



Formerly Cell Biosciences, Inc.

# AlphaMager Mini User Guide

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ProteinSimple  
3040 Oakmead Village Drive  
Santa Clara, CA 95051  
USA

Phone: 1.408.510.5500  
Toll Free: 1.888.607.9692  
Fax: 1.408.510.5599  
Email: [info@proteinsimple.com](mailto:info@proteinsimple.com)

Tech Support: 1.888.607.9692  
Tech Support Fax: 1.510.352.7395  
Email: [support@proteinsimple.com](mailto:support@proteinsimple.com)

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# Alphamager<sup>®</sup> Mini



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## Waste Electrical and Electronic Equipment (WEEE)

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ENG



This symbol indicates that the waste of electrical and electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact an authorized representative of the manufacturer for information concerning the decommissioning of your equipment.

FRA



Ce symbole indique que les déchets relatifs à l'équipement électrique et électronique ne doivent pas être jetés comme les ordures ménagères non-triées et doivent être collectés séparément. Contactez un représentant agréé du fabricant pour obtenir des informations sur la mise au rebut de votre équipement.

GER



Dieses Symbol kennzeichnet elektrische und elektronische Geräte, die nicht mit dem gewöhnlichen, unsortierten Hausmüll entsorgt werden dürfen, sondern separat behandelt werden müssen. Bitte nehmen Sie Kontakt mit einem autorisierten Beauftragten des Herstellers auf, um Informationen hinsichtlich der Entsorgung Ihres Gerätes zu erhalten.

ITA



Questo simbolo indica che i rifiuti derivanti da apparecchiature elettriche ed elettroniche non devono essere smaltiti come rifiuti municipali indifferenziati e devono invece essere raccolti separatamente. Per informazioni relative alle modalità di smantellamento delle apparecchiature fuori uso, contattare un rappresentante autorizzato del fabbricante.

SPA



Este símbolo indica que el equipo eléctrico y electrónico no debe tirarse con los desechos domésticos y debe tratarse por separado. Contacte con el representante local del fabricante para obtener más información sobre la forma de desechar el equipo.

SWE



Denna symbol anger att elektriska och elektroniska utrustningar inte får avyttras som osorterat hushållsavfall och måste samlas in separat. Var god kontakta en auktoriserad tillverkarrepresentant för information angående avyttring av utrustningen.

## Safety Warnings

### UV Safety Precautions



# CAUTION

Because U.V. radiation can cause serious damage to unprotected eyes and skin, we recommend to wear U.V. protection glasses or face shield.

Alphamager® Mini may come with a built-in Ultra-Violet (UV 200-400nm) Transilluminator. Exposure to UV radiation can cause permanent damage to the eyes and skin. The cabinet enclosure confines the radiation within the system and shields the user from exposure. The end user should always be aware of the status of the UV transilluminator, and turn off prior to opening the cabinet door.

It may become necessary to operate the transilluminator with the door open for excision of bands or other purposes. In these situations, be sure to use the following safety precautions:

- Always wear UV-protected eyewear that is specified by the manufacturer as providing protection at the wavelength(s) used, making sure that the eyewear protects any areas wear radiation may come through (UV sunglasses may not prevent UV radiation from coming in through the sides or around the lenses).
- Always cover all skin that may be exposed to UV light, especially the face, neck, hands, and arms.
- Always make sure that any UV protection devices are working properly. If not, discontinue use until the device(s) are properly repaired.

# UV LAMP ONLY

- Please use only UV lamps in the transilluminator.

