SmartView Pro 2300/2400
Imager System

Instruction Manual

Catalogue No. UVCI-2300
UVCI-2400

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service@majorsci.com

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major science

Packing List

<table>
<tr><td colspan="2">Standard Package</td></tr>
<tr><td>UVCI-2300</td><td>UVCI-2400</td></tr>
<tr><td>SmartView Pro 2300 Imager system
-1 x 2.0MP CCD camera and lens
-1 x 312(302)nm UV transilluminator
-1 x Epi White Light Module
-1 x UV viewing window</td><td>SmartView Pro 2400 Imager system
-1 x 2.0MP CCD camera and lens
-1 x 470nm blue transilluminator
-1 x Epi White Light Module
-1 x Blue viewing window</td></tr>
<tr><td colspan="2">-1 x Power Cord
-1 x Instruction Manual
-1 x SmartView 1D Analyze Software CD
-1 x Stylus Pen
-1 x Close up lens</td></tr>
<tr><td colspan="2">Optional Package</td></tr>
<tr><td>UVCI-2300</td><td>UVCI-2400</td></tr>
<tr><td>White Light Plate
- 1 x White Light Plate
- 4 x M3 screws</td><td rowspan="2">White Light Plate
- 1 x White Light Plate
- 4 x M3 screws</td></tr>
<tr><td>Blue Light Plate
- 1 x Blue Light Plate
- 4 x M3 screws</td></tr>
</table>

Signed by:

Date:

Major Science is liable for all missing or damaged parts / accessories within 7 days after customer received this instrument package. Please contact Major Science immediately regarding this issue. If no response within such time period from consignee party, that will be consignee party's whole responsibility.

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Warning

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.

Notice: (1) Changes or modifications not expressly approved by the party responsible for could void the use is authority to operate the equipment.

Major Science SmartView Pro Imager System series has been tested and found to comply with the limits for the CE regulation. Also, SmartView Pro Imager System series is RoHS compliant to deliver confident product which meets the environmental directive. These limits are designed to provide reasonable protection against harmful interference when the instrument series is operated in a commercial environment. This instrument series used together with power supply unit generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this instrument series in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. It is strongly recommended for the user to read the following points carefully before operating this equipment.

1. Read and follow the manual instructions carefully.
2. Do not alter the equipment. Failure to follow these directions could result in personal and/or laboratory hazards, as well as invalidate equipment warranty.
3. Use a properly grounded electrical outlet with correct voltage and current handling capacity.
4. Disconnect from power supply before maintenance and servicing. Refer servicing to qualified personnel.
5. Never use this instrument series without having the safety cover correctly in position.
6. Do not use the unit if there is any sign of damage to the external tank or cover. Replace damaged parts.
7. Do not use in the presence of flammable or combustible material; fire or explosion may result. This device contains components which may ignite such materials.
8. Refer maintenance and servicing to qualified personnel.
9. Ensure that the system is connected to electrical service according to local and national electrical codes. Failure to make a proper connection may create fire or shock hazard.
10. Use appropriate materials and operate correctly to avoid possible hazards of explosion, implosion or release of toxic or flammable gases arising from overheated materials.
11. The unit shall be operated only by qualified personnel.

Safety Information

Use high level of precaution against any electrical device. Before connecting the electrical supply, check to see if the supply voltage is within the range stated at the rating label, and see to it that the device be seated firmly. Place the unit in a safe and dry location; it must NOT touch the surrounding. Follow the safety precautions for chemicals / dangerous materials. If needed, please contact qualified service representative or service@majorsci.com

Environmental Conditions

Ensure the instrument is installed and operated strictly in the following conditions:

1. Indoor use only
2. ≤95% RH (non-condensing)
3. 75 kPa – 106 kPa
4. Altitude must not exceed 2000 meters
5. Ambient to 40°C operating temperature
6. Pollution degree: 2
7. Mains supply voltage fluctuations up to ±10% of the normal voltage

Avoiding Electrical Shock

Follow the guidelines below to ensure safe operation of the unit.

SmartView Pro Imager System series has been designed to use with shielded wires thus minimizing any potential shock hazard to the user. Major Science recommends against the use of unshielded wires.

To avoid electrical shock:

1. In the event of solution accidentally spilling into the instrument, it must be dried out for a period of time (at least 2 hours) and restored to NORMAL CONDITION before each operation.
2. Never connect or disconnect wires loading from the power jacks when the red indicator light of power switch is on.
3. WAIT at least 5 seconds after stopping a run before handling output leads or any connected apparatus.
4. ALWAYS make sure that your hands, work area, and instruments are **clean** and **dry** before making any connections or operating the power supply.
5. ONLY connect the power cord to a properly grounded AC outlet.

Avoiding Damage to the Instrument

1. Do not attempt to operate the device if damage is suspected.

2. Protect this unit from physical damage, corrosive agents and extreme temperatures (direct sunlight, etc.).
3. For proper ventilation and safety concerns, keep at least 10 cm of space behind the instrument, and at least 5 cm of space on each side.
4. Use high level of precaution against the damages on the unit.
5. Do not operate the unit out of environmental conditions addressed above.
6. Prior to applying any cleaning or decontamination methods other than manufacturer's recommendation, users should check with the manufacturer's instruction to see if the proposed method will damage the equipment.

Equipment Operation

Follow the guidelines below to ensure safe operation of the unit:

1. Check the displayed figures to see if the unit is functioning correctly before using this unit.
2. NEVER access dangerous chemicals or other materials to prevent possible hazard of explosion and damage.
3. A temporary conductivity caused by condensation might occur even though this series is rated Pollution Degree 2 in accordance with IEC 664.

To Disposal UV tubes

The UV tubes contain mercury; please dispose of the tubes in accordance with local laws. It is important to handle the waste tubes with care to ensure public health and the environment. For further information about recycle waste tubes, please see www.lamprecycle.org.

Equipment Handling

Follow the guidelines below to ensure safe move of the device:

1. Carry the device at least two people.
2. Do not over than knuckle height when you moving the device.
3. Move the device by cart and assist the device do not drop.

Symbols

The symbols used on SmartView Pro 2300 Imager System are explained below.

Indicates an area where a potential shock hazard may exist. Consult the manual to avoid possible personal injury or instrument damage.

Indicate a warning of UV radiation.

While using the UV Transilluminator, be sure the operating personnel is properly protected.

Indicates disposal instruction.

DO NOT discards this unit into a municipal trash bin when this unit has reached the end of its lifetime. To ensure utmost protection of the global environment and minimize pollution, please recycle this unit.

Potential Risk and Preventive Measure

1. Risk assessment table

Potential Risk / Frequency	Frequent	Likely	Possible	Rare	Unlikely
Bruise			✓		
Pinch			✓		
Slash					✓
UV radiation dangerous					✓
Power cord plug wrong				✓	

2. Preventative measures of risk

Potential Risk	**Preventive measures**
Bruise	Do not put the machine near the table edge. Move the machine by cart.
Pinch	Do not put your hands on the open door.
Slash	Prevent hard impact on the acrylic panel.
UV radiation dangerous	Do not open the darkroom door while you turn on the UV light.
Power cord plug wrong	Observe correct adapter plug.

1 Introduction

1.1 Overview

SmartView Pro Imager System is the next generation of gel documentation instrument. It is specifically designed for ease of use for any lab experiment with gel imaging. SmartView Pro Imager System is packed with 2.0 megapixels high sensitivity and resolution scientific grade camera for outstanding imaging quality. The system provides you convenience such as 312(302)nm pull out UV transilluminator for easy gel cutting(enclosed with UVCI-2300; pull out blue transilluminator with UVCI-2400), pre-focused lens for one touch image capture, and user friendly software interface. The expendable accessories such as epi-blue module and White Light Plate are also available for environment safe nucleic acid stains or western blot analysis.

1.2 Feature

- Standalone gel doc system with high-quality monochrome CCD
- 2.0 megapixels CCD resolution
- Intuitive 10.4” interface with color touch-screen
- Zoom-able lens for proper picture size
- Movable platform for gel excision with optional UV-protection shield
- Automatic UV shut off mechanism (UVCI-2300 only)
- Safety door switch
- Optional trans white light and blue light plates (UVCI-2300 only)
- Exclusively designed for EtBr-free operation gel doc system (UVCI-2400 only)
- Easy to use software for image analysis
- Optional trans white light plates

1.3 Components Guide

Front View

Rear View **Side View**

2 Technical Specification

Model Name	**UVCI-2300**	**UVCI-2400**
Total Weight	Approx. 32.34 kg	Approx. 25.4 kg
Unit Dimension (W × D × H)	400× 425 × 900 mm	410 × 405 × 915 mm
Display	10" TFT display	
Touch Sceen	Image capture	
Download Images	USB or web	
Image Storage	Built-in 14G Memory and USB flash	
Saved Image Format	BMP/JPEG/PNG/TIFF, 8bit ; PNG/TIFF, 16 bit	
Interface	Ethernet Port 10/100/1000Mb Ethernet port	
	USB flash drive: Front x 1, Back x 2(all three ports)	
	Supports Mitsubishi thermal-printer P95DW	
Material	Painted iron metal , ABS front door	
Rated Voltage	100-240V~, 50/60Hz, 2A	
Safety Regulation	CE	
Stylus Pen	Yes	
PC Software	Analysis (including process、editor、analyze、summary step) 軟體要綁 License	
CCD Camera		
Image Sensor	1/1.8" Interline UXGA monochrome progressive CCD (Sony ICX274AL)	
Effective Picture Elements	1628 (H) × 1236 (V)	
Resolution	1600 (H) × 1200 (V) (full scanning)	
Video Output Format	RAW 8 bit / 10 bit / 12 bit	
Pixels Size (H × V)	4.4 × 4.4 µm	
Max. Frame Rate	15 fps	
Interface	USB2.0 connector	
Grayscale	12 bit, 0 – 4095 gray levels	

Manual Zoom Lens	
Operation Range Iris	Manual control, F1.2-F16C
Operation Range Focus	Manual control, 1m - Inf.
Operation Range Zoom	Manual control, 12.5mm - 75mm
Filter size	M55mm
Close-up Lens	
+1 close up	
Filter (for camera) ★*Ordered Separately*	
• Optical EtBr filter	Orange Amber filter
• Optical SYBR green filter	
• Orange Amber filter	
Note: *For use with UV light as activation source, optical filters should be used.* *For use with blue light as activation source, amber filters should be used.*	
Darkroom	
- Built-in Drawer Type UV transilluminator 312(302) nm - Light source: 8W × 6 tubes	- Built in Blue light Table
- Built in LED white light, Light source: 1W x 6 lamps	
- UV Safety door switch	N/A
- Maximum field of view 21 × 26cm	
- (optional) Blue Light Plate	N/A
- (optional) White Light Plate	
Viewing Window	
- Built-in UV protection viewing window	
- Built-in viewing window amber filter 580nm	
PC Minimum Hardware Requirements	
Operating Systems	Windows® 7 SP1 / Windows® Vista SP1 / Windows® XP SP3 / Windows® 8/ Windows® 10
Processor	1.8GHz Pentium® IV or equivalent AMD Athlon® processor
Storage	1 GB available HD space
Display	1280 × 800 resolutions
Memory	1 GB
Media	CD-ROM drive

3 Installation Instructions

SmartView Pro Imager System comes with epi white light and trans-UV (UVCI-2300) as standard. Optional blue light plate or white light plate is offered for expansion to offer higher flexibility. There are few procedures to install the optional devices: place the unit on a sturdy, level safe and dry place, then follow the instruction below for installation.

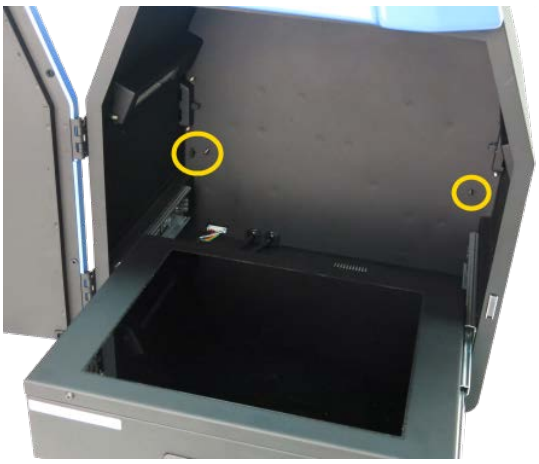
Note: Please skip ahead to section 3.3 if no optional lighting modules are included with your purchase.

Tool required: A regular screwdriver (not provided)

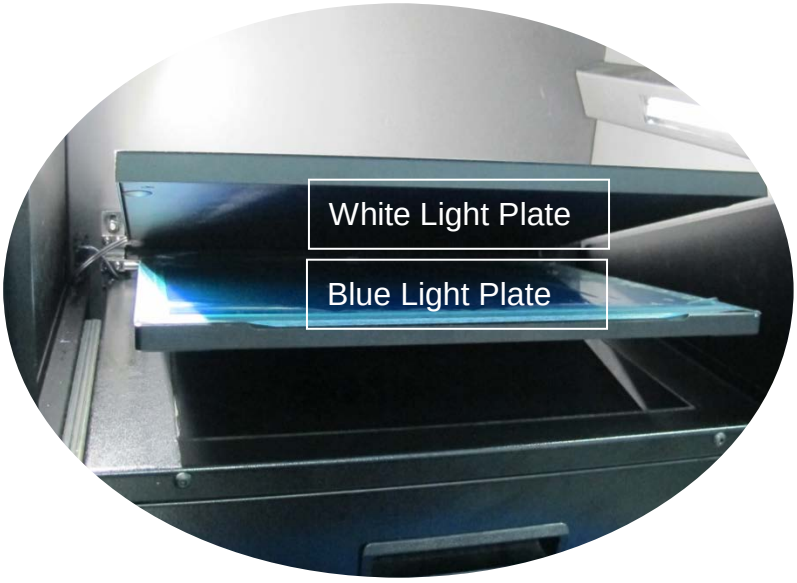
3.1 Installing Blue Light Plate (Optional)

Step1 Get the Blue Light Plate ready.

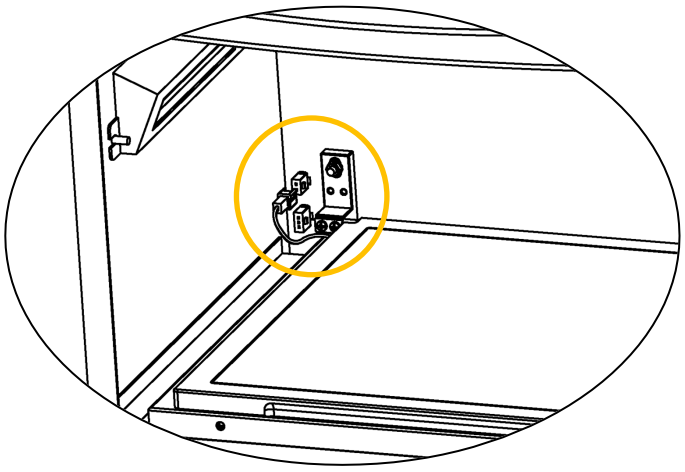
Step2 Open the darkroom door.

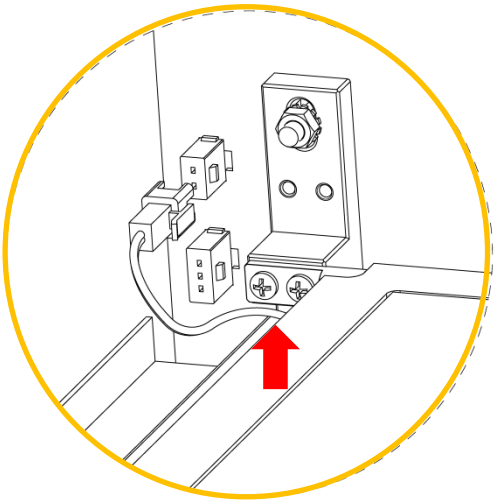


**The Blue Light Plate will be installed under the White Light Plate.*



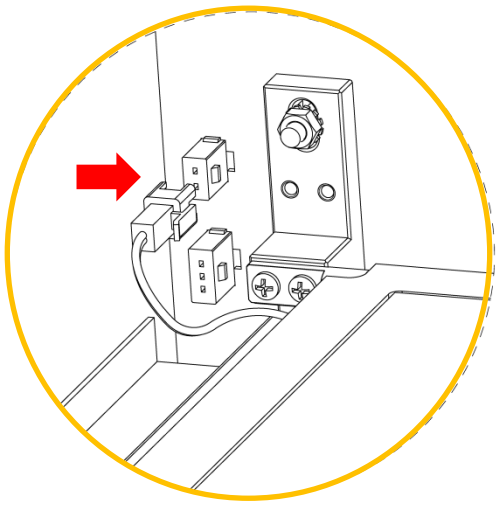
Step3 Fasten the Blue Light Plate onto device with a regular screwdriver and four screws.



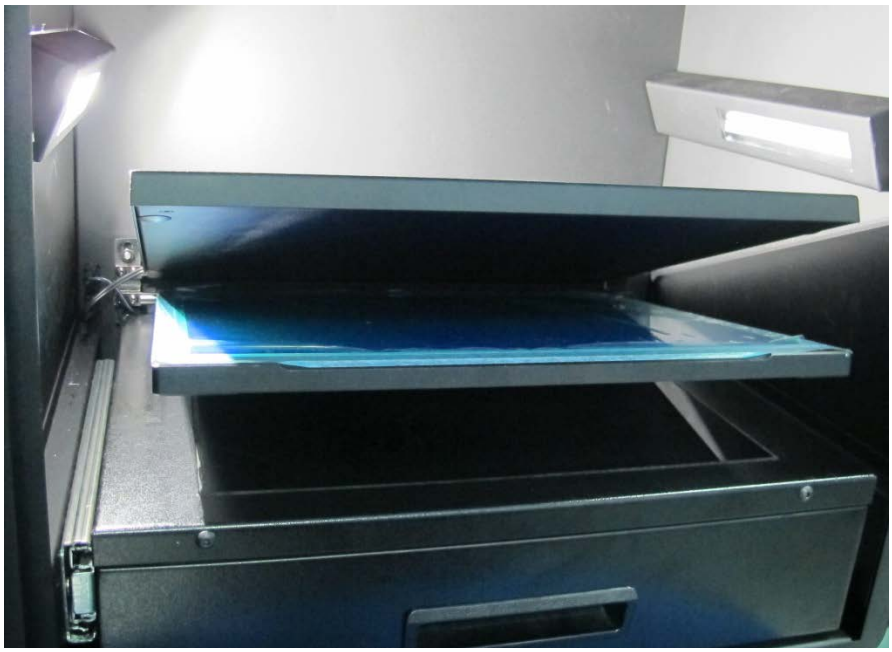


Step4 Connect the Blue Light Plate cable to darkroom inner socket.

NOTICE: Blue Light Plate cable connects to the upper socket.



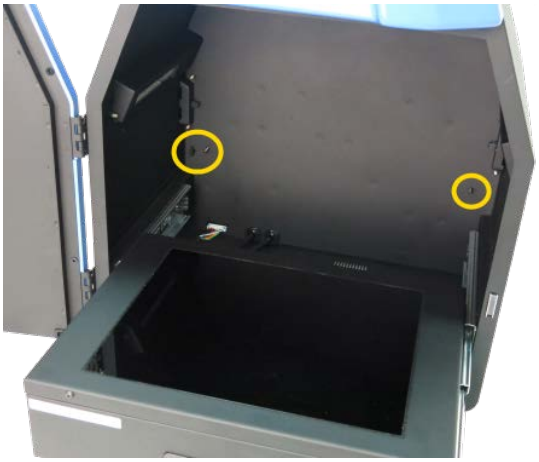
Finished



3.2 Installing White Light Plate (Optional)

Step1 Get the White Light Plate ready.

Step2 Open the darkroom door.

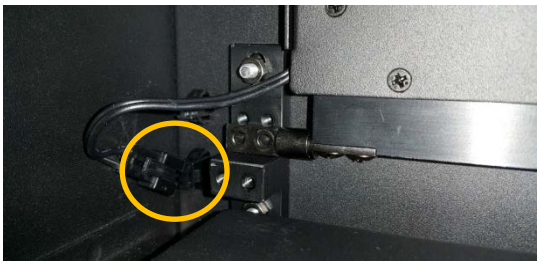


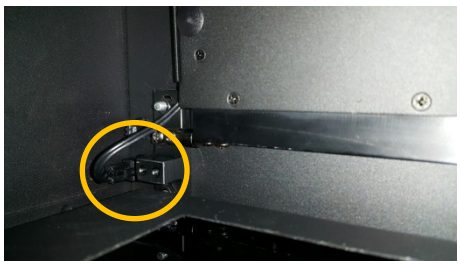
Place the White Light Plate as the picture below. Align four screw holes (in yellow circles).

Step3 Fasten the White Light Plate onto device with a regular screwdriver and four screws.

Step4 Connect the White Light Plate cable to darkroom inner socket.

NOTICE: White Light Plate cable connects to the lower socket.





Finished

Note: If necessary, please manually adjust the aperture to have the best performance while working with White Light Table.

Aperture ring

F1.2 - Close

3.3 Installing SmartView 1D Analysis Software

***To install the program, please log in as an administrator on the computer.**
Please refer to the Web link to change the account of computer:

a. For Windows® XP

http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/windows_security_runas.mspx?mfr=true

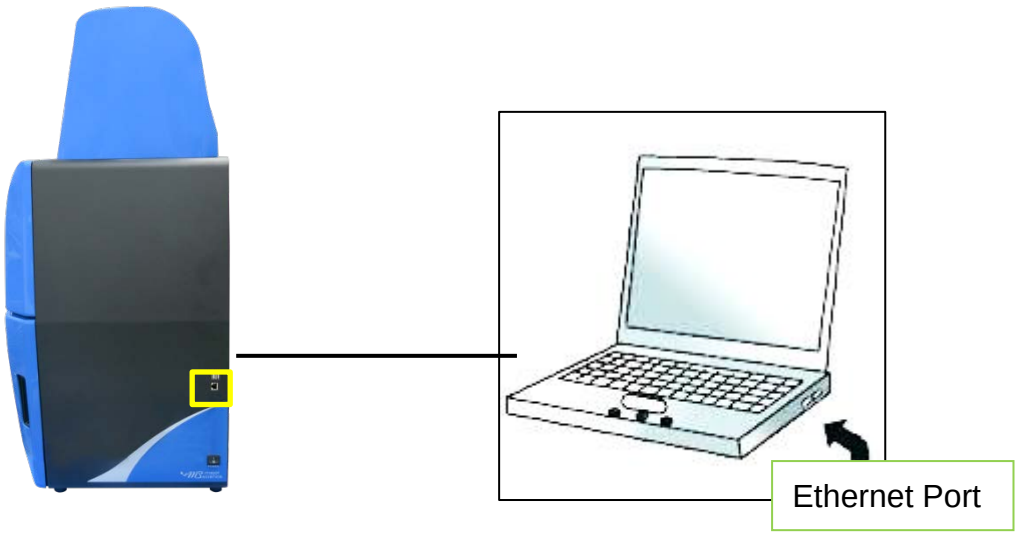
b. For Windows® 7

http://windows.microsoft.com/en-hk/windows7/installing-programs-frequently-asked-questions

c. For Windows® 8 and Windows® Vista

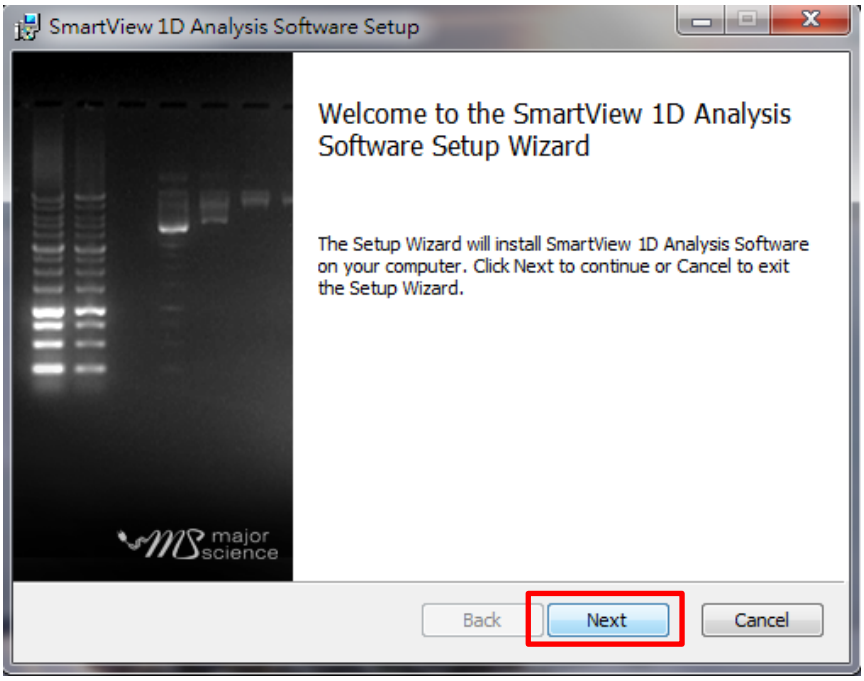
1. Go to the Search and type "Change User Account Settings" or Go to Control Panel > User Accounts and Family Safety > User Accounts.
2. Do one of the following:
   - To turn off UAC, move the slider to the Never notify position, and then click OK. If you're prompted for an administrator password or confirmation, type the password or provide confirmation. You will need to restart your computer for UAC to be turned off.
   - To turn on UAC, move the slider to choose when you want to be notified, and then click OK. If you're prompted for an administrator password or confirmation, type the password or provide confirmation

Step1 Turn on the SmartView Pro Imager System and connect to Ethernet port of personal device via the Ethernet port with an Ethernet cord.

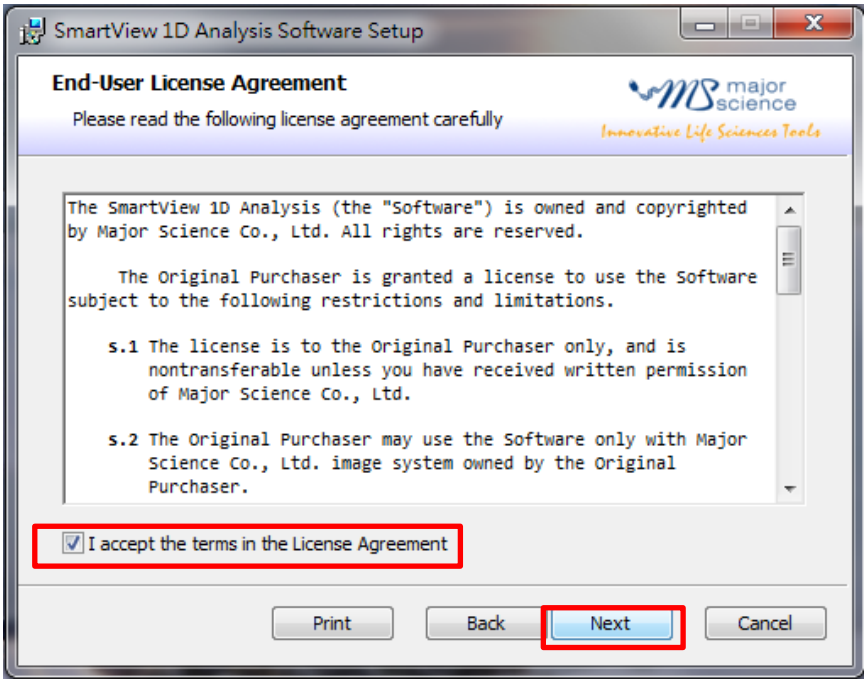


Step2 Activate SmartView 1D Analysis Software installation program.

