command.

SETUP > Camera > Camera # > Advanced Options section > Camera Order

- 1) Click on the SETUP button.
- 2) Click on the Camera tab.
- 3) Click on the camera you wish to change move.
- 4) In the Advanced Options section, locate the Camera Order option.
- 5) Change the Camera Order to the new position.
- 6) Click the APPLY button

## Delete a Camera

Setup > Camera > Camera # > DELETE CAMERA button.

When you unplug a camera from your system, Werks retains the settings of the camera (password, name, position, etc.), allowing you to move your camera to other needed locations around your home or office. In all, Werks anticipates that you will return the camera to the system. If you are permanently removing a camera from the system, you can free the camera position by deleting the camera using the Delete Camera command.

Here are the steps:

- 1) Open the Setup program.
- 2) Click on the Camera tab.
- 3) Click on the camera button for the camera you want to delete.
- 4) Click on the DELETE CAMERA button and click the YES button to confirm delete choice.

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Note: Deleting a camera will remove all of your local camera configuration options, but it does not delete the stored video.

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## Recording Options

The Setup > Recording tab allows you to manage the recording of live video from your cameras to your PC hard drive. It allows you to manage motion detection, schedule recording times, and manage disk usage.

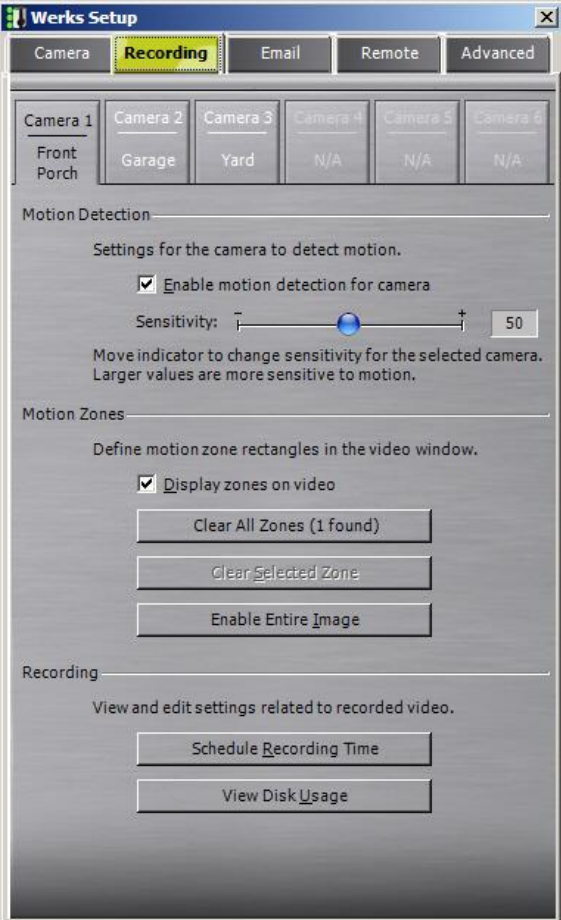
### Learn About Motion Detection

By default, each camera automatically records video anytime it detects any motion. Recording only motion has the advantage of saving disk space. Luk Cameras also allow you to change from “entire image” motion detection, to individually defined zones. These smart cameras have the capability of detecting motion in up to 16 regions – which we call motion zones. This is useful if you want to eliminate detection along the road and limit it to the parking lot only. Motion detection works by comparing the difference between consecutive frames of video and calculating if any objects moved.

Each time the camera detects motion it alerts the Werks software and records the event and a few prior frames. Once motion is detected, the system records uninterrupted until 5-seconds after the motions stops. This could be seconds, minutes, or even hours of compressed video.

### Review the Recording Dialog

From the main Werks screen click the SETUP button and choose the Recording tab to modify your recording and disk usage settings:

Dialog	Item	Usage
	Camera Buttons	Click the camera button 1-6 to select the camera you wish to adjust.
	Enable Motion Detection	Check (default) to enable motion detection. Uncheck to only record on scheduled times and dates.
	Detection Sensitivity	Slide the bubble toward the [-] to reduce or toward the [+] to increase the motion sensitivity for the selected camera.
	Display of Zones	Check to see zones on the live view of each camera during motion detection.
	Clear All Zones	Click button to delete all motion detection zones for the selected camera.
	Clear Selected Zone	After clicking within one of the detection zone, click this button to delete the chosen zone. You can also simply press the Delete key.
	Enable Entire Image	Click to set the entire image as one complete zone. (Default)
	Schedule Recording Time	Click button to schedule recording times or times cameras are to be disabled.
	View Disk Usage	Click button to review current disk usage or to change the video storage location.

## Enable & Disable Motion Detection

SETUP > Recording > Enable Motion Detection for camera

The default settings enable motion detection in all cameras you setup. To validate this, open the Setup > Recording tab and inspect the “Enable Motion Detection for All Cameras” option. You will see a checkmark in the checkbox. To disable motion detection, simply click in the checkbox so that the checkmark disappears. Remember that you have disabled it for only the camera selected in the Setup screen.

When motion detection is turned off, your cameras will record only during scheduled recording times.

## Manage Motion Detection Zones

SETUP > Recording > Enable Motion Detection for camera

When you have the Setup > Recording dialog open, Werks enters a special mode that allows you to select and draw motion zones directly on the Live Video image. You must be in Live Mode to access the full functionality when working with motion zones.

To manage detection zones for a camera, follow these instructions:

- 1) Click on the SETUP button and choose the Recording tab.
- 2) In the Motion Detection section, check the “Enable Motion Detection for camera” box.
- 3) Creating and deleting individual zones now is an interaction between the open setup dialog and the live video window.
  - a) To create a new zone, hold down your left-mouse button on one corner of the region and drag the mouse across the screen to the opposite corner of the zone. (If you decide that you do not like the zone you are creating, you can hit the ESC key before you let go of the mouse.)
  - b) To delete a single zone, left-click anywhere in the zone and then press the Delete key or click the CLEAR SELECTED ZONE button.
  - c) To delete all zones, click the CLEAR ALL ZONES button.
  - d) Finally, to detect motion anywhere on the image, click the ENABLE ENTIRE IMAGE button.

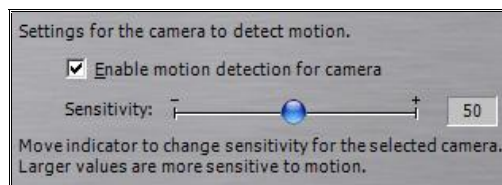
Remember, you can create up to 16 motion zones per camera.

## Set Motion Detection Sensitivity

Setup > Recording > Motion Detection section > Sensitivity Slider.

Use the Sensitivity slider on the Setup > Recording tab to adjust the level of motion sensitivity for each camera. The setting ranges from 0 to 100 sensitive, or low to high sensitivity. 100 is the most sensitivity. You can adjust the sensitivity to meet your needs. A very low number will tell the camera to only detect motion by large objects (a person or car). A high number will increase the sensitivity allowing you to capture small objects like pets or even a passing cloud.

In our graphic below, the motion detection sensitivity level is set to 50.



## Manage Recording Schedules

Setup > Recording > Recording section > SCHEDULE RECORDING TIME.

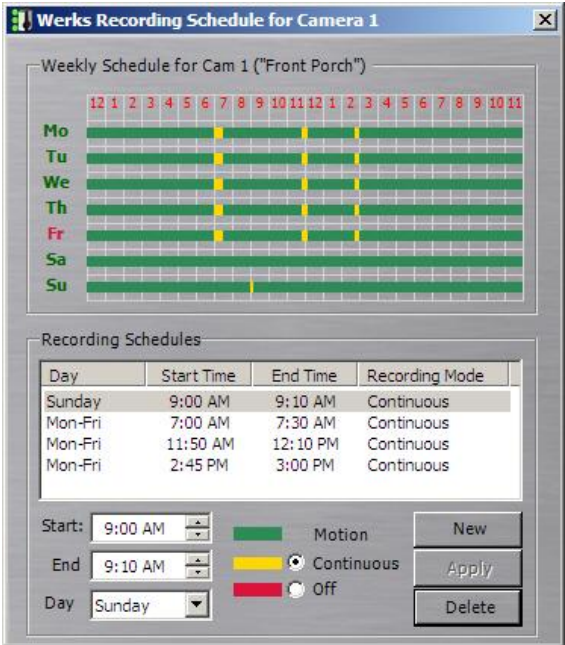
Werks allows you to schedule recording events for each camera. These events have two types: Continuous Recording and camera Off. During Continuous recording schedules, Werks records video from the selected

camera even when there is no motion. Off schedules disable both Motion and Continuous recording, although you can still monitor the live video.

During times that are not scheduled, Werks by default will record Motion unless you have disabled motion recording (See *Enable & Disable Motion Detection Functionality* for more details.)

To activate the Recording Schedule dialog, click the SCHEDULE RECORDING TIME button on the Setup > Recording tab.

Here is a quick overview of the Recording Schedule dialog:

Dialog	Item	Usage
	Weekly Schedule for Cam #	This graph displays the scheduled recordings for the selected camera for a week. A line exists for each day of the week (Mo - Su). A column exists for each hour of the day. Colored markers of green for motion, yellow for continuous, and red for off indicate the currently defined schedules.
	Recording Schedules	Here you see a list of the recording schedules. Each line shows the details about the scheduled recording— the day(s), start and end times, and the recording mode. Select a line to edit or delete an existing schedule.  In this example, you can see four schedules. The first is for Sunday only while the others are for Monday through Friday.
	Scheduling Area	The New, Apply, and Delete buttons allow you to add, modify, and delete recording schedules. You use the Start, End, Day, and type option to specify the recording details.  Remember that each camera can have its own schedule.

## Create a New Recording Schedule

Setup > Recording > SCHEDULE RECORDING TIME button.

Create a new recording schedule to turn on continuous recording (for a specified time period) or to turn off all recording. You create a new recording scheduled video recording using the Recording Schedule screen. To accomplish this task, follow these instructions:

- 1) Open the Setup > Recording dialog.
- 2) Click the button for the camera you wish to program.
- 3) Click the SCHEDULE RECORDING TIME button.
- 4) Click the NEW button to indicate you are creating a new entry.
- 5) Set your Start and End time, Days option, and choose between Continuous and Off.

Continuous Mode	Off Mode
Continuously record on the set days and times, even if there is no motion on the camera.	Disable recording on the set days and times, even if there is motion on the camera.

- 6) Click the APPLY button to save the schedule. You will notice the scheduled recording is added to the schedule list.

Note: It will take a few minutes for the new schedule to take effect.

## Change or Delete a Recording Schedule

Setup > Recording > SCHEDULE RECORDING TIME.

Over time, you will need to modify or delete recording schedules. Changing a schedule is very similar to creating a new schedule:

- 1) From Setup, click on the Recording tab.
- 2) Click on the Camera # button for the camera you wish to change.
- 3) Click the SCHEDULE RECORDING TIME button.
- 4) Click on the recording schedule you wish to change in the Recording Schedules list
- 5) To modify the selected schedule, change the Start, End, Day, or Mode and click APPLY.
- 6) To delete the selected schedule, click DELETE.

Note: It will take a few minutes for the new schedule to take effect.

## Manage Disk Usage

The Werks Disk Usage dialog allows you to view and change the disk allocation rules. The adjustable options include the Video Path and Max Allocation. You can also view the free disk space, current usage, and discard date among other statistics. You open the Werks Disk Usage dialog by clicking on the VIEW DISK USAGE button on the Setup > Recording dialog.

This graphic shows a screen shot of the Disk Usage dialog. A description of each field is also included:

Dialog	Item	Usage
	Video Path (adjustable)	The path where Werks stores video files. The default value is C:\LukWerks Video
	Browse Button (...)	The browse button allows you to navigate and pick another video storage directory.
	Free Disk Space	The amount of free space on the drive Werks is using to store video files.
	Max Allocation	The max amount of space you allow to Werks for storing video files. The number is in megabytes. The grey calculations shows the percent of the disk drive allocated for video storage use.
	Current Usage	Current usage shows the megabytes in current use for video files. The grey calculation shows the percent of the maximum allocated in use.
	Discarding From	Discarding From shows the date of the oldest file and the one Werks will delete if it needs to recycle space to make room for a new clip.
	Werks Disk Usage Per Camera	Here you can review a detailed list of the storage and files in use by each camera.

## Change Video Storage Options

Setup > Recording > Recording section > VIEW DISK USAGE button.

Werks allows you to store captured video segments in any directory you wish. Once you have chosen a directory, Werks allows you to specify the maximum space you want to allocate for video. By default, when you choose a path, Werks will guess at a reasonable maximum disk allocation, which you can change.

To change the storage directory,

- 1) From the Setup dialog, click on the Recording tab.
- 2) Click the VIEW DISK USAGE button.
- 3) Either enter the path for the video files or click the browse (...) button and navigate to the path.
- 4) Finally, set the amount of disk space you wish to allocate to video files in this directory.

Note: If you reduce the amount of disk space allocated to video files to a number less than that currently in use, Werks will slowly reduce the space used over the next few hours.

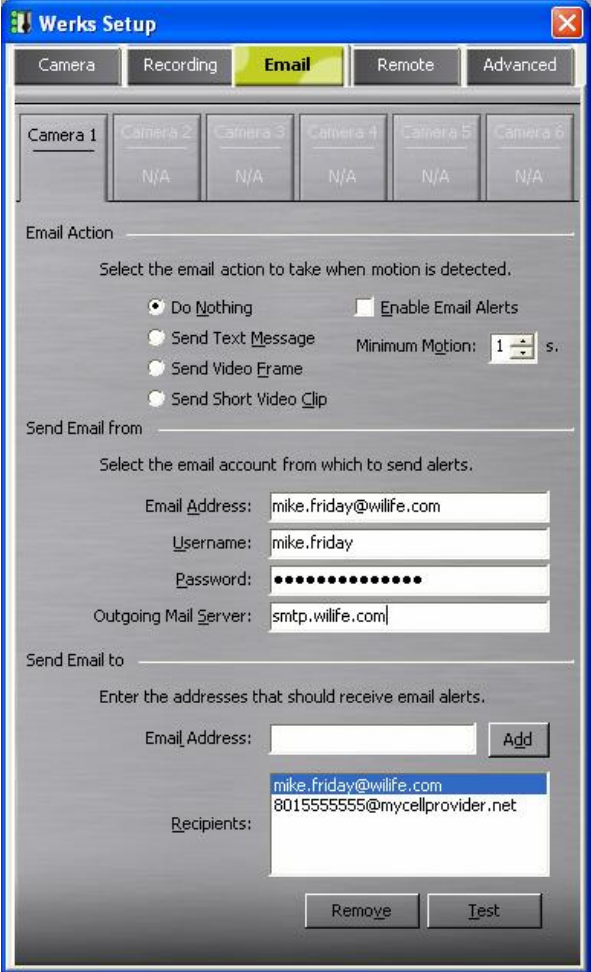
- 5) Click the APPLY button to apply the changes.

## Email Alert Management

With Werks you can receive email and cell phone alerts (messages) when a camera detects motion. You have the option of receiving one of three message types: simple text-only, text and one frame of video, or a video clip. In any case, this email alert option allows you to know when your cameras are capturing motion.

You set email alerts on the Werks Setup > Email dialog, which allows you to activate and configure email alerts.

The following graphic is a screen shot of the Email dialog, after setting some of the options:

Dialog	Item	Usage
	Camera Buttons	Click the camera button 1-6 to select the camera for which you are managing alerts.
	Email Action Section	Select the type of alert action you want a camera to send when it detects motion. The options include—do nothing; send a text message; or send a frame of the captured video.
	Enable Email Alerts	Check to turn on email alerts for the selected camera. Uncheck to turn the alerts off.
	Minimum Motion	Set the minimum length of motion necessary to trigger an alert.
	Send Email from	Enter your account information for the email server that you plan to use for sending alert notifications. Information required to enable this option is your email address, account username, account password, and email server name. You obtain this information from your email service provider.
	Send Email To	Here you enter the one or many email and cell phone addresses to which you want to send alerts.  Use the Add and Remove buttons to add and remove email address from the list.
	Test Button	Click the test button to verify that you have properly configured your email server. The test will send a message to all of the addresses you list in your To box.

## Configure Email Server Settings

After you have entered the values specifying your local email account information (mail server name, account name, account password, email address) and added the email addresses in the Send Email to list, press the TEST button to send a test message to each of the addresses.

When you click the TEST button, Werks shows 'Sending' on the button's face.