## Electrical Safety Precautions

Be sure to take proper precautions when handling any electrical equipment. NEVER work on any live circuit, fixture, receptacle, or switch. Safety rules you should follow whenever working with any electrical appliance include:

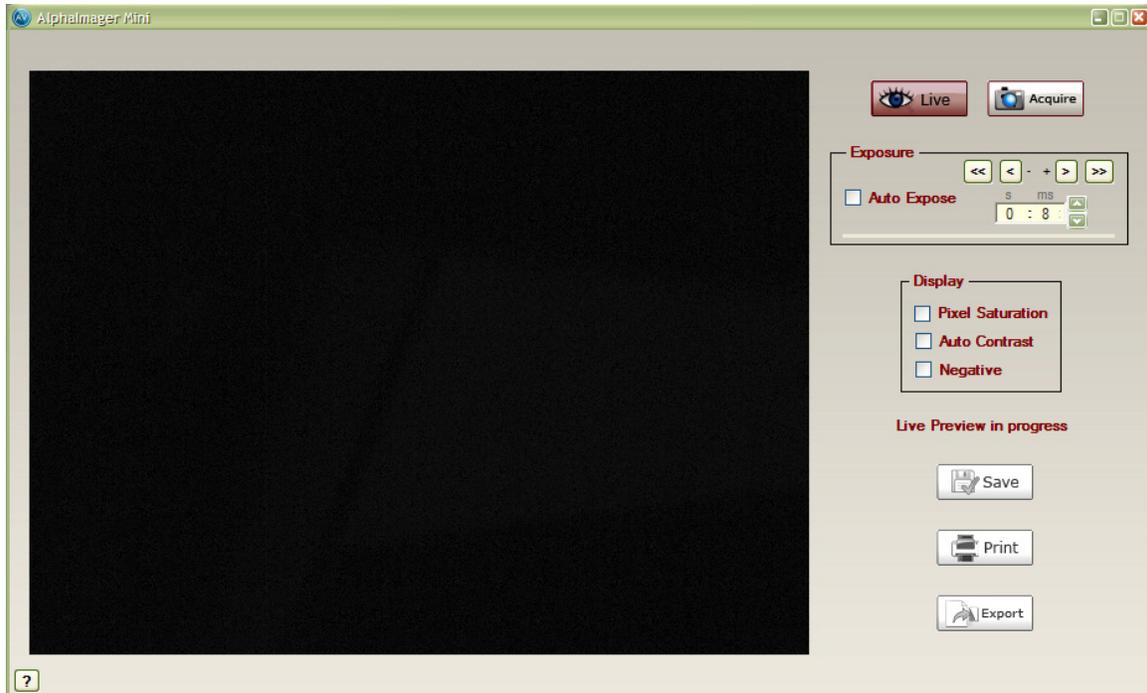
- Always shut off power at the main disconnect before changing a fuse
- Always shut off power to the circuit before repairing or replacing a switch, receptacle, or fixture
- Always tape over the main switch, empty fuse socket, or circuit breaker you are working on.
- Always check that the circuit is dead before beginning work on it. Using a circuit tester or voltmeter can help you determine this.
- Always unplug any appliance before repairing it.

## Hot surface warning



Under normal conditions, the temperature of glass surface of UV transilluminator is below 50 °C and safe to touch. However, if the system malfunctions, it is possible that the glass surface temperature exceeds 80°C. Please exercise caution when touching the glass surface with your hand if this occurs.

## Quick Reference Guide



### Exposure

- Auto Expose option
- Manual exposure time setting (8 ms – 42 sec)

### Display

- Settings adjust image but does not affect true data values in image analysis

### Export

- Exports acquired image into AlphaView software
- Dialog box will indicate if you do not have AlphaView software on your computer

## Alphamager Mini Package Options

### Alphamager Mini Unit

P/N 92-14005-00

- Camera
- Custom Image-250 cabinet with mounted gasket, bracket
- Step-up ring with diopter lens and Orange filter pre-installed
- USB A to mini B cable
- Power adapter
- AlphaSnap Software

### Alphamager Mini Analysis Unit

P/N 92-14021-00

- Camera
- Custom Image-250 cabinet with mounted gasket, bracket
- Step-up ring with diopter lens and Orange filter pre-installed
- USB A to mini B cable
- Power adapter
- AlphaSnap Software
- AlphaView Stand Alone Software with two licenses