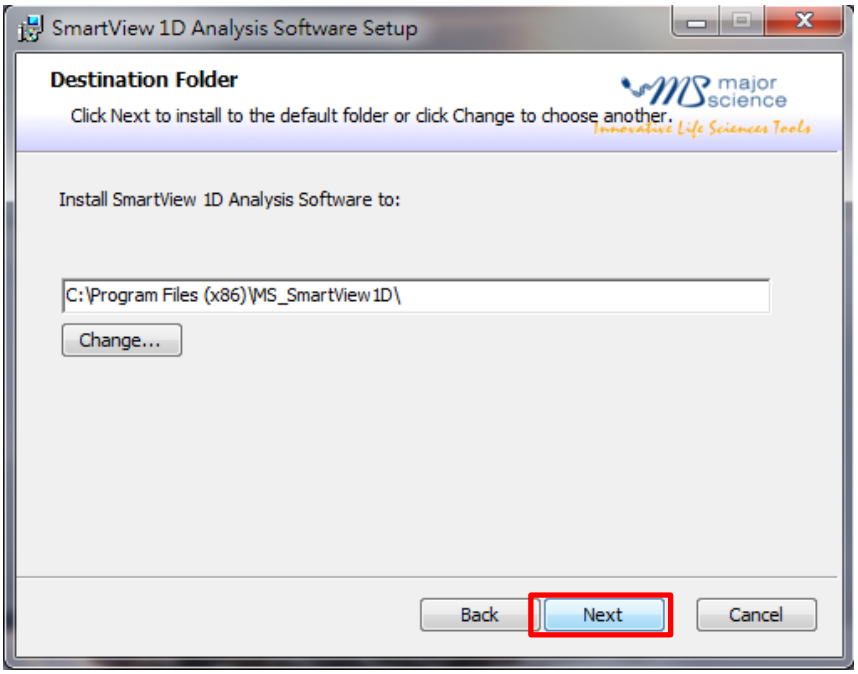
Step3 Click ”Next” to proceed.



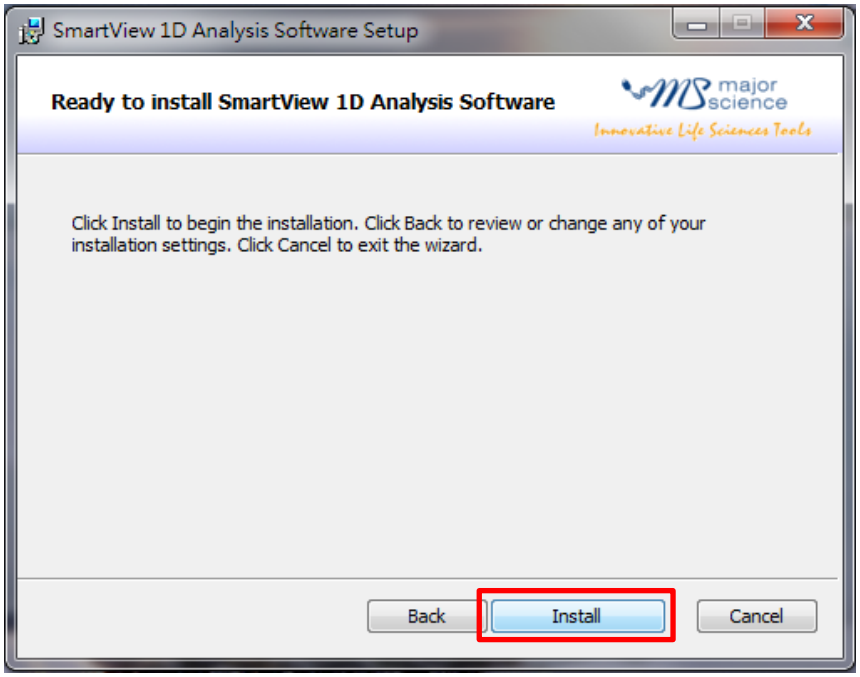
Step4 Accept the license agreement then press “Next” to proceed.



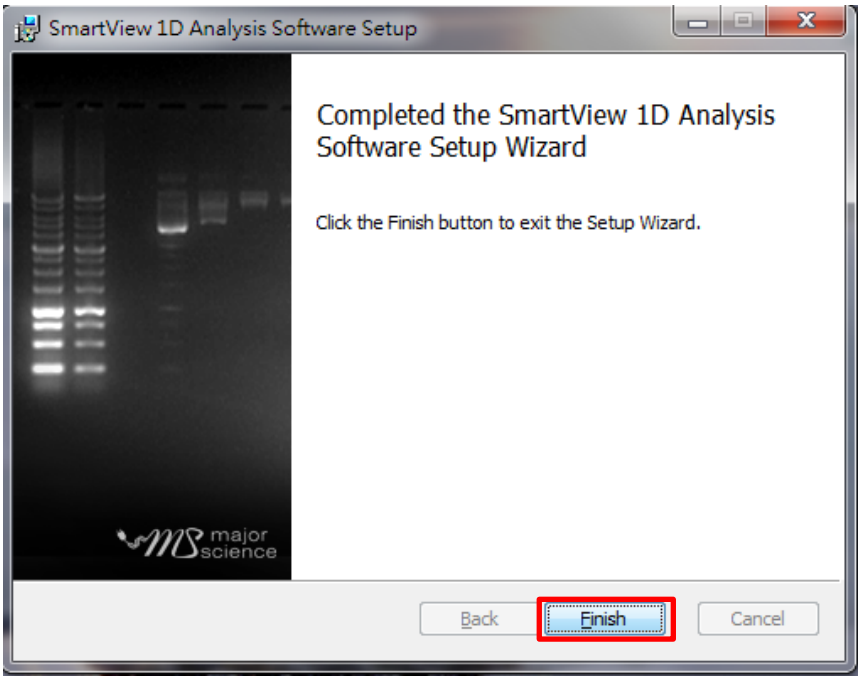
Step5 Save this program in your specifying location then press “Next” to proceed.



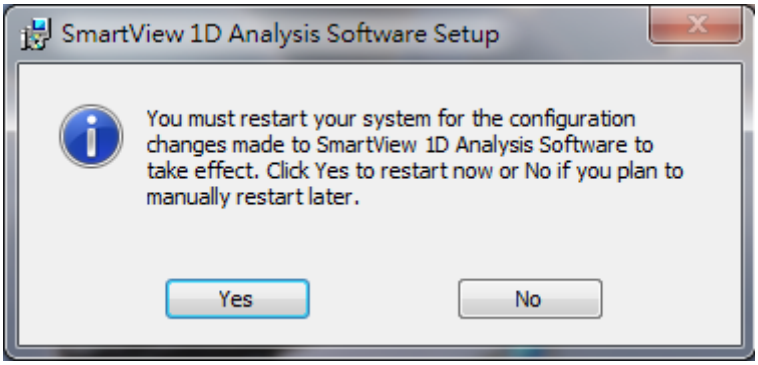
Step6 Click “Install” to begin the installation.



Step7 Press "Finish" to complete the program installation.

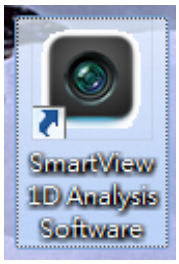


Step8 A dialog will pop up to ask you to restart your system, press “Yes” to restart now or “No” if you plan to manually restart later.



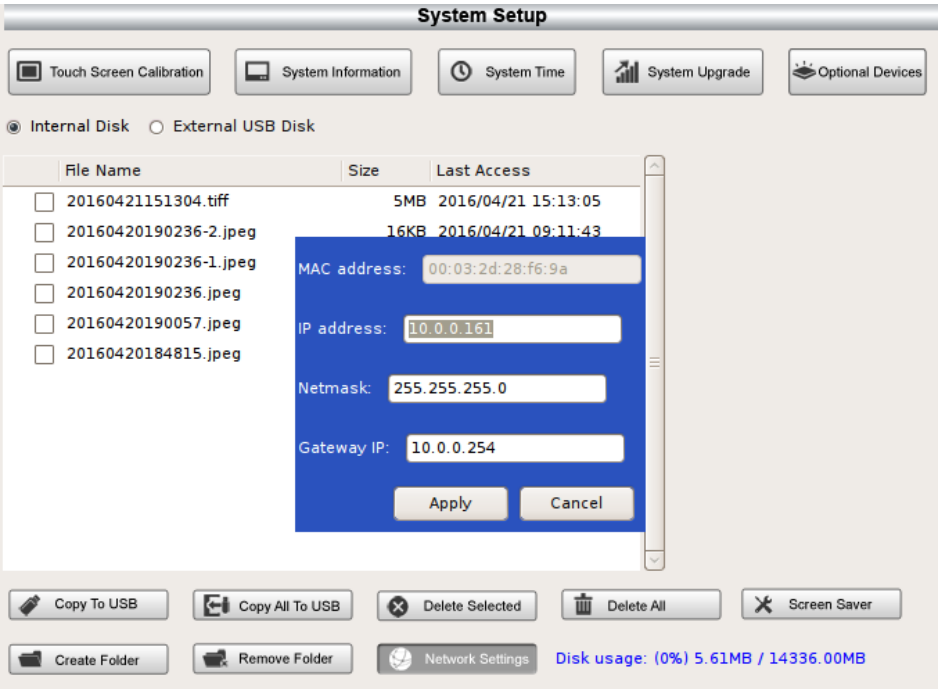
Note: Please restart the computer when you have all needed software installed.

Step9 The SmartView 1D Analysis Software icon will be shown on desktop.

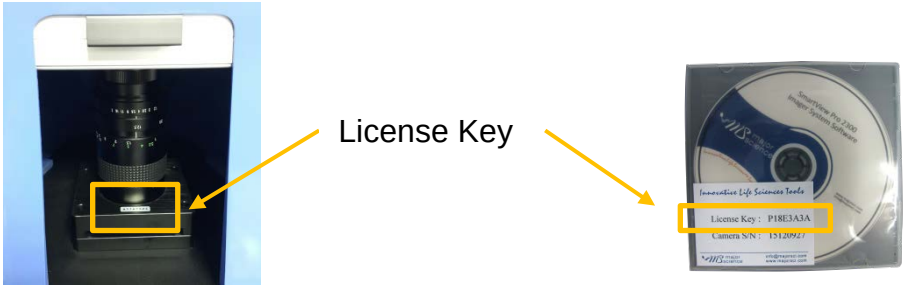


Step10 Click to open SmartView 1D Analysis Software. For the first installation, you will need to enter the corresponding IP address of your device and license key. Press “OK” to finish the final step of installation and you may start using your SmartView 1D Analysis Software.

NOTICE: You may find your IP address by checking your UVCI-2300/2400 interface> System Setup> IP address.



Find your license key as following instruction.



Note: The license key must match the camera serial number.

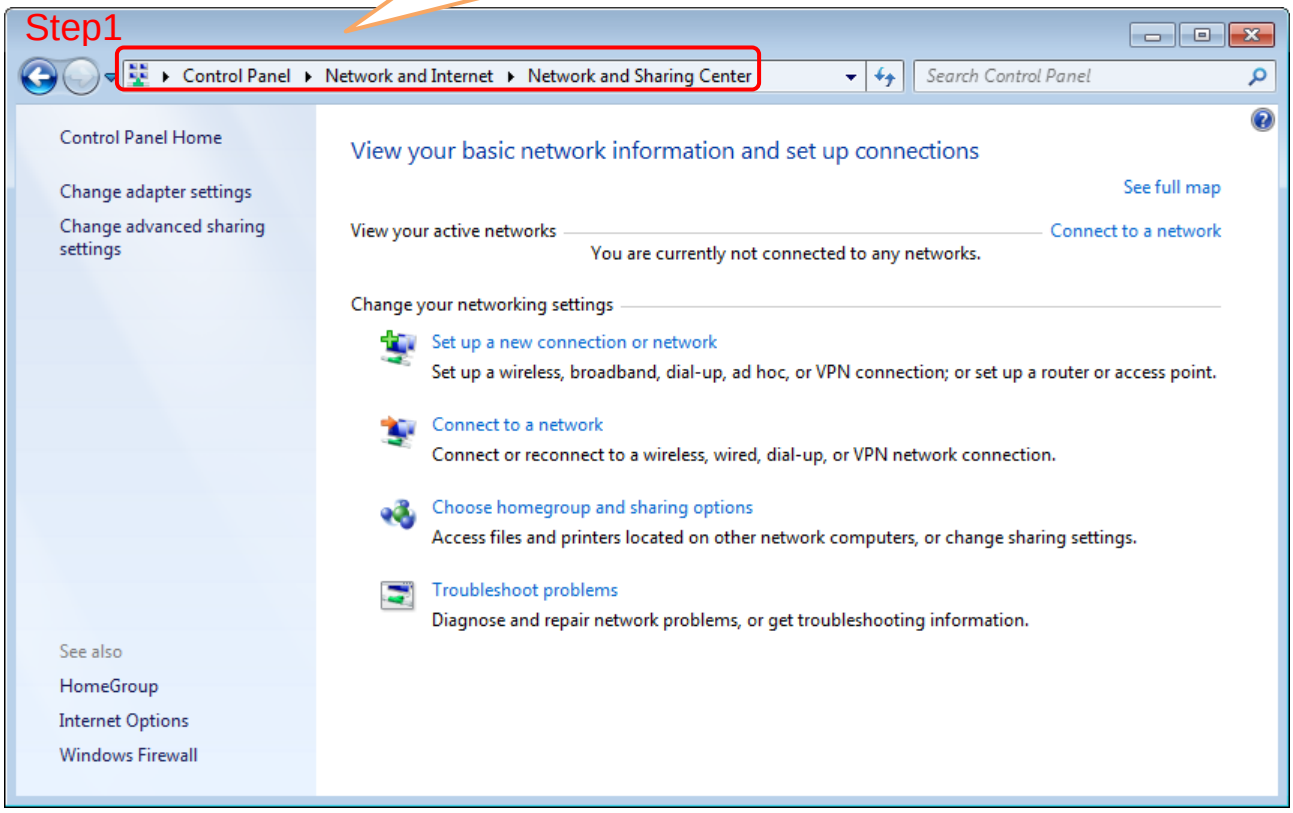
Note: Do not unplug the Ethernet cord of SmartView Pro Imager System when you operate the analysis software. If you need to disconnect the SmartView Pro Imager System with your computer, please close the analysis software first.

3.3.1 IP Address Setup

In some cases, user might not be able to connect the remote control when user completes all the installation. So we suggest user check the IP address of user's computer. Follow the instructions below.

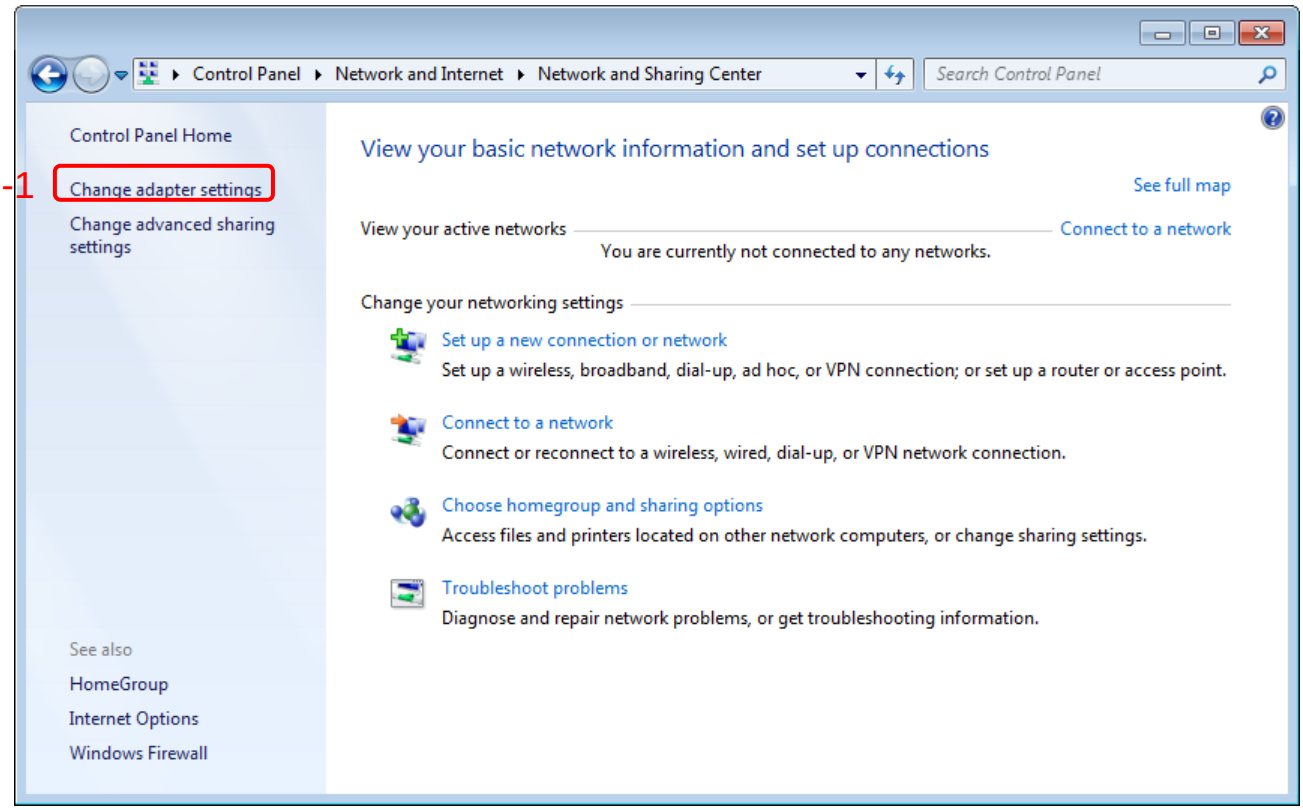
Step1 Open "Control Panel" on the computer. Enter "Network and Internet"; then "Network and Sharing Center". (The following pictures are captured under Microsoft Windows7 operating system.)

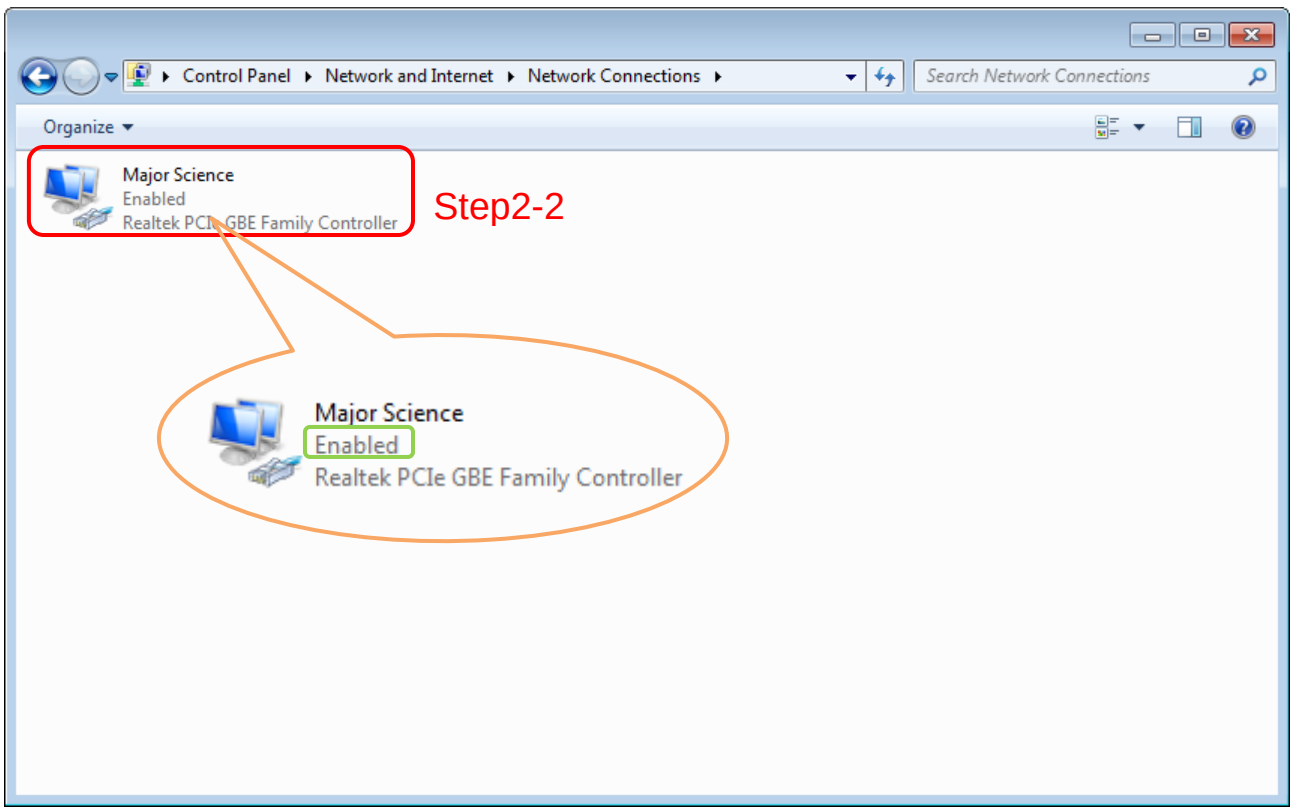
Start > Control Panel > Network and Internet > Network and Sharing



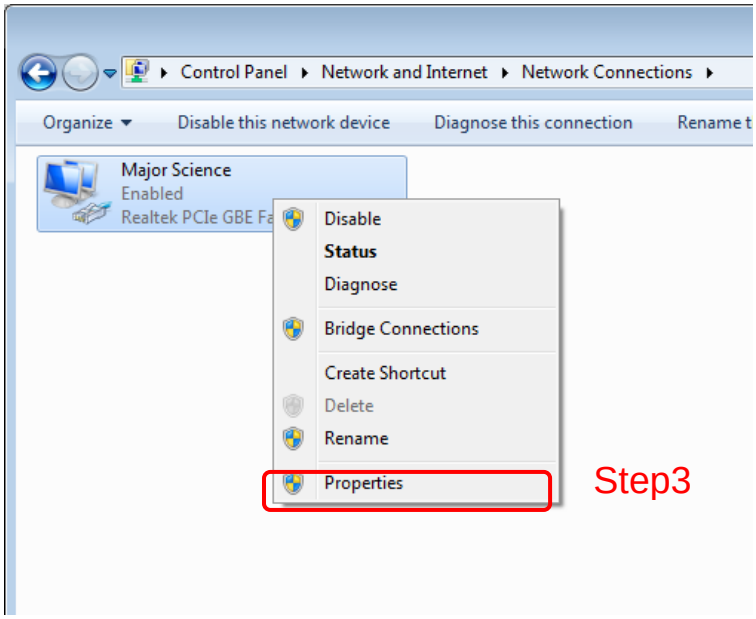
Step2. Click on “Change adapter settings”. User can see the connected LAN (Local Area Network). “Enabled” means the network that user’s computer is using, and the network is connected.

Step2-1

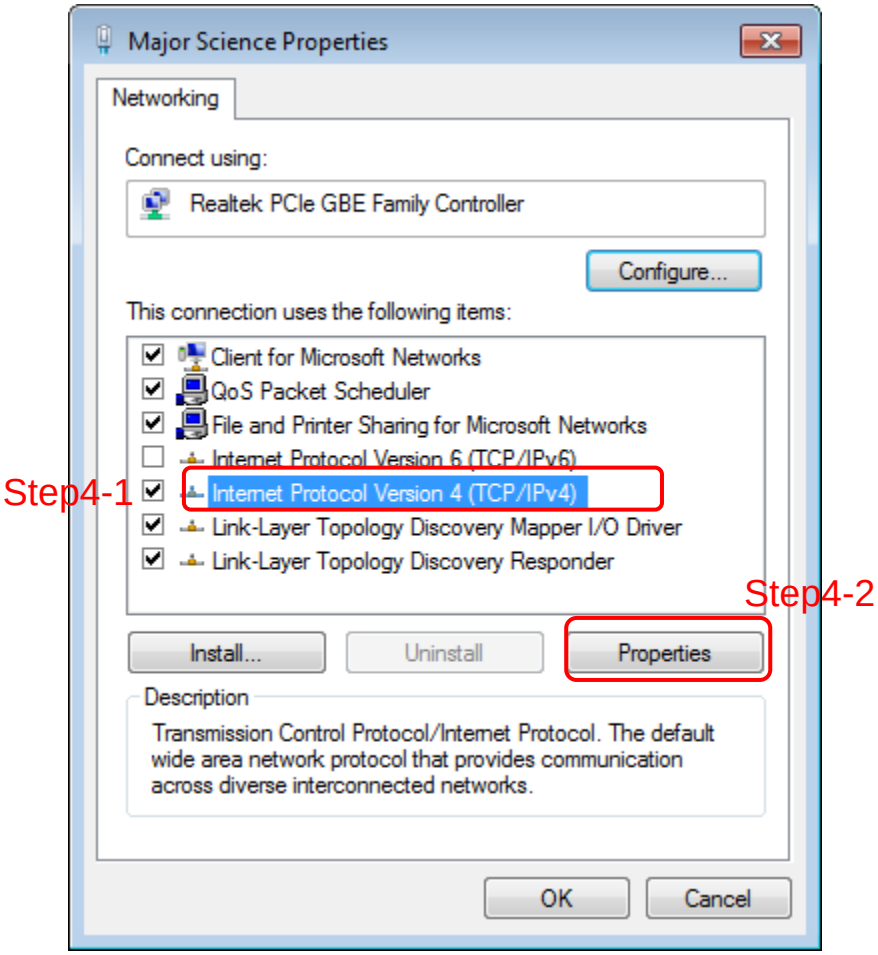




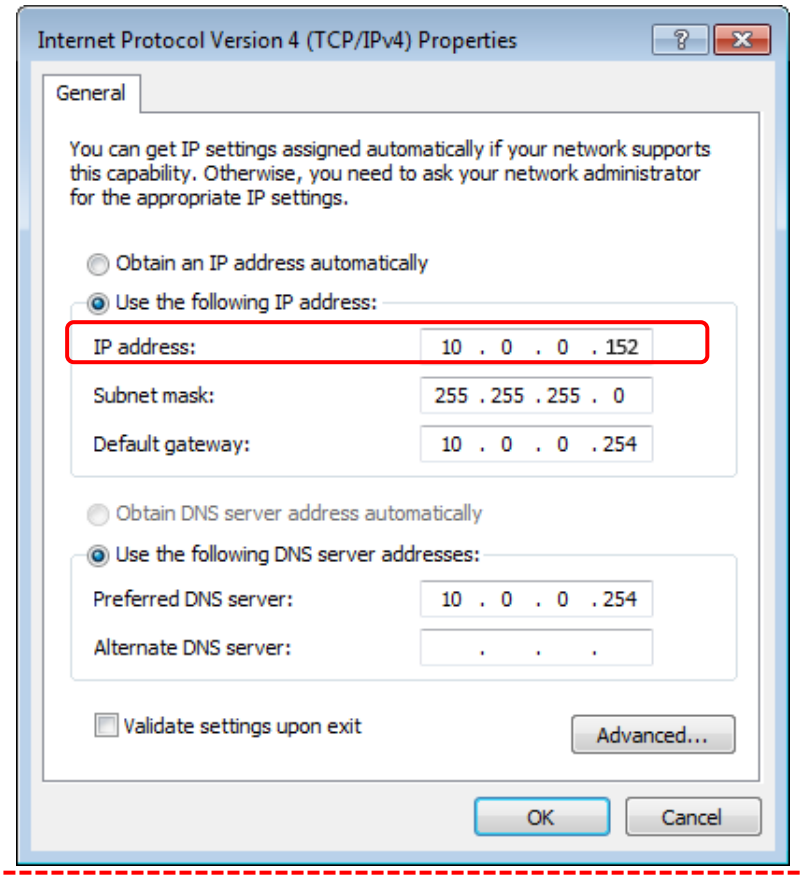
Step3. Right click on the connected network, and select “Properties”. The Network properties dialogue will pop up on the screen.