If Werks successfully connects to your server, it displays a message asking you to check your email to see if a test message arrived successfully. If Werks was unable to send the test message, it will provide you with an error message indicating the type of problem.

---

Sometimes, the process of sending and delivering the test message can take a few minutes, depending on your email provider.

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## Add Email Addresses

Setup > Email > "Send Email to" section.

The Werks application makes adding email address easy. If you want a specific email to receive alerts notifications on motion detection, follow these simple instructions:

- 1) Open the Setup and click the Email tab.
- 2) Enter the email address in the Email Address field.
- 3) Click the ADD button. The address is added to list of email addresses.

## Create Cell Phone Alerts

Most modern cell phones and cell phone providers support messaging. You can send alerts to your cell phone just like email messages. The trick is determining the email address for your phone. The typical format for these email addresses is #####@yourprovidersaddress.com, where ##### is your cell phone number. Here are a few examples for different cell phone providers.

Provider	Email Address
Cingular	#####@mobile.mycingular.com
Sprint	#####@messaging.sprintpcs.com
T-Mobile	#####@tmomail.net
Nextel	#####@page.nextel.com
Verizon	#####@vtext.com
AT&T	#####@mmode.com

For example, if my cell phone number is (123) 555-7890 and my cell phone provider is Sprint, my alert email address is 1235557890@messaging.sprintpcs.com.

Because of limits in many cell phone messaging systems, most will not send you video frames or video clips.

## Remove Email Addresses

Setup > Email > "Send Email to" section.

To remove an email address from the list of email addresses, follow these tasks:

- 1) Open Setup and click the Email tab.
- 2) In the "Send Email to" section, click on the email address you want to remove, so that it is highlighted.
- 3) Click the REMOVE button. The email address is immediately removed.



## Remote Viewing Setup

Remote viewing is yet another great feature in LukWerks. As mentioned previously, it allows you to view live video from your cameras anywhere anytime. To get started with remote viewing, first create a “My LukWerks” account at [www.lukwerks.com/register](http://www.lukwerks.com/register). Learn more by reading the chapter Using Remote Viewing later in this user guide.

### Verify System Requirements

Before beginning the setup, confirm that your system meets our recommended requirements. Unlike a minimal LukWerks setup, remote viewing consumes more resources and requires a high-speed internet connection to perform well.

#### MACHINE CONFIGURATION

For remote viewing, confirm that your machine matches or exceeds the *recommended* configuration.

Cameras		1	2	3	4	5	6
Compatible CPU	Minimum Recommended	700 MHz 1.4 GHz	700 MHz 1.4 GHz	900 MHz 1.8 GHz	900 MHz 1.8 GHz	1.0 GHz 2.0 GHz	1.2 GHz 2.4 GHz
Computer RAM (MB)	Minimum Recommended	256 256	256 512	256 512	256 512	512 512	512 512
Video Card: (VRAM MB)		32	32	32	32	64	64
DirectX 9 compatible		32	32	64	64	128	128
Display Resolution:		1024 x 768 or higher					
Hard Drive Space (MB):		100 MB for program and a minimum of 200+ MB with 10+ GB recommended for video recording					
Operating System:		Microsoft® Windows® 2000 or; Microsoft® Windows® XP Home Edition, XP Professional or, XP Media Center Edition					
USB:		One free USB port					
Media Player:		Microsoft Windows Media® Player 9					
Other:		CD ROM drive for installation					

#### NETWORK REQUIREMENTS

Requirement	Description
Network Speed	Uplink and downlink speeds of 150kpbs or faster, per installation (DSL, Cable Modem, T1)
Connection Type	Always-on broadband connection

### Remote Viewing Using Cell Phones & Handhelds

LukWerks provides remote viewing using Windows Mobile cell phones, handhelds, and web browsers. The common requirement for a compatible web browser is support for Windows Media Player 9. The common requirement for the cell phone is also support for Windows Media 9. Usually you can find these phones labeled as Windows Mobile or Windows Smartphones.

LukWerks is compatible with a wide range of Microsoft Windows Mobile cell phones and wireless handhelds. Of course, these devices require Internet access either through a cell service provider or wireless Internet hub, depending on your device.

Examples of Compatible Cell Phones:

- |  |   |
|--|---|
| Anextek SP230                          | Palm Treo 700w                                    |
| Audiovox PPC 6601; SMT 5600; PPC 4100; | Motorola Q; CN620; Motorola MPx, MPx100 & MPx220; |
| HP iPAQ hw6500 series                  | Samsung SCH-i730                                  |
| iMate SP5; SP5m; K-JAM; JASJAR         | Siemens SX66                                      |

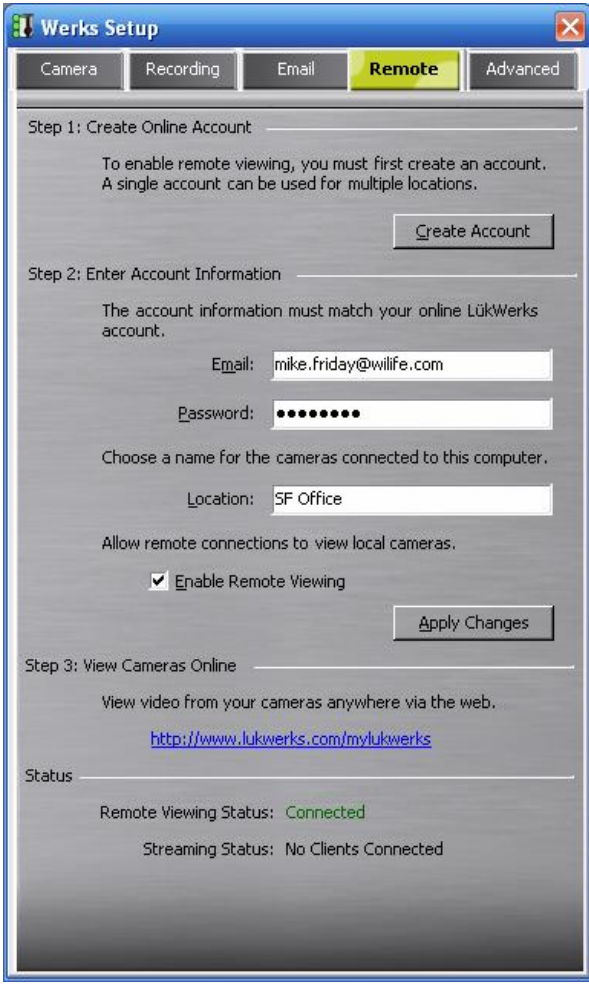
Example Wireless Handheld Devices:

- |                            |  |
|----------------------------|--|
| Asus MyPal A730W           | HP iPAQ hx2400 series; hx2700 series; hx3700 series; hx4700 series |
| Dell Axim X51v; X50v; X30v | Toshiba e805   |

**BROWSER**

- |                     |  |
|---------------------|--|
| Common Requirements | Windows Media Player 9 or later                  |
| Browsers            | Microsoft Internet Explorer Version 5.5 or later |

Once you have created your My LukWerks account, you are ready to setup individual sites such as the Home, Office, or Vacation Home. You use the Setup > Remote dialog to configure the site local options:

Dialog	Item	Usage
	Create Account	Click this button to quickly jump to the <a href="http://www.lukwerks.com/register">www.lukwerks.com/register</a> site where you create your My LukWerks account.
	Email	Enter your My LukWerks account name, which is also the email address you use when creating your My LukWerks account.
	Password	Your secret password used to access your account and remote viewing.
	Location	Set the name for this location. You can have many sites attached to your remote viewing account.
	Enable Remote Viewing	This checkbox, when checked, activates remote viewing functionality, allowing you to have remote access to your camera images from the Internet and Smart Phone.
	Apply Changes	Click this button to write the new account information to the options file.
	View Cameras Online	Click this link to start your Internet explorer in the My LukWerks page. From here you can login and check remote access of your cameras.
	Status	<p>In the status fields, Werks reports current Remote Viewing information.</p> <p>Remote Viewing Status read Connected when Werks makes a successful like with the My LukWerks servers.</p> <p>Streaming Status tells you when someone is remotely viewing the local cameras.</p>

## Set Up Remote Viewing

Setting up Remote Viewing is a two-step process. First you create your My LukWerks account and then enable Remote Viewing in Werks Software. These instructions assist you in completing both of these steps within the Werks Software:

### CREATE YOUR MY LUKWERKS ACCOUNT

Note: To create your online account, you will need Internet access.

1. From Werks, click on the Setup button on the main screen. The Werks Setup dialog opens.
2. Click on the CREATE ACCOUNT button, which will open the Internet browser and display the Registration form.

As you can see by the example of the form on the right, you are required to enter data regarding your name, e-mail address, and then asked to create a password.

Here are a few notes on some of these fields:

Field Name	Description
Email	Your email address doubles as your account name. To complete the registration process, My LukWerks will email you a confirmation message to validate your address.
Password	We recommend you create a password using at least 7 characters, one of them being a number. Punctuation characters are allowed.
Confirm Password	Re-enter the password that you entered in the Password field.
Security Question	Create a security question that you can use to unlock your account should you ever forget your password. For example: "my first dog's name."
Security Answer	Enter the answer to your security question. For example: "Rocky."
I want to be notified of LukWerks software and product updates	Leave this checkbox marked to receive email about software or camera updates. Remove the checkbox if you don't wish to receive any notifications.
I have read and agree to the Terms of Use and Privacy Policy	Click this checkbox after you have read the Terms of Use page and Privacy Page. This checkbox must be marked to complete your registration.

3. When you have completed the form, click the REGISTER! button. We will send you a confirmation email to validate your account. Note, some email systems and spam guards will mistakenly categorize this email as junk. If you do not see the message within a minute, check the Junk and Spam folders.
4. Open the email and follow the instructions to complete your registration and activate your account.

## 2. ENABLE WERKS FOR REMOTE VIEWING

Once you have activated your account through the email confirmation, enable Werks by following these steps:

1. Return to the Setup > Remote tab screen in Werks.

2. In "Step 2: Enter Account Information," enter the same Email address and password that you used to create your My LukWerks account.
3. Enter a Location name for your site, for example, Home, Office, or Grandma's, etc.
4. Check the Enable Remote Viewing checkbox.
5. Click the APPLY CHANGES button.

In the Status section, notice that the Remote Viewing Status will display Connected when it completes the link to the online servers. If the connection becomes broken, the Remote Viewing Status line will display a message, such as Disconnected—Account Unknown, Inactive - No client, Active - Direct mode, or Active - Relay mode. In the case of disconnected error, please recheck your account info and review the troubleshooting guide for possible reasons and solutions.

Here are some frequent questions that may be of help:	
What do I do if I never receive an email confirmation?	Some email systems and spam guards will mistakenly categorize this email as junk mail. If you do not see the message within a minute, check your Junk folder.  If a confirmation email doesn't show up after a few minutes, contact support at 1.877.585.9375.
Will I have to pay to use remote viewing?	No. Remote viewing is a service.
Is there a time limit for viewing video?	It depends on your Internet capability and firewall settings.  LukWerks automatically determines how to stream video to you in the most direct way. If Werks cannot find a direct path, we direct the video feed through WiLife's network. We call this "Relayed Mode" and there is a three-minute time limit.  If Werks finds a direct path, you are connected via "Direct Mode." In Direct Mode, there is no time limit. You can view a video feed for any length of time.

There are answers to more questions available on our Frequently Asked Questions and Tips & Tricks pages at LukWerks.com:

FAQ (<http://www.lukwerks.com/Support/FAQ.aspx>)

Tips & Tricks (<http://www.lukwerks.com/Support/TipsAndTricks.aspx>)

## Advanced Options

The Advanced dialog includes tools that assist you in maintaining the cameras and the application. These tools range from changing passwords to checking for software and firmware updates. Tools would be a more fitting title for the dialog.

### Review the Advanced Options Dialog

Here we take a quick peak at the Advance dialog:

Dialog	Item	Usage
	Add New	This feature allows the application to find any newly added cameras, even if you have set a password for your current system.
	Rediscover	Rediscover initiates a search for cameras that you may have lost due to computer or other problems.
	Change Password	Change password allows program a password into your cameras and USB receiver allowing them to encrypt your video.
	Check for Updates	Search our online update service for new releases of software or camera firmware.
	Update Camera	Update cameras with the most recent firmware version.
	Automatic Restart	This option allows you to enable and set a time that Werks automatically restarts. This may be helpful if you are running on a machine with limited memory.
	Rebuild Video List	Rebuild Video List compares the Werks Video database with the available video files to ensure every file is recorded in the database. You may want to perform this operation if you suspect the video database is corrupt.
	Find Orphan Clips	This option looks under the currently selected video path (e.g. the default C:\LukWerks Video) for any video files that are not currently associated with a camera.
	About	Here you can inspect the current version number for you Werks installation and review system information and diagnostics. This is helpful when contacting support.

### Add a New Camera

You can have up to six Luk Cameras in each LukWerks system. Adding new cameras is easy and you can watch our website for new types of cameras that we will release over the next months.

#### STEP 1 – POSITION YOUR CAMERA

a. *Select a location for your camera.*

Use one of the convenient mounting options to secure your camera to a desktop, window or wall.

---

Note 1: If mounting the camera on a window, clean the area of the window where the suction cup will be attached. Let the area dry completely before mounting the camera.

Note 2: The Window Mount Suction Cup has been tested and proven to hold the weight of objects heavier than the camera for extended periods. To increase the suction power of the cup, spread a small drop of vegetable or olive oil on the underside of the cup before applying it to the window.

---

***b. Plug the Camera Power Supply into a nearby outlet.***

Use the included Camera Cable (8 ft. standard Ethernet cable) to connect the power supply to the camera.

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Note: The Camera Power Supply has built-in surge protection and must be plugged directly into your wall outlet. Plugging the Camera Power Supply into a surge-protected power strip may reduce the quality and performance of the LukWerks system.

---

## STEP 2 – IDENTIFY THE NEW CAMERA IN WERKS

There are two choices of setup described: a and b. So, read both before moving on with the procedure:

***a. If you did NOT set a custom password***

If you have NOT set a custom camera password, then you do not need to do anything more. Werks will automatically recognize the camera within 1-2 minutes.

Once the camera appears, you can change its configuration, set a name, or adjust the picture options. (See the chapter on *Setting System Options* for information on these settings.)

***b. If you did set a custom password***

If you HAVE set a custom camera password, you need to complete a few additional tasks. This is necessary because new cameras are shipped with a no password. Therefore, Werks will not automatically identify it.

Follow these instructions to include the new camera into your Werks system:

- 1) Go to the Werks > Setup > Advanced dialog screen.
- 2) Click the Add New camera button.
- 3) Wait 1-2 minutes while Werks locates the camera.

If after a few minutes, Werks does not recognize the camera, turn to the Specifications chapter located in the online user guide or at [www.lukwerks.com/support](http://www.lukwerks.com/support).

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Note: We recommend that you set a custom password because a custom camera password provides you with security from others having access to your streaming video.

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If you receive a camera from a friend or as a used item, it may have a password stored on its power supply. This will prevent you from linking with the camera. To remove the password, power up the camera and wait until the camera's top two green status lights are flashing. Then with a paperclip, gently press the reset button hidden below the reset hole near the Ethernet cable plug.

After the camera resets, it will have no password. If necessary, you may need to repeat the steps above to connect the camera.

## Rediscover Cameras

Setup > Advanced > Find Camera section > REDISCOVER button.

On rare occasions, you may lose a camera due to powerline problems, bad weather, or even static electricity. Rediscover restarts the camera search process to locate cameras on the network that have a password matching your password (if you have set a password).

To start this procedure, follow these simple tasks:

- 1) Click on the Werks SETUP button.
- 2) Click on the Advanced tab.
- 3) In the Find Camera section, click on the REDISCOVER button. A popup message displays.
- 4) Click YES if you wish the system to rediscover the cameras. Click NO to exit out of the procedure without rediscovering the cameras.

## Set or Change Your Password

Setup > Advanced > Network Security section > CHANGE PASSWORD button.

Werks uses passwords to secure communications links between cameras, the USB receiver, and Werks. When the system has a password, your live video is encrypted – protecting it from snoops. Change Password allows you to enter a new security password or even remove the password.

To change the password, follow these steps:

- 1) Go to the Setup > Advanced dialog.
- 2) Locate the Network Security section and click on the CHANGE PASSWORD button.

- 3) Enter the current password, if you are changing an existing password. Otherwise, Werks will make this field read only.
- 4) Type your new password in both the New and Re-enter fields to confirm the password.