### Alphamager Mini System

P/N 92-14022-00

- Camera
- Custom Image-250 cabinet with mounted gasket, bracket
- Step-up ring with diopter lens and Orange filter pre-installed
- USB A to mini B cable
- Power adapter
- AlphaSnap Software
- ML-26 Dual Wavelength / Dual Intensity Transilluminator

### Alphamager Mini Analysis System

P/N 92-14023-00

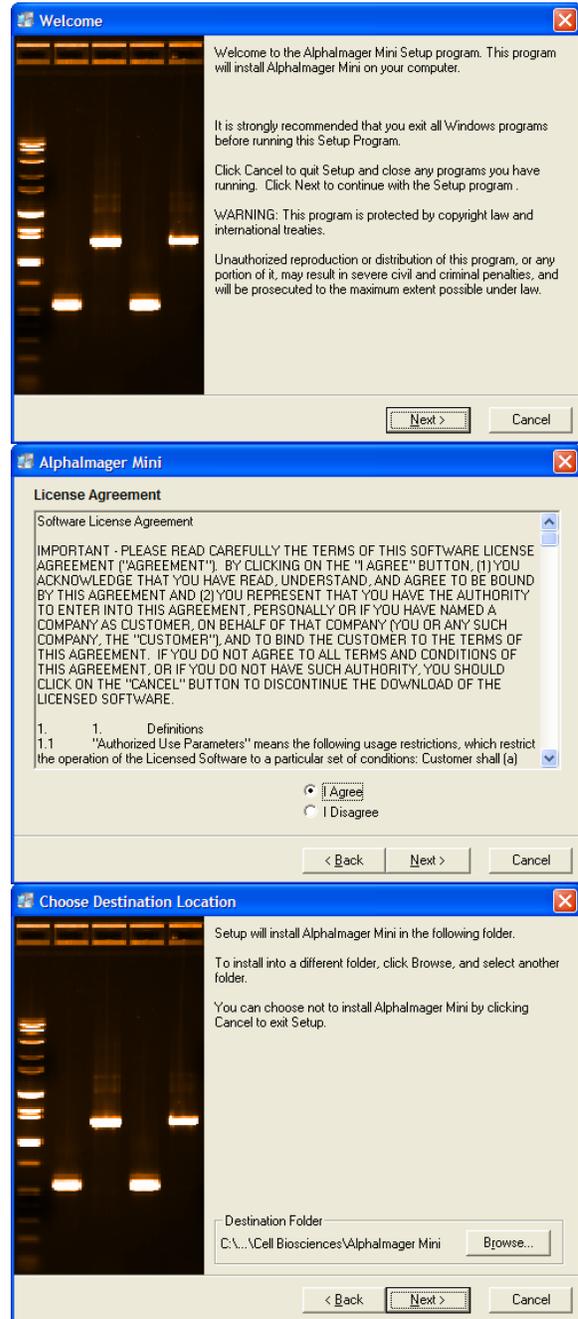
- Camera
- Custom Image-250 cabinet with mounted gasket, bracket
- Step-up ring with diopter lens and Orange filter pre-installed
- USB A to mini B cable
- Power adapter
- AlphaSnap Software
- ML-26 Dual Wavelength / Dual Intensity Transilluminator
- AlphaView Stand Alone Software with two licenses

## Software Installation of AlphaSnap

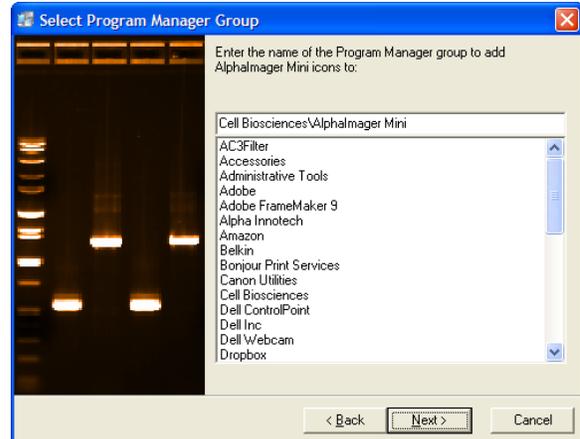
1. Close all other applications and insert the AlphaSnap CD. The Installation Wizard will start and the Welcome Screen will appear. Select **Next**.