Step4. Select “Internet Protocol Version 4 (TCP/IPv4)”; then click “Properties”

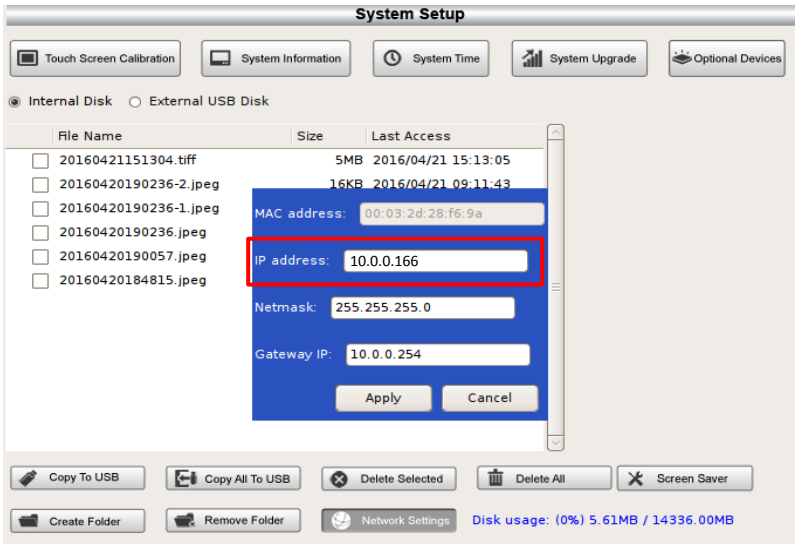


Step5. Check the IP address of user's computer to see if user's computer IP conflicts with the IP address of UVCI-2300/2400 or other computers. To set up a new IP address, the first 3 numbers should be the same as the first 3 numbers of user's network IP address. All user need is to change the last number, which has to be different from the IP address of user's UVCI-2300/2400 and other computer.

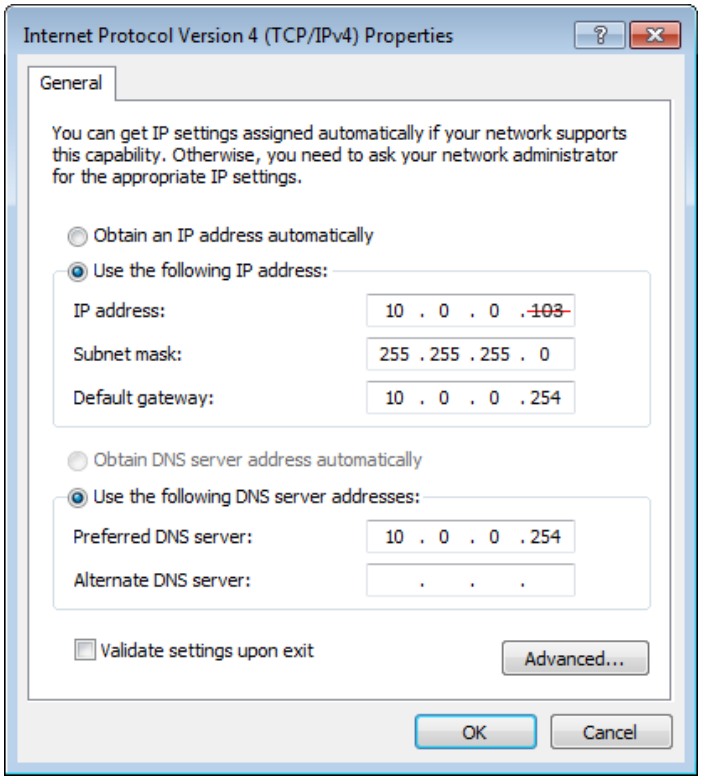


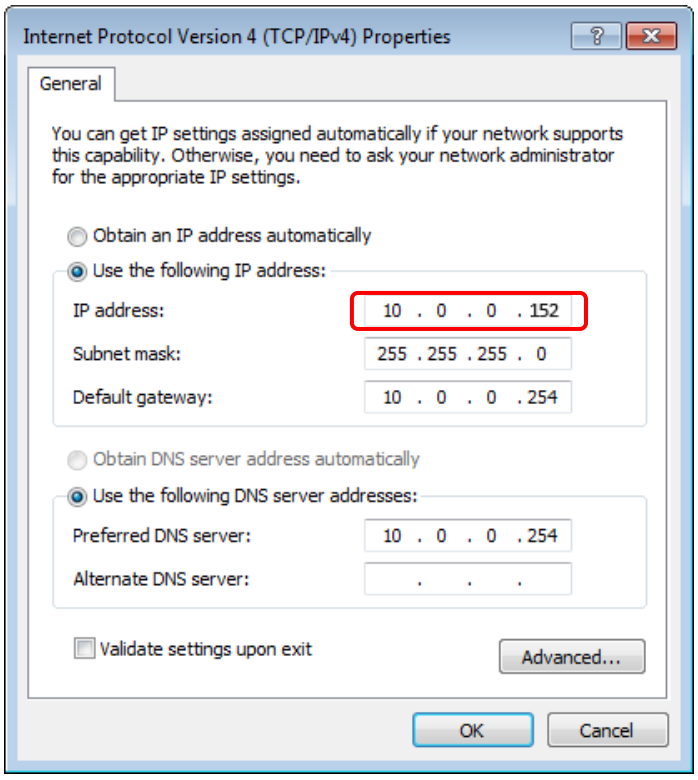
Note:

You may find your IP address by checking your UVCI-2300/2400 interface> System Setup> IP address.



For example, if the IP address of the conflicted IP address is “10.0.0.103”, and the UVCI-2300/2400 IP address is “10.0.0.166”. Then the IP address of user’s computer should be set up like “10.0.0.152”. User can use the numbers ranging from 1 to 254 except 103 (the conflicted IP address) and 166 (the UVCI-2300/2400 IP address).

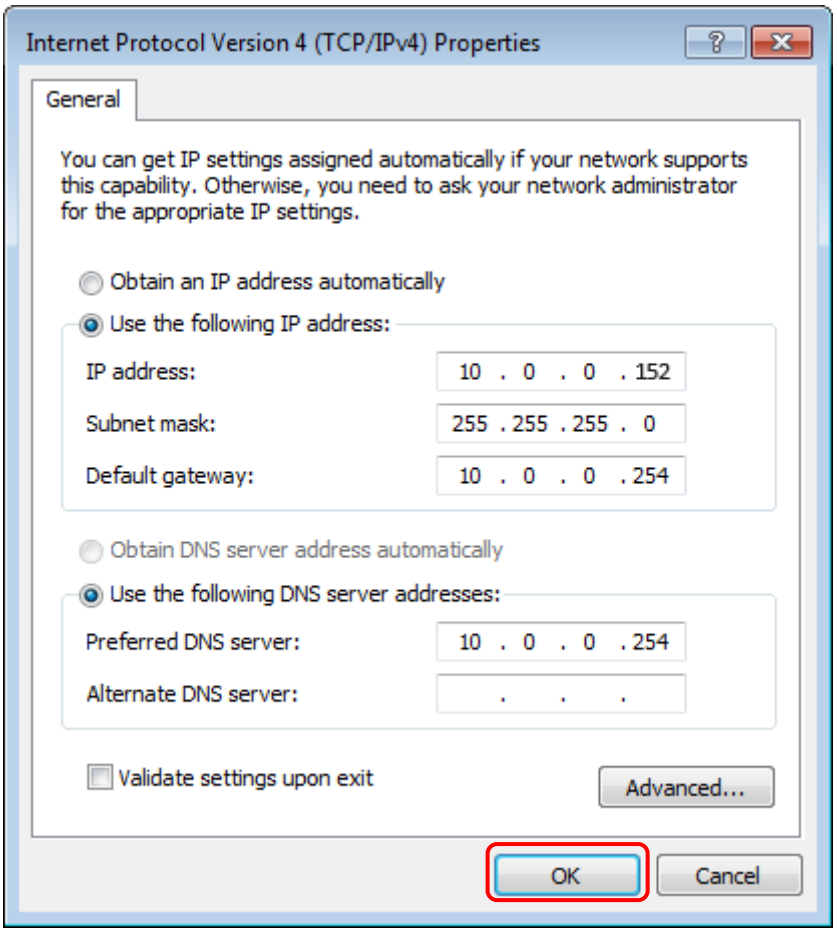




Hint:

There are odds that the new IP address which user sets might conflict with other’s network. Try another number to set up the IP address.

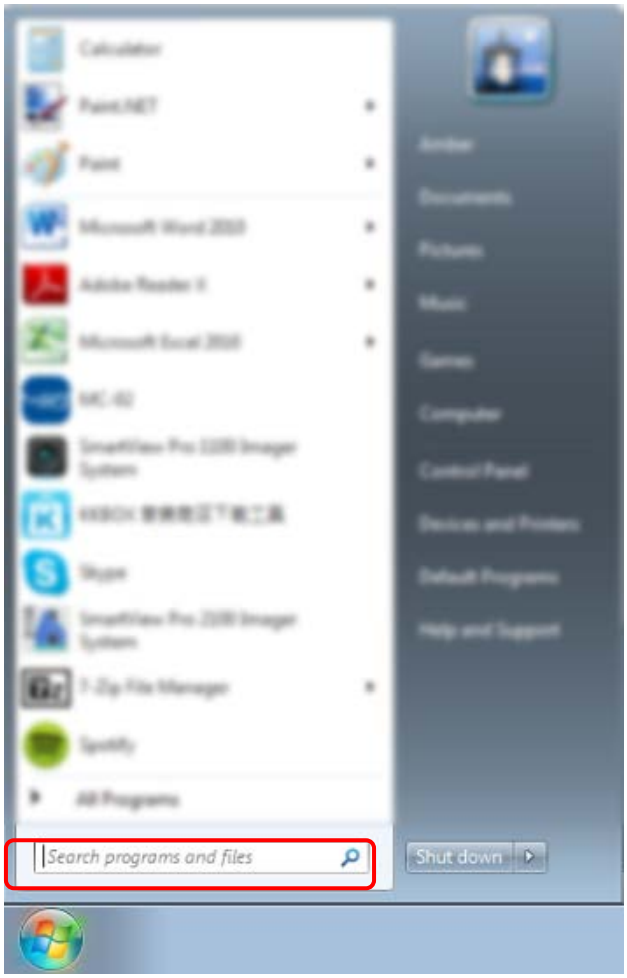
Step6. After finishing the setting, press “OK” to confirm the settings and exit the dialogue.

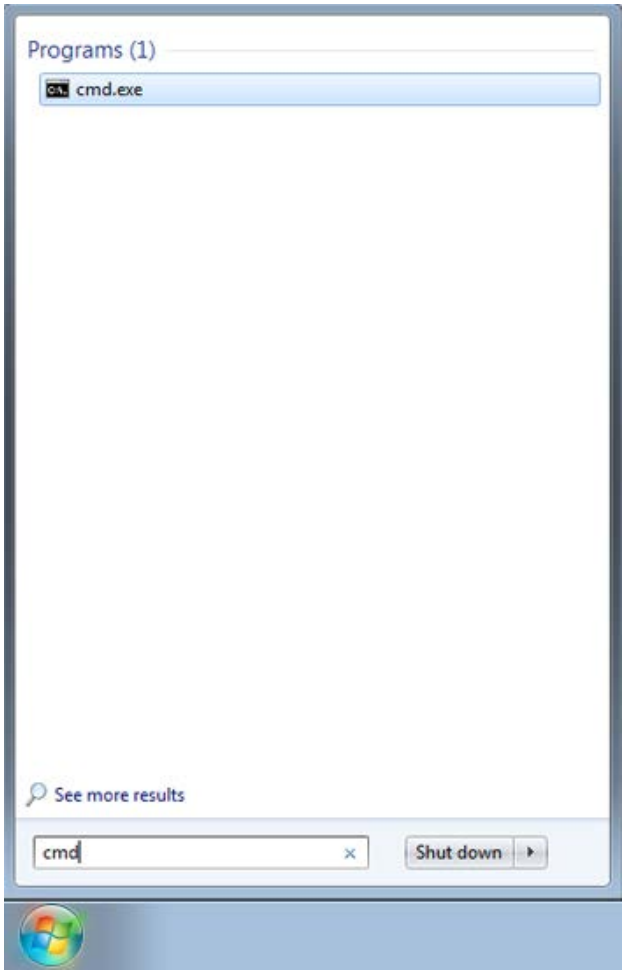


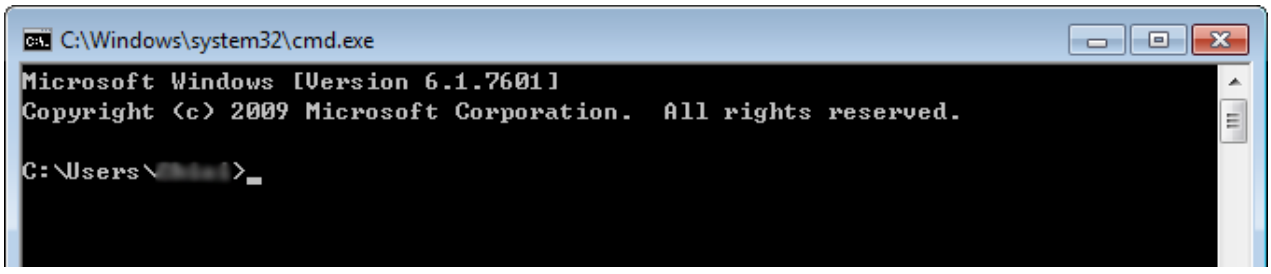
3.3.2 IP Address Confirm

To confirm the new IP address. Follow the next step.

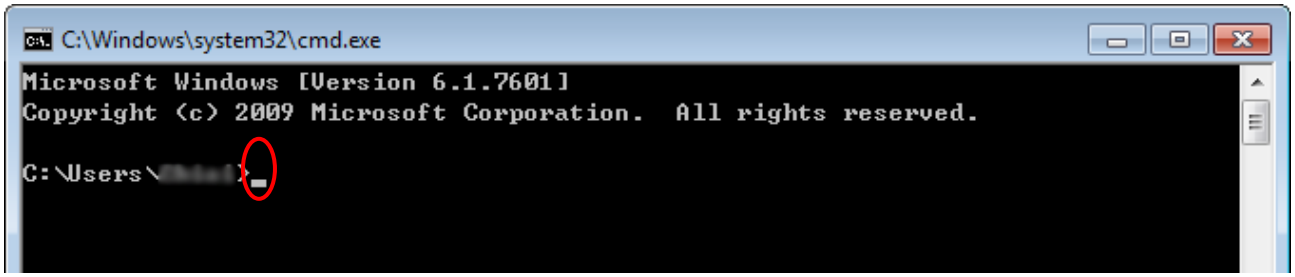
Step7. Click on the “Start” button. Type “cmd” in the search bar and press “Enter” key to execute the program. MS-DOS will pop up on the screen.

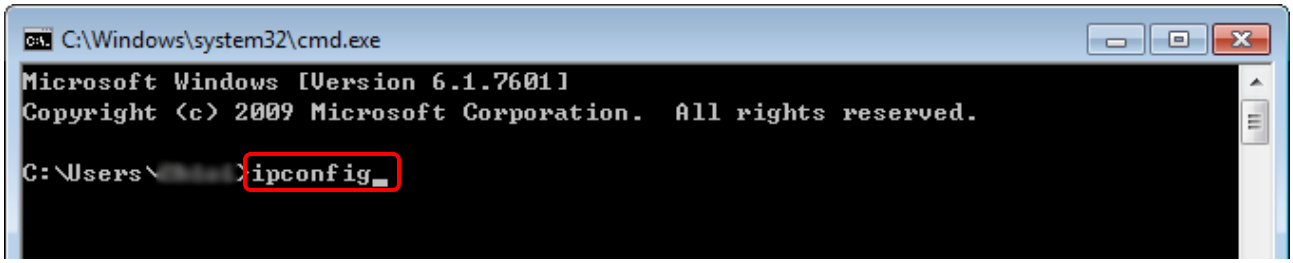




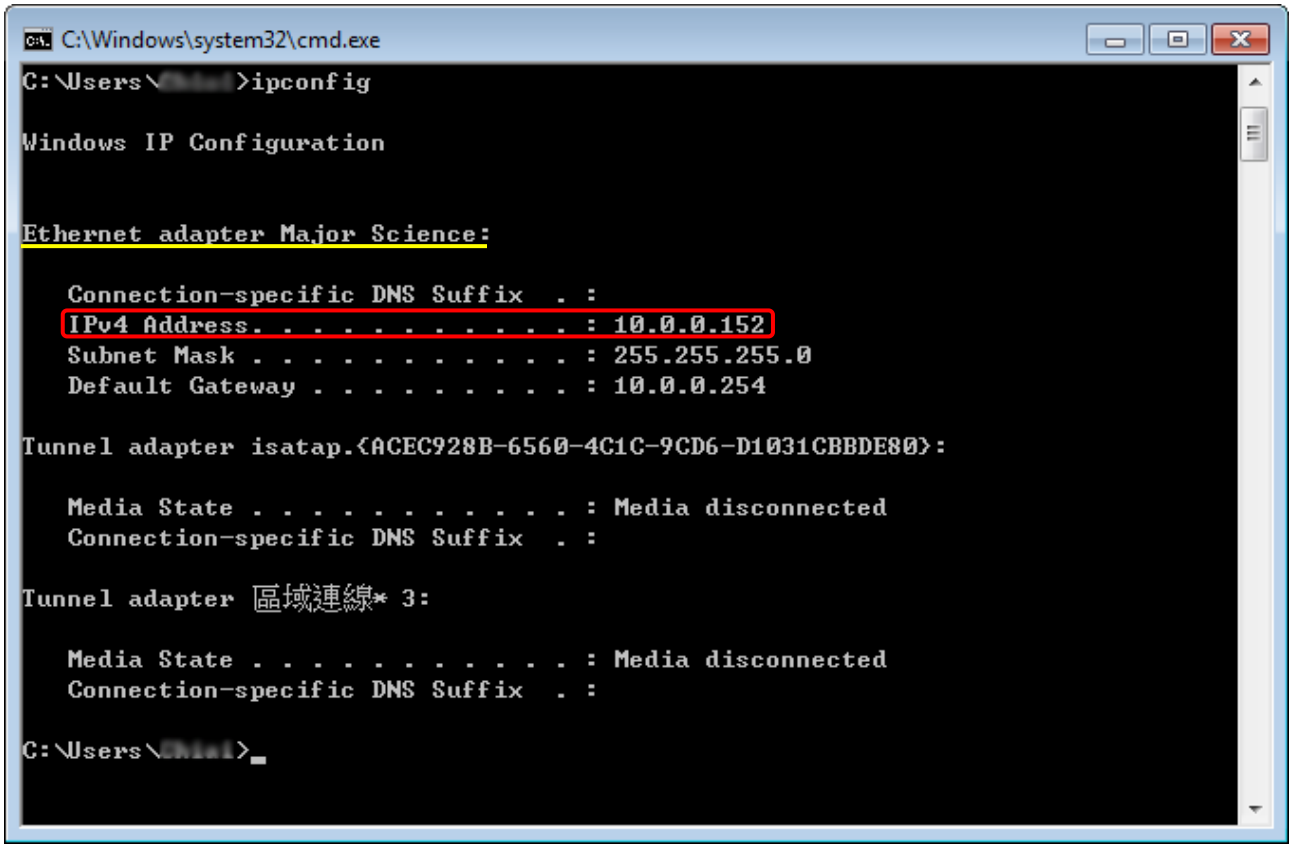


Step8. Type “ipconfig” after the flashing cursor. And press “Enter” key.

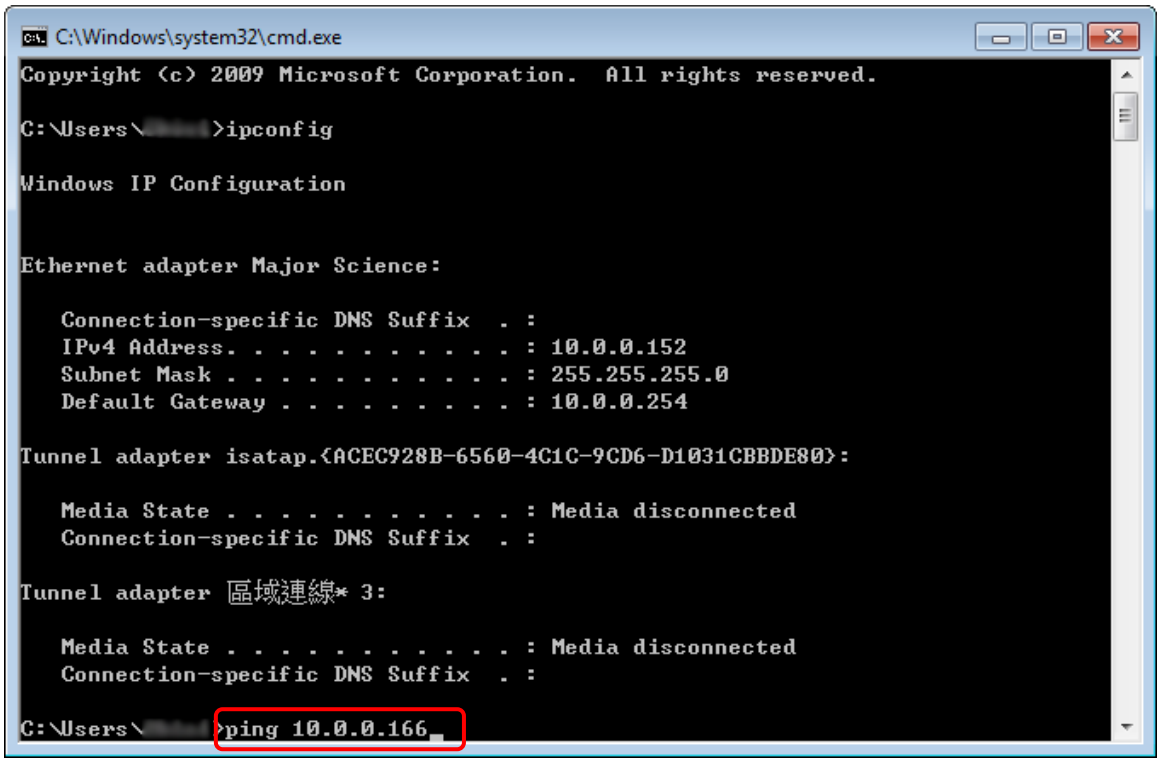




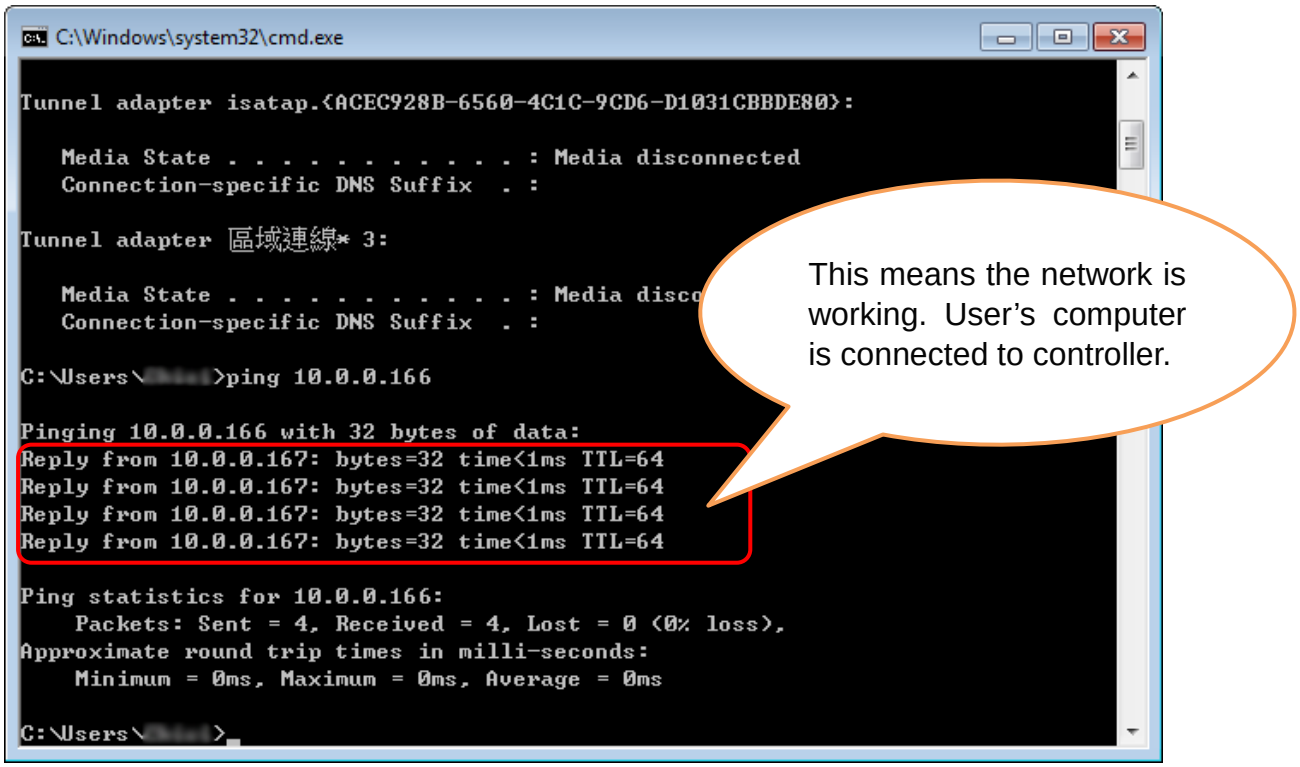
Step9. System then shows the IP address of user’s, the example in step 5, user’s IP has been changed to “10.0.0.152”, therefore the same IP address is showed in the screen. However, if it is not showed on the screen, the IP address might conflict with others’. Search the Internet for “IP address conflict” to solve the problem.

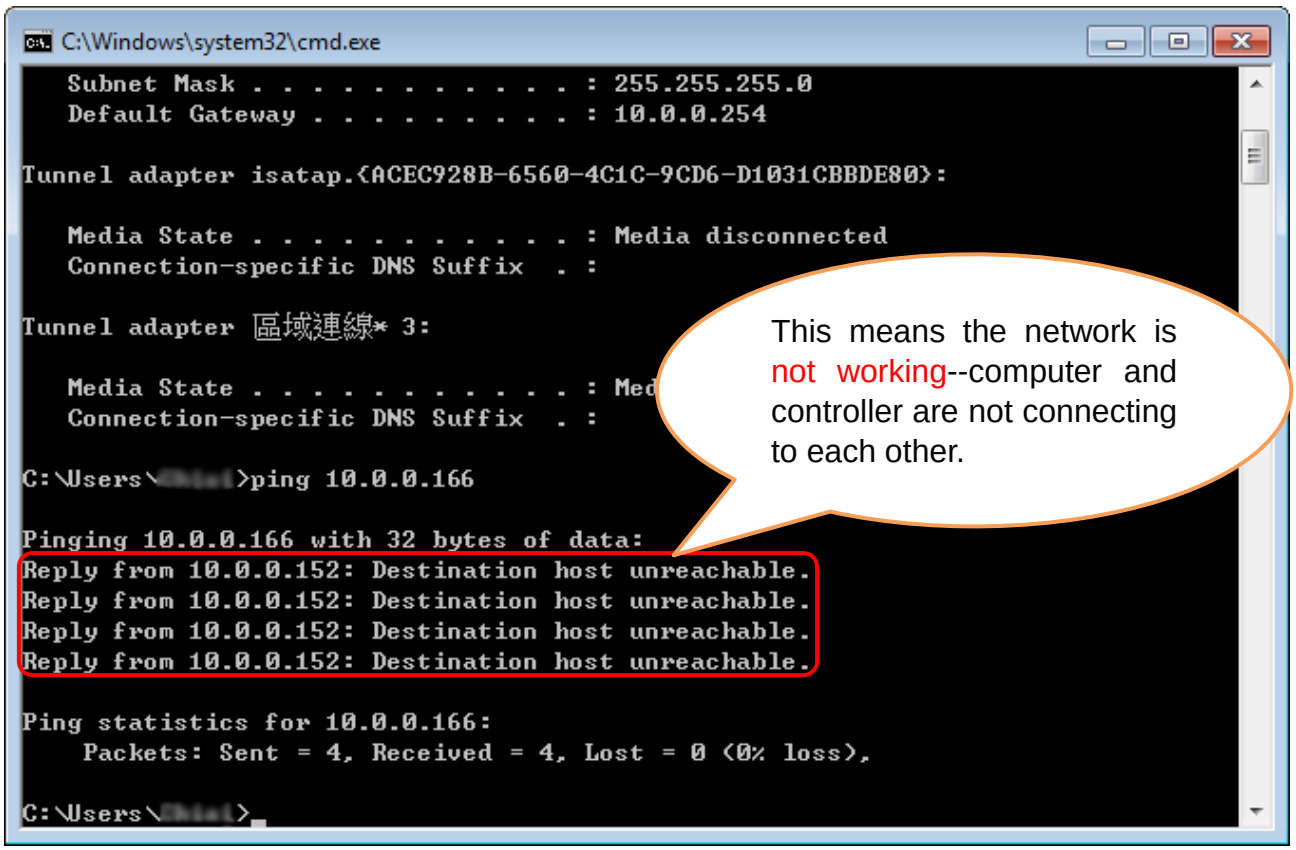


Step10. Then type “ping + (Space) + UVCI-2300/2400’s IP address” right after the flashing cursor. For instance, the IP address of the used UVCI-2300/2400 is “10.0.0.166”; then type “ping 10.0.0.166”, and press “Enter”.