---

Note: Write this password down as it is a difficult process to clear a forgotten password. If you do forget your password, review the Troubleshooting topic "I have forgotten my local LukWerks password" for instructions.

---

- 5) Click CHANGE PASSWORD to accept the new password.

## Check for Software Updates

Setup > Advance > Application Updates section > CHECK FOR UPDATES button.

To check our online update servers for new releases of Werks, click this button. If Werks finds a newer version, it will prompt you for permission to download and install the update.

## Update Camera Firmware

Setup > Advance > Application Updates section > UPDATE CAMERA button.

This feature updates the selected camera with the firmware stored on your hard drive. To download new firmware update, you must first click the CHECK FOR UPDATES button.

- 1) Go to the Setup > Advanced dialog.
- 2) In the Application Updates section, click on the UPDATE CAMERA button.
- 3) Check the checkboxes next to the cameras you wish to update.
- 4) Select the firmware file using the Browse button.
- 5) Click the UPDATE FIRMWARE button and wait for the process to complete.

You should note that each time Werks starts up, it automatically checks the firmware versions on your cameras and the available local firmware files. If it finds that new firmware is available, it will prompt you to update your cameras. As a result, you do not need to worry about manual checking for new camera updates.

## Change the Automatic Restart Time

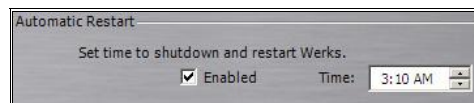
Setup > Advance > Automatic Restart section > Enabled & Time fields.

Some low-end machines run better if programs occasionally shutdown and restart. This feature allows you to set a time for the Werks application to automatically restart each day. By default this option is disabled as most computers do not need the daily process.

To edit the time, follow these steps:

- 1) Go to the Setup > Advanced dialog.
- 2) Locate the Automatic Restart section. You will see two options: Enabled and Time.
- 3) By default, the Enabled checkbox is unchecked. Check the box if you want to enable auto restart.
- 4) In the Time field, specify the time you want the Werks application to restart each day.

The following graphic shows that the restart time has been set for 3:10AM.



## Rebuild Video Segment List

Setup > Advanced > Video Maintenance section > REBUILD VIDEO LIST button.

This operation rebuilds your video database by examining each file in your Werks Video Directory. You may want to perform this operation if you suspect your video database has become corrupt by some hard disk or computer failure. The obvious sign of a corrupt database is missing video segments in the Search window. This process may take a long time to complete.

To rebuild your video database follow these steps:

- 1) Go to the Setup > Advanced dialog.
- 2) In the Video Maintenance section, click on the REBUILD VIDEO LIST button.

Recording and Playback will halt during this operation. This procedure may take a long time.

- 3) Click the YES button to rebuild a video segment list. Click the NO button to cancel this operation.

## Find Orphan Clips

Setup > Advanced > Video Maintenance section > FIND ORPHAN CLIPS button.



This is a rarely needed and used tool. It searches the current video path (e.g. the default C:\LukWerks video) for any video files that are not currently associated with a camera. This is possible if you have recently added, remove, or changed cameras. To use this tool, follow these instructions:

- 1) Go to the Setup > Advanced dialog.
- 2) Locate the Video Maintenance section and click the FIND ORPHAN CLIPS button.

If Werks finds any of these “orphaned” video files, it reports its findings to you, prompting you to allow Werks to create a camera to associate with these stored video files.

If Werks doesn't find any orphaned video files (most common), a message displays informing you of this fact. Click OK to close out of the message.



# 5

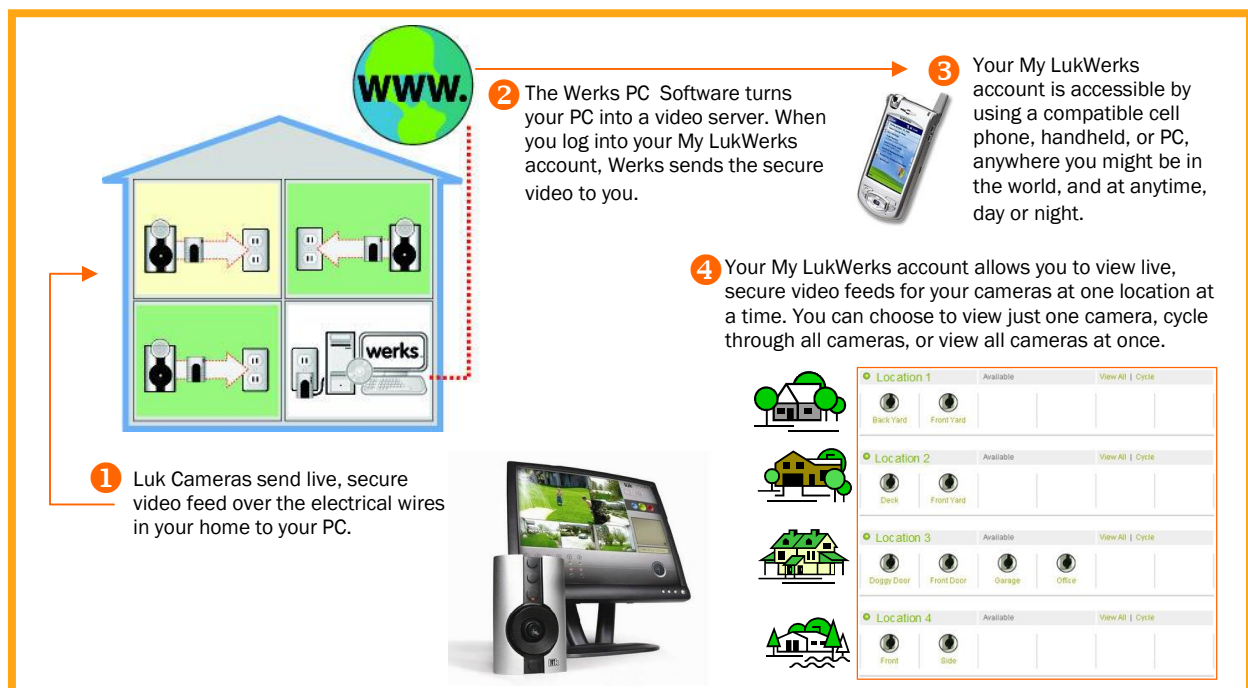
## Using Remote Viewing

Using the Werks Software, and your My LukWerks account, you can access live video from your cameras anywhere in the world using a Windows Media enabled Internet browser, wireless PDA, or cell phone.

When you enable Remote Viewing, your Werks PC becomes a video server ready to publish video through the secure LukWerks network over the Internet to you, wherever you are. LukWerks intelligently creates the most efficient path through your local routers to your remote device. You connect to your video feed by going to [www.lukwerks.com](http://www.lukwerks.com) and logging into your My LukWerks account – using a username and password you set. Once connected to your account, you select the site and cameras you want to view. The LukWerks server then routes a live video feed to your device.

During this process, LukWerks automatically determines your system's firewall settings and Internet capability in order to stream video to you in the most direct way possible. If Werks cannot find a direct path, we direct the video feed through WiLife's network to you. We call this mode "Relayed Mode." In this mode, there is a three-minute time limit. If Werks finds a direct path, you are connected via "Direct Mode." In Direct Mode, there is no time limit. You can view a video feed for any length of time.

The following illustration shows the remote viewing process.



### Remote Viewing has so many applications:



Home Security



Business Security



2nd Home Security



Family Monitor



Elder Care Monitor



Pet Monitor

#### Anywhere Anytime Access

- Live video from the road
- Connect over the Internet
- View from PC browser or Windows Mobile cell phone

## Remote Viewing From a PC

Note: This process assumes that you have completed the setup steps for Remote Viewing, located in Chapter 3.

Remote viewing is a process that consists primarily of two easy steps – logging into your My LukWerks account and selecting which camera or cameras you want to view. This section shows you how to accomplish those tasks.

Our remote viewing feature, however, offers more options that help enhance your experience. We will discuss those in the following section as well. The layout of the section's topics are as follows:

- a. Log in to My LukWerks
- b. Use the My LukWerks Page
  - i) View the video feed for one camera
  - ii) View the video feed for all cameras at the selected location
  - iii) View the video feed for your cameras using the cycle feature
  - iv) Using the viewing window
  - v) Viewing video in compatibility or robust mode

### LOGGING INTO MY LUKWERKS

- 1) Go to [www.lukwerks.com](http://www.lukwerks.com) and click on the My LukWerks menu option. The Please Log In page displays.

Enter your email and password. Then click Log In. You will then be redirected to your My LukWerks page.



Hint: If you mark the “Remember me next time” check box, the system will automatically open your My LukWerks page.

If you ever forget your password, you can come to the Log In page and click on the link “Have you forgotten your password?” Instructions regarding this task are found later in this chapter.

### USING THE MY LUKWERKS PAGE

The My LukWerks page allows you to see all LukWerks sites and cameras on one page.

The layout of the page is designed so you can easily distinguish between sites and the cameras used for each site. In the example below, you can see the information and options available for each site.



Here are some hints to help you better understand the links on the page:

**Site Name**  
Click on the site's name to open the Manage My LukWerks page.

**Location Status**  
Displays Available or Offline

**View All**  
Allows you to see the live video from all of your cameras, all in one view.

**Status LED**

- Active Locations display with a green icon.
- Inactive Locations display with a red icon.
- Active location without active cameras.

**Camera Name**  
Click the link to open the viewing page and view this camera's live feed.

**Cycle**  
LukWerks cycles through each camera's live video feed.

### VIEW THE VIDEO FOR ONE CAMERA

To view live video for just one camera, you can do either one of these options:

- c. Find the desired location and then click on the camera icon
- d. Find the desired location and then click on the camera's name, which displays beneath the camera icon

The viewing page opens and the video plays in the viewing panel, as shown in this example:

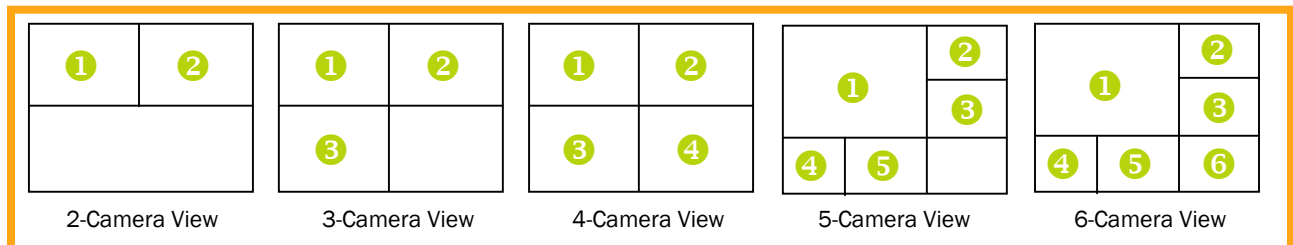


For information regarding this page, see the topic "Using the Viewing Window" later in this chapter.

### VIEW THE VIDEO FOR ALL CAMERAS IN ONE IMAGE

To view live video for all cameras at a specific site, locate the site you want to view and then click the link titled "View All."

Upon clicking "View All," the viewing page displays. Because you are viewing the video feed from all of your cameras, the viewing panel will be divided up into squares, each square displaying the video feed for one of the cameras. The illustration below shows what the viewing panel displays if you have 2, 3, 4, 5, or 6 cameras:



## VIEW THE VIDEO FOR YOUR CAMERAS USING THE CYCLE FEATURE

The “Cycle” option allows you to view the live, secure feed for all of the cameras at the selected location one at a time. The Viewing page will rotate through each camera and will continue to do so until you turn the option off.

## USING THE VIDEO VIEWING WINDOW

The Video Viewing Window automatically opens when you click on a single camera icon or the link View All or Cycle.

As the following screenshot shows, the Video Viewing Window consists of a viewing panel, additional camera links, and a status bar.



Here are some additional notes about the features and options on the screen:

Components of the Viewing Window	
1	Name of the location of cameras.
2	List of cameras set up at this location. Click on a camera to view the live, secure video.
3	<b>View All</b> : Allows you to see the video from all of your cameras in one view. <b>Cycle</b> : Viewing panel rotates through each camera's video.
4	The video viewing panel displays the video.
5	The status bar shows the following information: <ul style="list-style-type: none"> <li>• Status of the video– connecting, buffering, or playing.</li> <li>• The amount of viewing time left in the current session. Only displays if you are using Relayed Mode.</li> <li>• The Normal and Large options allow you to alter the size of the video. The default setting is Normal.</li> </ul>

## VIEWING VIDEO IN DIRECT VS. RELAYED MODE

### DIRECT MODE

If you are viewing video Direct Mode, you are in the best possible mode. However, the Internet may still block video for a number of reasons. If you do not see video after a few minutes, consider switching to Relayed Mode, which uses our WiLife network and requires less browser ability. To switch to this mode, you simply click on the button SWITCH TO RELAYED MODE. You can switch back to Direct Mode at any time.

There is no viewing time limit in this mode.

### RELAYED MODE

If you are viewing video in Relayed Mode, it is because your firewall or other Internet influences are preventing direct access to your video. Relayed Mode directs the video feed through WiLife's network to you. Because of this, there is a time limit of 3 minutes for each viewing session. Of course, you can re-connect and receive another 3 minutes viewing time, as many times as you want.

If you would like to use Direct Mode and not be restricted to a time limit, you can enable UPnP on your router. If you cannot enable UPnP, you can manually set ports in the router for Werks to use. The port addresses Werks uses are 20570 to 20575. (Contact the manufacturer of the router or see your firewall or router documentation for complete instructions about manually configuring ports.)

If you are using Relayed Mode, you do not have the option to switch to Direct Mode.

Mobile devices will always use Relayed mode.

## Managing Your My LukWerks Account

Your My LukWerks Account allows you to update your user profile and change your password and/or login.

Within this section, you will find the instructions on how you can accomplish these tasks.

### CHANGING USER PROFILE SETTINGS

To update your user profile, follow these instructions:

6. Go to [www.lukwerks.com](http://www.lukwerks.com) and click on the My LukWerks menu option.  
If you previously marked the "Remember me next time" check box, the system will automatically open your My LukWerks page. If not, you will need to enter your login name and password.
7. On the My LukWerks page, click on the My Account link in the navigation panel.
8. Click on the "Update Profile" link in the navigation panel or the "click here" link in the Update User Profile section.
9. Complete all of the fields showing on the form.
10. When you have completed the form, click the button UPDATE USER PROFILE.

The image shows a web form for updating a user profile. It includes the following fields and controls:

- First Name: Text input field
- Last Name: Text input field
- Phone: Text input field with a dropdown arrow on the left
- Company: Text input field
- Address: Text input field
- City: Text input field
- State: Dropdown menu with "Alabama" selected
- Zip Code: Text input field
- Country: Dropdown menu with "United States" selected
- Update User Profile: Green button

### CHANGING YOUR MY LUKWERKS PASSWORD

The Change Password option can be used when you have accidentally forgotten your original password or if you feel the security of your password has been compromised. Besides, it is a good security practice to change your password on a regular basis.

Change your password by following these steps:

1. Go to [www.lukwerks.com](http://www.lukwerks.com) and click on the My LukWerks menu option.
2. Click on the link “Have you forgotten your password?”
3. Enter your email address and click SUBMIT. LukWerks will send an email to you with a temporary password.
4. Log back into My LukWerks using this temporary password.  
At this point, we suggest that you change the temporary password to one that is easier to remember.

5. Click on the My Account link.
6. Under the Manage Personal Settings heading, click the “Change Password” link. The Change Password page displays, as shown in this graphic.
7. In the Current Password field, enter the temporary password.

Note: You may be changing your password for other reasons. If so, just enter your current password.

8. In the New Password field, enter a new password.

Hint: We recommend that your password is at least 7 characters long and includes a number. Punctuation symbols are also allowed.

9. Re-enter the new password in the Confirm Password field.
10. Click CHANGE PASSWORD.

11. Now that you have changed your My LukWerks password, you must change the password in the Werks Software > Setup > Remote tab screen.

If you do not change the password on the Remote tab screen in Werks, then the Remote Viewing process will not recognize your account. Errors you may encounter include the following:

- “Unknown Remote Viewing Account.” This message displays on the Live screen, in the message panel.
- “Disconnected–Account Unknown.” This message displays on the Remote tab screen, in the Status section.

## CHANGING YOUR MY LUKWERKS LOGIN NAME

Note: When you change your login name, your account will be disabled until you complete the process, as described below.