2. Read the AlphaSnap Software License and select **I Agree**, and select **Next**.

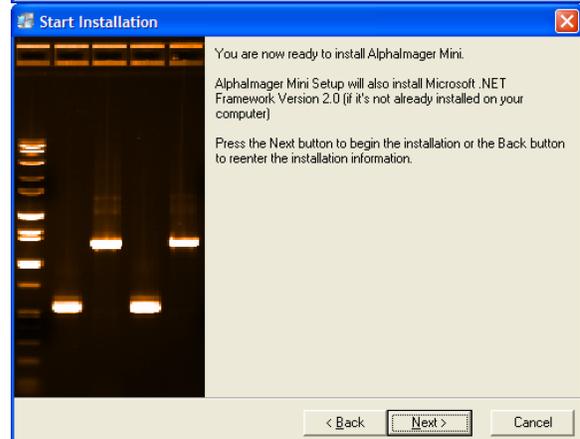
3. Designate the location for software installation. Default is **C:\ProgramFiles\Cell Biosciences\Alphamager Mini** or **C:\ProgramFiles\ProteinSimple\Alphamager Mini**. Select **Next**.



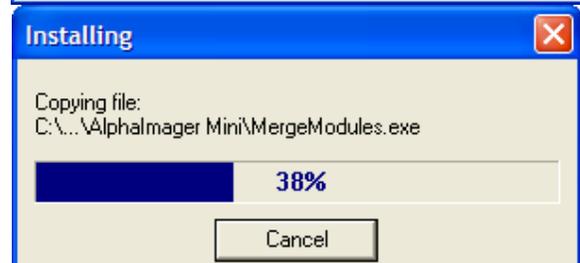
4. Name the Program Manager Group. Default is **Cell Biosciences\Alphalmager Mini** or **ProteinSimple\Alphalmager Mini**. Select **Next**.



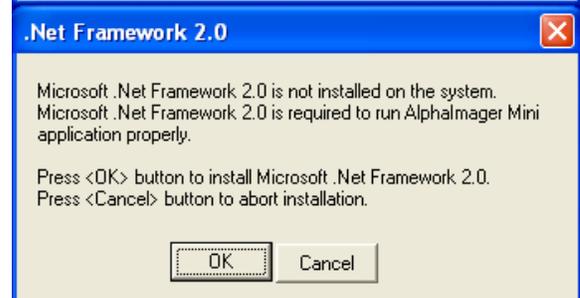
5. Select **Next** to start the installation process.



6. Installation in Progress



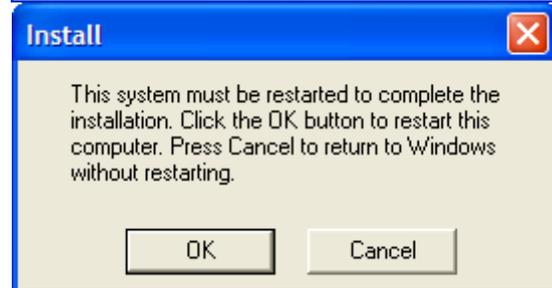
\*\*\* If your computer does not yet have Microsoft .Net platform, it will prompt you for installation prior to the completion of the software installation.



7. You will then get a confirmation screen stating that the software has been successfully installed. Select **Finish** to exit.