Step11. The program will start connecting user’s computer to UVCI-2300/2400. The information showed on the screen tells user if the network is connected.





If the network is still not connected, please check the connection and settings of user's network equipment.

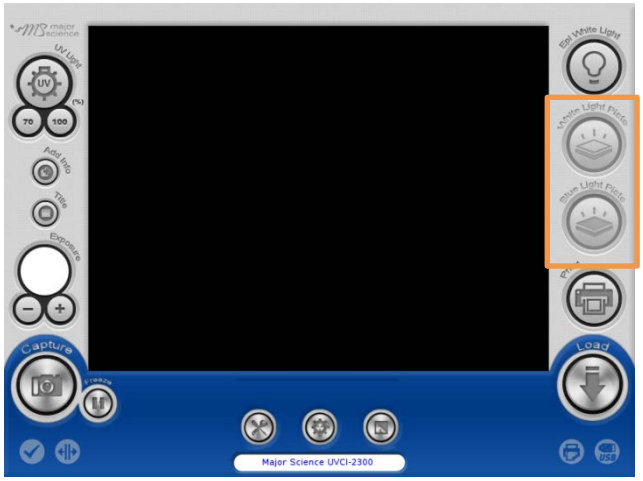
4 Operation Instructions

HMI Interface (UVCI-2300)

4.1 Start the System

Plug on power cord to your socket.
Turn on device via the power switch on side of UVCI-2300.

▲ Opening Interface



▲HMI Interface (optional devices disabled)

▲HMI Interface (optional devices enabled)

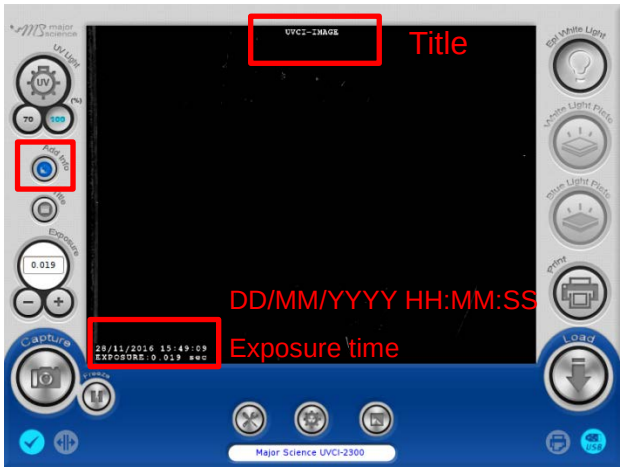
(With “white light plate” and “blue light plate” optional devices connected)

4.2 Select the UV Intensity

Press “UV” icon to turn on or off UV transilluminator, select 70/100 (%) to set the UV light intensity.

4.3 Add Info

Press “Add Info” icon to enable the function of date, exposure time stamp on the left corner of picture and the title on the middle above. If user wants to show only certain item, press to enter Default Setting>Add Info for further changing.

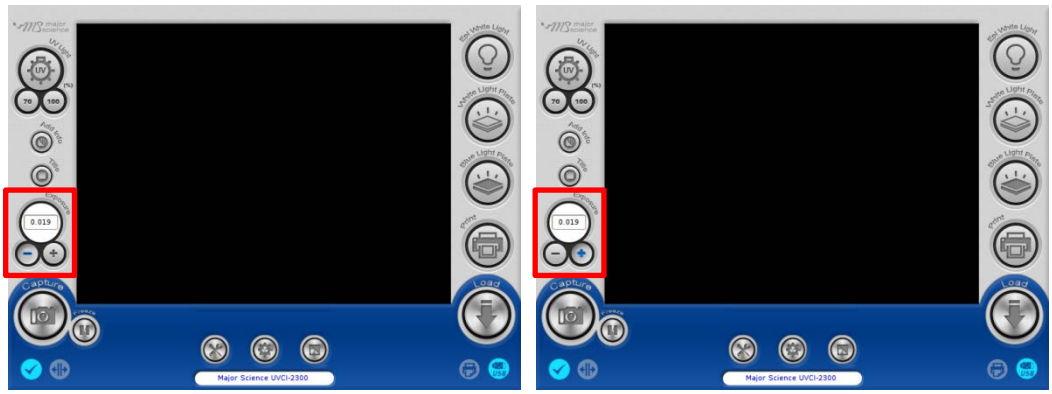


4.4 Title

Press “Title” icon to rename the title.

4.5 Adjust the Volume of Exposure

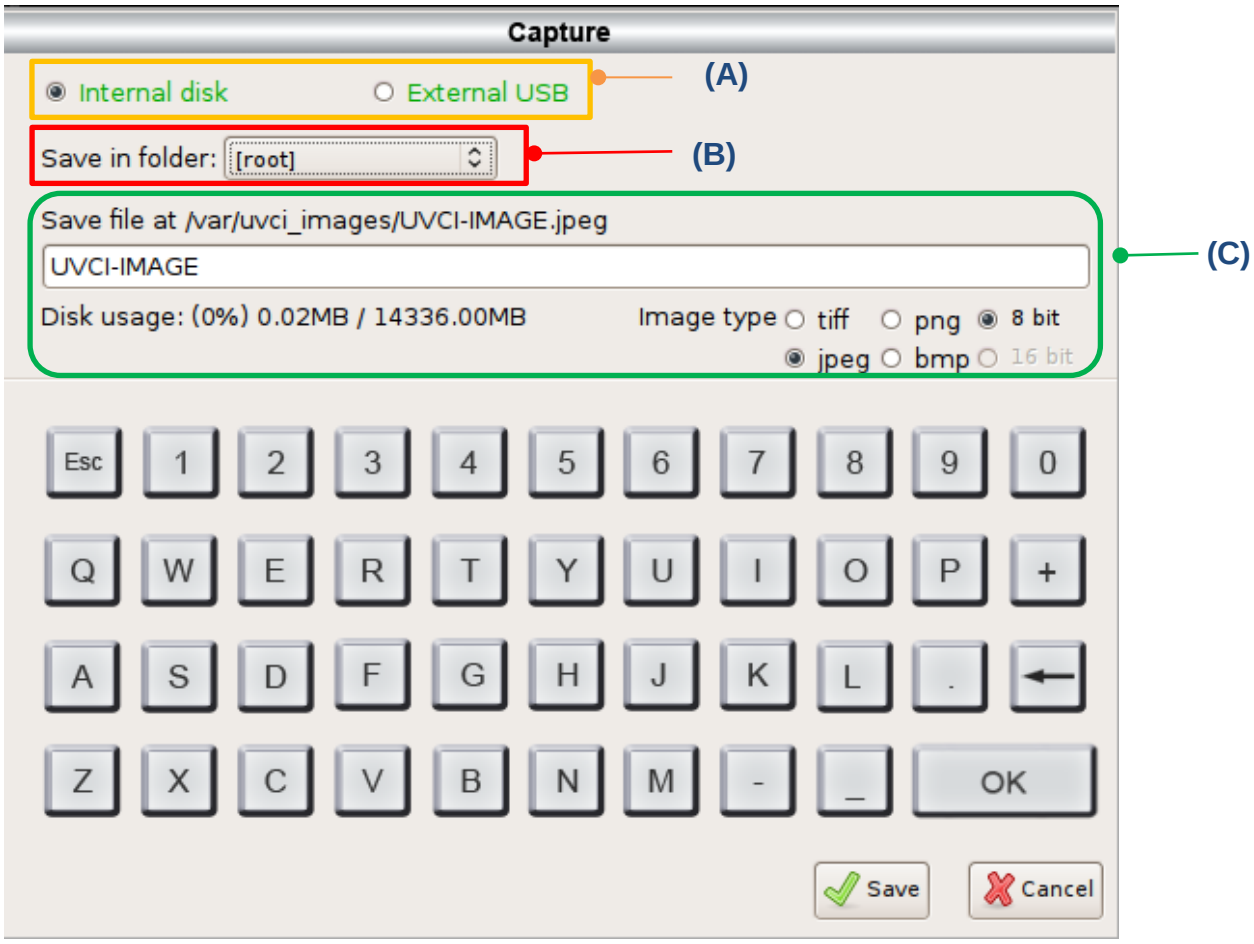
Key in the desired value of exposure time (0.001-30 sec.)



Press”+” or”-“under the column of “Exposure” to increase/decrease 0.001 sec. of the value of exposure user sets.

4.6 Capture

Press “Capture” icon to capture a picture at the present. The capture dialogue would pop out.



(A) Select either “Internal disk” or “External USB” to decide the loction of the storage.

(B) Tap the button behind “Save in folder” to choose the folder that desired to be saved. *Note: Users could create their own folder up to 3 layers of folder. Please go to System Setup> Create Folder*

(C) Type the file name(system default is the date and time of the picture been taken). The file can be named up to 128 characters. Select either “8 bit” or “16 bit” and the file format user would like to save. *Note: All file format can be saved as 8 bit while only tiff and png can be saved as 16 bit.*

Click “Save” to apply or “Cancel” to cancel and close the dialogue.

4.6.1 Save Pictures To Remote Computer

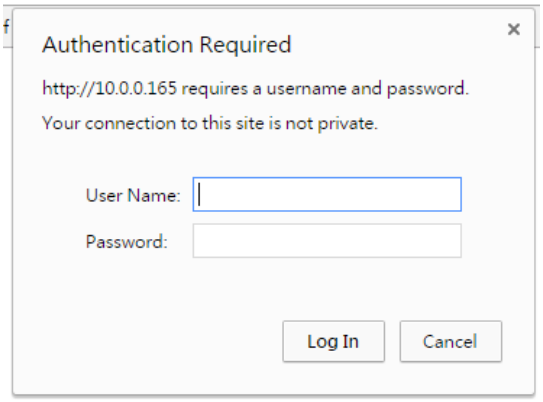
User could save pictures in “Internal disk” to any computer as long as UVCI-2300 is connected to a wireless router. Detailed instructions are shown below:

1. Connect UVCI-2300 to a wireless router by using a Ethernet cord.

2. Open a browser at any computer with access to Internet, and enter the corresponding IP address of your UVCI-2300 at address bar.

NOTICE: You may find your IP address by checking your UVCI-2300/2400 interface> System Setup> IP address.

3. Input the user name and the password.

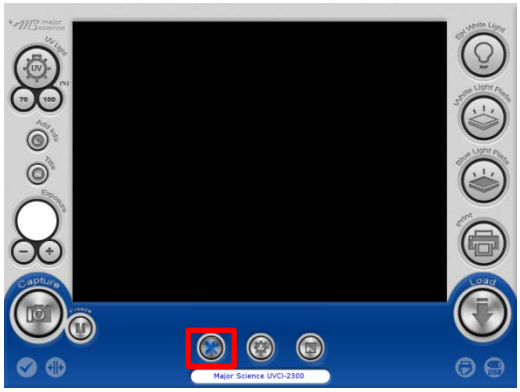


NOTICE: You may find and change your user name and password by checking your UVCI-2300/2400 interface> Default Setting>Remote login.

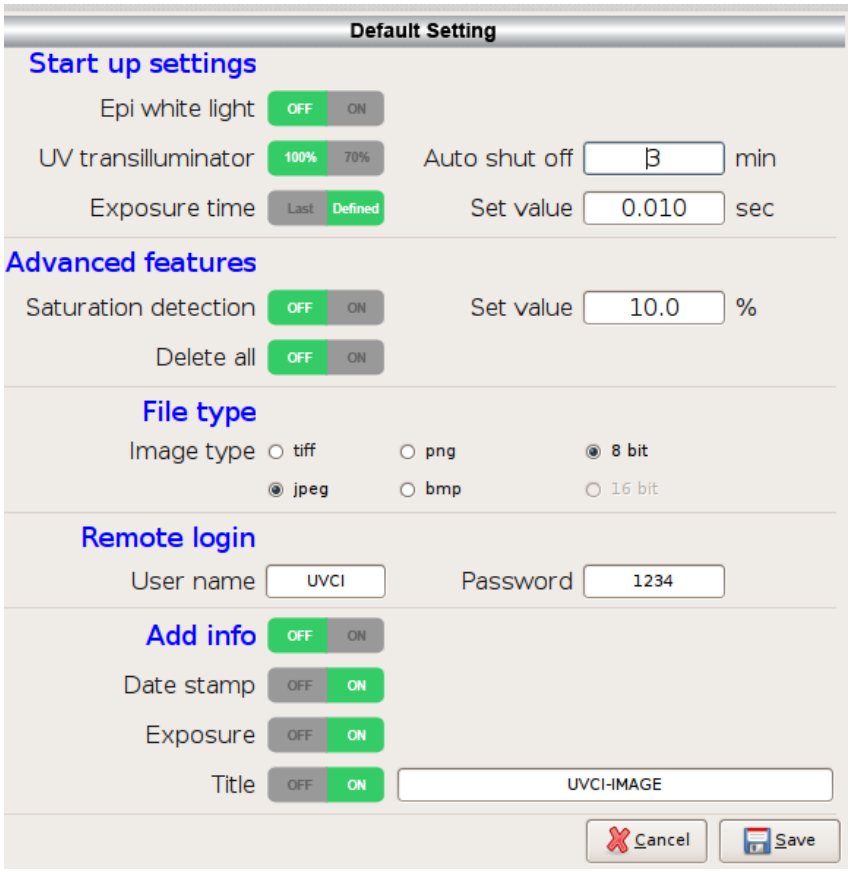
4. List of current pictures saved in “Internal disk” then could be viewed and saved from the computer.

Note: This function is not compatible to Windows 10 Edge, which is the default browser for Windows tablet; for tablet user, please change your browser to Chrome or Firefox to apply this function.

4.7 Default Setting



Press to open “Default Setting” dialogue.



In “Default Setting” page, user can set various items as default setting. See detailed description below.

Start up settings

In this column, user can set the lighting module on or off as default setting. Also, user can set the intensity of UV light (UVCI-2300 only), its auto-shut-off time, and the default exposure time.

Advanced features

Here user could set “Saturation detection” on/off and its value as default setting.

NOTICE:

If the current saturation value is above the set value and the mechanism is on, this signal picture will show beside “Default Setting” button.

In case user accidentally delete all the files, the default setting of “Delete all” is OFF. If user activates this function here, the “Delete all” button would show up in System setup.

File Type

Here user can set default file type also in 8 or 16 bit (16 bit for “tiff” and “png” only).

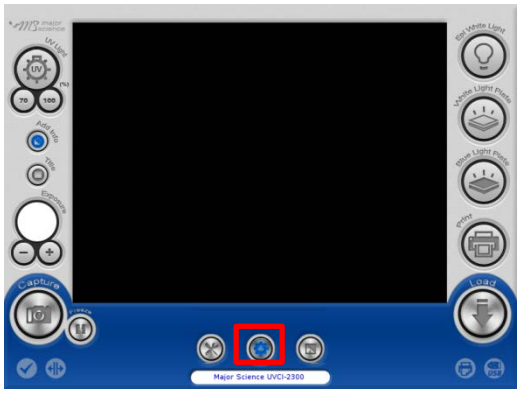
Remote login

When user wants to save pictures from remote computer, it is necessary to input the user name and the password first. Here user can change user name and password.

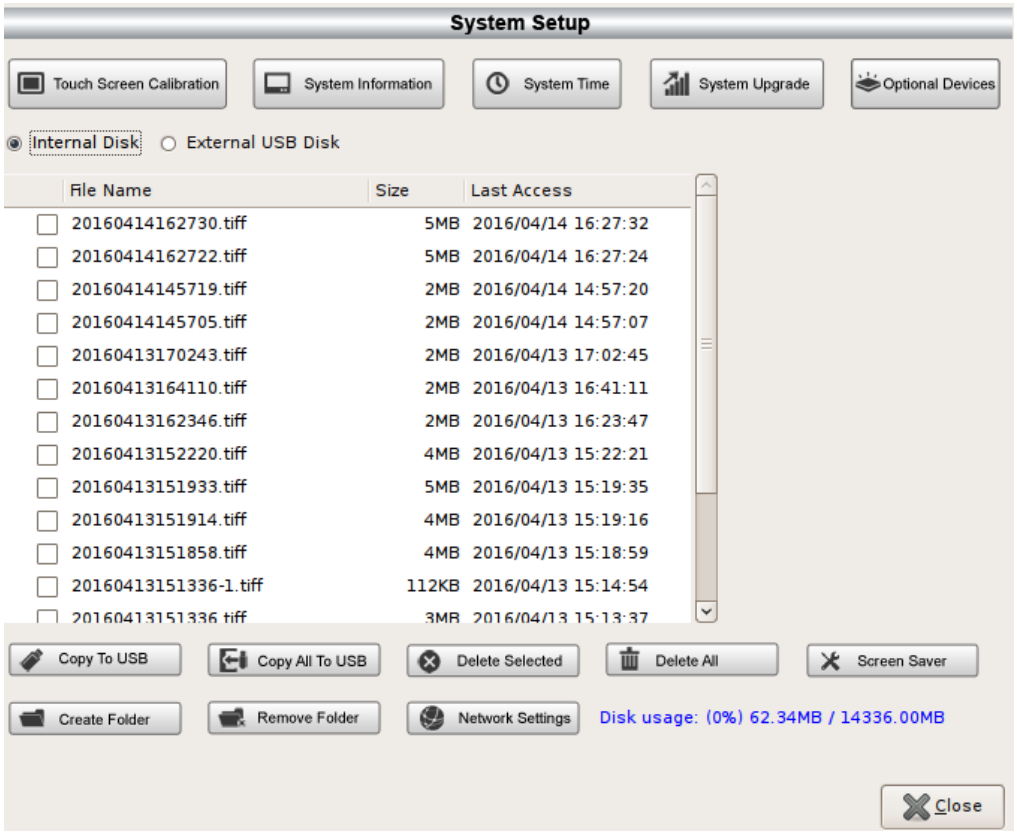
Add info

The Add info button is the main switch of date stamp, exposure time, and title, and here user can set date stamp, exposure time, and title on/off separately as default setting. Tap the blank behind title to rename it.

4.8 System Setup

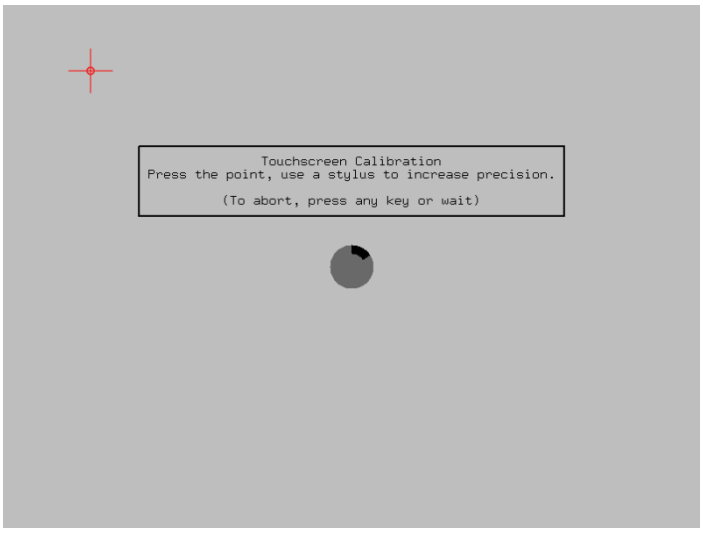


Press “System Setup” icon and open the system setup page. See detailed description in the following sections.



▲ System Setup Page

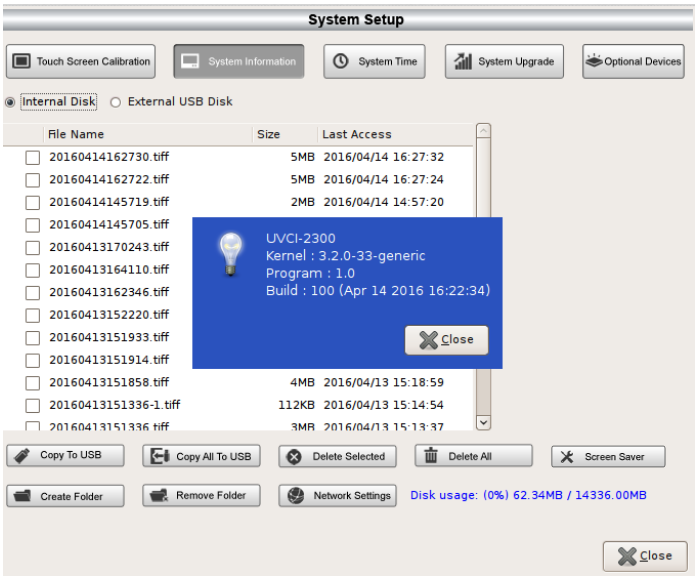
4.8.1 Touch Screen Calibration



Press

and system will transfer to the page of screen calibration. Click the middle of the cross until finish the calibration process. After finish the screen calibration process, system will return to the prior page automatically.

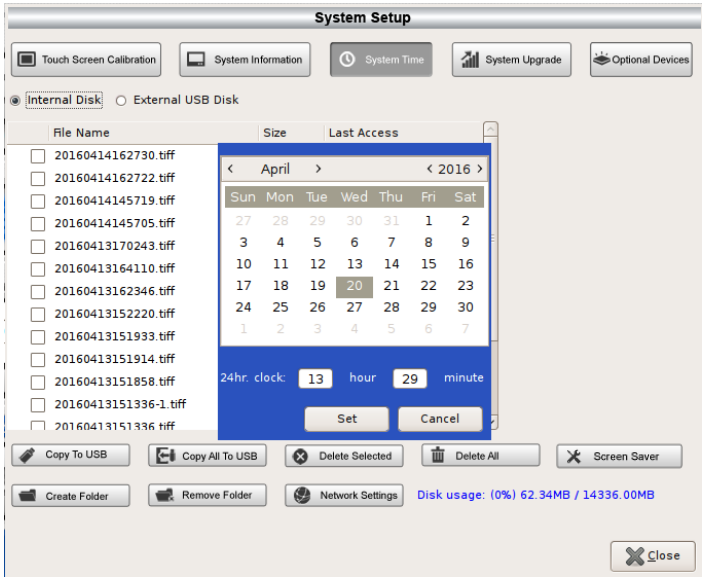
4.8.2 System Information



Press

to read the detail information of the system. Press “Close” to close the dialogue.

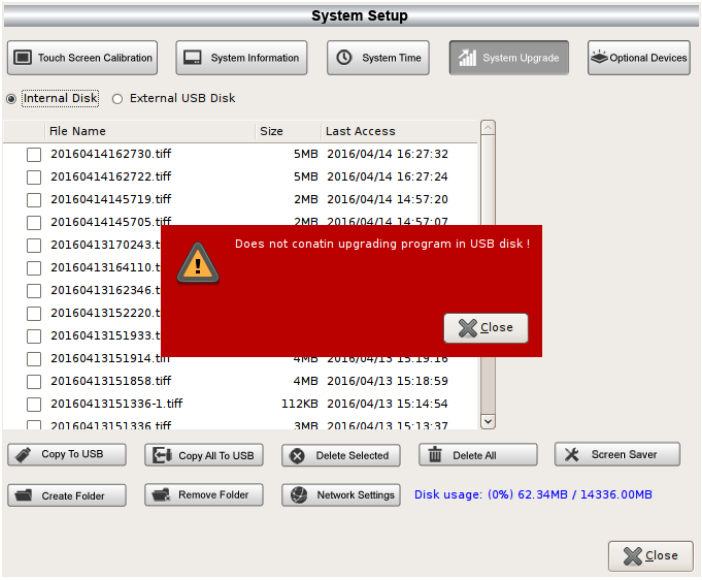
4.8.3 System Time



Press

icon to read or set system time. Press ”Set” to save or “Cancel” to cancel and close the dialogue.

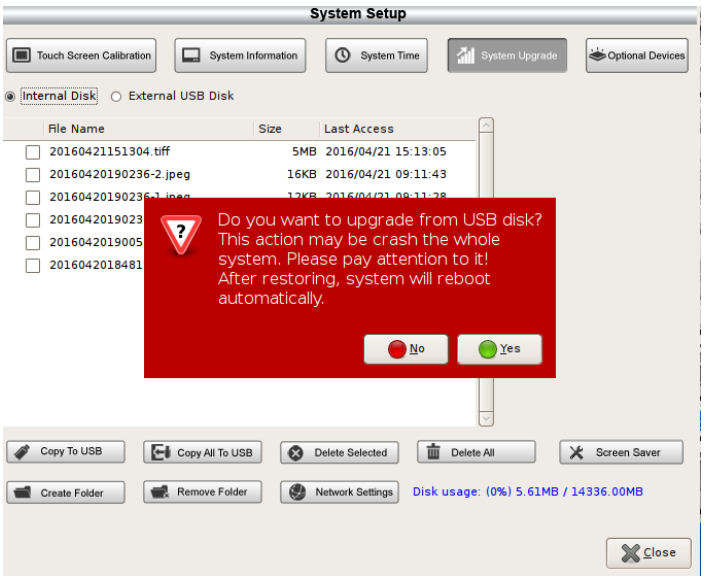
4.8.4 System Upgrade



If there is a need of system upgrade, plug the USB with the upgrade file in and press

.

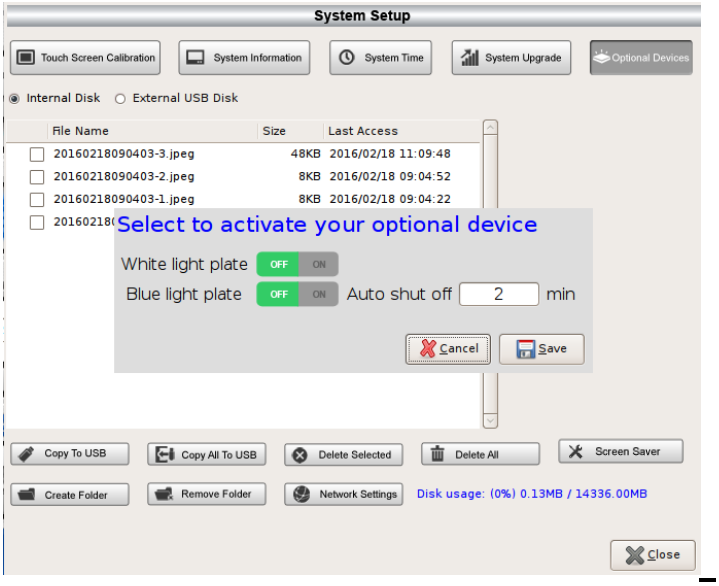
If user does not plug in the USB or the USB does not contain the corresponding files system needed, warning will pop up. Press “Close “to close the dialogue.