To update your user profile, follow these instructions:

1. Go to [www.lukwerks.com](http://www.lukwerks.com) and click on the My LukWerks menu option.  
If you previously marked the “Remember me next time” check box, the system will automatically open your My LukWerks page. If not, you will need to enter your login name and password.
2. On the My LukWerks page, click the My Account link in the navigation panel.
3. Click the “Change Login” link in the navigation panel or the “change user login” link in the Change Login section.
4. In the Current Email field, enter your current email address.
5. In the New Email field, enter the email address that you want to use for My LukWerks.



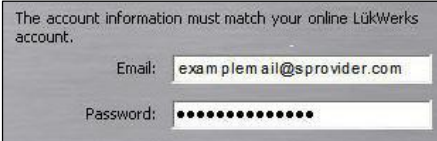
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Note: It must be an active Internet email address.

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6. Re-enter the email address in the Confirm Email field.
7. Click the button CHANGE USER LOGIN. An activation email will be emailed to you.
8. Open your email account and open the email that was forwarded to you by LukWerks. Follow the instructions in the email.
9. Now that you have changed your My LukWerks login name, you must change the Email login name in the Werks Software > Setup > Remote tab screen.

If you do not change the Email on the Remote tab screen in Werks, then the Remote Viewing process will not recognize your account. Errors you may encounter include the following:



- “Unknown Remote Viewing Account.” This message displays on the Live screen, in the message panel.
- “Disconnected–Account Unknown.” This message displays on the Remote tab screen, in the Status section.

You can now go to [www.lukwerks.com](http://www.lukwerks.com) and log into My LukWerks using your new email.

## Manage My LukWerks Page Overview

In this version, the Manage My LukWerks page is used to see details about a location and its cameras; for troubleshooting purposes by our support team; and for removing a location and/or cameras from Remote Viewing.

Here are some descriptions of the information and options available on this screen:

Column Name	Description
<input type="checkbox"/>	Mark this checkbox when you want to remove a Location or a Camera. A Location or Camera is not removed until you click the REMOVE CHECKED button.
Status	“Online” indicates that the Werks Software system is running. “Offline” indicates that it is not on.
Last Connection Date	The date someone connected to this location.
Werks Version	The version of the Werks Software system running at this location.
MAC Address	The media access control address for the camera.
Version	The firmware version running on the camera.
REMOVE CHECKED	Removes the Locations or Cameras check marked.

## REMOVING A LOCATION OR A CAMERA

Removing your location or cameras is perfectly safe and easy. Werks will re-register itself and any cameras to keep your My LukWerks accurate and fully up-to-date.

To remove a location or a camera, follow these instructions:

1. Go to [www.lukwerks.com](http://www.lukwerks.com) and click on the My LukWerks menu option.

---

Note: If you previously marked the “Remember me next time” check box, the system will automatically open your My LukWerks page. If not, you need to Log In.

---

2. Click on the Location name link. If the Location name is “Location 1,” like it is in this example, you would click on this.



The Manage My LukWerks page displays, as shown in the graphic below.

Easily remove any locations or cameras you no longer have. Removing your location or cameras is perfectly safe. Werks will register itself and any cameras as needed to keep your **My LukWerks** as accurate as possible.

Location Name	Status	Last Connection Date	Werks Version
<input type="checkbox"/> Daniel's Home	Online	Mon, Jan 30 2006	2.0.51.0

Camera	MAC Address	Version
<input type="checkbox"/> Back Yard	00-12-AB-00-00-7D	1.29
<input type="checkbox"/> Front Yard	00-12-AB-00-01-00	1.29

- e. To remove the entire location, click the checkbox next to the location name and then click the REMOVE CHECKED button.
- f. To remove one or more cameras, click the checkbox next to the cameras you wish to remove, and then click the REMOVE CHECKED button.

---

Note: Cameras that you don't want to show up for Remote Viewing must be removed from the Werks Software. As long as cameras are still assigned in the Werks Software, My LukWerks will recognize them and show them.

---

## Viewing Your Cameras Using a Cell Phone or Handheld

The following requirements must be met prior to viewing remotely using a cell phone or handheld:

3. Registered for a My LukWerks account? If not, please see the topic “Create Your My LukWerks Account” for complete details.
4. Have enabled Remote Viewing in Werks? If not, please see the topic “Enable Werks for Remote Viewing.”
5. Does your PDA or Cell Phone meet the system and browser requirements? To verify, please visit <http://www.lukwerks.com/About/Requirements.aspx> and view the section titled “Cell Phones and Handhelds.”

### FIRST TIME PDA VIEWING

If you are logging into My LukWerks for the first time, you will see the landing page. The landing page has three options:

- g. [Login](#) link
- h. My LukWerks button
- i. Live Demo button

---

Hint: Click the LIVE DEMO button to connect to the demo site to view live video from a WiLife test location. This option can be used to test your handheld to make sure that it is compatible for remote viewing.

---



Because this is the first time opening My LukWerks, you need to login.

1. Click the [Login](#) link or the MY LUKWERKS button.
2. Enter the email address and your password.
3. Mark the checkbox “Remember me next time.”
4. Click the LOG IN button.

---

Note: Now that you have logged in, the website remembers you and will automatically direct you to the landing page. Simply click the button MY LUKWERKS.

---



## USING THE MY LUKWERKS PAGE (FOR HANDHELDS)

Your My LukWerks page allows you to see your LukWerk network all on one page.

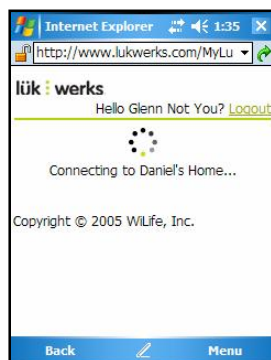
In the example on the right, you will notice the names of your locations and cameras. You will see if a Location is Offline or Available.

Each camera name is a link that opens the Video Viewing Window and displays live video for the camera you selected.

Active cameras appear in green and underlined text.

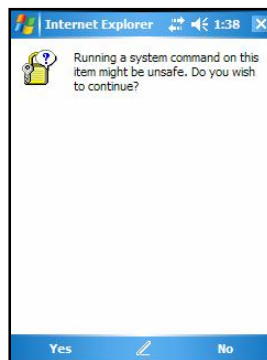


When you click on one of the camera links, you will see messages similar to these:



This window will display as long as LukWerks is connecting to the Werks system.

With handheld devices, there is a time limit of 3 viewing minutes. When the time expires, you are welcome to reconnect and view video again.



For some handheld devices, you will see a security message similar to this: "Running a system command on the item might be unsafe? Do you wish to continue?"

Click "Yes."

## VIEWING A CAMERA'S LIVE VIDEO ON A HANDHELD

The Video Viewing Window is used to show video from the camera you selected.

The window consists of the following sections:

- j. Name of the Location
- k. Status of the video feed (buffering, playing, stopped, etc.)
- l. Video Viewing Panel
- m. Player control panel that includes the time counter, time progression bar, percent of size of video panel, and basic player control buttons (full screen, stop, play, and decrease/increase video size).



# Troubleshooting

We expect that you will rarely have problems with your LukWerks system. However, in the event of a problem, you will find solutions to those issues here. You can also find additional resources at [www.lukwerks.com/support](http://www.lukwerks.com/support).

Below you will find specific tables directed at solving Installation, Configuration, Maintenance and other problems. Choose the one that best fits your circumstance.

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## STOP - DO NOT RETURN THE CAMERA KIT TO YOUR RETAILER

We are ready to help you get the most benefit from your LukWerks system! If you have any questions about setup or operation, please visit our online support site or call our toll-free line.

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If one of these solutions does not solve your problem, please contact WiLife Customer Support and we will gladly assist you. You can contact us at [support@lukwerks.com](mailto:support@lukwerks.com) or call 1.877.LukWerk (1.877.585.9375).

## Installation Problems

Installation Problem	Solution
Setup does not automatically run when inserting the CD	<ul style="list-style-type: none"> <li>• Ensure that the CD label is facing up.</li> <li>• Open the CD from My Computer and double-click the autorun.exe program.</li> <li>• Check the CD for scratches or flaws. If you found problems, call LukWerks support for a replacement.</li> </ul>
Werks does not automatically find my cameras	<ul style="list-style-type: none"> <li>• Reset the camera by unplugging the power supply and then replugging it in to the wall.</li> <li>• Verify that the camera power supply and the USB receiver have power by checking if the status lights have power.</li> <li>• Verify that the camera power supply and the USB receiver are plugged directly into a power outlet and not a power strip or UPS.</li> <li>• Ensure the Ethernet cable between the camera and power supply is secure.</li> <li>• Ensure the USB receiver is plugged securely into the PC.</li> <li>• Verify that you have properly configured any PC firewalls by reviewing the chapter on <i>Configuring Your PC Firewall</i>.</li> <li>• Close other applications that may be interfering with Werks.</li> <li>• Test another outlet for your camera, perhaps one closer to your PC.</li> <li>• Click the REDISCOVER button on the Setup&gt;Advanced dialog.</li> <li>• Verify that the camera ON/OFF button on the main window is set to ON.</li> <li>• Refresh your environment. To do this, 1) restart you computer, 2) reset your USB by removing and reconnecting the USB-to-PC cable, and 3) reset your cameras by unplugging and re-plugging them into the power outlet.</li> </ul>
My cameras appear for a few seconds an then go away	<p>This problem is most commonly caused by a USB socket that is underpowered. These sockets do not provide the electricity necessary to power the LukWerks receiver. This is most common in PC's built prior to 2001. You have two options:</p> <ul style="list-style-type: none"> <li>• Add a new USB 2.0 card to your PC or laptop</li> <li>• Add a powered USB hub between your USB socket and the LukWerks USB receiver.</li> </ul>
Camera suction cup comes free from the window	<ul style="list-style-type: none"> <li>• Clean the window to ensure an airtight fit.</li> <li>• With your fingertip, place a very light layer of vegetable or olive oil around the edge of the suction cup.</li> <li>• Always use the strain relief mini-suction cup for added safety by attaching it to the glass and cable.</li> </ul>

## Setup Problems

Setup Problem	Solution
After a few minutes or even seconds Werks drops my camera	<ul style="list-style-type: none"> <li>On older machines (pre 2001), some USB sockets may be underpowered or incompatible with the USB 1.1 standard. Upgrade your computer by adding a USB 2.0 card or hub.</li> <li>Check your firewall settings. Some firewalls close communications after a few seconds of operations.</li> </ul>
The cable connecting the camera to the power supply is too short	<ul style="list-style-type: none"> <li>You may purchase a longer Ethernet cable or Ethernet Cable Coupler at our online accessory store.</li> <li>Purchase a standard CAT5e Ethernet cable from your local computer accessory retailer (up to 80 feet). (Note: crossover CAT5 cables will not work with our system.)</li> </ul>
My primary camera is shown in the second camera position	Use the Setup>Camera "Camera Order" option to change the position of each camera.
My cameras are recording too frequently	<ul style="list-style-type: none"> <li>Reduce camera motion Sensitivity on the Setup&gt;Recording dialog.</li> <li>Reduce the size or number of motion zones.</li> </ul>
My camera is not following my recording schedule	<ul style="list-style-type: none"> <li>Ensure the camera ON/OFF button on the main screen is ON.</li> <li>Verify that your computer clock is correct.</li> <li>Check your recording schedule to validate the days-of-the-week and times. Remember 12AM is midnight, not noon.</li> <li>Check your recording schedules to ensure you do not have overlapping schedules that conflict.</li> </ul>
I do not know my SMTP account information	<ul style="list-style-type: none"> <li>Contact your email provider for details on connecting to their SMTP server. You can usually find this information on your email provider's Internet support page.</li> <li>Create a new email account using gMail or other email services that supports SMTP (<a href="http://www.gmail.com">www.gmail.com</a>).</li> </ul>
My alert emails are being rejected because of size	<p>Most email providers limit the maximum size of emails and limit the cumulative size of all emails in your system.</p> <ul style="list-style-type: none"> <li>Delete or archive outdated emails from your system.</li> <li>Contact your email vendor to have them configure your account for larger email messages.</li> <li>Select a smaller alert message type. The "Send Text Message" is smallest and the "Send Video Frame" email is usually about 50KB.</li> </ul>
I am getting too many email messages	<p>Werks sends an email alert when a camera detects motion and the length of the motion meets or exceeds your settings. To reduce the number of messages, you can:</p> <ul style="list-style-type: none"> <li>Reduce recording events by reducing motion sensitivity or changing motion zones on the Setup&gt;Cameras dialog.</li> <li>Increase the Minimum Motion time on the Setup&gt;Recording dialog.</li> </ul>

## Video Problems

Video Problem	Solution
My video is fuzzy	<ul style="list-style-type: none"> <li>Clean the lens glass with soft cloth designed for cleaning eyeglasses. This will remove any dust or dirt.</li> <li>If your camera is pointing out a window, clean the glass inside and out.</li> <li>Focus the camera by gently turning the outer lens clockwise or counter clockwise. You will find this easiest by plugging the camera into a power outlet near your PC. (See the section on <i>Focusing and Aiming the Camera</i> in the <i>Getting Started</i> chapter of this documentation for more information.)</li> <li>If you are trying to focus on an item less than 3 feet from the camera, you may want to try a lens with a shorter focal point from our online accessory store.</li> </ul>
My video is too dark or too light	<ul style="list-style-type: none"> <li>Ensure the camera has sufficient light.</li> <li>Use the Setup&gt;Camera options to adjust the camera brightness and contrast options. We find Auto Brightness performs best in changing light conditions.</li> </ul>

Video Problem	Solution
My video windows are black and do not show video	<ul style="list-style-type: none"> <li>• Upgrade your video drivers to the latest version. You can find these drivers on the manufactures support website.</li> <li>• Verify that you have installed the latest version of Windows Media Player.</li> <li>• Reboot your computer to reset the video card.</li> </ul>
I cannot see images in low light conditions	<ul style="list-style-type: none"> <li>• Check the Setup &gt; Camera &gt; Auto Brightness option to allow the smart Luk Camera to automatically adjust to changing lighting conditions.</li> <li>• Increase the lighting of your target scene.</li> <li>• Watch for our soon to be released outdoor day/night camera.</li> </ul>
I cannot see the detail I need in on-screen objects	<ul style="list-style-type: none"> <li>• Clean the lens glass with a soft cloth to remove any dust or dirt, being careful not to scratch the glass.</li> <li>• Focus the camera by gently turning the outer lens clockwise or counter clockwise. You will find this easiest by plugging the camera into a power outlet near your PC. (See the section on <i>Focusing and Aiming the Camera</i> in the <i>Getting Started</i> chapter of this documentation for more information.)</li> <li>• Change the image resolution from QVGA (320 x 240) to VGA (640 x 480) in the Setup&gt;Camera dialog.</li> <li>• Increase the camera Bit Rate on the Setup&gt;Camera dialog.</li> <li>• Increase the lighting in the room.</li> <li>• Upgrade the camera lens using one from our accessory store (<a href="http://www.lukwerks.com">www.lukwerks.com</a>).</li> </ul>
My live video lags several seconds behind the real motion	<p>This is most commonly caused by wiring that is poor or by unusual noise on the wiring system. An underpowered computer or video card can also cause it.</p> <ul style="list-style-type: none"> <li>• Plug your camera into an outlet on the same circuit as your PC to test if this line noise or poor wiring is the cause of the problem.</li> <li>• Test connecting your camera and USB receiver into other outlets that may not have the wiring or noise problem.</li> <li>• Reduce the number of live video windows you have displayed.</li> </ul>
My camera view is too narrow or too wide	<p>Your Luk Camera was shipped with a wide angle lens that should fit most applications. If you find you have need for wider or narrower viewing angles, check out our additional lenses at <a href="http://www.lukwerks.com">www.lukwerks.com</a>.</p>
Live video skips and jumps	<p>LukWerks was tuned to ensure high-quality recording first, and great live viewing second. You may find that live video skips from time-to-time if your PC is underpowered or your Homeplug network is overloaded. Here are a few adjustments to improve live video viewing:</p> <ul style="list-style-type: none"> <li>• Reduce the frames per second (fps) on the camera setup.</li> <li>• Reduce the video quality to QVGA from VGA.</li> <li>• Ensure you are running a PC that meets the minimum system requirements, and preferably one that matches the recommended system requirements.</li> <li>• Close unneeded applications running on your computer</li> <li>• Run virus and spyware detection software to ensure your computer is clean.</li> <li>• Some power outlets are not wired well; test your camera by plugging it into a power outlet closure to your USB Receiver (for best results, try using the same outlet for both).</li> </ul>