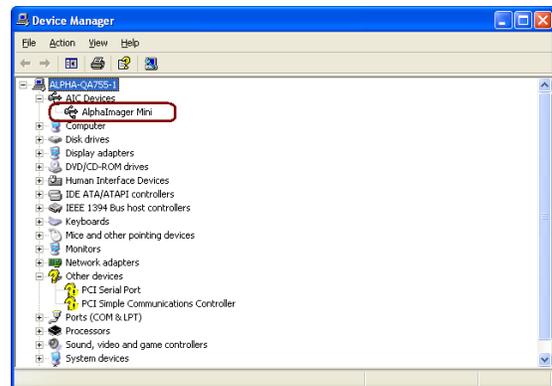


8. Select **OK** to restart your computer. It is a good practice to restart your computer after software installations or uninstallations.



9. After restart, you will find a desktop shortcut automatically created for you, labeled Alphamager Mini. You can double click on this to launch the program.

10. In Device Manager, you will now see the Alphamager Mini camera appear under AIC Devices.



Continue to page 6 for Hardware Installation.

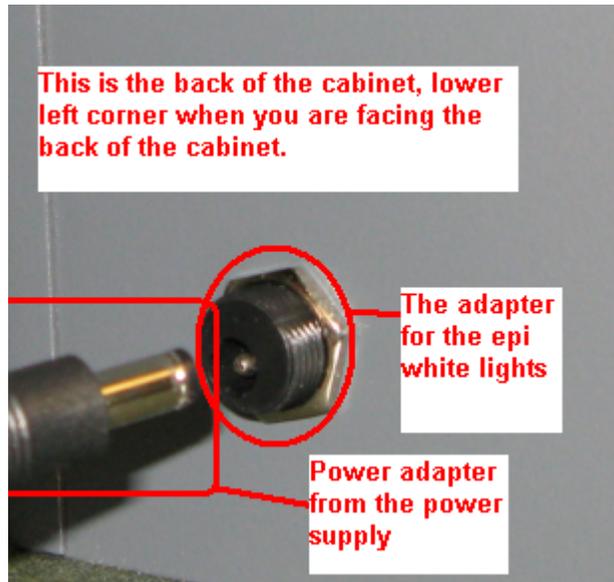
## Hardware Installation

1. Unpack the box.
2. Installation of the Camera onto the bracket:
  - a. The mounting plate is pre-mounted onto the bracket.
  - b. Simply screw the camera onto the mounting plate with the knob.

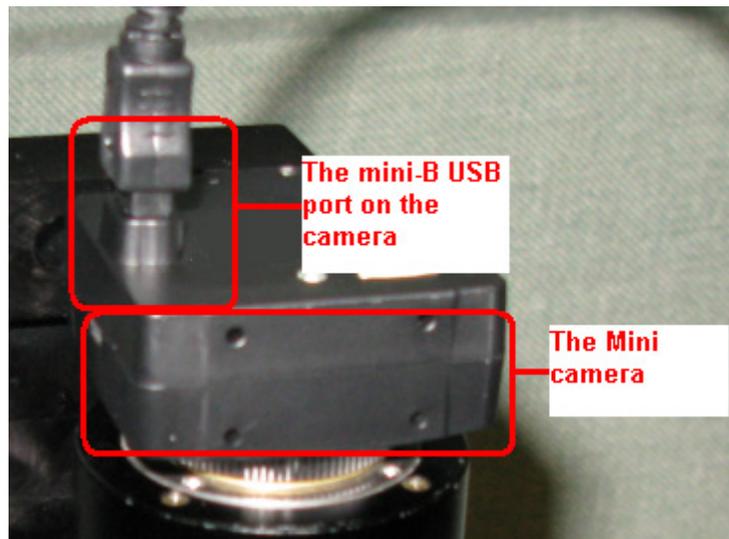


- c. The completed assembly will look like the above picture. Note that the camera mounting plate is flush with the bracket edge, and that the gasket is level with the top of the step up ring.