Plug the USB with upgrade file, system will pop up a warning to confirm, press "Yes" to continue or "No" to cancel.

NOTE: System will reboot automatically after the upgrade.

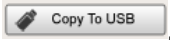
4.8.5 Optional Devices



Press

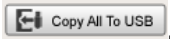
to enable the optional devices. Press and turn on/off the lighting module. Set the auto shut off time if available. Press "Save" to apply or "Cancel" to cancel and close the dialogue.

4.8.6 Copy to USB

If user would like to copy files to a flash drive, select the files, plug the USB on then press 

.

4.8.7 Copy All to USB

If user would like to copy all files to a flash drive, select the files, plug the USB on then press 

.

4.8.8 Delete Selected

If user would like to delete any file. Select the files and press

.

4.8.9 Delete All

If user would like to delete all files, press

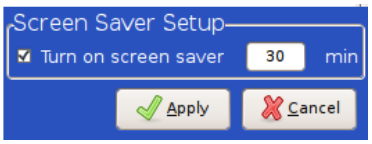
. System will delete all files automatically.

Note: User has to enable this function in Default Setting first; otherwise this button will not show up.

4.8.10 Screen Saver

Click

to set the screen saver time. The window below will be shown:



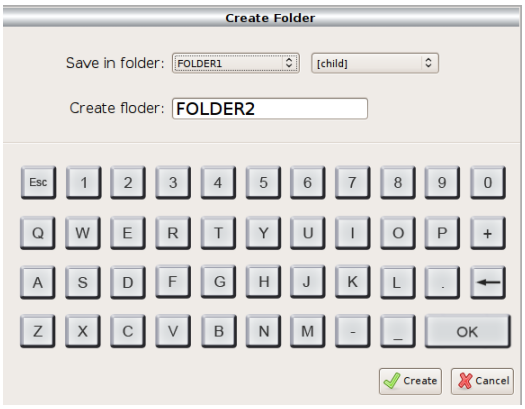
Time setting range is 3-9999 min.

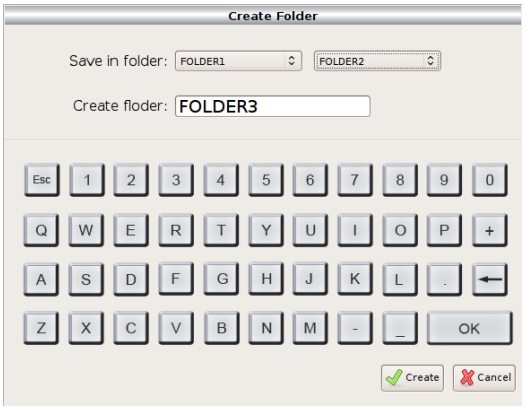
4.8.11 Create Folder

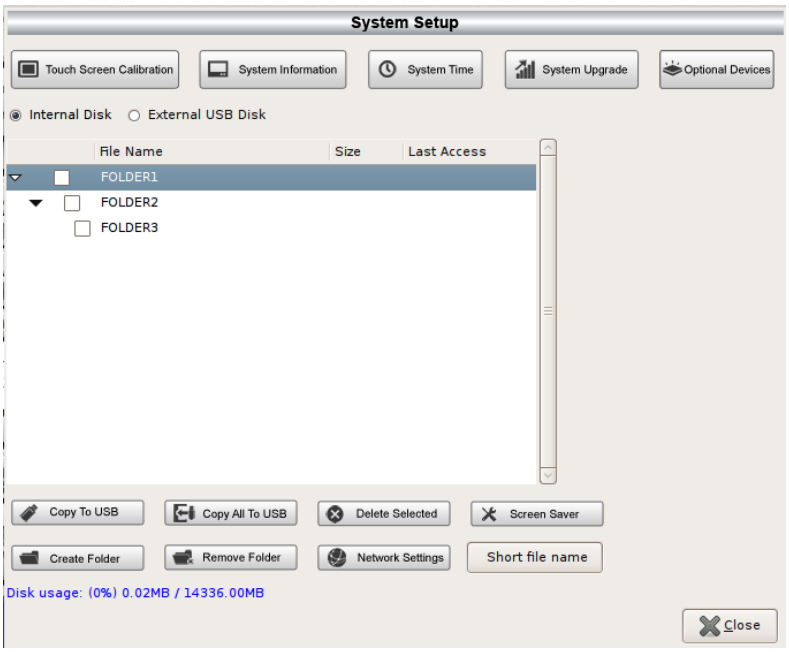
If user would like to create a folder in the folder, press

. Name the folder, press “OK” and press “Create” to save or “Cancel” to cancel and close the dialogue. Tap the button behind “Save in folder”

to choose the desired location of newly create folder. In the same folder, it can contain up to 3 layers of folder.







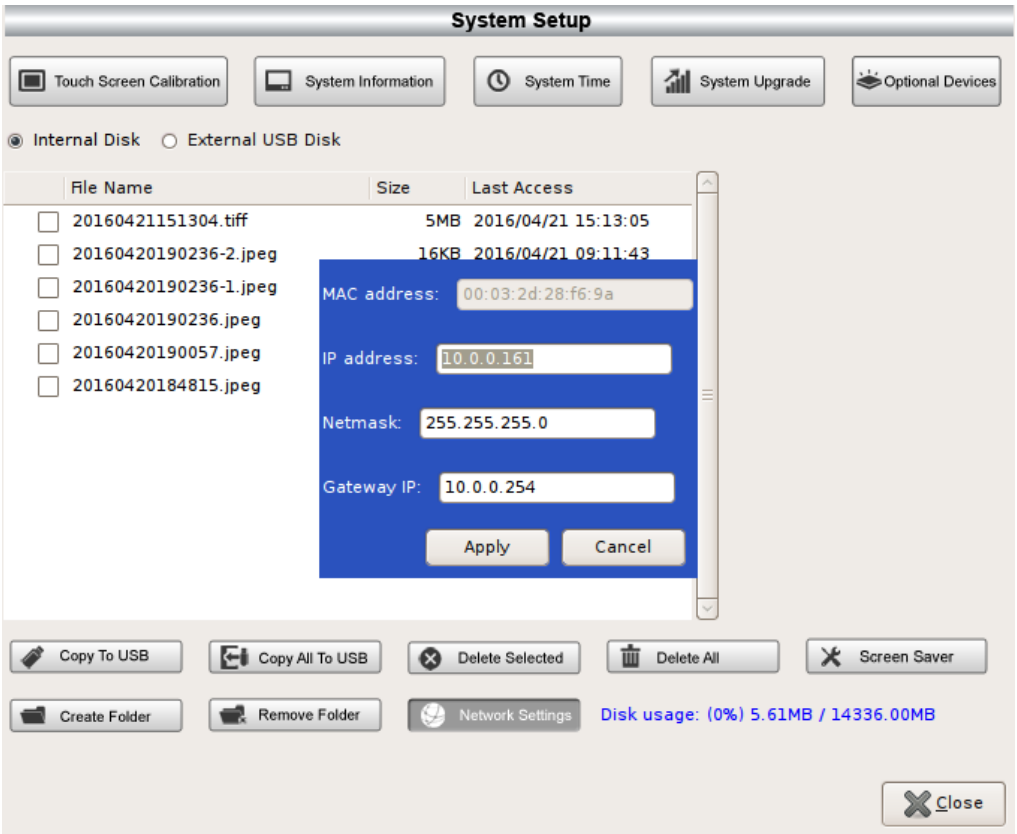
4.8.12 Remove Folder

If user would like to delete any folder in the list, select the folders and press

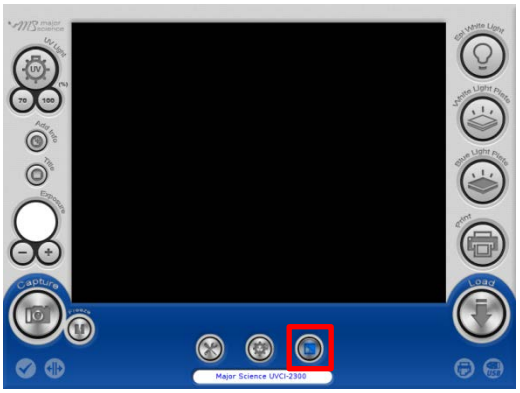
.

4.8.13 Network Settings

Press to set detail information. Press “Apply” to apply or “Cancel” to cancel and close the dialogue.



4.9 Reverse out

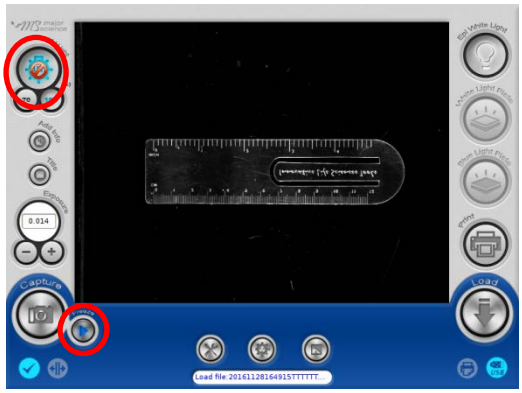


Press the icon to reverse the color of present picture from black to white, white to black.

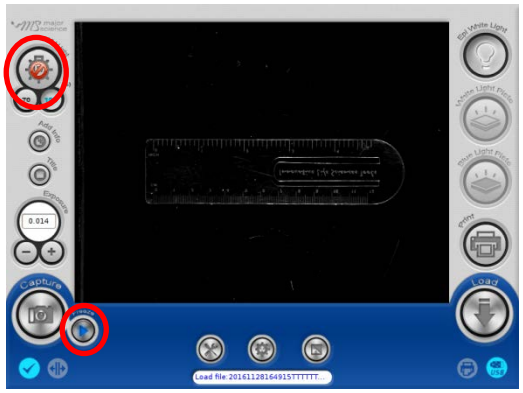
4.10 Freeze

Press to freeze the present picture on the screen. System will have the picture stay on the screen as long as user needs. If user would like to save the freeze picture, press “Capture” and press “Save”.

During the period of “freeze,” the UV light function can not be activated.
If the UV light were lit, it would be temperately shut off; press “freeze” button again to resume UV lighting. If the UV light were not lit, still the UV lighting function can not be activated during “freeze” period.

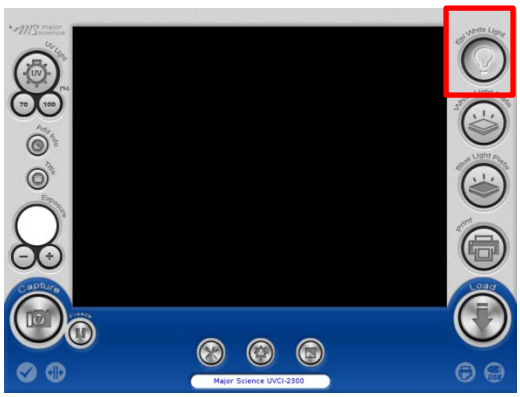


UV light were lit and freeze function is activated

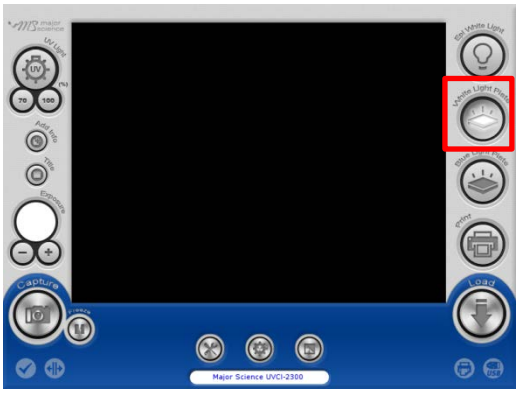


UV light were not lit and freeze function is activated

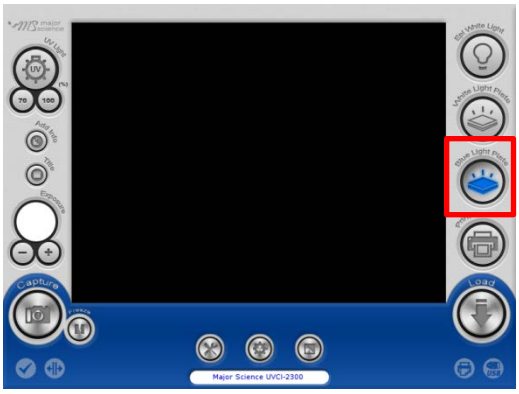
4.11 Turn ON/OFF the Lighting Modules



Press the icon of “Epi White Light” to turn on/off the Epi white light.

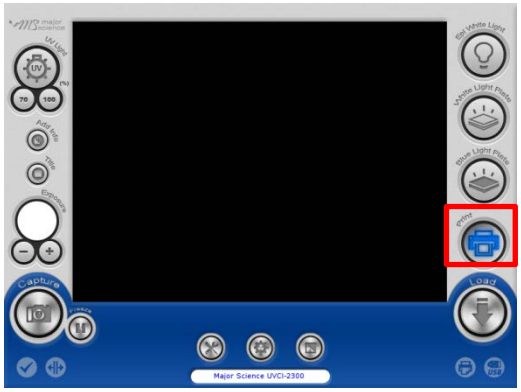


Press the icon of “White Light Plate” to turn on/off the white light.



Press the icon of “Blue Light Plate” to turn on/off the blue light.

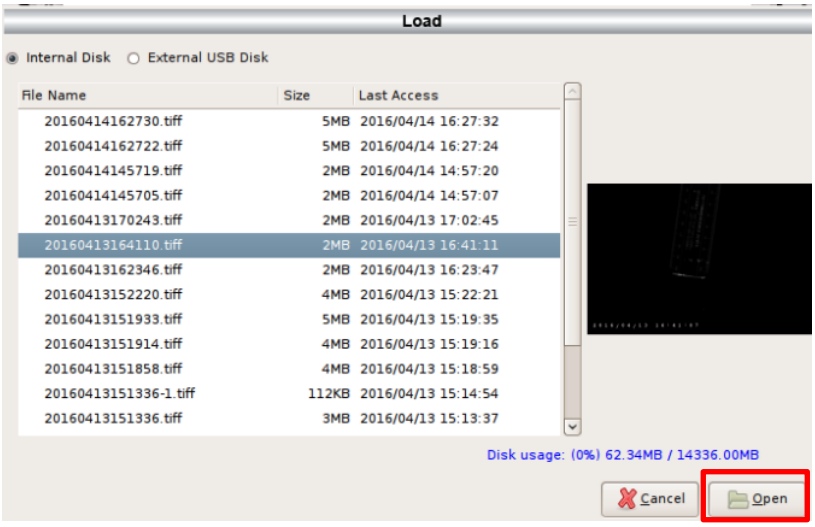
4.12 Print



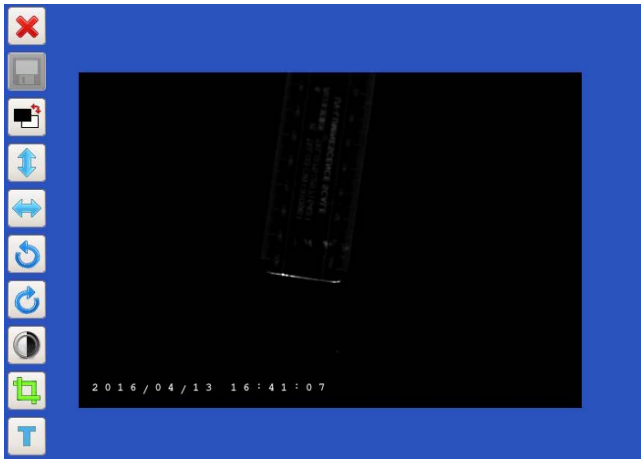
Press the icon of “Print” to print the present picture on the screen.
NOTICE that system will not save a digital format of the picture automatically only by pressing “Print” button.

4.13 Load and Edit the Picture

Press “Load” icon to review or edit the files in device or flash drive.



Select either “Internal Disk” or”External USB Disk” to read the files in corresbonding device. Select one file then press”Open “ to edit; press “Cancel” to cancel and close the dialogue. The usage percent of the device displayed at the right corner.



◀ Editing Interface

- Close/Cancel
- Save
- Anti-white
- Flip upside down
- Flip horizontally
- Turn counterclockwise
- Turn clockwise
- Brightness adjust
- Crop
- Text

4.13.1 Anti-white

Press to anti-white the screen.

4.13.2 Flip upside down

Press to turn the picture upside down.

4.13.3 Flip horizontally

Press to flip the picture horizontally.

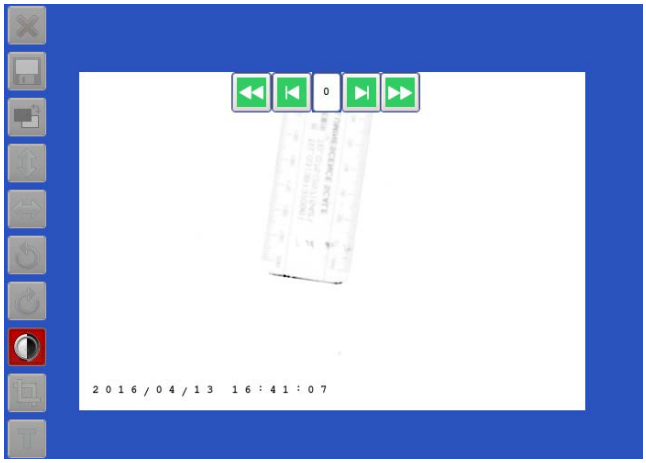
4.13.4 Turn counterclockwise

Press to turn the picture counterclockwise.

4.13.5 Turn clockwise

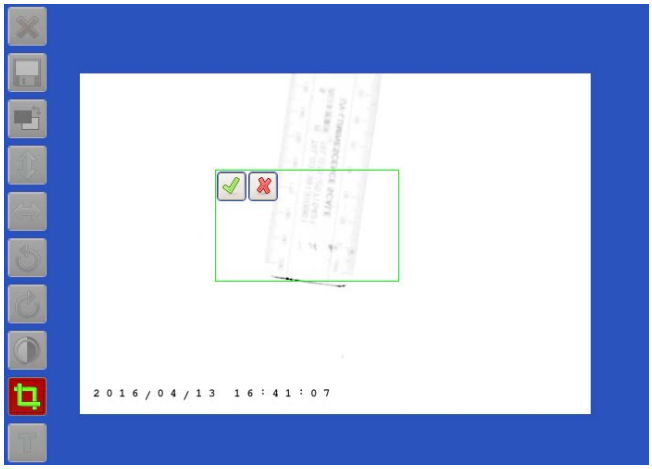
Press to turn the picture clockwise.

4.13.6 Brightness adjust



Press to increase or decrease the brightness of the picture.

4.13.7 Crop



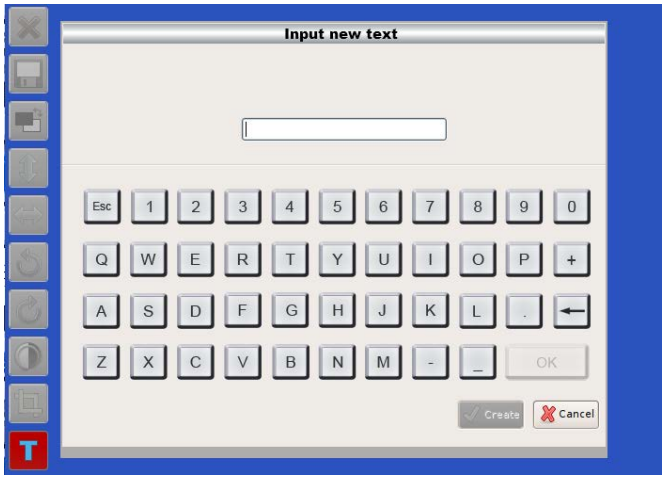
Press to crop the picture. Press one point on the screen and drag to crop.

NOTICE: The minimum area of cropping is 256*256 pixels. If the crop square shows red, it is too small; if it is green, it is in possible size.

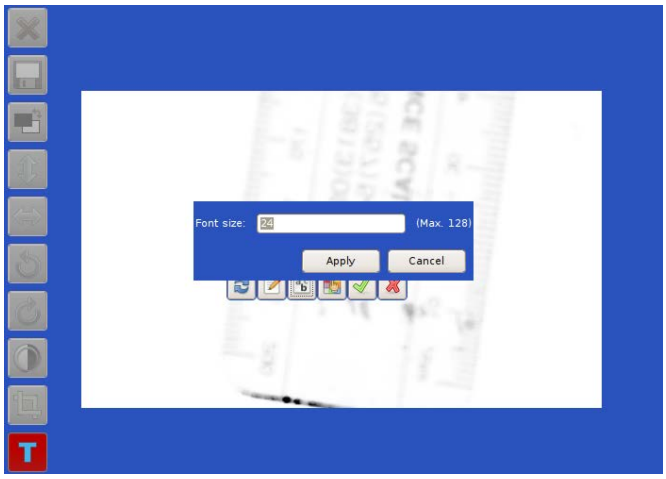
4.13.8 Text

1. Press to create a new text on the picture. Locate one point and press to add a new text. Cross indicates the location of the text. Press to start editing the text.

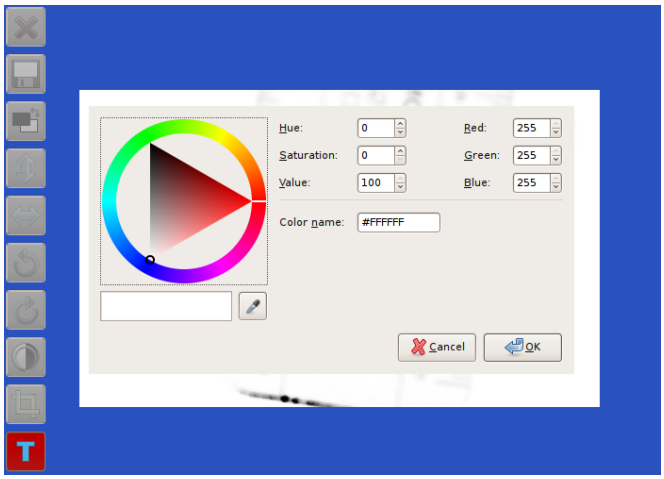
2. Press to replace the text on any point on the screen.



3. Press to edit the content of the text. Press “Create” to apply the setting. Note: all letters are in capital. “Esc” is to delete all text in the column; is to backspace. Press “Cancel” to cancel editing and close



4. Press to adjust the front size. Press ”Apply” to confirm or “Cancel” to cancel and close the dialogue.



5. Press to change the color of the text. Click the color triangle to pick the color. Move the color triangle to choose the color range. Press “OK” to apply or “Cancel” to cancel and close the dialogue.

4.13.9 Undo and redo

On the editing page, any changing can be undone or redone by buttons along right bar.

4.14 Signals Indication

CCD Camera Connected

Door Opened

Printer Connected

USB Enabled

4.13 WARNINGS:

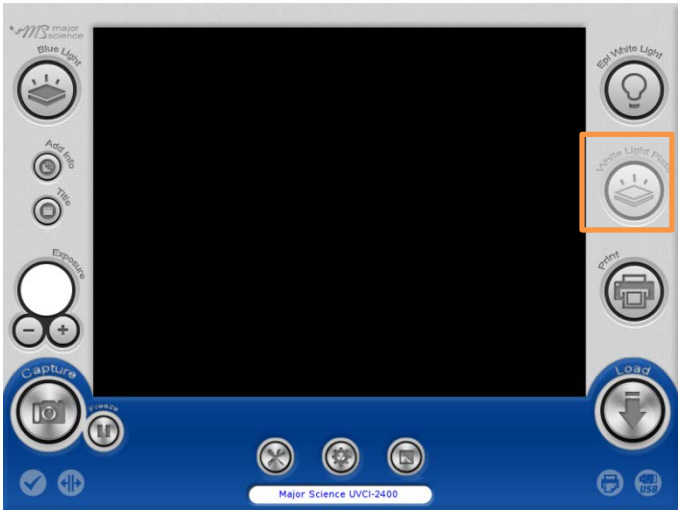
If the UV transilluminator is on while the door is opened, UV light will be turned off automatically, and the warning will pop up to warn users that the UV light is harmful to humans if protection mechanism is not prepared. Press ”Yes” to turn the UV transilluminator on or “No” to cancel turning on the UV transilluminator.

HMI Interface (UVCI-2400)

4.1 Start the System

Plug on power cord to your socket.
Turn on device via the power switch on side of UVCI-2400.

▲ Opening Interface



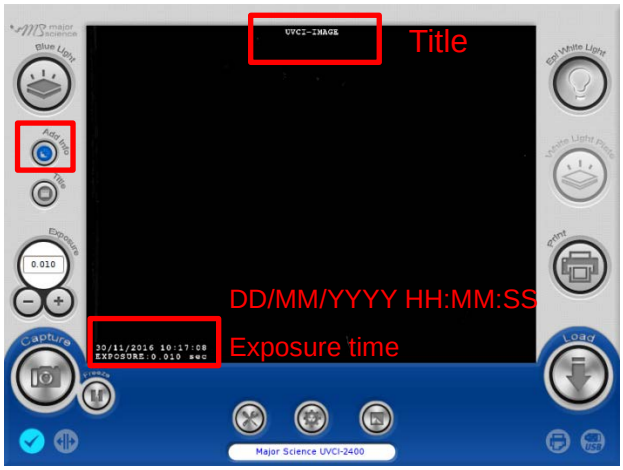
▲HMI Interface (optional device disabled)

▲HMI Interface (optional device enabled)

(With optional device “white light plate” connected)

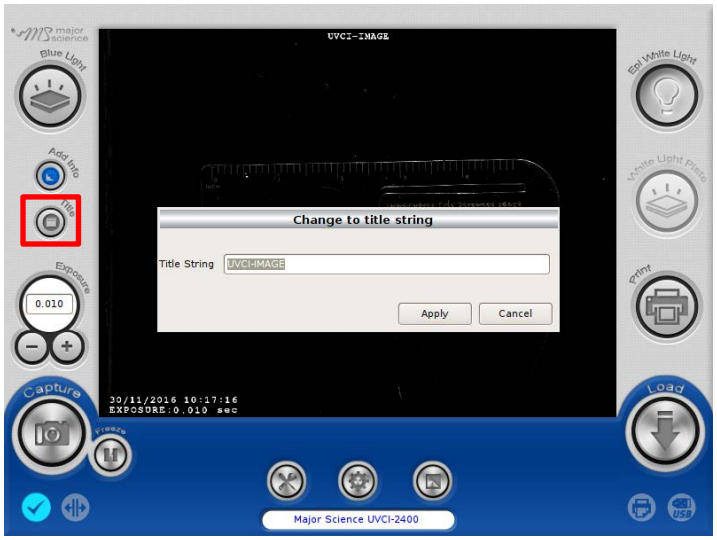
4.3 Add Info

Press “Add Info” icon to enable the function of date, exposure time stamp on the left corner of picture and the title on the middle above. If user wants to show only certain item, press to enter Default Setting>Add Info for further changing.



4.4 Title

Press “Title” icon to rename the title.