## Maintenance Problems

Maintenance Problem	Solution
My CPU is pegged at 100%	<ul style="list-style-type: none"> <li>• Test if Werks.exe is using the CPU by checking Task Manager (CTRL-ALT-DEL&gt;Task Manager&gt;Process Tab).</li> <li>• If Werks is taking the CPU do one or more of the following: <ul style="list-style-type: none"> <li>• Reduce the number of live cameras you are viewing from the 6-camera view to the 4-camera view, or from 4-camera view to 1-camera view.</li> <li>• Reduce camera resolution from 640 x 480 to 320 x 240.</li> </ul> </li> </ul>

Maintenance Problem	Solution
Message "Password does not match password in powerline adapter"	<p>This usually occurs when you change the USB receiver attached to your PC or you change the PC used to run Werks. Follow these steps in either case:</p> <ul style="list-style-type: none"> <li>• Enter your former password into the Old Password field.</li> <li>• Enter your former password (recommended) into the New Password fields.</li> <li>• Validate that you can now see your cameras. If not, follow the steps for the "I have forgotten my local LukWerks password" problem and solution.</li> </ul>
I have forgotten my local LukWerks password	<p>Follow these steps to reset your local LukWerks password:</p> <ol style="list-style-type: none"> <li>2. Exit Werks from the task tray icon</li> <li>3. Click My Computer from the Start menu</li> <li>4. In the address field, enter the path: "C:\Documents and Settings\All Users\Application Data\WiLife\LukWerks"</li> <li>5. Select and delete the file <code>Werks.ini</code>.</li> <li>6. Reset each camera by pressing the reset button on the bottom of the camera with a paperclip while the camera is powered.</li> <li>7. Restart Werks. Werks will prompt you for a new password.</li> <li>8. From Werks, enter Setup&gt;Advanced and click the Add New cameras button.</li> <li>9. You are now back up and running.</li> </ol>
A friend gave me a camera and I do not know its password	<p>Remember that passwords are stored in the camera's power supply, not the camera. If you get a new camera &amp; power supply from a friend or from eBay you will need to reset the password before installing the camera. Follow these steps to clear the old password:</p> <ol style="list-style-type: none"> <li>1. Power-up your camera by plugging in the power supply and connecting the camera using the Ethernet cable.</li> <li>2. Wait until the camera's green status lights are flashing</li> <li>3. While the camera is on, reset the camera by gently pressing a paperclip against the reset button hidden below the small hole next to the camera's Ethernet connector.</li> <li>4. Follow the steps in this manual for adding a new camera.</li> </ol>
Werks does not see my cameras	<ul style="list-style-type: none"> <li>• Reset the camera by unplugging the power supply and then replugging it in to the wall.</li> <li>• Verify that the camera ON/OFF button on the main Werks window is set to ON.</li> <li>• Verify that the camera power supply and the USB receiver have power by checking the status lights, some of which flash and others which are solid on.</li> <li>• Verify that the camera power supply and the USB receiver are plugged directly into a power outlet and not a power strip or UPS.</li> <li>• Ensure the Ethernet cable connecting the camera with the power supply is secure.</li> <li>• Ensure the USB receiver connected securely into the PC.</li> <li>• Verify that you have properly configured any PC firewalls by reviewing the chapter on <i>Configuring Your PC Firewall</i>.</li> <li>• Close other applications that may be interfering with Werks.</li> <li>• Test another power outlet for your camera, perhaps one closer to your PC.</li> <li>• Click the REDISCOVER button on the Setup&gt;Advanced dialog.</li> <li>• Refresh your environment. To do this, 1) restart you computer, 2) reset your USB by removing and reconnecting it PC-to-USB cable, and 3) reset your cameras by unplugging and re-plugging them into the power outlet.</li> <li>• Reset each camera by pressing the reset button on the bottom of the camera by gently inserting a paperclip into the small hole near the network connector.</li> <li>• From the Setup&gt;Advanced dialog, execute the Add New and Rediscover camera operations.</li> </ul>
Werks seems to run slowly	<p>Werks is a 21<sup>st</sup> century application and is tuned for use on modern PCs. Though we provide minimum system requirements for running Werks, you may find some functions operate slowly on underpowered machines.</p> <ul style="list-style-type: none"> <li>• Ensure you are running a PC that meets the minimum system requirements, and preferably one that meets the recommended system requirements.</li> <li>• Close unneeded applications running on your computer.</li> <li>• Run virus and spyware detection software to ensure your computer is clean.</li> </ul>



Maintenance Problem	Solution
My camera is not recording motion	<p>Werks uses two methods to record video: Camera Motion Detection and user defined Recording Schedules. If you have disabled both of these options, cameras will not record. Check the following to ensure recording is configured properly:</p> <ul style="list-style-type: none"> <li>• Check the Setup&gt;Recording options page for each camera and ensure the camera has defined motion zones.</li> <li>• Ensure the “Enable motion detection for camera” checkbox is checked.</li> <li>• Check your camera recording schedule to ensure the cameras are turned on (not scheduled to be Off)</li> <li>• Increase your motion sensitivity settings.</li> </ul>
Werks is not sending email alerts	<p>Werks requires four elements to send an email alert. Check the following items on the Setup&gt;Email dialog for each detected camera:</p> <ul style="list-style-type: none"> <li>• Ensure you have properly set the SMTP server settings and executed the TEST button operation.</li> <li>• Verify your “Send Email to” email addresses are correct.</li> <li>• Choose the alert action for each camera.</li> <li>• Ensure the “Enable Email Alerts” option is checked.</li> <li>• Adjust the Minimum Motion time to meet your needs.</li> </ul>
I am unable to see my site or cameras from My LukWerks account	<p>To view your cameras remotely you need four items: proper Werks configuration, an active My LukWerks account, Internet connectivity, and a compatible remote device. Check the following items:</p> <ul style="list-style-type: none"> <li>• Ensure that you have created a My LukWerks account by registering at <a href="http://www.lukwerks.com">www.lukwerks.com</a>.</li> <li>• Verify that your account name (email address) and password match those used to create your account.</li> <li>• Test your account information accuracy by going to the Setup&gt;Remote dialog and clicking the APPLY CHANGES button.</li> <li>• Test your internet connection from your device by opening an Internet browser on the device and going to the <a href="http://www.lukwerks.com">www.lukwerks.com</a> site.</li> <li>• Test the compatibility of your Internet Browser or Cell Phone by reviewing our documented system requirements.</li> </ul>

## Status Lights

We incorporated Light Emitting Diodes (LEDs) as part of our design for the Luk Camera, Power Supply, and USB receiver to make it easy to quickly diagnose many problems.

### CAMERA STATUS LIGHTS

There are six status lights (LEDs) on the camera in various locations. Point the camera lens toward you with the three green LEDs on the right-hand side to read the following table.

LED	Description
Top Green	Flashes when the camera captures a video frame
Middle Green	Flashes when the camera encodes a video frame
Bottom Green	Flashes when the camera sends a video frame to Werks
Front Red	On when camera has power and flashes when it detects motion. Note that you can disable this LED from the advanced camera setup
Bottom Green	Located near the network connector, the green light is on when the camera has successfully started its internal software
Bottom Amber	Also located near the network connector, the amber light flashes when it sends data over the network. It flashes slowly when communicating with the power supply only and quickly when sending data to the Werks application

### POWER SUPPLY STATUS LIGHTS

There are five status lights on the Luk Camera power supply.

LED	Description
Top Green	Steady green when power supply has power
Middle Green	Steady green when the power supply is connected to the Homeplug network
Bottom Green	Flashes when sending and receiving data to the camera
Bottom Green	Located near the network connector, the green light is on when the camera has successfully linked to the camera
Bottom Amber	Also located near the network connector, the amber light flashes when sending and receiving data to the camera. It flashes slowly when communicating with the camera only and quickly when sending data between the camera and Werks

### USB RECEIVER STATUS LIGHTS

There are three status lights on the USB Receiver. Because the USB Receiver gets its power from the USB port, these lights will be on even when you have not plugged the receiver into an outlet.

LED	Description
Top Green	Flashes when it detects a collision between two network packages (normal)
Middle Green	Flashes green when sending and receiving data from the cameras
Bottom Green	Solid green when successfully linked to the computer

# Configuring Your Firewall

## Firewall Basics

Firewall configuration issues are our most common support call. In this chapter, we help you understand and configure your firewall, saving you and us the trouble of a support call.

Simply put, a firewall is a device, software or hardware, which controls the flow of network traffic between your computer and the outside world. Having a good firewall is important to prevent hackers and viruses from getting access to your computer.

Many popular firewalls run directly on your PC; they include Microsoft Firewall, Symantec Internet Security, ZoneAlert, BlackICE, McAfee Personal Firewall, and many others. Each vendor provides a different interface for network management and use different rules for protecting your computer. Many of them have built screens and dialogs that automatically prompt you to allow and disable network access for specific programs.

## Internet Filters

Internet filters are a different form of network firewall. They work to protect individuals and computers from accessing potentially objectionable materials. These filters capture internet requests and either block or allow them depending on whether they pass their internal tests. Like firewalls, Internet Filters can block communications with your Luk Cameras.

## LukWerks Firewall Requirements

LukWerks uses two networks. First, the Werks software connects to each of your Luk Cameras on our Homeplug network. Second, the Werks software connects to the Internet to provide you with Remote Viewing access to your video. In communicating, two common protocols Werks uses include UPnP (Universal Plug and Play) and HTTP (on a variety of ports).

LukWerks Networking Protocols

Name	Description	Network
UPnP Discovery	UDP: port 1900	Powerline
UPnP Control	TCP: ports 50000-65000	Powerline
Video Streaming	TCP: port 22210	Powerline
Camera Control	TCP/UDP: ports 5800-5821	Powerline
Remote Viewing	TCP: ports 20570-20575	Internet

When we configure your Homeplug network, Werks sets the IP address for the USB adapter to 169.254.X.X with a subnet mask of 255.255.0.0. Additionally, each Luk Camera picks an IP address in this same range. In both cases, we pick random numbers for the last two elements of the IP address.

By design, Firewalls and Internet Filters attempt to control communications on both of the internal LukWerks network and your Internet connection. This is not a problem if you configure them correctly. Remember, it is common to have more than one firewall installed on a PC.

Below you will find descriptions of both the automated and manual methods for configuring many popular firewalls.

## Microsoft Firewall

Microsoft Firewall is a standard component for Windows XP, Service Pack 2 (SP2). Microsoft does a good job of automatically asking users to allow Werks to access the network. This automatic configuration method is sufficient in most cases. Here we provide you with instruction for both the automatic and manual configuration methods.

### ENABLE WERKS AUTOMATICALLY

When you first start Werks, Microsoft Firewall will automatically provide you with a Windows Security Alert, asking you whether you want to block Werks. You should always choose UNBLOCK when the program name is Werks the publisher is WiLife.



and

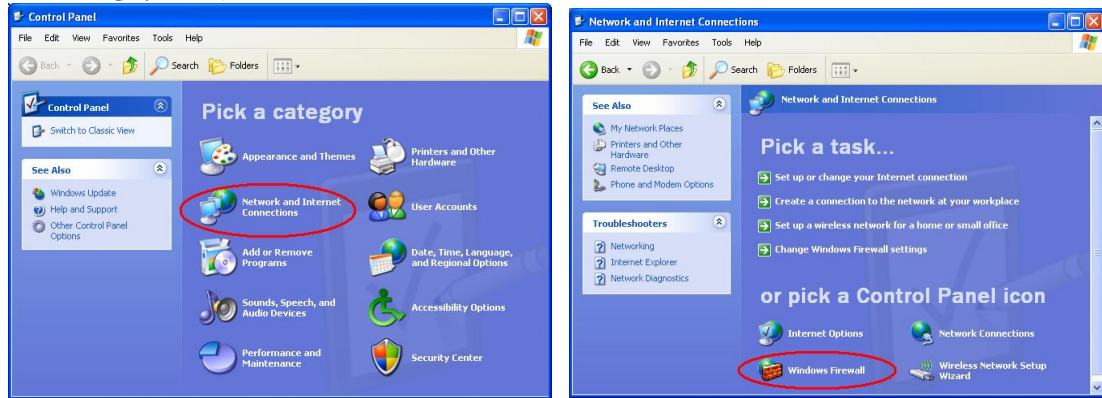
### ENABLE WERKS MANUALLY

In some cases, Windows may not provide you with the automatic alert or you may mistakenly choose to block Werks. In these and other cases, you need to configure the firewall rules manually.

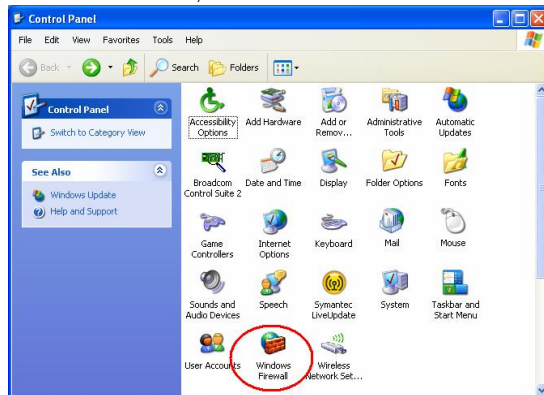
Follow these step-by-step instructions:

- 1) Open the Control Panel from the Start menu.
- 2) Next, open the Windows Firewall using one of the two examples below:

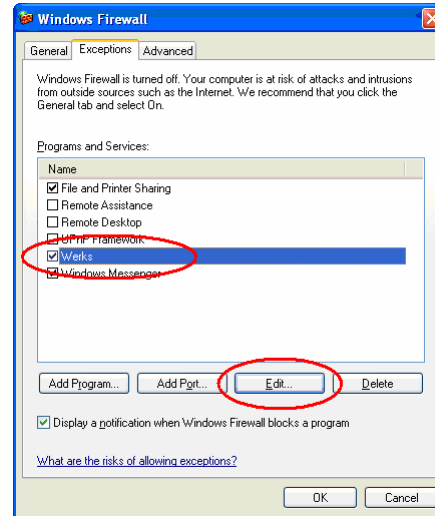
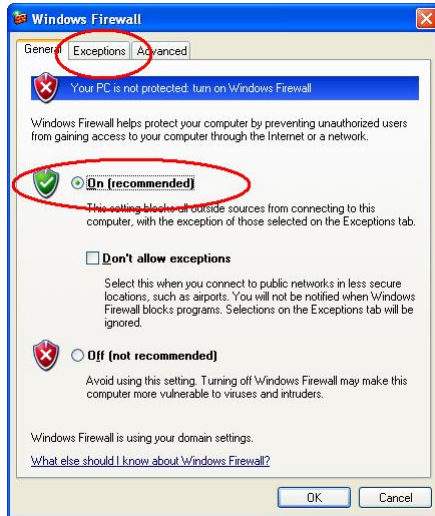
From Category View, pick Network and Internet Connections and then Windows Firewall.



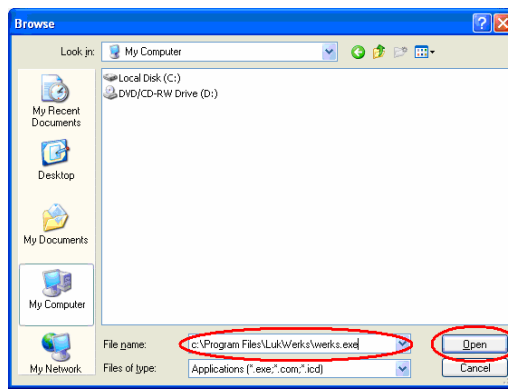
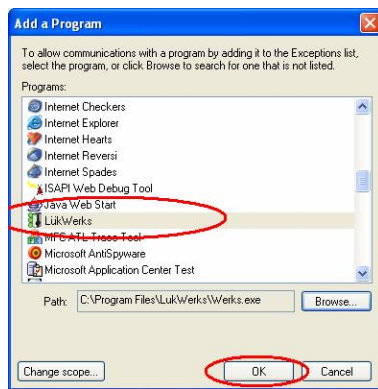
In the Classic View, choose Windows Firewall.



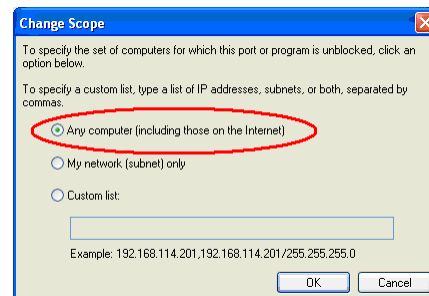
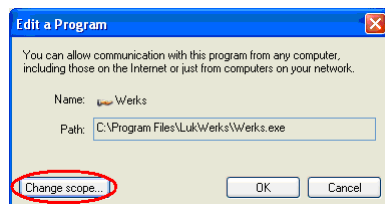
- 3) If the Windows Firewall is enabled (On), select the Exceptions tab. On the Exceptions tab, check the Werks box to enable it for network communications. Next, click on the EDIT button.