3. Installation of Cabinet Power Supply and USB cable:
  - a. Connect the universal power cord to the power supply and plug into a surge protector if available.
  - b. Insert the power adapter into the plug located in the back right hand corner of the cabinet (when facing the cabinet from the front).



- c. Connect one end of the USB cable to any USB port on the computer and the other end to the camera port located on the top of the camera casing (mini B connector).

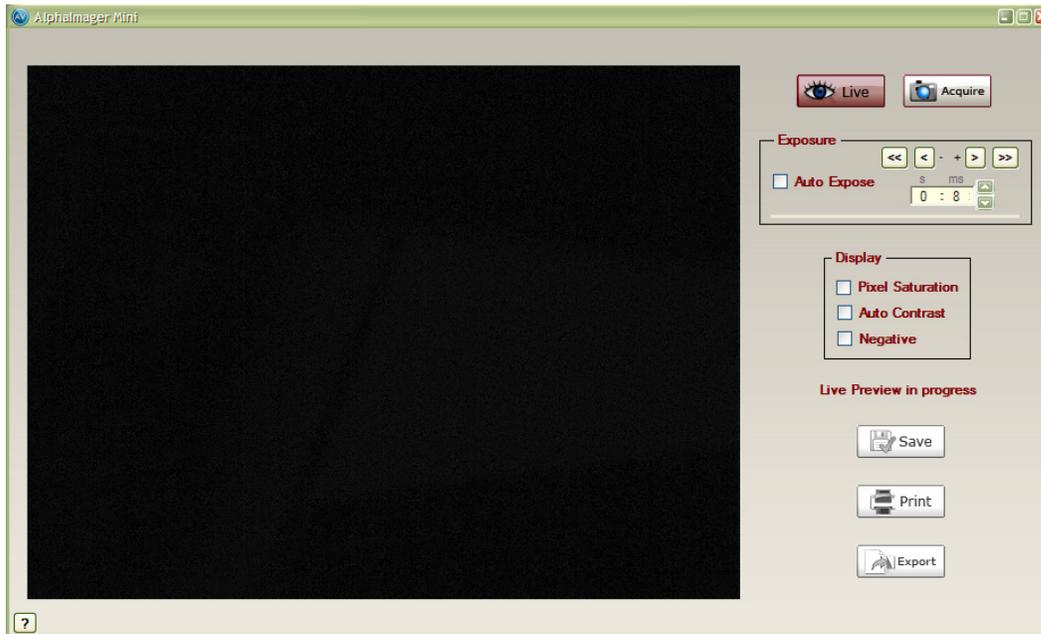


4. Capturing Images with Alphamager Mini and your Computer:
  - a) Launch the Alphamager Mini software from the desktop shortcut.
  - b) **Live** will automatically be active (the button will be a burgundy color) and you will have a live preview of your sample.
  - c) Turn on the white lights via the rocker switch. Adjust the aperture, zoom and focus on your lens. If you find the image too dim in live mode, try extending the exposure time to 30ms. Other options can be to select the Auto Contrast feature or opening the door to let ambient light in.
  - d) Deselect the Auto Contrast feature prior to acquiring an image.
  - e) Adjust the exposure time as desired for image capture, or check the "Auto Expose" box.
  - f) Click on **Acquire** to capture the image.

*NOTE: If you are specifying an exposure time manually, briefly select the Saturation feature to ensure your sample is not saturated (saturated pixels will appear red). Decrease exposure time until the red is gone. De-select Saturation, and acquire the image. This is especially important for downstream analysis. Saturated pixels will not yield accurate data.*

- g) Three options are now available to you:
  - (i) **Save** to a local or networked location
  - (ii) **Print** to a local or networked printer
- a. **Export** image into AlphaView Stand Alone Software. This will only work if your computer has the AlphaView Stand Alone Analysis Software.