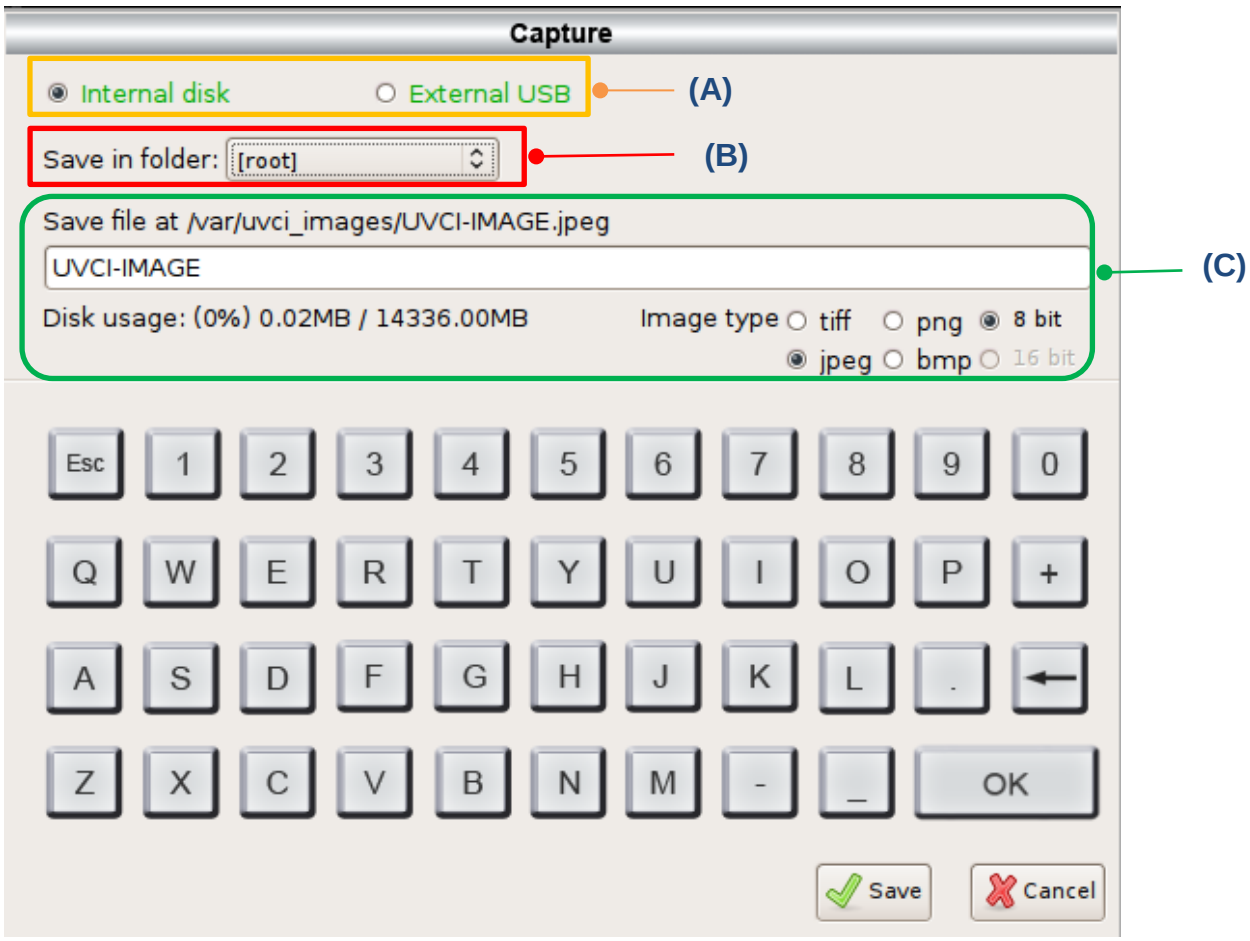
4.5 Adjust the Volume of Exposure

Key in the desired value of exposure time (0.001-30 sec.)

Press”+” or”-“under the column of “Exposure” to increase/decrease 0.001 sec. of the value of exposure user sets.

4.6 Capture

Press “Capture” icon to capture a picture at the present.



(A) Select either “Internal disk” or “External USB” to decide the loction of the storage.

(B) Tap the button behind “Save in folder” to choose the folder that desired to be saved. *Note: Users could create their own folder up to 3 layers of folder. Please go to System Setup> Create Folder*

(C) Type the file name(system default is the date and time of the picture been taken). The file can be named up to 128 characters. Select either “8 bit” or “16 bit” and the file format user would like to save. *Note: All file format can be saved as 8 bit while only tiff and png can be saved as 16 bit.*

Click “Save” to apply or “Cancel” to cancel and close the dialogue.

4.6.1 Save Pictures To Remote Computer

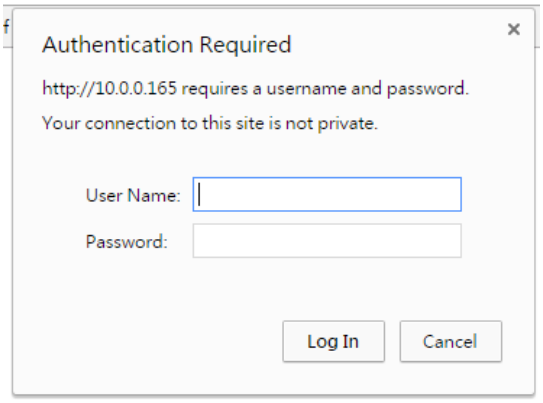
User could save pictures in “Internal disk” to any computer as long as UVCI-2400 is connected to a wireless router. Detailed instructions are shown below:

1. Connect UVCI-2400 to a wireless router by using a Ethernet cord.

2. Open a browser at any computer with access to Internet, and enter the corresponding IP address of your UVCI-2400 at address bar.

NOTICE: You may find your IP address by checking your UVCI-2300/2400 interface> System Setup> IP address.

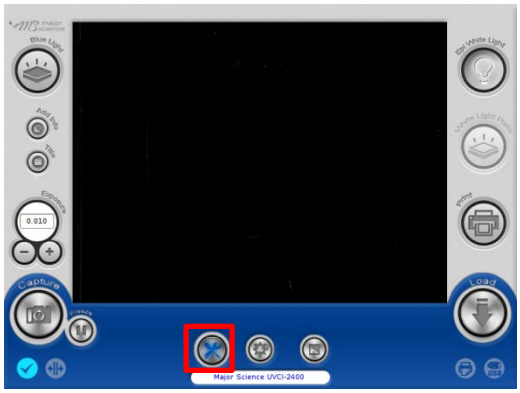
3. Input the user name and the password.



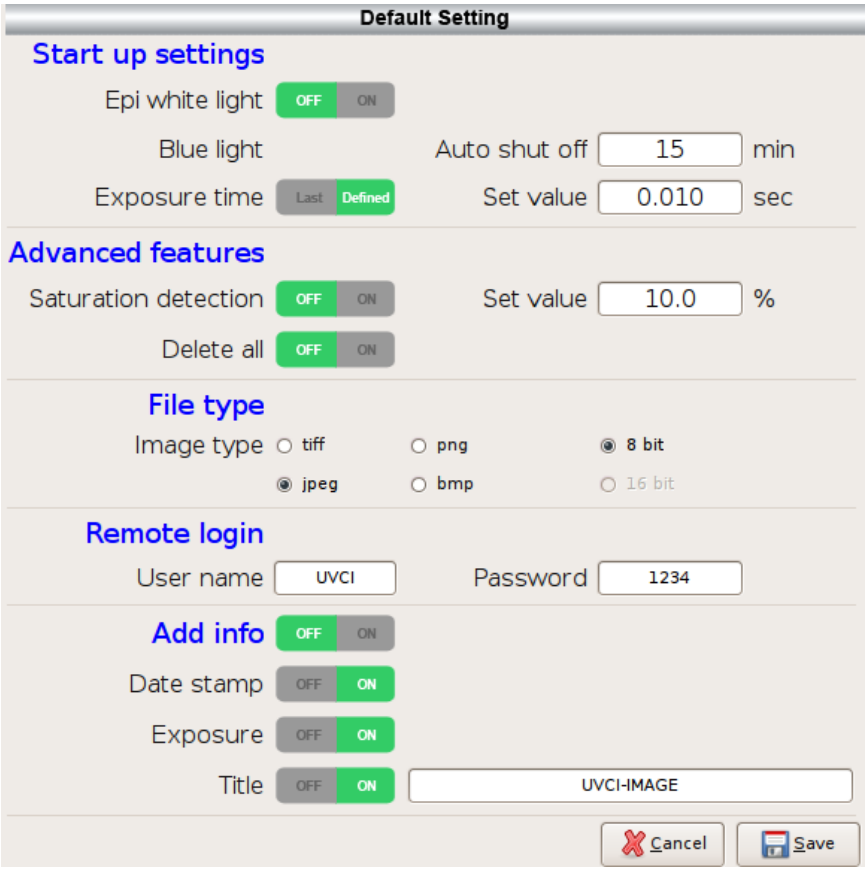
NOTICE: You may find and change your user name and password by checking your UVCI-2300/2400 interface> Default Setting>Remote login.

4. List of current pictures saved in “Internal disk” then could be viewed and saved from the computer.

4.7 Default Setting



Press to open "Default Setting" dialogue.



In "Default Setting" page, user can set various items as default setting. See detailed description below.

Start up settings

In this column, user can set the lighting module on or off as default setting. User can set the auto-shut-off time of white light, and the default exposure time.

Advanced features

Here user could set “Saturation detection” on/off and its value as default setting.

NOTICE:

If the current saturation value is above the set value and the mechanism is on, this signal picture will show beside “Default Setting” button.

In case user accidentally delete all the files, the default setting of “Delete all” is OFF. If user activates this function here, the “Delete all” button would show up in System setup.

File Type

Here user can set default file type also in 8 or 16 bit (16 bit for “tiff” and “png” only).

Remote login

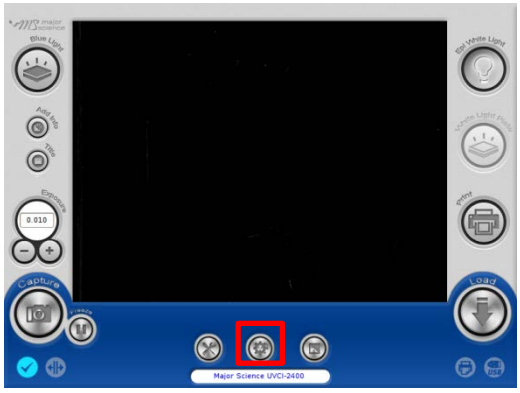
When user wants to save pictures from remote computer, it is necessary to input the user name and the password first. Here user can change user name and password.

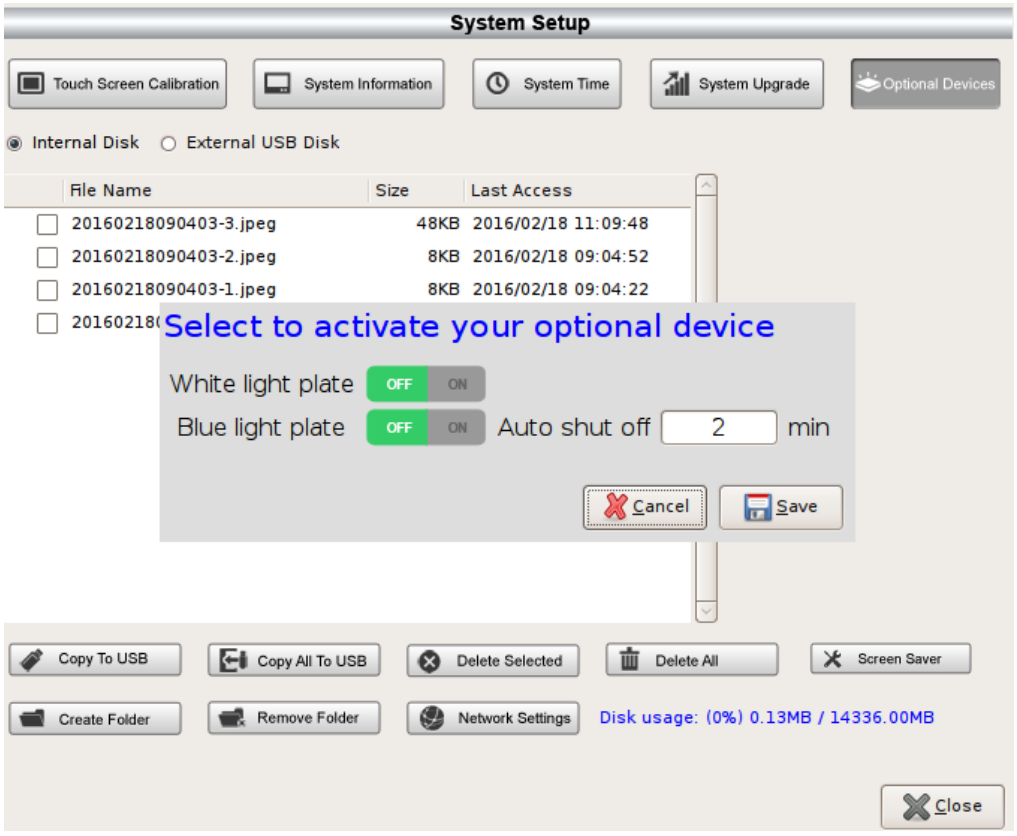
Add info

The Add info button is the main switch of date stamp, exposure time, and title, and here user can set date stamp, exposure time, and title on/off separately as default setting. Tap the blank behind title to rename it.

4.8 System Setup

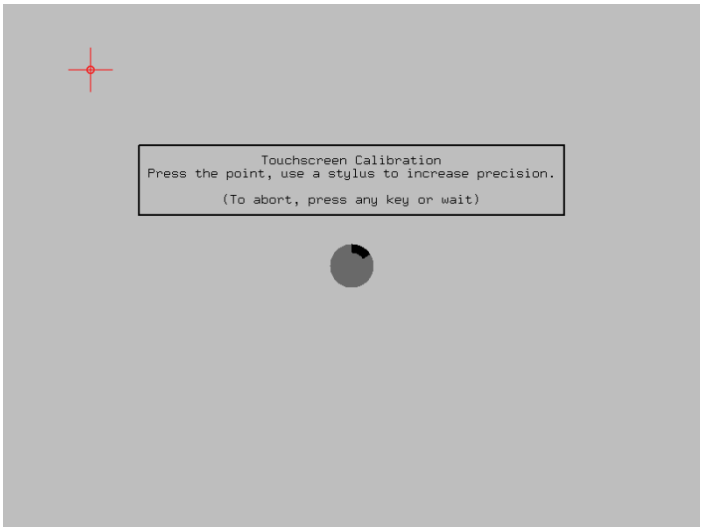
Press “System Setup” icon and open the system setup page. See detailed description in the following sections.





▲ System Setup Page

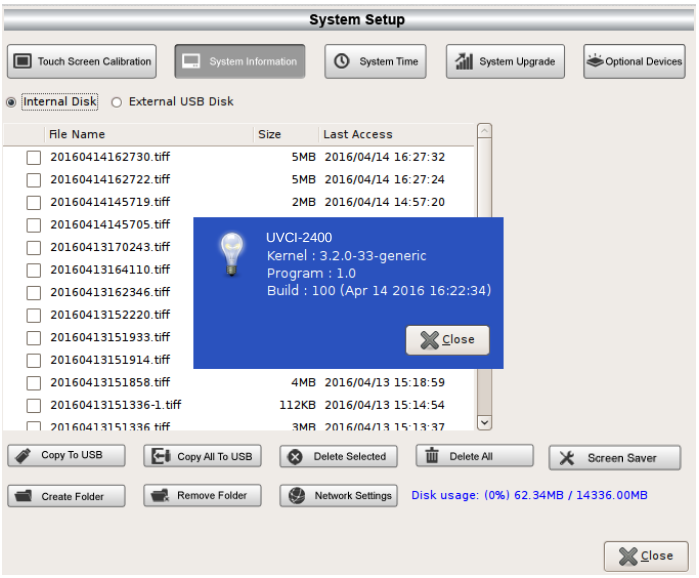
4.8.1 Touch Screen Calibration



Press

and system will transfer to the page of screen calibration. Click the middle of the cross until finish the calibration process. After finish the screen calibration process, system will return to the prior page automatically.

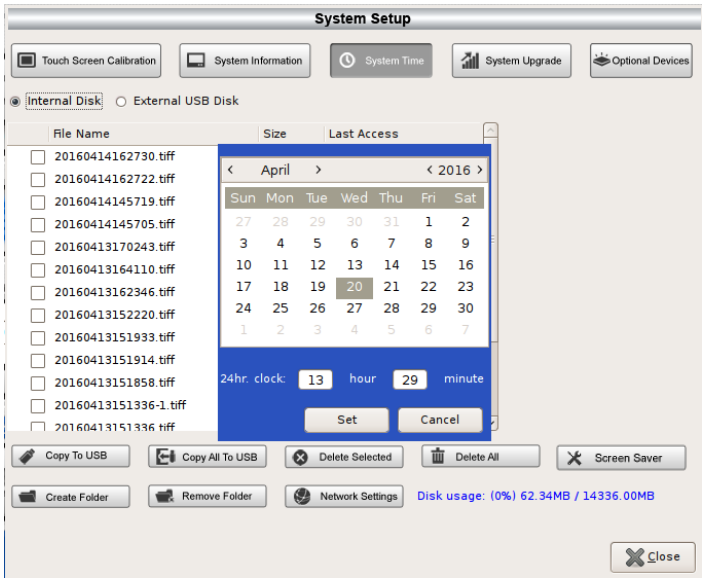
4.8.2 System Information



Press

to read the detail information of the system. Press “Close” to close the dialogue.

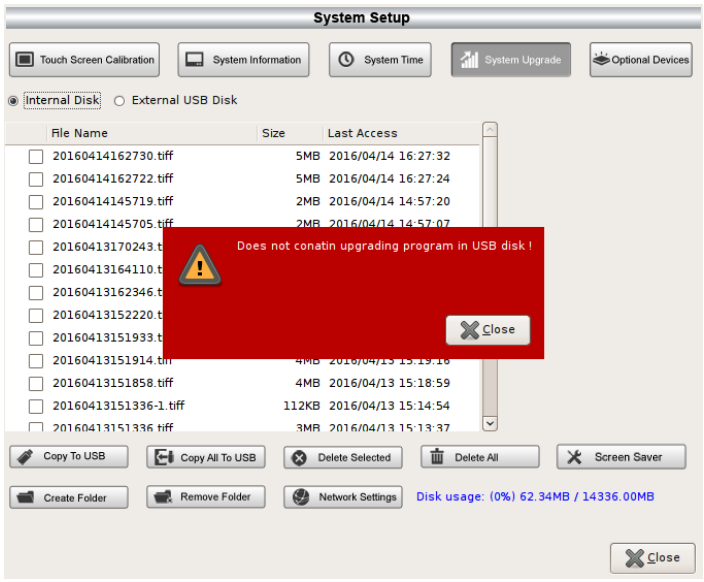
4.8.3 System Time



Press

icon to read or set system time. Press ”Set” to save or “Cancel” to cancel and close the dialogue.

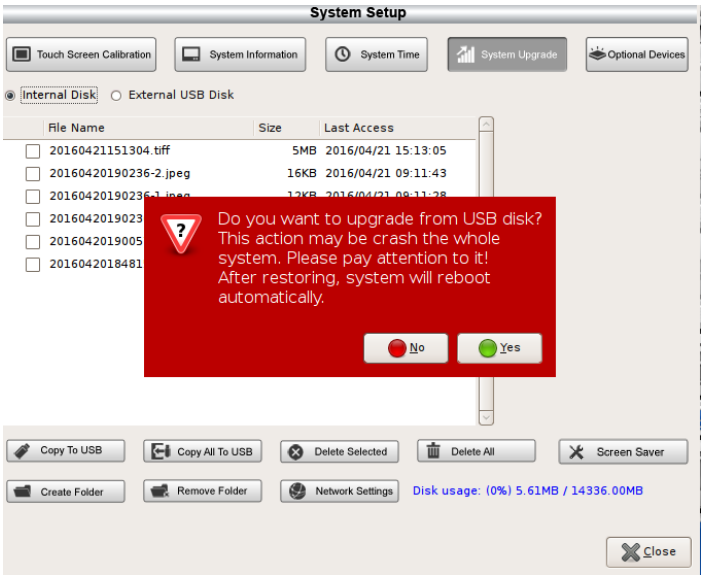
4.8.4 System Upgrade



If there is a need of system upgrade, plug the USB with the upgrade file in and press

.

If user does not plug in the USB or the USB does not contain the corresponding files system needed, warning will pop up. Press “Close “to close the dialogue.



Plug the USB with upgrade file, system will pop up a warning to confirm, press “Yes” to continue or “No” to cancel.

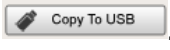
NOTE: System will reboot automatically after the upgrade.

4.8.5 Optional Devices

Press

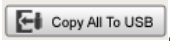
to enable the optional devices. Press and turn on/off the lighting module. Set the auto shut off time if available. Press “Save” to apply or “Cancel” to cancel and close the dialogue.

4.8.6 Copy to USB

If user would like to copy files to a flash drive, select the files, plug the USB on then press 

.

4.8.7 Copy All to USB

If user would like to copy all files to a flash drive, select the files, plug the USB on then press 

.

4.8.8 Delete Selected

If user would like to delete any file. Select the files and press

.

4.8.9 Delete All

If user would like to delete all files, press

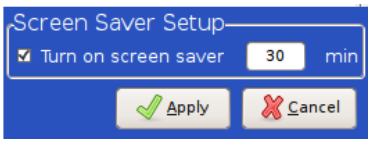
. System will delete all files automatically.

Note: User has to enable this function in Default Setting first; otherwise this button will not show up.

4.8.10 Screen Saver

Click

to set the screen saver time. The window below will be shown:



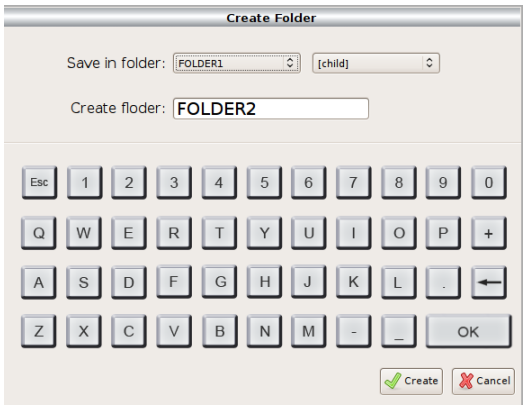
Time setting range is 3-9999 min.

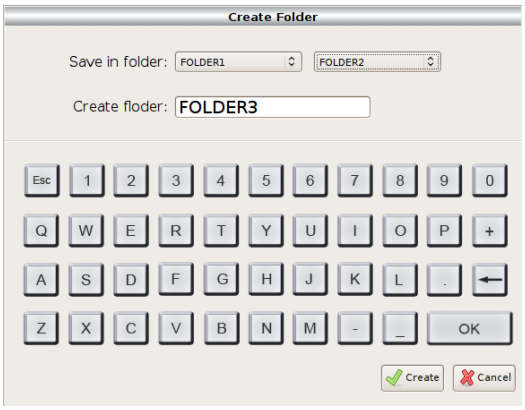
4.8.11 Create Folder

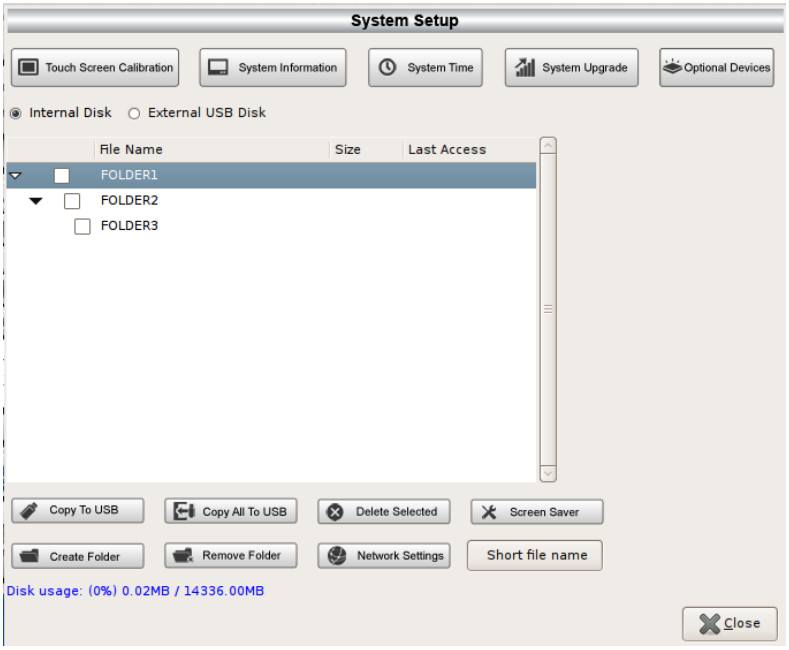
If user would like to create a folder in the folder, press

. Name the folder, press “OK” and press “Create” to save or “Cancel” to cancel and close the dialogue. Tap the button behind “Save in folder”

to choose the desired location of newly create folder. In the same folder, it can contain up to 3 layers of folder.







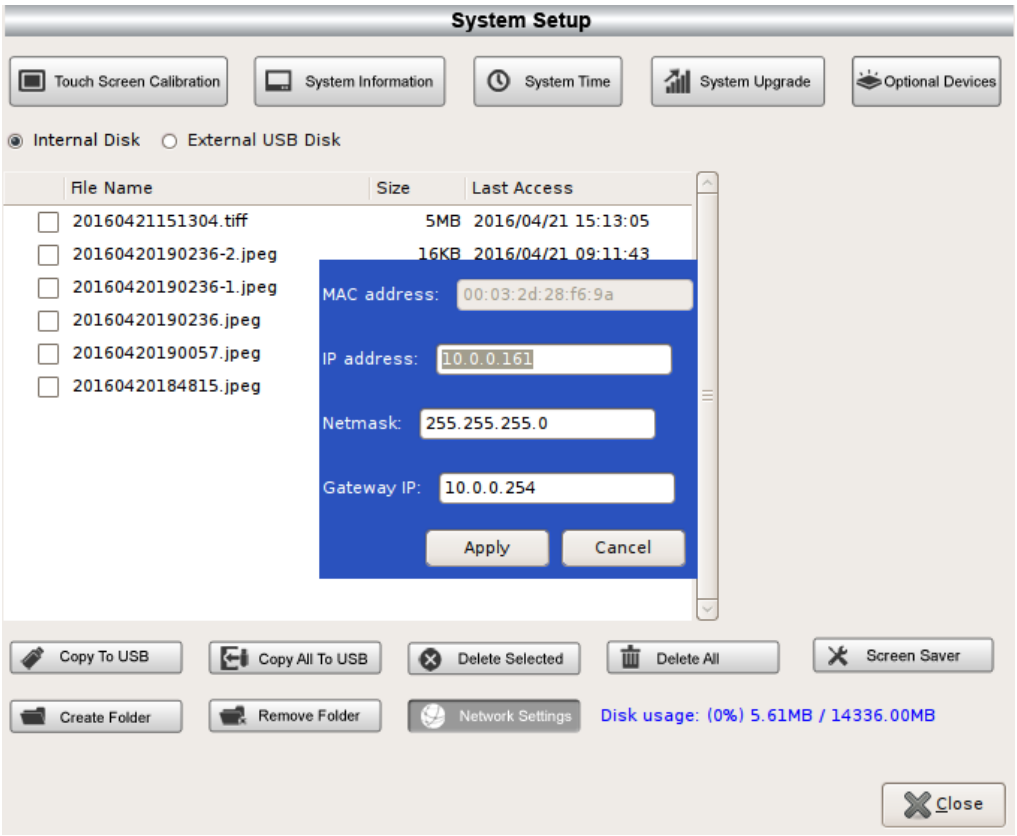
4.8.12 Remove Folder

If user would like to delete any folder in the list, select the folders and press

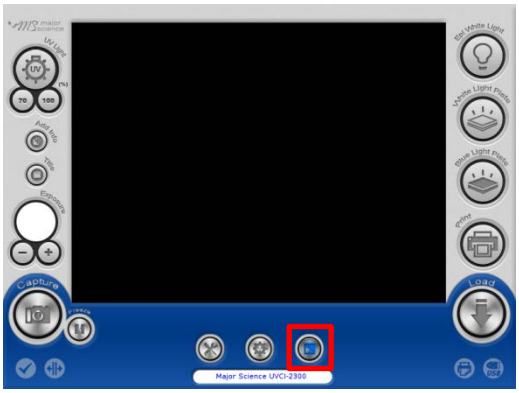
.