- 4) If you do NOT see Werks in the Programs and Services list (rare), you will need to choose Add Program... and find Werks either in the list of programs or Browse to it at "C:\Program Files\LükWerks\Werks.exe".



- 5) From the Edit a Program dialog, click the "Change scope..." button and then select the option "Any computer" as shown. Finally, click OK to close each dialog.

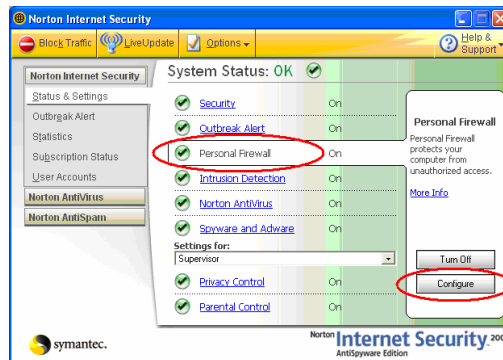
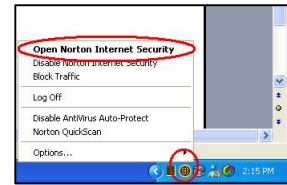
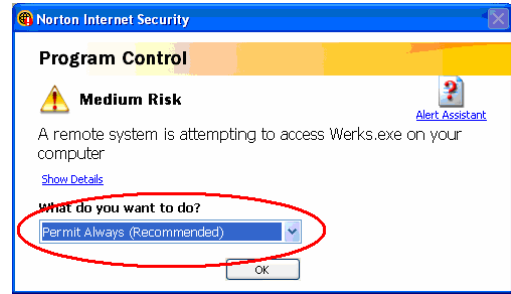


- 6) Remember that you may have more than one firewall application running on your PC. You will need to configure each one.

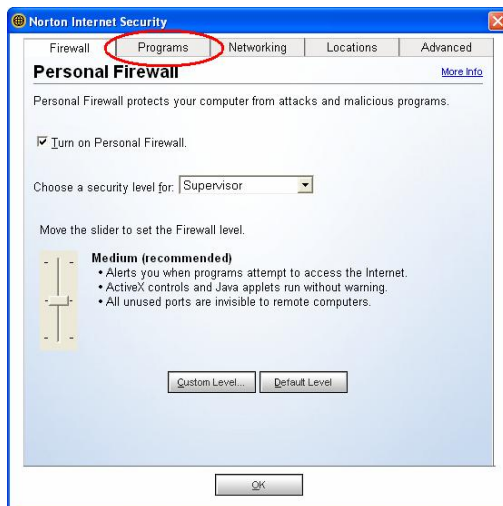
## Norton Internet Security 2001 - 2005

Norton Firewall is a component of several Symantec security products including Norton Internet Security, Norton Personal Firewall, Symantec Client Security, and others. In most cases, Norton will automatically recognize Werks attempting to access the network and display show present you with a quick configuration dialog. You must follow all of these steps to ensure Norton 2001-2005 will not block Werks!

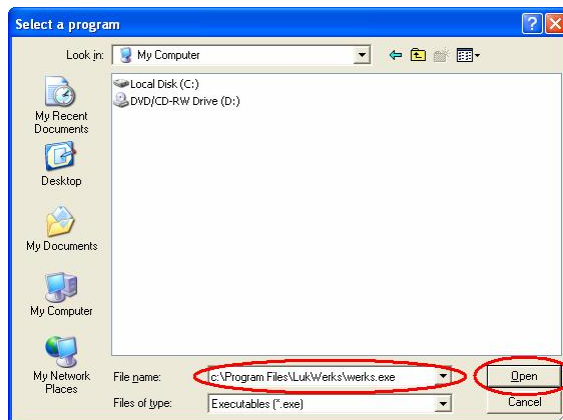
- 1) Run Werks to allow Norton to display Program Control dialog.
- 2) If Norton displays the Program Control dialog, choose "Permit Always". In any case, continue to the next steps.
- 3) Open "Norton Internet Security" from the system tray (shown) or from the Start...All Programs menu.
- 4) On the Norton Internet Security management screen, click Personal Firewall. (Note: the dialog may look different depending on your version of Norton.) Next, click the CONFIGURE button under the Personal Firewall section.



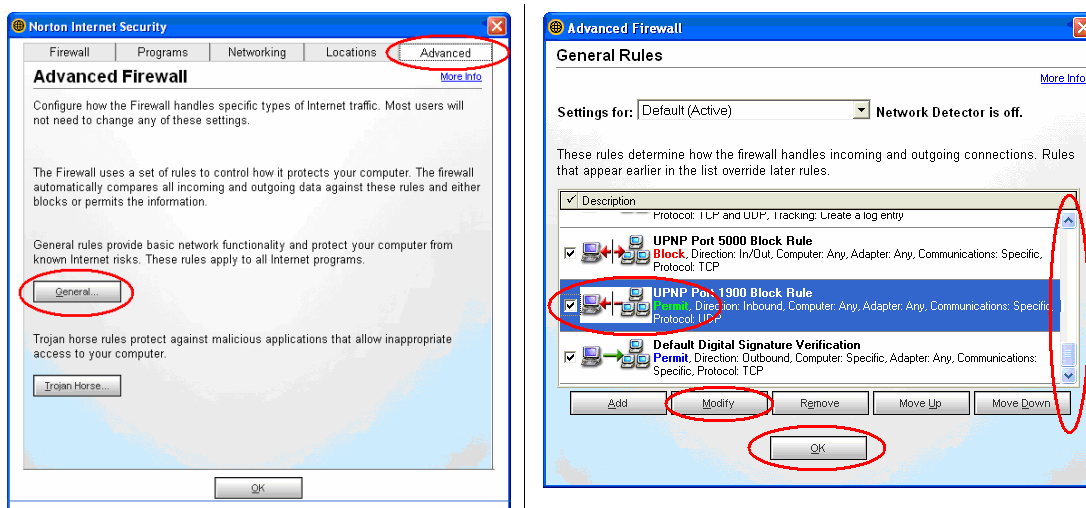
- 1) From the Personal Firewall page, click Programs tab. In the Manual Program Control window, scroll down until you find Werks. Here you need to set the Internet Access to "Permit All".



- 2) If you do NOT find Werks in the Program list (rare), you will need to click the Add button. On the program dialog, enter the file name “c:\Program Files\LukWerks\werks.exe” and click Open. Now repeat the previous step.



- 3) Finally, click on the Advanced tab and then the GENERAL button. On the General Rules Screen, scroll down to the rule “UPNP Port 1900 Block Rule.”
- 4) Click on the Modify button and change the rule from Block to Permit. Leave the rule checked and then click OK to accept the change.



- 5) You have now successfully configured Norton Firewall, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.
- 6) Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

## Norton Personal Firewall 2006

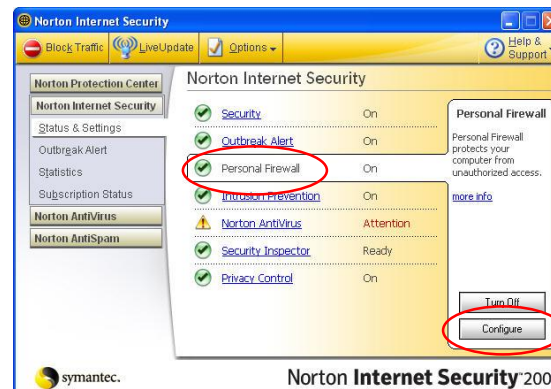
Norton Personal Firewall 2006 is a component of several Symantec security products that include Norton Internet Security, Norton Personal Firewall, Norton AntiVirus, Symantec Client Security, and others.

- While you are installing Werks, Norton Internet Security will automatically recognize Werks attempting to access the network. It will prompt you with this Security Alert.
- Leave the setting as “Always allow connections from this program on all ports.”
- Click OK.
- Norton Internet Security will also recognize that Werks is attempting to access the Internet. It will prompt you with this Program Alert.
- Leave the setting as “Allow always” and click OK.



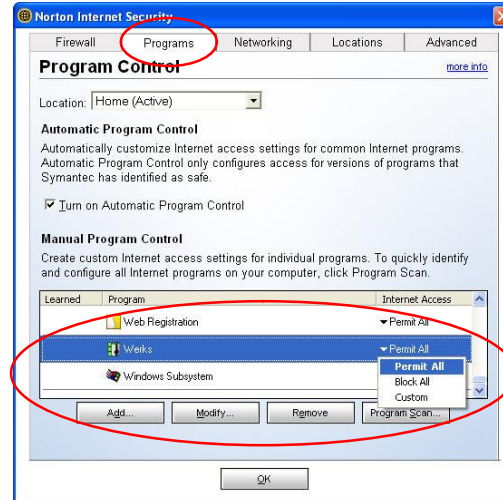
- **Validate the Setup**

- We expect these settings will configure Werks completely for Norton 2006. However, we recommend that you follow these steps to ensure the settings are accurate:
5. Open “Norton Internet Security” from the system tray (shown) or from the Start...All Programs menu.
  6. On the Norton Internet Security management screen, click Personal Firewall.
  7. Click the Configure button under the Personal Firewall section.
  8. From the Personal Firewall page, click Programs tab.
  9. In the Manual Program Control section, scroll down until you find Werks.





10. Here you need to set the Internet Access to "Permit All."
11. Click OK.
  - 
  - NOTE: If you do NOT find Werks in the Program list (rare), you will need to click the Add button.
  - On the program dialog, enter the file name "c:\Program Files\LukWerks\werks.exe" and click Open.
  - Now repeat the previous step.



You have now successfully configured Norton Firewall 2006.

Note: If you may have more than one firewall application running on your PC, you need to disable or configure each one to run with Werks.

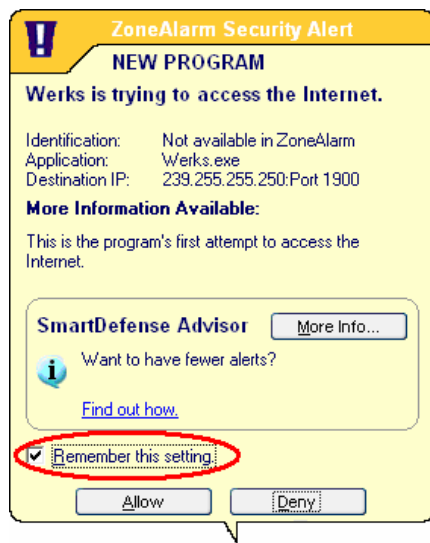
## ZoneAlarm Firewall

Zone Labs produces several computer security packages including ZoneAlarm Pro and ZoneAlarm. Though there some differences in the UI, they are largely the same. Like other PC firewall products, Zone Labs provides both automatic and manual configuration interfaces. By default, ZoneAlarm will automatically prompt you to allow Werks.exe to both access the Internet and to act as a server. Follow these instructions to ensure ZoneAlarm does not interfere with the operation of LukWerks.

### ENABLE WERKS AUTOMATICALLY

When you first start Werks, Zone Alarm will automatically provide you with a ZoneAlarm Security Alert, asking you whether you want to block Werks. You should always choose ALLOW when the program name is Werks.exe and the publisher is WiLife.

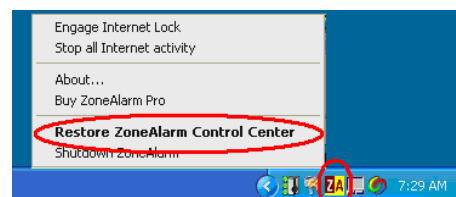
- 1) Run Werks.
- 2) Check “Remember this setting” and click the Allow button on both the “New Program” and Server Program dialogs.



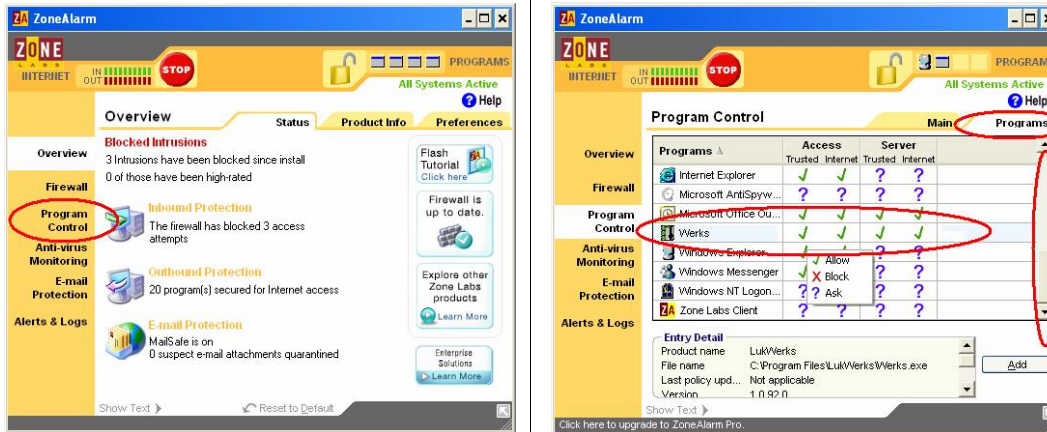
### ENABLE WERKS MANUALLY

In some cases, you may need to manually configure ZoneAlarm. This process is not difficult. Follow these steps to complete the manual firewall setup:

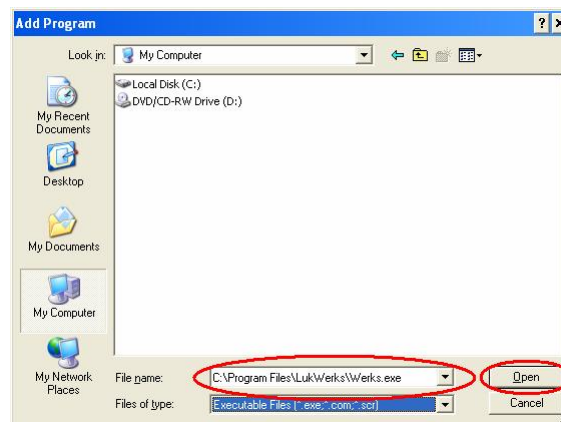
- 1) Open the ZoneAlarm control center either from the Start menu or by right-clicking on the ZoneAlarm icon in the Windows Task bar.



- On the ZoneAlarm Control page, click the Program Control option to show the Program Control Page. Here click the Programs tab and scroll down to the Werks program. Set each Access and Server option to Allow (as shown).



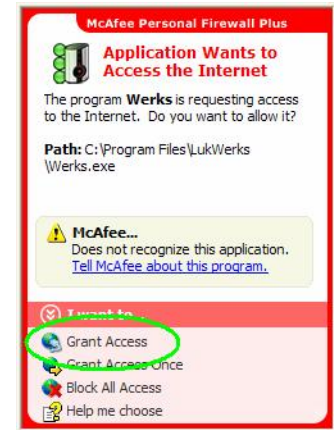
- If you do NOT find Werks listed as a program, you will need to click the ADD button to manually add Werks to the list. In the Add Program dialog, enter the path to Werks, which by default is "C:\Program File\LükWerks\Werks.exe". Click OPEN and repeat the prior step.



- You have now successfully configured ZoneAlarm, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.
- Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

## McAfee Personal Firewall

McAfee distributes its firewall product in several packages including Internet Security Suite, Personal Firewall Plus, and Desktop Firewall. Though there are some differences in the UI, they are largely the same. Like other PC firewall products, McAfee provides both automatic and manual configuration interfaces. By default, Personal Firewall will automatically prompt you to allow Werks.exe to access the Internet. Follow these instructions to ensure the McAfee firewall does not interfere with the operation of LukWerks.



### ENABLE WERKS AUTOMATICALLY

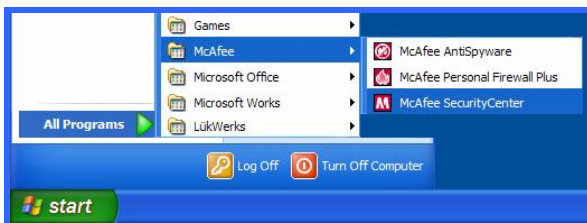
When you first start Werks, McAfee Firewall will automatically provide you with a security notice, asking you whether you want to Grant or Block Internet access. You should always choose GRANT ACCESS when the program name is Werks.exe.