## Software User Interface Description



### User Interface Buttons

- **Live:** Select to enable a live image. Deselect by clicking once more so it is grayed out.
- **Acquire:** Click to acquire an image after you have adjusted the settings to your liking.
- **Auto Expose:** Click to select Auto Expose feature as opposed to manually adjusting the exposure time.
- **Exposure Time:** Exposure time can be set anywhere between 8 ms – 42 seconds.
- **Pixel Saturation:** Check box to show saturation in your image.
- **Auto-contrast:** Check box to enhance auto-contrast in your image.
- **Negative:** Reverse the image so it appears as dark bands on a light background.
- **Save:** Clicking will bring up a dialog box that will allow you to save your Acquired Images in three formats (tiff, jpeg, bmp) anywhere on your computer or network if applicable.
- **Print:** Select button to print to any printer that is accessible by your computer.
- **Export:** (Optional) Export your Acquired Image to AlphaView software for analysis. This is available only if you purchased one of two available Analysis packages. You can purchase the AlphaView software separately at any time to enable this export feature. If you do not have AlphaView, this option will be grayed out. If you do have AlphaView, this will be enabled.
- **Question Mark:** This button located in the bottom left hand corner will bring up an Info box providing the name of the software, and the software version number.

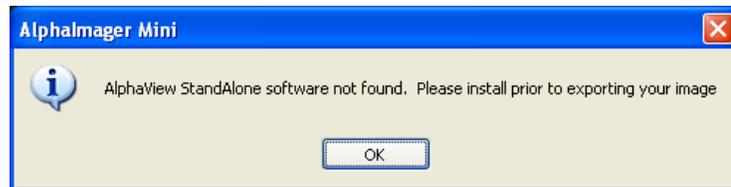
## Frequently Asked Questions

- **What kind of camera is in Alphamager® Mini?** A scientific grade, 1.3 Megapixel camera.
- **What's the field of view?** 21.8 × 15 cm is the maximum area, and the minimum is 3.6 × 2.7 cm.
- **Does the UV box turn off for safety?** No, the user will need to shut the UV box off after use. If the user needs to do preparative work with the UV illumination on, they can simply open the door for easy access, providing they have their UV-protective gear. Don't forget safety glasses!
- **Can we image gels stained with dyes other than EtBr?** Yes, you should be able to image any dye that is UV 302 / 365 excitable. The Orange filter is standard; optional green, red and blue filters can be purchased from ProteinSimple.
- **We typically use SYBR Green, can we image that in Alphamager Mini?** Yes. In addition to the Ethidium Bromide filter which comes standard with **Alphamager Mini**, optional filters (including a Green filter which is appropriate for SYBR Green) are available for purchase from ProteinSimple. Please refer to the dye chart for a list of all excitable UV dyes along with the appropriate ProteinSimple emission filter.
- **Can we image protein gels?** Yes, users can choose to purchase the optional white light table or white light conversion screen, which can be used for imaging visible dyes. The white light table can be purchased separately and paired with the unit if the customer will only be imaging white light applications. Alternately, customers can purchase the white light conversion screen and place it over the UV transilluminator.
- **Can we image a silver-stained gel?** Yes, the white light table and white light conversion screen are both suitable choices for imaging a silver-stained gel. The white light conversion screen will require a UV transilluminator, while the white light table can be used by itself.
- **What file format is my image saved in?** Users have options to save as a tiff, jpeg, or bmp file. Tiff files are recommended for easy transfer to ProteinSimple's AlphaView StandAlone Analysis software. Jpegs are recommended for other third party software such as Microsoft Office, Powerpoint.