4.8.13 Network Settings

Press to set detail information. Press “Apply” to apply or “Cancel” to cancel and close the dialogue.



4.9 Reverse out



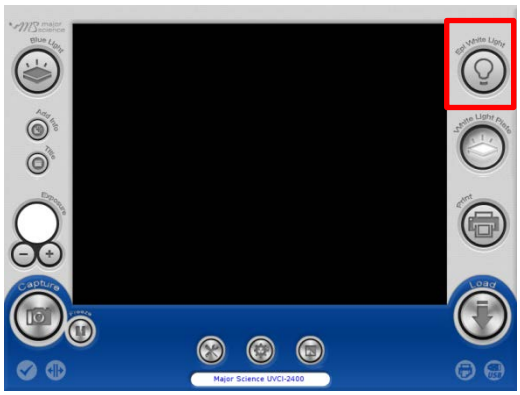
Press the icon to reverse the color of present picture from black to white, white to black.

4.10 Freeze

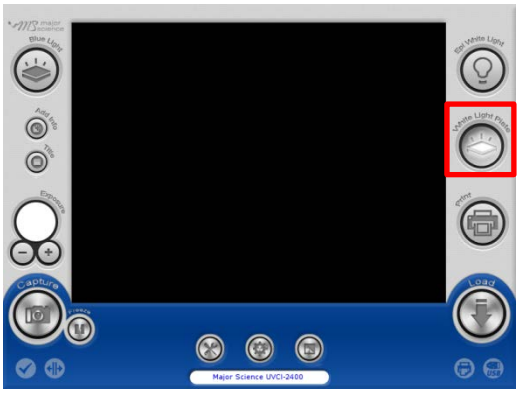
Press to freeze the present picture on the screen. System will have the picture stay on the screen as long as user needs.

If user would like to save the freeze picture, press “Capture” and press “Save”.

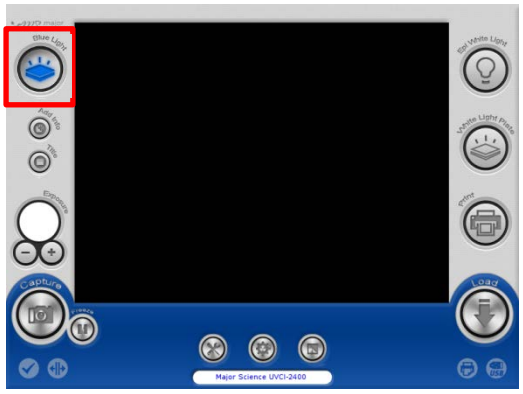
4.11 Turn ON/OFF the Lighting Modules



Press the icon of “Epi White Light” to turn on/off the Epi white light.

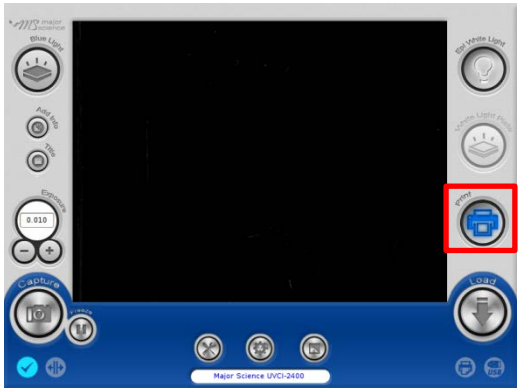


Press the icon of “White Light Plate” to turn on/off the white light.



Press the icon of Blue Light” to turn on/off the blue light.

4.12 Print

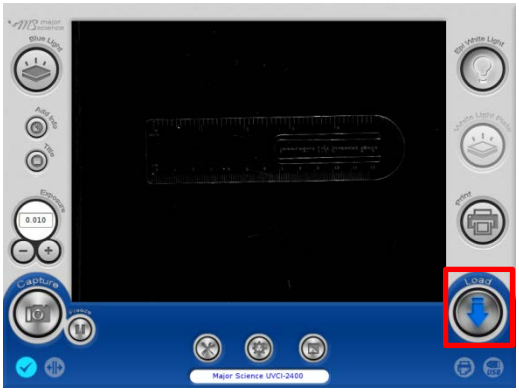


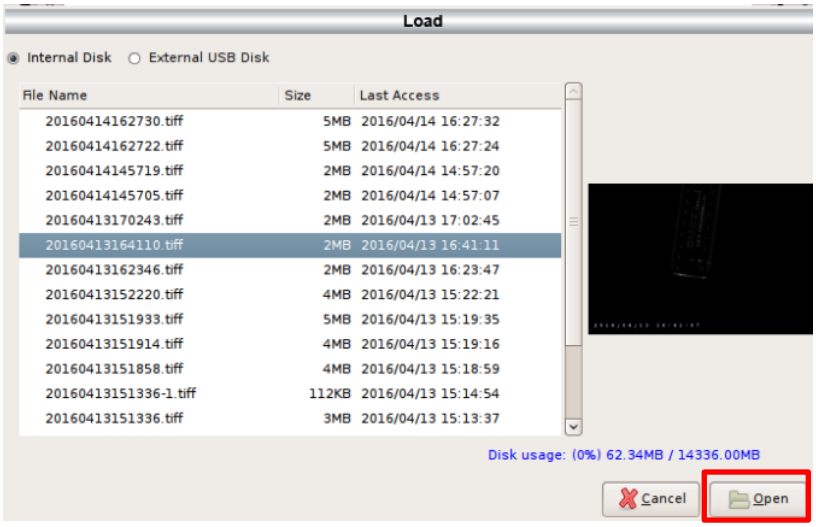
Press the icon of “Print” to print the present picture on the screen.

NOTICE that system will not save a digital format of the picture automatically only by pressing “Print” button.

4.13 Load and Edit the Picture

Press “Load” icon to review or edit the files in device or flash drive.

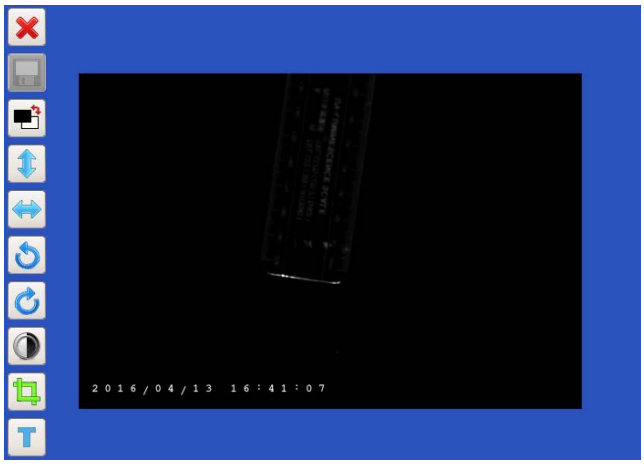




Select either “Internal Disk” or”External USB Disk” to read the files in corresbonding device.

Select one file then press”Open “ to edit; press “Cancel” to cancel and close the dialogue.

The usage percent of the device displayed at the right corner.



◀ Editing Interface

- Close/Cancel
- Save
- Anti-white
- Flip upside down
- Flip horizontally
- Turn counterclockwise
- Turn clockwise
- Brightness adjust
- Crop
- Text

4.13.1 Anti-white

Press to anti-white the screen.

4.13.2 Flip upside down

Press to turn the picture upside down.

4.13.3 Flip horizontally

Press to flip the picture horizontally.

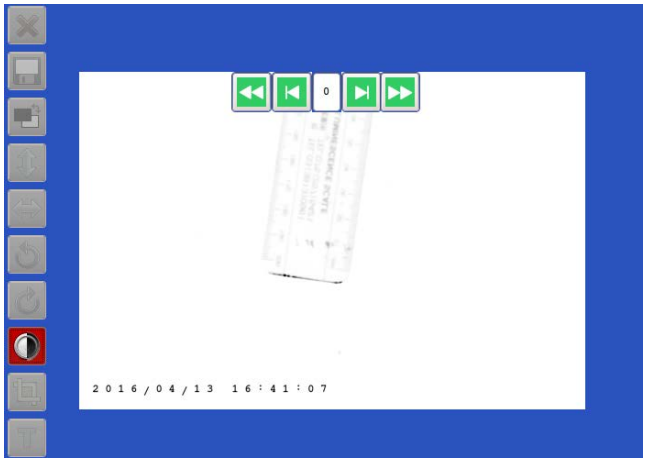
4.13.4 Turn counterclockwise

Press to turn the picture counterclockwise.

4.13.5 Turn clockwise

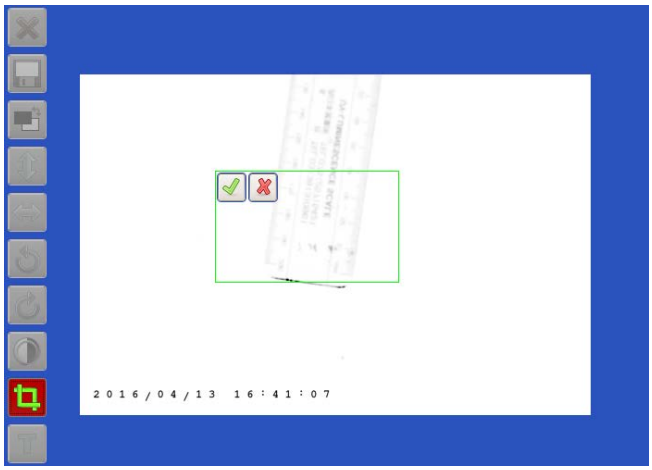
Press to turn the picture clockwise.

4.13.6 Brightness adjust



Press to increase or decrease the brightness of the picture.

4.13.7 Crop

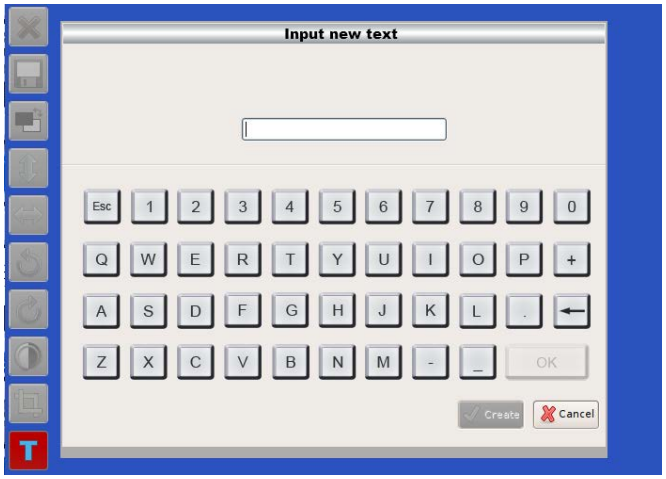


Press to crop the picture. Press one point on the screen and drag to crop.

4.13.8 Text

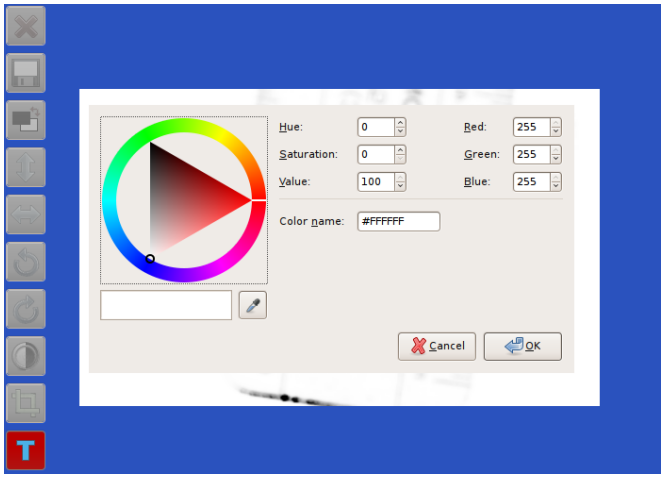
1. Press to create a new text on the picture. Locate one point and press to add a new text. Cross indicates the location of the text. Press to start editing the text.

2. Press to replace the text on any point on the screen.



3. Press to edit the content of the text. Press “Create” to apply the setting. Note: all letters are in capital. “Esc” is to delete all text in the column; is to backspace. Press “Cancel” to cancel editing and close

4. Press to adjust the front size. Press ”Apply” to confirm or “Cancel” to cancel and close the dialogue.



5. Press to change the color of the text. Click the color triangle to pick the color. Move the color triangle to choose the color range. Press “OK” to apply or “Cancel” to cancel and close the dialogue.

4.13.9 Undo and redo

On the editing page, any changing can be undone or redone by buttons along right bar.

4.14 Signals Indication

CCD Camera Connected

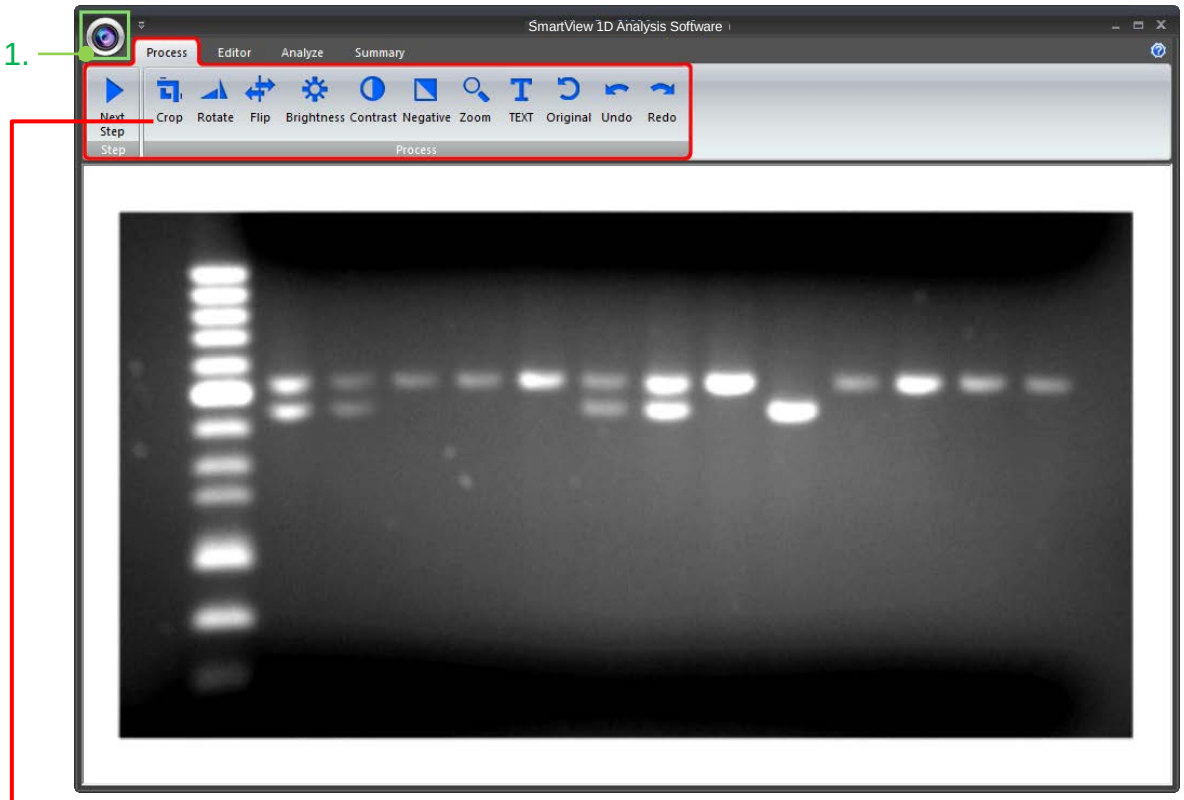
Door Opened

Printer Connected

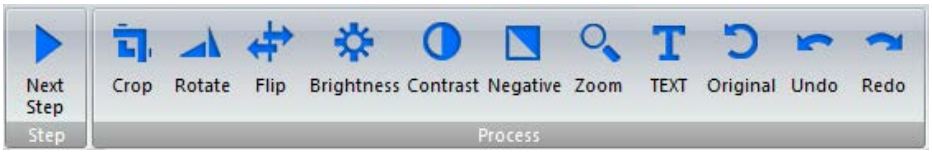
USB Enabled

5 SmartView 1D Analysis Software

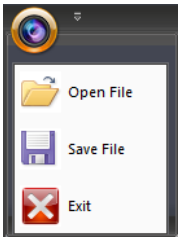
5.1 Process



2.-13.



1.



a. Open the data file.

b. Save the file.

c. Exit the program.

Step:

2.

Next Step: Go to next step to select analysis mode: gel positive/ gel negative/ dot positive/ dot negative.

Process:

3.

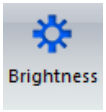
Crop: Select the cropping area of the image.

4.

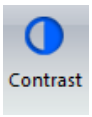
Rotate: Rotate the image.

5.

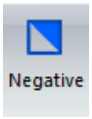
Flip: Flip the image according to the orientation you desired.

6. 

Brightness: Adjust the brightness of the image.

7. 

Contrast: Adjust the contrast level of image.

8. 

Negative: To reverse the image between black and white (not applicable to colored images).

9.

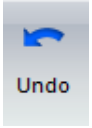
Zoom: To show a larger area or to examine more closely of the image.

10.

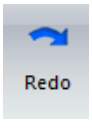
Text: Add text on the image.

11.

Original: Return back to original image without any editing.

12. 

Undo: Return to previous step.

13. 

Redo: Repeat last action.

Crop:

Crop the image by press the “Crop” button (as box 1). In order to select the cropping area of the image, hold and drag the cursor to select the area you want (as box 2). Once you are done. Press “✓” (as box 3) button to confirm or press “x” to cancel.

Rotate:

To rotate the image, first select the “Rotate” button (as box 1) then the toolbar (as box 2) will pop up.

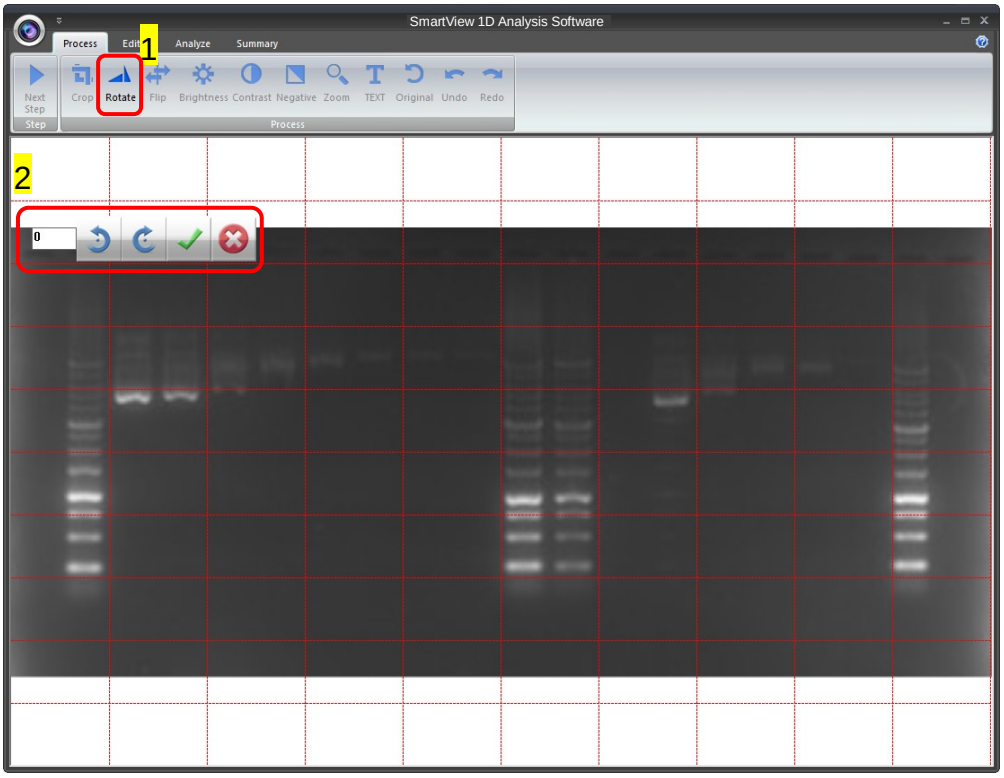
Toolbar:

a. : Rotate counter-clock wise

b. : Rotate clock wise

c. : Confirm action

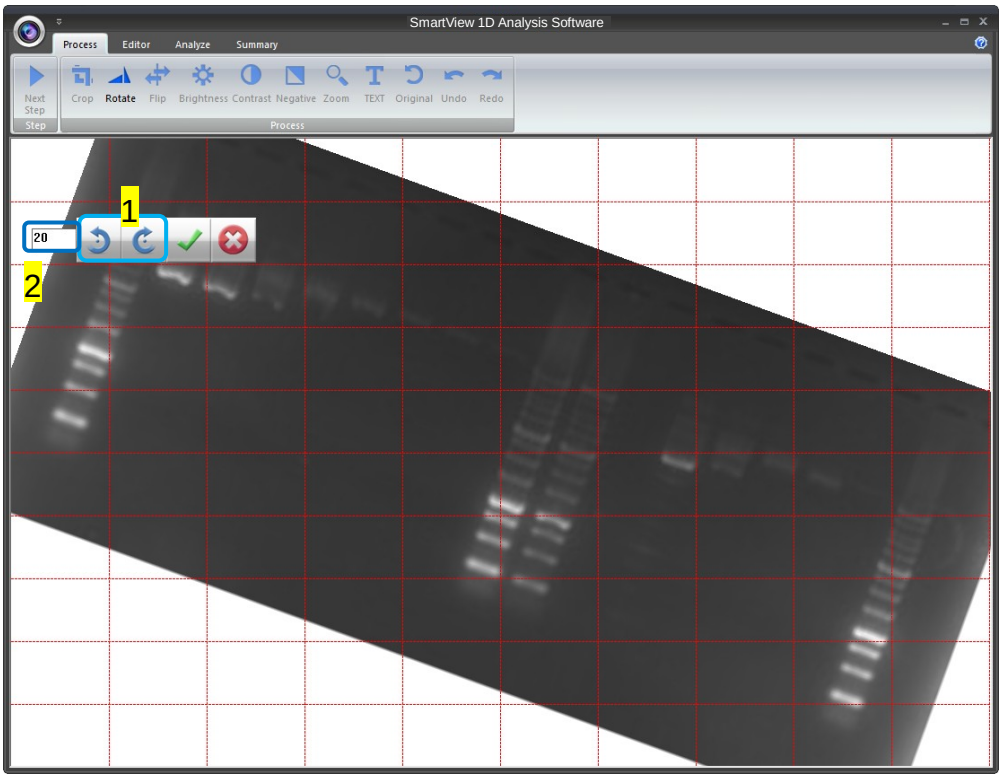
d. : Cancel



You may rotate the image counter-clock wise or clock wise in two ways:

a. Using the toolbar labelled as box 1, press "✓" to confirm action.

b. Input the desired angle (0~359) directly in the blank space labelled as box 2, press **ENTER** first before pressing "✓" to confirm action.



Flip:

To flip the image according to the orientation you desired.

a. : Invert the image upside down.

b. : Invert the image from left to right.

c. : Confirm action d. : Cancel

Brightness:

Adjusting the brightness of the image by pressing on the “Brightness” button (as box 1), then use the scrollbar (as box 2) to adjust the brightness level.

a. : Low – High

The result of Brightness is shown below. Press “✓” to proceed or press “X” to cancel.

b. : Confirm action c. : Cancel

Contrast:

Adjusting the contrast level of the image by pressing the “Contrast” button (as box 1), then use the scrollbar (as box 2) to adjust the contrast level.

a. : Low – High

The result of Contrast is shown below. Press “✓” to proceed or press “X” to cancel.

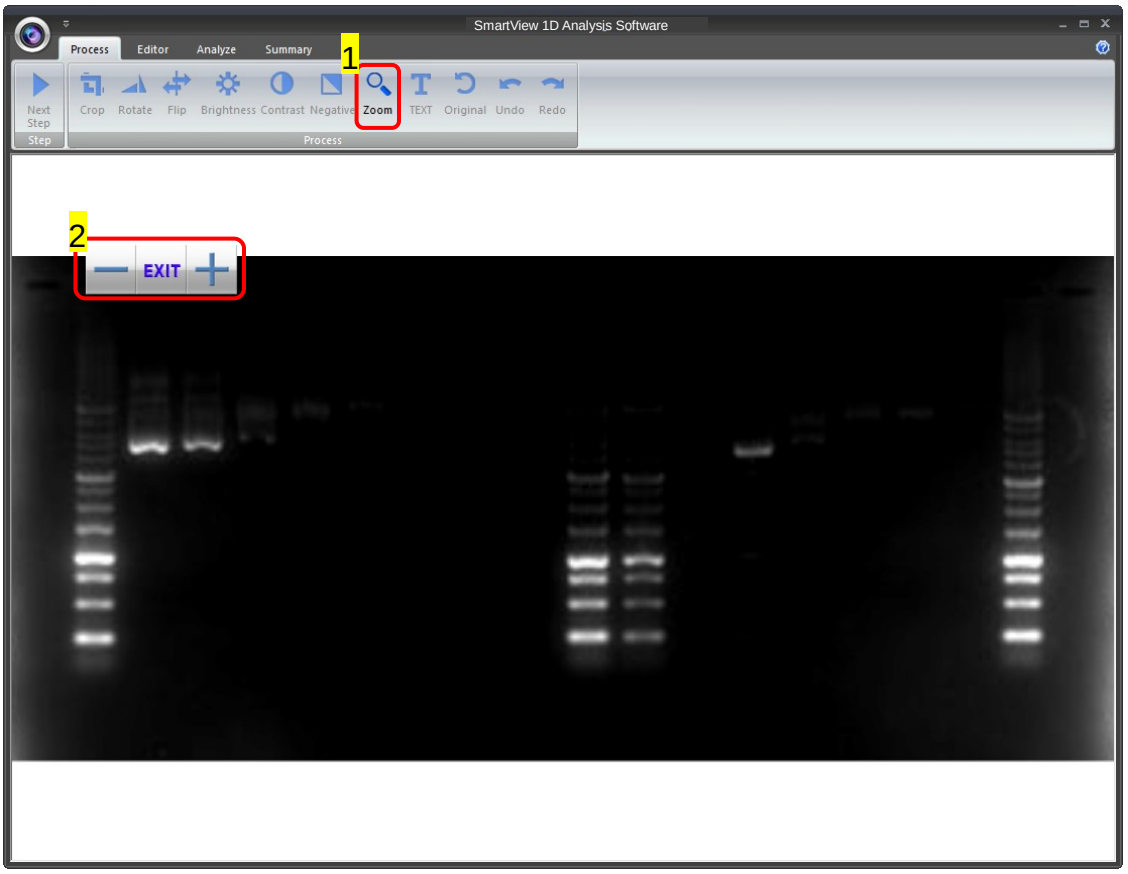
b. : Confirm action c. : Cancel

Negative:

To reverse the image between black and white by pressing on the “Negative” button (as box 1). If you don’t want to negative the image, you can press the “Negative” button again or you can press the “Undo” button (as box 2) to recover the image.