- 1) Run Werks
- 2) Check “Remember this setting” and click the Allow button on both the “New Program” and Server Program dialogs

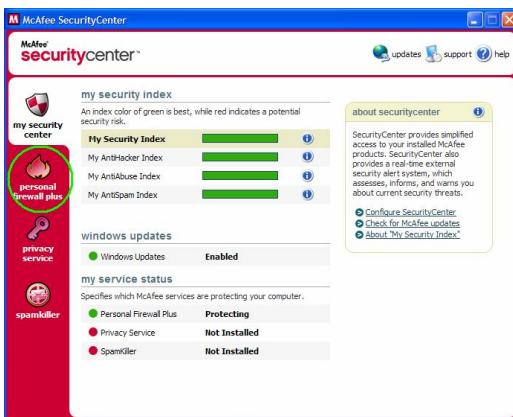
### ENABLE WERKS MANUALLY

In some cases, you may need to manually configure the firewall. This process is not difficult. Follow these steps to complete the manual firewall setup:

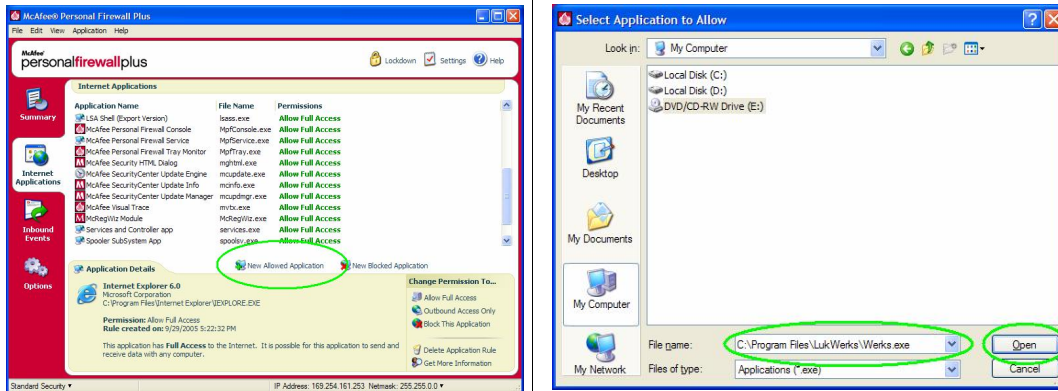
- 1) Open the McAfee SecurityCenter either from the Start menu or by right clicking on the McAfee icon in the Windows Task bar.



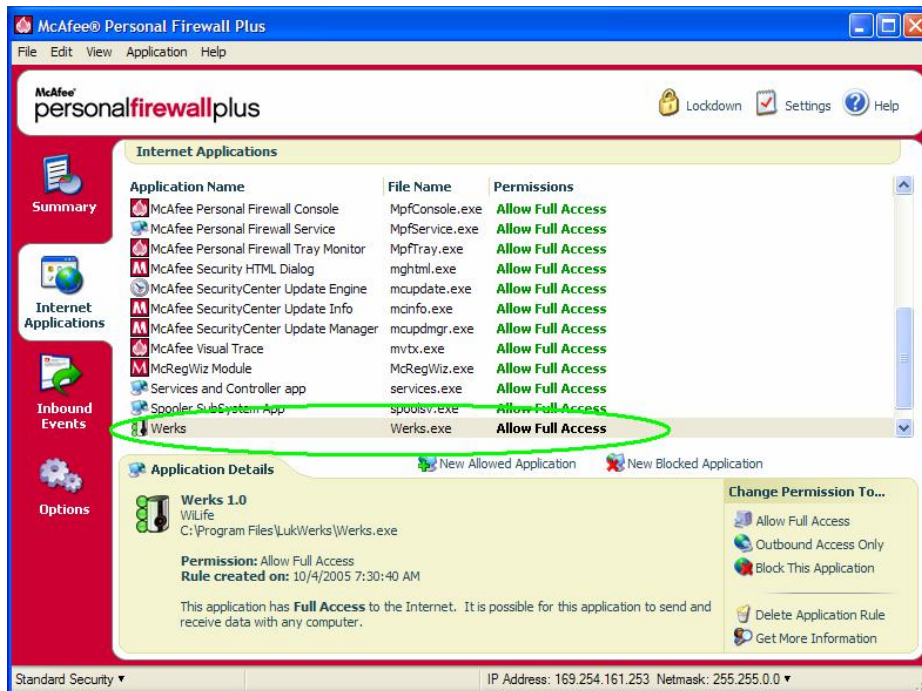
- 2) On the McAfee SecurityCenter page, click the Personal Firewall Plus tab to show the Firewall Control Page. Next click the “View the Internet Application List” to show a list of managed programs.



- From the Internet Applications page, click the “New Allowed Application” link to open the Select Application dialog. Now enter “C:\Program Files\LukWerks\Werks.exe” in the File name field, and click Open.



- Finally, you can confirm that Werks is in the Internet Applications list and marked as “Allow Full Access” along with other networked applications.



- You have now successfully configured McAfee, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.
- Finally, you may need to exit Werks (from the task icon) and restart for the changes to take effect.

## BlackICE Firewall

BlackICE is the least friendly of all the firewalls we review here. There are two common implementations of BlackICE: those that have purchased a retail copy of PC Protection Firewall for personal use and those that unknowingly have a copy installed along with either software from an ISP, VPN, or other source. The primary difference between the two is this. The retail (full package) version of BlackIce includes a user-interface for making changes. Copies installed with other software have no user interface and require editing a file in order to unblock traffic.

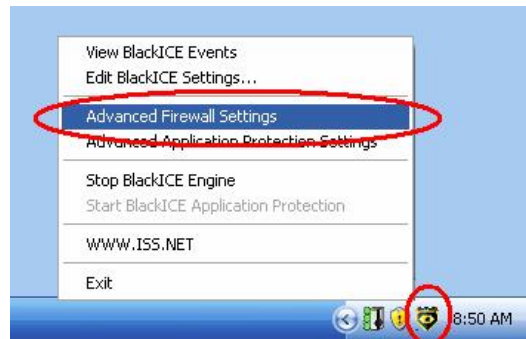
Unlike most firewalls, BlackICE does automatically prompt users for permission to allow Werks to access the cameras and Internet.

### ENABLE WERKS WITH BLACKICE UI

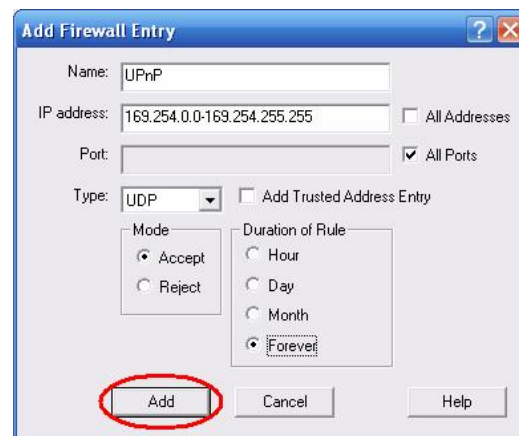
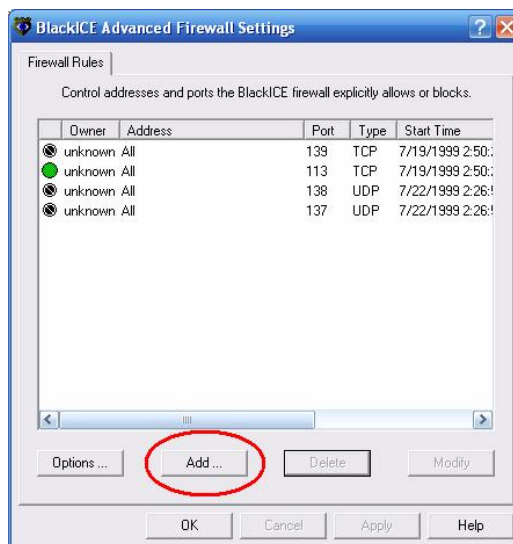
If you have the full retail version of BlackICE you will have access to it's somewhat crude user interface (UI). If you do not have access to the UI, jump forward to the section on Enabling Werks with BlackICE Options File.

Follow these instructions when using the BlackICE UI:

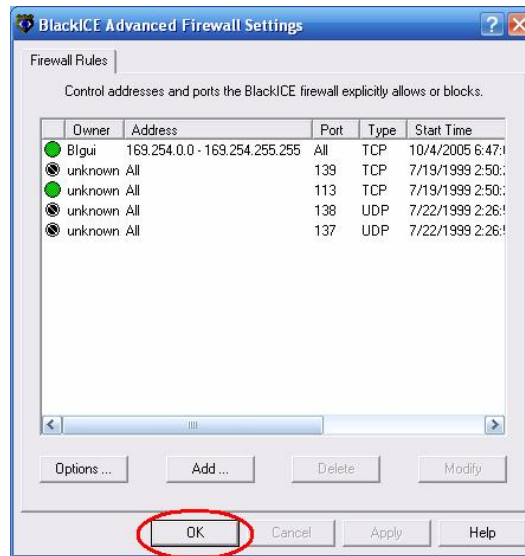
- 1) Open the BlackICE Advanced Firewall Settings dialog by right clicking on the BlackICE icon in the task tray (as shown).



- 2) On the Advanced Firewall Settings dialog, click the Add button. Next, enter the values shown (Name: UPnP; IP Address: 169.254.0.0-169.254.255.255; Check All Ports; Type:UDP; Mode: Accept; Duration of Rule: Forever) and click Add.



- 3) Click OK to close each of the open dialogs.

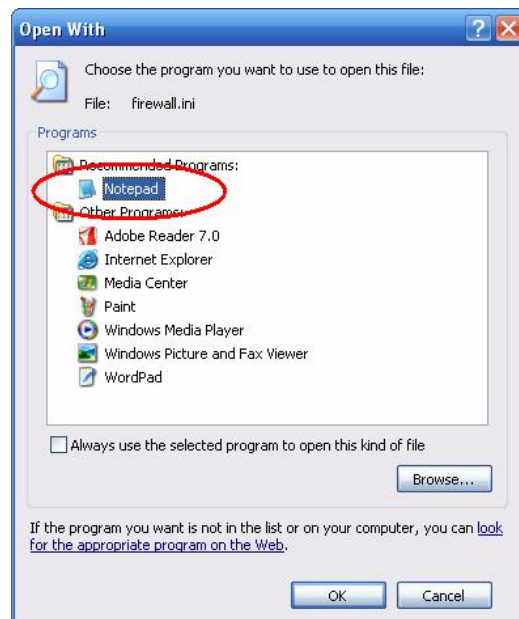
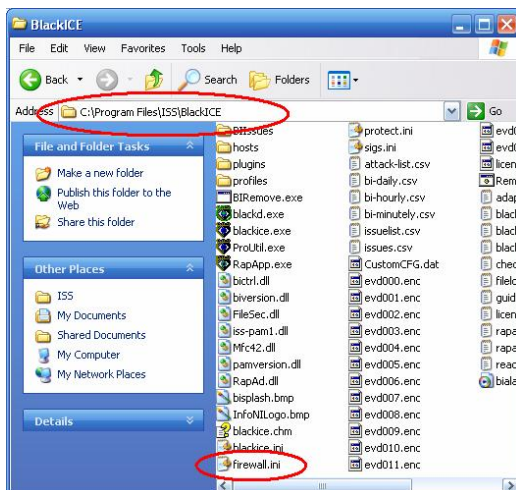


- 4) You have now successfully configured BlackICE, but remember that you may have more than one firewall application running on your PC. You need to disable or configure each one.
- 5) Finally, you will need to exit Werks (from the task icon) and restart.

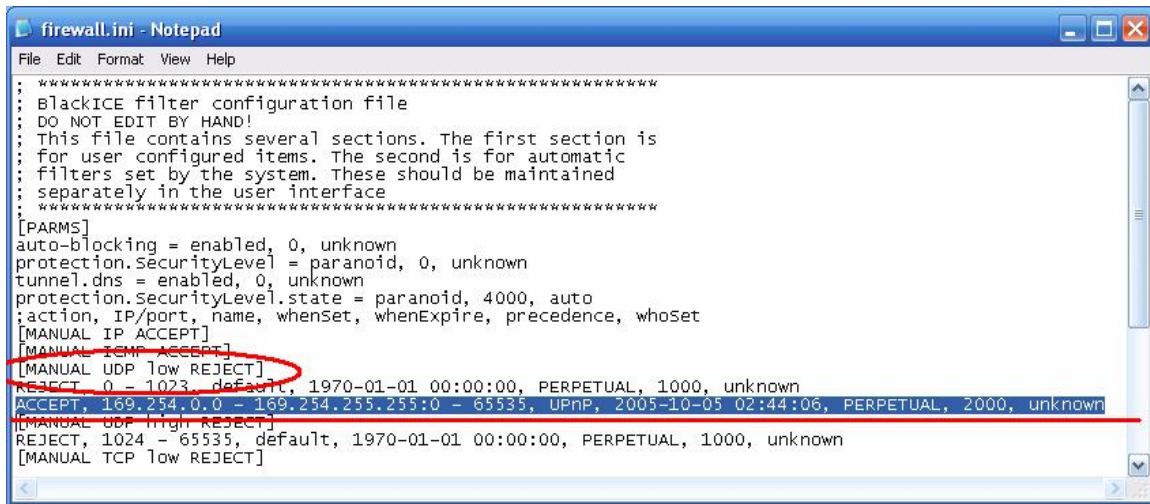
### ENABLE WERKS WITH BLACKICE OPTIONS FILE

If you do not have the BlackICE user-interface (UI), you need to edit the BlackICE Options file. Follow these instructions to update the file:

- 1) Open an explorer window by clicking on the My Computer icon and change directories to c:\program files\ISS\BlackICE.
- 2) Open the file `firewall.ini` with Notepad by double-clicking on the file.



- 3) Find the [Manual UDP low REJECT] section and add the line this line:  
ACCEPT, 169.254.0.0 - 169.254.255.255, 0 - 65536, UPnP, 2005-10-05, 02:44:06, PERPETUAL, 2000, unknown



```
firewall.ini - Notepad
File Edit Format View Help
: *****
: BlackICE filter configuration file
: DO NOT EDIT BY HAND!
: This file contains several sections. The first section is
: for user configured items. The second is for automatic
: filters set by the system. These should be maintained
: separately in the user interface
: *****
[PARMS]
auto-blocking = enabled, 0, unknown
protection.SecurityLevel = paranoid, 0, unknown
tunnel.dns = enabled, 0, unknown
protection.SecurityLevel.state = paranoid, 4000, auto
:action, IP/port, name, whenSet, whenExpire, precedence, whoSet
[MANUAL IP ACCEPT]
[MANUAL ICMP ACCEPT]
[MANUAL UDP low REJECT]
REJECT, 0 - 1023, default, 1970-01-01 00:00:00, PERPETUAL, 1000, unknown
ACCEPT, 169.254.0.0 - 169.254.255.255:0 - 65535, UPnP, 2005-10-05 02:44:06, PERPETUAL, 2000, unknown
[MANUAL UDP High REJECT]
REJECT, 1024 - 65535, default, 1970-01-01 00:00:00, PERPETUAL, 1000, unknown
[MANUAL TCP low REJECT]
```

- 4) Close Notepad and save your change.
- 5) Finally, you need to shutdown and restart your computer for these change to take effect.



# Specifications

## System Computer Requirements

LukWerks requires these minimum requirements for proper operation. Additionally, we recommend a more powerful machine to achieve the best results.

Cameras*		1	2	3	4	5	6
Compatible CPU	Minimum	700 MHz	700 MHz	900 MHz	900 MHz	1.0 GHz	1.2 GHz
	Recommended	1.4 GHz	1.4 GHz	1.8 GHz	1.8 GHz	2.0 GHz	2.4 GHz
Computer RAM (MB)	Minimum	256	256	256	256	512	512
	Recommended	256	512	512	512	512	512
Video Card: (VRAM MB) DirectX 9 compatible		32	32	32	32	64	64
		32	32	64	64	128	128
Display Resolution:		1024 x 768 or higher					
Hard Drive Space (MB):		100 MB for program and a minimum of 200+ MB for video recording 5+ GB recommended for video recording					
Operating System:		Microsoft® Windows® 2000 or; Microsoft® Windows® XP Home Edition, XP Professional or, XP Media Center Edition					
USB:		One free USB port					
Media Player:		Microsoft Windows Media® Player 9					
Other:		CD ROM drive for installation					

\* Minimum and recommended requirements for systems running cameras using the default QVGA (320 x 240) settings. Running your cameras in the higher VGA (640 x 480) mode requires additional CPU.