- **Can I use my own UV transilluminator instead of buying another one?** Yes. The bottom of the cabinet frame is 10.6 x 13.4 inches. The outer dimensions of the UV transilluminator need to be a little smaller than these dimensions for proper seating of the cabinet. If the UV transilluminator has a larger surface area than the outer dimensions of the cabinet, simply place the unit on top of the transilluminator.
- **Can we analysis our images in the AlphaSnap Software?** No, the AlphaSnap Software is designed for image acquisition only. The images can be directly exported into AlphaView Stand Alone Analysis Software via the Export button. If you do not have a copy of the Analysis Software, a dialog box will pop up indicating such. If you do have the Analysis software, the computer will prompt you to save your image before it exports the image into AlphaView Stand Alone.
- **Does the system come standard with AlphaView Stand Alone Analysis Software?** No, this software is optional and can be purchased separately or together with your unit / system package via the Analysis packages.
- **What software comes with Alphamager Mini?** The Mini comes with AlphaSnap Software. This software interface was designed with simplicity in mind, providing the most crucial features for quality imaging, and removing all the excess. AlphaSnap is all about simple image acquisition.
- **Does the software have the ability to auto-focus or auto-expose?** No and yes. The focusing is done via the manual zoom lens, but the software does have an auto-expose feature, allowing users the convenience of not worrying about exposure time.
- **What wavelength is the UV transilluminator?** The UV transilluminator that we offer is a dual wavelength, dual intensity. Customers can choose from 302nm or 365nm UV illumination, in addition to high (100%) or low (70%) intensity.
- **How do I change the UV bulbs?** Screws are located on the outside of the UV cover. Removal of these screws will allow the cover to be taken off. The UV light bulbs are now accessible, and can be easily swapped out.
- **Is there a UV safety switch?** No. Since **Alphamager Mini** can be sold without a UV transilluminator, there is no safety switch. We have placed a prominent UV label right by the door handle as a reminder to users to check if the UV lights are off prior to opening the door.

## Troubleshooting Tips

- *The Image window is black*
  - Check to make sure the Live button is burgundy. If it is grayed out, click on the button to select Live Mode.
- *The image is too dim under Live Mode for focusing*
  - Extend the exposure time to 30ms, and see if this helps enough. Other alternatives are to select the Auto Contrast feature
- *Auto Expose was selected for an image. When Live is selected again, the software is running slow.*
  - The Live Mode is still trying to run off the Auto Expose mode. De-select the Auto Expose box, and change the exposure time back to 8ms (the default), or a length of time suitable for live viewing.
- *You cannot export your image.*
  - When you click on export, your computer will search for AlphaView Stand Alone Analysis Software. If your computer does not have the software, a pop-up window will direct you to install the software. If you need to purchase a copy, please contact your local rep.



- *Image acquired with the white-light table appears tinted*
  - Check to make sure you only have the +2 diopter lens on the end of the lens and that you have removed any unnecessary filter. Interference filters can be removed by turning the filter ring counter-clockwise.

## Ordering Info: Accessories and Spare Parts

Please contact Customer Service for current pricing.

<i>Description</i>	<i>Part Number</i>
<b>Accessories</b>	
White Light Table (110v)	TW-200-110K
White Light Table (220v)	TW-200-220K
White Light Conversion Screen	72-14067-00
ML-26 UV Transilluminator	76-12995-00
Green Filter	91-13840-00
Blue Filter	HB-500
Red Filter	SYPRO-500
AlphaView Stand Alone Analysis S/W (2 licenses)	91-13896-00
Digital Thermal Printer	91-12999-00
High Contrast Thermal Paper	P-150A
High Gloss Thermal Paper	P-200H
AIC Gel Cutter	83-13999-00
Clear Sample Tray (15x15cm)	90-14062-00
<b>Spare Parts</b>	
302nm (UV-B) bulbs (5 total in UV trans)	75-12315-00
365nm (UV-A) bulbs (6 total in UV trans)	75-12292-00
Orange Filter	EBR-500K
+2 Diopter Lens, 58mm	74-12066-00
Power Adapter, AC	22-12033-00
USB Cable	23-14204-00
Bracket	90-13915-00
Gasket	90-13916-00
Camera Mounting Plate	90-14049-00
Camera and mounting plate screws	41-11452-05
Bracket screws (4)	41-11449-04
Bracket screw washers (4)	41-11519-06