LukWerks uses your Windows PC to record the video from your cameras and to serve video to your remote devices. You need to have your PC on and running for the LukWerks system to operate.

## Remote Viewing Requirements

LukWerks provides for remote viewing using Windows Mobile cell phones and handhelds, and Web Browsers.

### CELL PHONES & HANDHELDS

LukWerks is compatible with a wide range of Microsoft Windows Mobile cell phones and wireless handhelds. Of course, these devices require Internet access either through a cell service provider or wireless Internet hub, depending on your device.

Examples of Compatible Cell Phones:

Anextek SP230

Palm Treo 700w

Audiovox PPC 6601; SMT 5600; PPC 4100;

Motorola Q; CN620; Motorola MPx, MPx100 & MPx220;

HP iPAQ hw6500 series

Samsung SCH-i730

iMate SP5; SP5m; K-JAM; JASJAR

Siemens SX66

## Example Wireless Handheld Devices:

Asus MyPal A730W

Dell Axim X51v; X50v; X30v

HP iPAQ hx2400 series; hx2700 series; hx3700 series; hx4700 series

Toshiba e805

## BROWSER

Common Requirements

Windows Media Player 9 or later

Browsers

Microsoft Internet Explorer Version 5.5 or later

## DVC-810i Camera

## CAMERA FEATURES

Processing Power	400 MHz DSP
Onboard Image Encoding	Windows® Media Video 9
Onboard Image Processing	Motion detection up to 16 zones, Auto brightness,
Resolution	Selectable: 320 X 240 or 640 X 480 pixels
Frame Rate	Selectable: 5, 10 or 15 frames/second
Bit Rate	Selectable: 150, 400 and 750 kbps
Color Depth	10 bits
Lens	
Focus	User adjustable
Viewing Angle	65° (diagonal)
Pan Angle	50° (manual)
Firmware Updates	Selectable: Manual or Automatic
Communications (to power supply)	Ethernet; TCP/IP
Power Consumption	15 Watts

## OPERATING ENVIRONMENT

The DVC-810i Luk Camera meets requirements for indoor use and is not qualified for outdoor or other extreme environments.

Temperature Range	
Operating	+32° F to +93° F (0° C to +34° C)
Storage	-4° F to +140° F (-20° C to +60° C)
Humidity (storage and operating)	5% to 90% (relative; non-condensing)
Voltage	102 - 132 Volts AC, 60 Hz
Power supply to Camera cabling	
Included cable	CAT-5e, RJ-45 connectors, 10 feet (3 m)
User provided requirements	CAT-5e or better, RJ-45 connectors, up to 80 feet (24 m)
Connector pin out	Per IEEE 802.3
Illumination	2 lx minimum per IEC 61146-1
Property Size	Up to 8,000 square feet

### PHYSICAL METRICS

Power Consumption	15 Watts
Camera Body Dimensions	Height: 5.0 inch (12.7 cm); Width 3.2 inch (8.1 cm); Depth: 1.8 inch (4.6 cm)
Camera Weight	6.7 oz (190 g)
Power Supply Dimensions	Height: 3.8 inch (9.7 cm); Width: 2.9 inch (7.4 cm); Depth: 2.6 inch (6.6 cm)
Power Supply Weight	5.6 oz (160 g)

## Powerline Networking

LükWerks uses powerful power-line networking technology to allow users to easily install and setup your surveillance system.

Networking specification	HomePlug® Power-line 1.0
Data Rate	14 Mbps (maximum), 5 Mbps (typical)
Data Encryption	56 bits (standard DES)
Security Key	Coded user defined password
Networking protocol	TCP/IP
Camera discovery	Universal Plug and Play (UPnP)
IP Address Space	169.254.0.1 – 169.254.255.255, Mask 255.255.0.0

## Wall and Ceiling Mount Installation

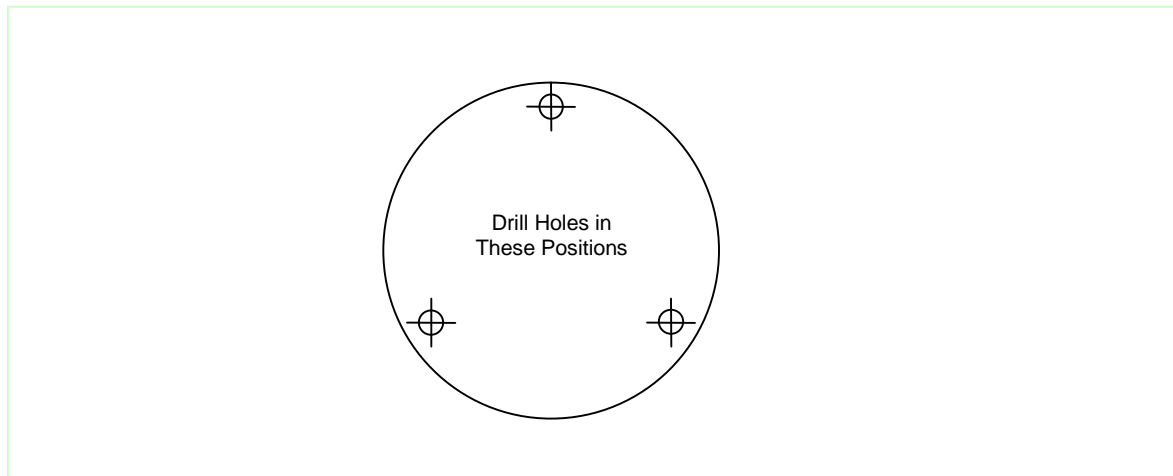
Installing the Luk Camera Wall and Ceiling Mount is simple. Use the recommended tools and drilling template below. As always, use caution to avoid injury.

Recommended tools: Screwdriver, electric drill.

Surface	Pilot Hole Drill Size	Pilot Hole Depth
Softwood	1.6 mm (1/16")	1.2 cm (1/2")
Hardwood	2.0 mm (5/64")	1.2 cm (1/2")
Wallboard (use anchor)	5.0 mm (3/16")	2.3 cm (7/8")

Pre-drill pilot holes before securing the camera to the surface. For soft, hollow surfaces such as wallboard, sheet rock and drywall, use the provided plastic anchors.

### WALL MOUNTING DRILLING TEMPLATE



The illustration is drawn to a one-to-one scale, which means it provides the exact dimensions required to mount the unit.

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#### OBTAINING WARRANTY SERVICE

Please review the customer support resources referred to in the accompanying documentation before seeking warranty service. If the product is still not functioning properly after making use of these resources, access the online website: [www.lukwerks.com/support](http://www.lukwerks.com/support) for instructions on how to obtain warranty service. If limited warranty service is required, WiLife will issue a Return Material Authorization Number. You must ship the products back to WiLife in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. WiLife will ship the repaired or replacement products to you freight prepaid if you use an address in the continental United States, where applicable. Shipments to other locations will be made freight collect.



# Regulatory and Safety

## Regulatory Information

### RADIO FREQUENCY INTERFERENCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Users of this equipment are cautioned that changes or modifications to this equipment not expressly approved by WiLife Inc. void the user's authority to operate this equipment.

### INDUSTRY CANADA NOTICE

Complies with IC: ICES-006 and ICES-003: en conformité avec IC: NMB-006 et NMB-003

### LEAD CONTENT

This equipment complies with Sections 25249.5 – 25249.13 of the California Health and Safety Code. The rubberized items of this equipment, which the user would come in frequent contact (cables/cords, suction cups, etc.), have lead content no greater than 0.03% (300 ppm).

## Safety Information

Please read the information in this section carefully and make sure you understand it completely. Make certain that all warnings and instructions in this manual and marked on the system components are carefully followed.

## CLEANING

Unplug this system from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning. Make certain the components are completely dry before inserting into the wall outlet after cleaning.

## ELECTRIC SHOCK HAZARD

When properly installed and configured, the LukWerks equipment is designed to protect users from exposure to hazardous voltage levels. This system should only be operated from the type of power source indicated in this guide and on the system's label. If you are not sure of the type of power supplied to your home or building, consult your local power company. There are no user serviceable components within any of the equipment enclosures. Users should not attempt to repair LukWerks equipment. Malfunctioning equipment should be serviced using the guidelines found in this manual. If an enclosure does accidentally come open, remove the power to the unit before handling it in any way.

Lightning also presents a real, but unlikely source of hazardous electric shock. As with all electrical equipment, it is best to unplug the LukWerks components during an electrical storm. This is especially recommended for Luk Cameras mounted on exterior windows. If the LukWerks equipment is installed in an area subject to frequent electrical storms, equipment damage and user exposure to hazardous voltages can be minimized by the proper installation of lightning rods and lightning arrestors. Please contact a licensed electrician for further assistance.

Unplug the system from the wall outlet and refer servicing to a qualified service facility under the following conditions:

- When the AC plug is damaged
- If liquid has been spilled into the system
- If the system has been exposed to rain or water
- If the system does not operate normally by following the operation instructions
- If the system has been dropped or the enclosure has been damaged
- If the system exhibits a distinct change in performance
- If the system emits smoke or odors
- If the system emits any audible sound

## PROTECTION AGAINST PHYSICAL SHOCK

Reasonable care should be taken to minimize the possibility of LukWerks components experiencing physical shock. Because of its many mounting configurations, the Luk camera is particularly vulnerable to damage by falling. Use the following guidelines to protect the Luk Camera:

- Do not place the camera in an area where it will be exposed to solvents, caustic gasses or strong air currents.
- Do not place the camera in an area where it can become dislodged by bumping, knocking, striking or other physical forces.

## WINDOW MOUNT (SUCTION CUPS)

- Place suction cup only on a flat, clean, dry window or glazed surface.
- Ensure the camera cable is routed in such a way as to preclude its accidental pulling the camera off the window.

### DESKTOP/SHELF MOUNT

- Place the mount on a stable, flat, clean, dry surface, well away from any edge.
- Ensure the camera cable is routed in such a way as to preclude accidental pulling the camera off the desk or shelf where it is placed.

### WALL/CEILING MOUNT

- Affix the mount to the wall or ceiling using the instructions provided in this manual.
- Ensure the camera cable is routed in such a way as to preclude accidental pulling the camera off the wall or ceiling.

If, after falling, the camera exhibits degraded performance, has ceased operating, shows visible cracks or if there is evidence that internal components have come loose, disconnect the camera from its cable and follow the instructions in this manual for obtaining service repair.

### EXPOSURE TO MOISTURE

The LukWerks equipment is designed to be used only in dry, indoor environments. Do not use this system near water; for example, near a bath tub, washbowl, kitchen sink, or laundry tub, in a wet basement, or in or near a swimming pool. Exposure to rain, mists, excessive humidity and liquid emersion will likely cause significant degradation in system performance and utility. If any LukWerks component has been exposed to moisture, immediately unplug all components from power outlets and allow the components to dry completely before attempting to reinstall the equipment. If, after drying, the system exhibits degraded performance, disconnect the system from all power sources and follow the instructions in this manual for obtaining service repair.

### FIRE HAZARDS

Care should be taken to keep LukWerks equipment and packing material away from open flames and temperatures in excess of 34 °C (93 °F). Care should be taken to keep electrically conductive objects from falling between the Luk camera power supply and the LukWerks HomePlug®/USB Bridge and the wall plug, potentially shorting out the AC power and causing a fire. In the case of any LukWerks equipment becomes open, cracked or broken in any way disconnect the power source to the component and refer to the service repair section of this manual.

### SHARP EDGES

Under normal circumstances LukWerks system components are safe to handle. If the LukWerks components are exposed to significant physical shocks, the LukWerks enclosures could break open exposing sharp enclosure edges and sharp internal component edges. In the event of enclosure breakage, carefully remove affected components from their power source and follow the service procedures of this manual.

### CHOKING, SUFFOCATION AND STRANGULATION HAZARDS

Care should be taken to keep LukWerks equipment and packing material away from small children and persons with diminished mental capability. Specifically, the camera lens might be unscrewed and accidentally swallowed. The wall/ceiling mount screws and anchors could be accidentally swallowed. The LukWerks cables could also be accidentally swallowed or become wrapped about a neck. If the LukWerks components are exposed to significant physical shocks, the LukWerks enclosures could break open and small internal components could come loose and become a choking risk. Plastic packing material may present a suffocation hazard to small children and persons with diminished mental capability. Please properly dispose of all packing material.

### USE WITH THIRD PARTY DEVICES

Do not plug the LukWerks cables into any device other than the intended LukWerks components. Doing so could damage the equipment and expose the user to fire and electrical shock hazards. The LukWerks equipment is specifically NOT compliant with “power over Ethernet” standards such as IEEE 802.3af.

## VENTILATION

Keep the area around LukWerks components free of materials that may obstruct airflow and proper ventilation of the components. This system should never be placed near or over a hot radiator or heat register. This system should not be placed in a built-in installation unless proper ventilation is provided.

## ENVIRONMENTAL HAZARDS

Please properly dispose of LukWerks packing materials. Cardboard, paperboard and plastic packing material can be recycled. Please consult your local recycling center for details. Burning this material is not recommended as it may release harmful chemicals into the environment.

## PROLONGED USE OF EQUIPMENT

As with all equipment, care should be taken to minimize the risk of repetitive motion injuries, muscle fatigue, prolonged muscle inactivity and eye strain. Repetitive motion injuries may be caused by common LukWerks activities such as typing and computer mouse use. Avoid spending excessive time viewing live or recorded video. Werks software can be configured to notify you remotely when an event happens so constant personal surveillance is unnecessary. Recorded playback can be time selected, skipped to or fast-forwarded to quickly reach a point of interest. Make sure your PC workstation (including chair) is comfortably configured and properly illuminated. Place your PC's keyboard, mouse and display at a comfortable, strain minimizing height. Adjust the brightness and contrast of your PC's display to a comfortable level.

## STATIC ELECTRICITY

All electronic equipment contains components that can malfunction, suffer reduced reliability or be damaged in the presence of static electricity. While this equipment has been designed to minimize performance degradation due to effects of static electricity, please use the following procedures when handling this equipment:

- Do not wear clothing that readily generates static electricity (synthetic materials generate large amounts of static electricity). Cotton or cotton blend fabrics, for example, are good because they are not as likely to store electrostatic charges.
- Keep all plastic items away from any area where this equipment is handled. Any plastic item is a potential static generator. This includes candy wrappers, foam cups, synthetic carpet, foam cushions, etc.
- Avoid activities that produce static such as wiping feet or putting on coats when in the vicinity of this equipment.
- Always discharge any static charge your body might have built up before touching any part of this equipment. To do this, touch and hold a grounded metal object for a minimum of two seconds.
- If storing this equipment for a prolonged period of time, return it to its original shipping container.

If this equipment ceases operation suddenly and static electricity exposure is suspected, unplug all connections for at least five seconds and then reinstall these connections. If this does not restore equipment operation, consult the troubleshooting section of this manual.

## Use with Power Conditioning Equipment

The LukWerks cameras and USB receiver should not be used with any type of power conditioning equipment such as surge protectors (commonly found in 'power strips'), AC line filters, AC line conditioners, voltage converters, frequency converters, uninterruptible power sources (UPS), spike protectors, AC line voltage regulators and motor-generator sets. Such equipment will likely block power-line network signals and render the LukWerks system inoperable.

## Powerline Network Limitations

This equipment will not operate during a power outage.

For best performance, limit your HomePlug network to 15 total devices. The presence of electric motors, fluorescent lights, halogen lamps, switching power supplies and dimmer switches on your network may diminish HomePlug® network performance. Avoid the use of extension cords with your HomePlug® devices. HomePlug® signals will not reliably pass through transformers or between different phases of a multi-phase power circuit. Operation between two legs of split phase power circuit should be satisfactory. If you have any questions about your specific electrical wiring topology, please consult a licensed electrician.

If your HomePlug®/USB Bridge is unable to connect to a Luk Camera, or if camera performance is unsatisfactory, try moving the camera's power supply module to a different electrical outlet.

If you suspect non-LukWerks equipment may be interfering with the operation of the LukWerks system (i.e. the LukWerks system only operates when the other equipment is turned off) placing a low-pass power line filter between the AC line and the non-LukWerks equipment may resolve the problem.

To protect your privacy, be sure to set a unique password via the LukWerks software. Doing this encrypts your camera data and makes the output unreadable by neighboring HomePlug® systems which may be able to detect your signals.



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