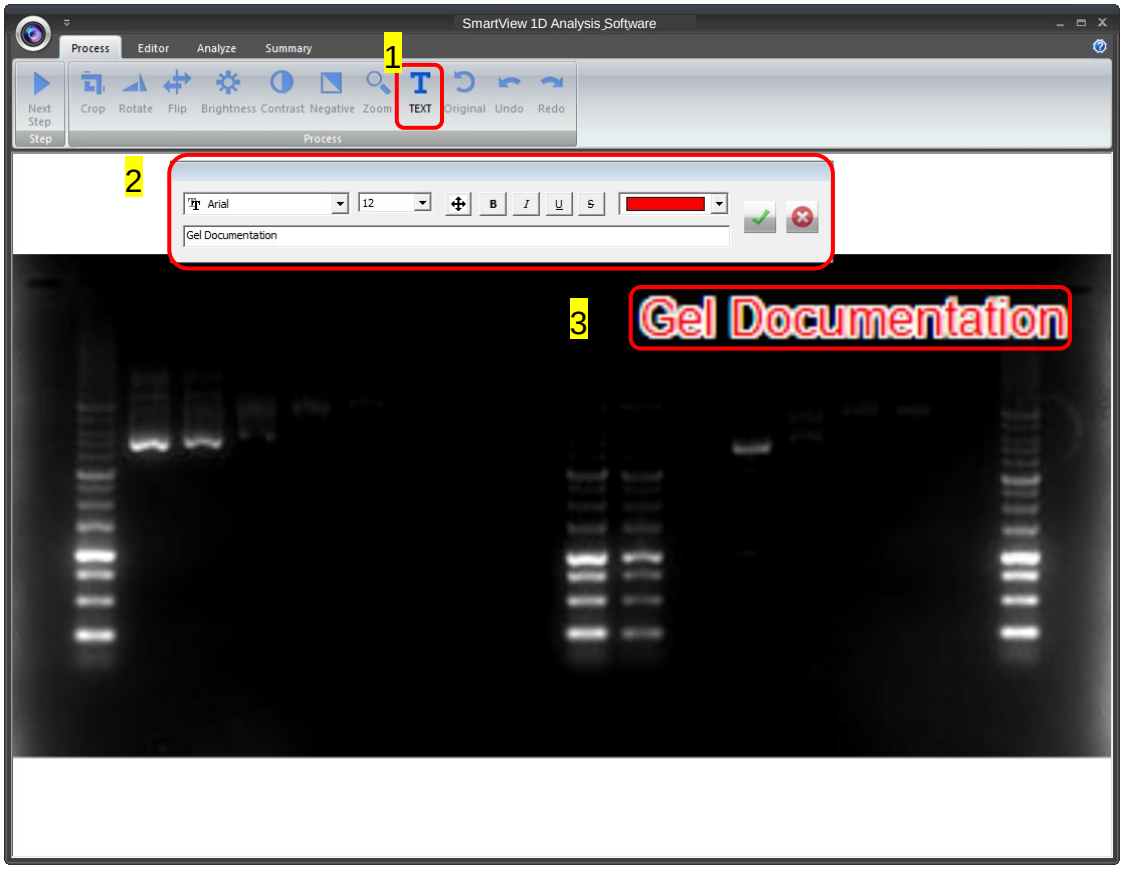
Zoom:

Adjusting the zoom of the image by pressing on the “Zoom” button (as box 1) and then a toolbar will pop out. If you want to zoom in the image, press the ”+” button (as box 2). If you want to zoom out the image, press the “-“ button (as box 2). Press “EXIT” to finish. This feature simply lets you zoom in and zoom out of the image but will not make any changes to the image file.

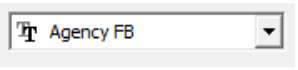


Text:

You could add any text onto the image. Click on the “Text” button (as box 1) and then the toolbar (as box 2) will show up. The sample text (as box 3) will show on middle of the screen.

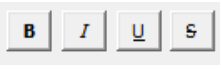


Click on the input box, type in your text here. You could adjust your text using this toolbar. The toolbar functions are explained as below.

a.  : Change the font type

b. : Change the font size.

c. : Move the text to the desired location by moving the mouse cursor to the desired location on the image and click the left button of the mouse.

d.  : Change the font properties.

e. : Change the color of the font.

f.

Input box: Type in your text here, press **ENTER** first before pressing "✓" to confirm action.

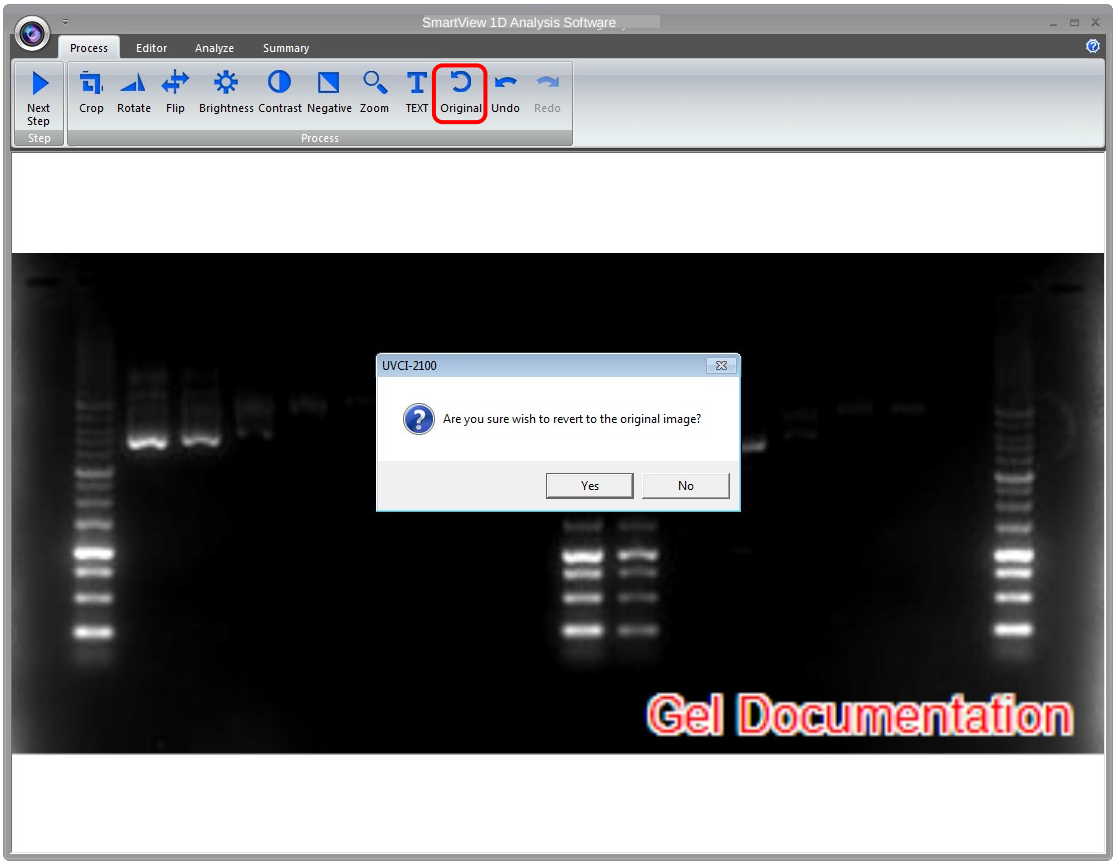
g. : Confirm action

h. : Cancel

Note: 1. To add another set of text, please press "TEXT" again.
2. To remove a text, please use "Undo".

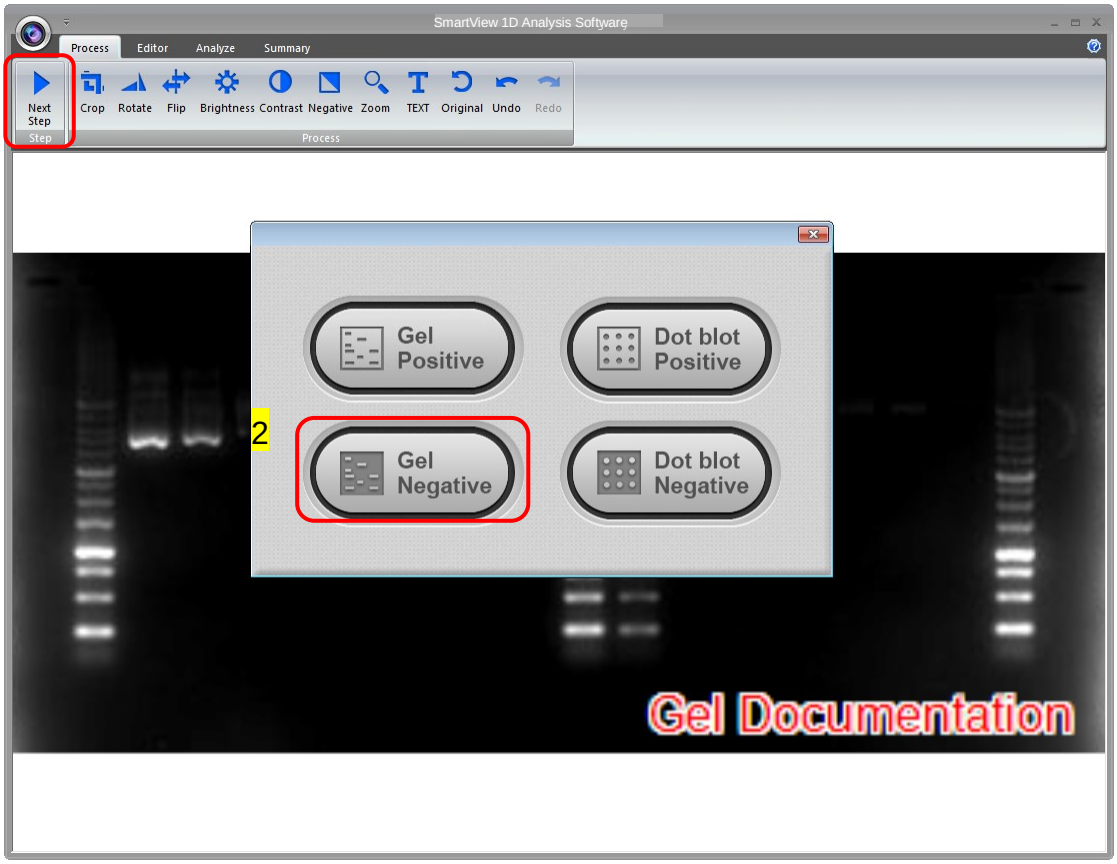
Original:

This is the master undo button. It will undo ALL the changes you made to the image and revert it back to the original image. A massage will pop up to ask for confirmation once you press the "Original" button. Press "Yes" to proceed.



Next Step:

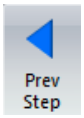
Press “Next Step” button (as box1) to continue the analysis. There are 4 analysis methods for you to choose depending on your application. For example here, we choose “Gel Negative” (as box 2) for DNA gel electrophoresis. (This instruction for operating under Gel Positive and Gel Negative is the same)



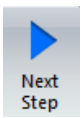
5.2 Editor

1.-4.

Step:

1. 

Previous Step: Return to previous step, current setting will be deleted.

2. 

Next Step: Go to next step.

Editor:

3.

Add Lane: Add the lane to analysis.

4.

Delete Lane: To cancel the lane.

Note: Make sure to add all lanes you wish to analyze before you proceed to the next step.

5.3 Selecting the Image Lane

Add Lane:

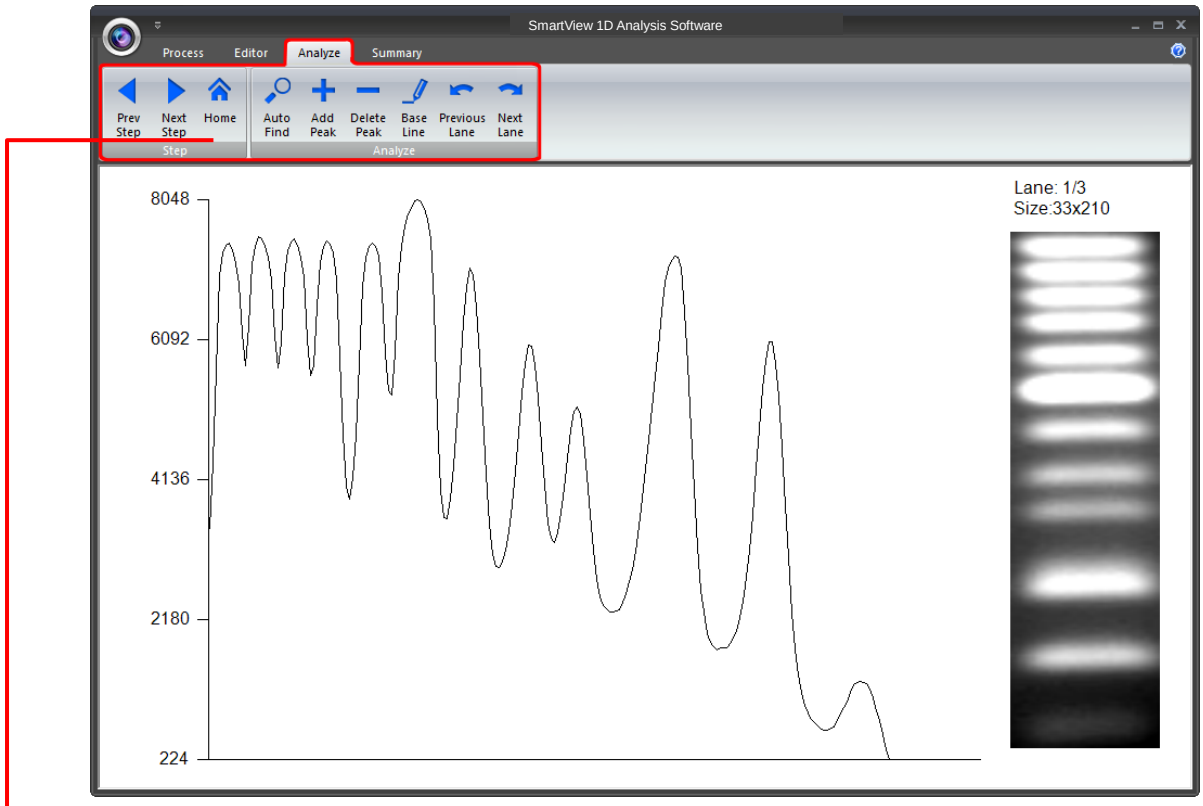
Selecting your lane by creating a long rectangular box along the lane. Press “Add Lane” button (as box 1) and then hold and drag the rectangular box to the area you want. Each time you press “Add Lane” button, the system will duplicate an exact box as your previous box. You may move the box once the “✥” cursor is appeared, hold and drag the box to the appropriate location.

Delete Lane:

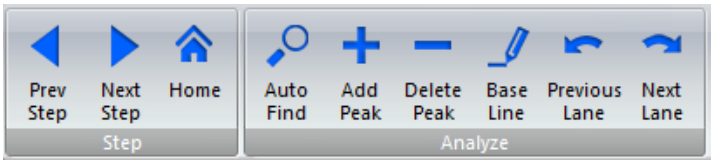
Press “Del Lane” button (as box 1), and then click the center of rectangular box you want to delete. After selecting all lanes, click “Next Step” button (as box 2) to move forward.

Note: Make sure your bands are straight and enclosed inside the rectangular box. You must choose at least one lane in order for the analysis software to proceed.

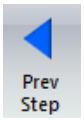
5.4 Analyze



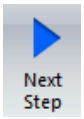
1.-9.



Step:

1. 

Previous Step: Return to previous step, current setting will be deleted.

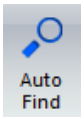
2. 

Next Step: Go to next step.

3.

Home: Return to **Image Process Interface**.

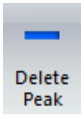
Analyze:

4. 

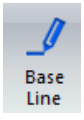
Auto Find: Find the peaks automatically.

5.

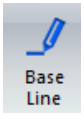
Add Peak: Add the peak manually.

6. 

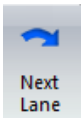
Delete Peak: Delete the peak manually.

7. 

Base Line: Set the base line manually for selecting peaks.

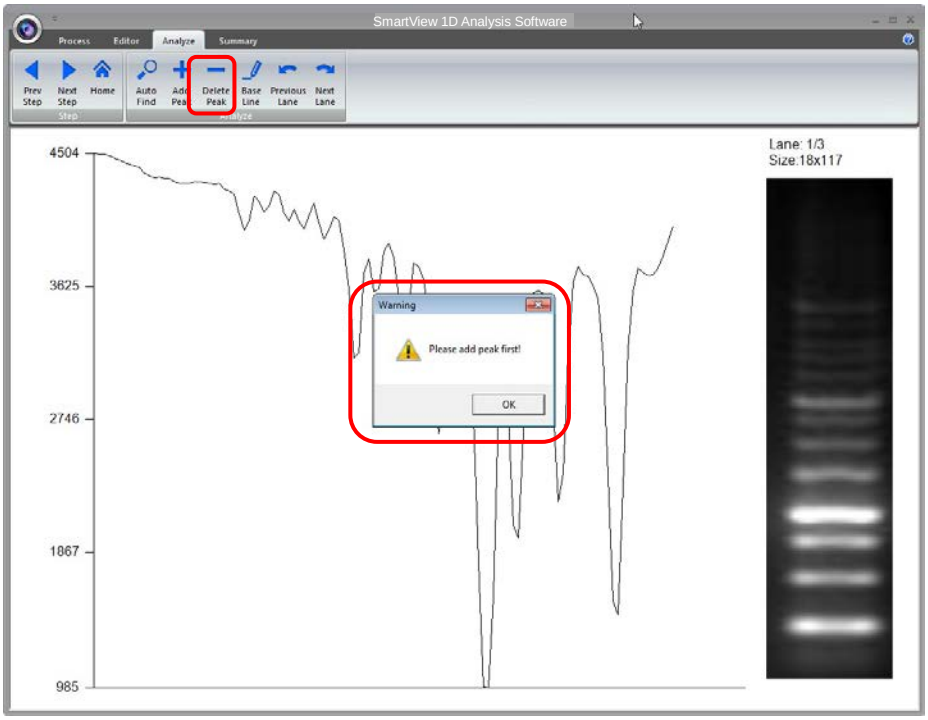
8. 

Previous Lane: Go back to last lane.

9. 

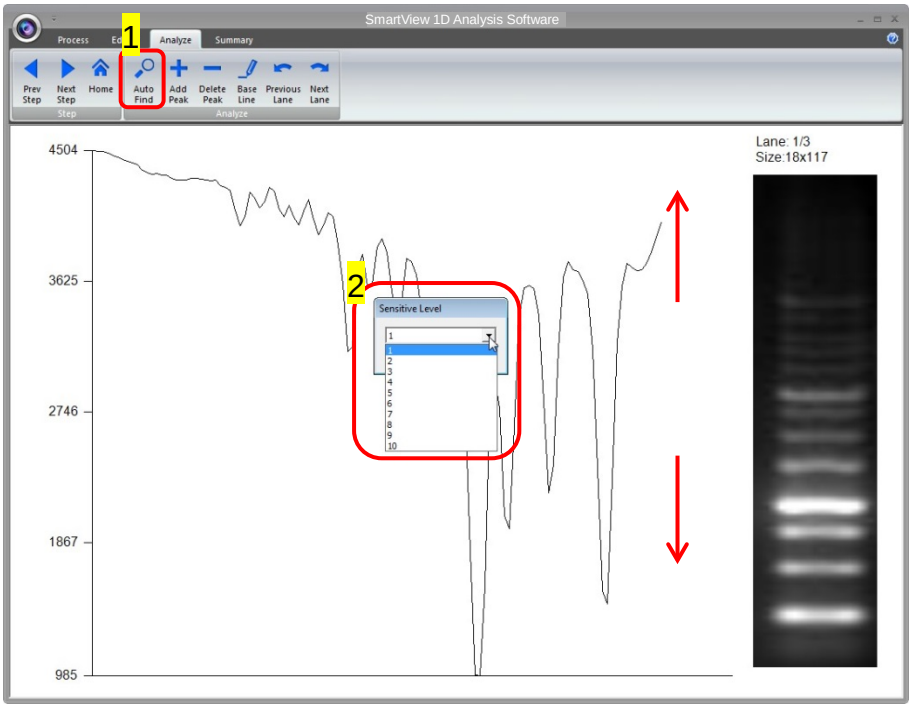
Next Lane: Go to next lane.

The analysis software will analyze the bands inside the lane to create a histogram.



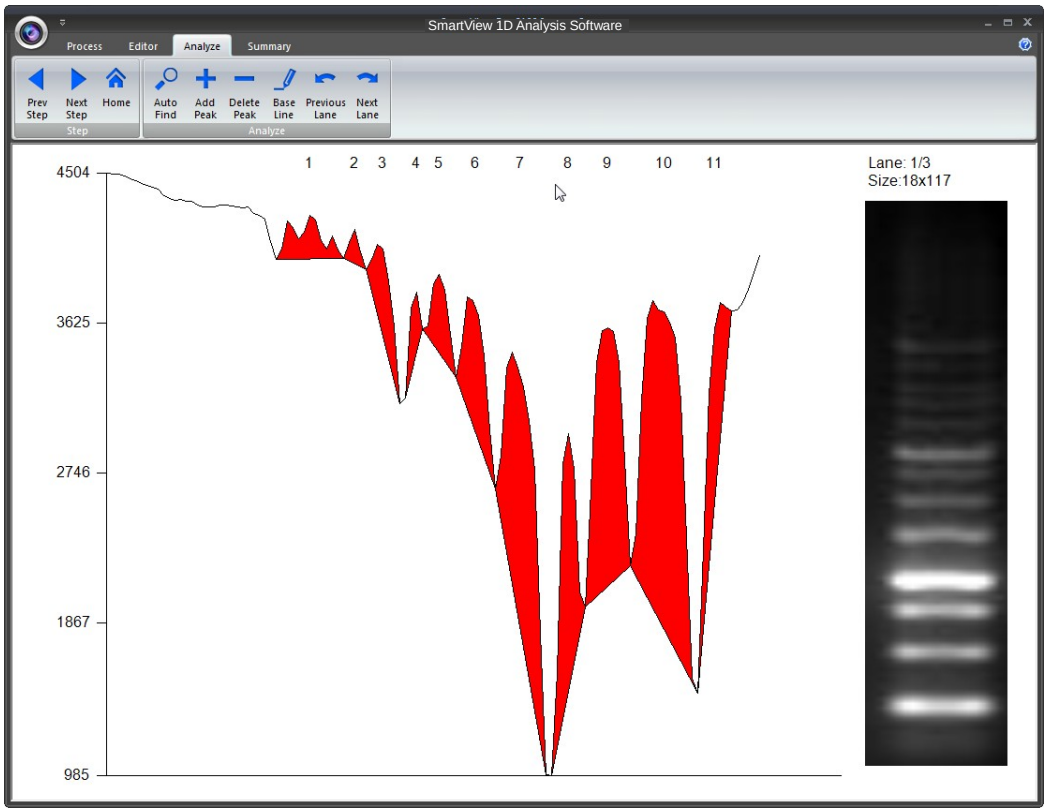
Auto Find:

Click on the “Auto Find” button (as box 1), the software will allow you to adjust the sensitivity level according to your needs. Sensitivity level (as box 2) is ranged from 1 to 10. Select a number appropriate to your image. The smaller the number, the lower the sensitive degree. The larger the value, the higher the sensitive degree.

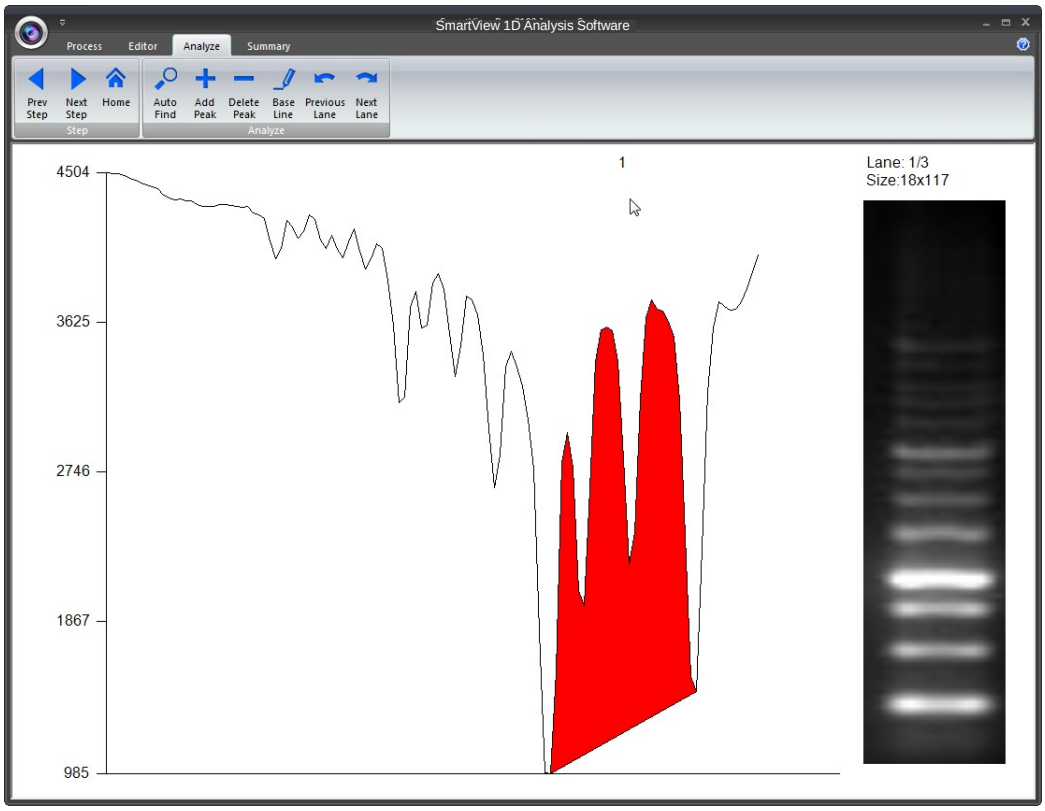


Any peaks above your adjusted sensitivity level will turn “RED”.

Example A: Sensitivity level 1

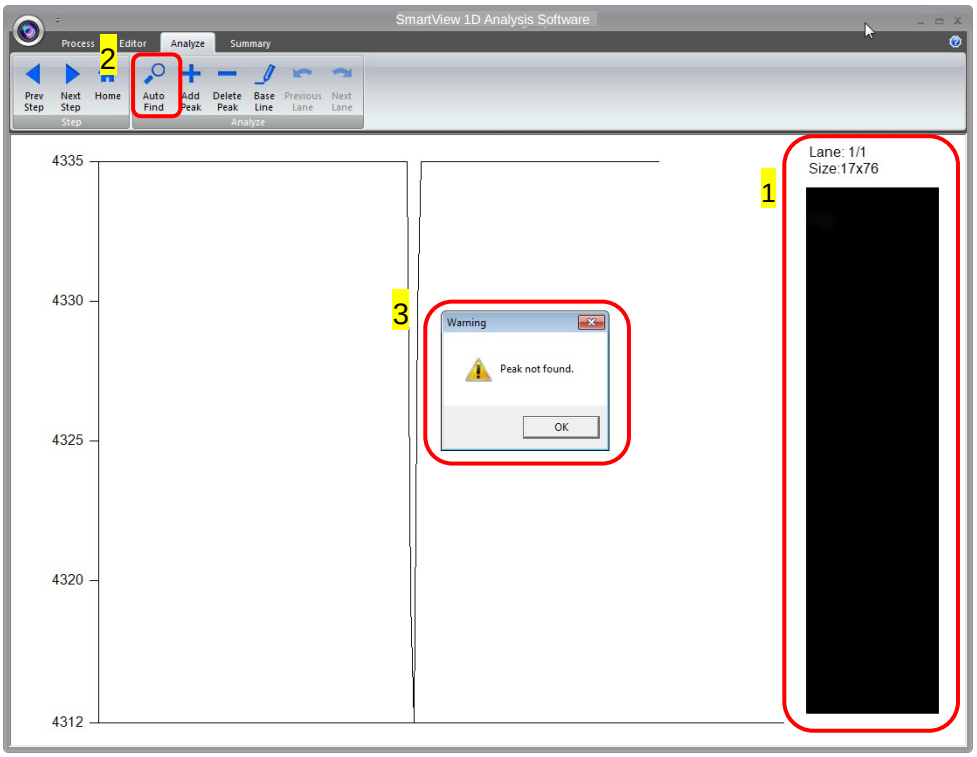


Example B: Sensitivity level 10



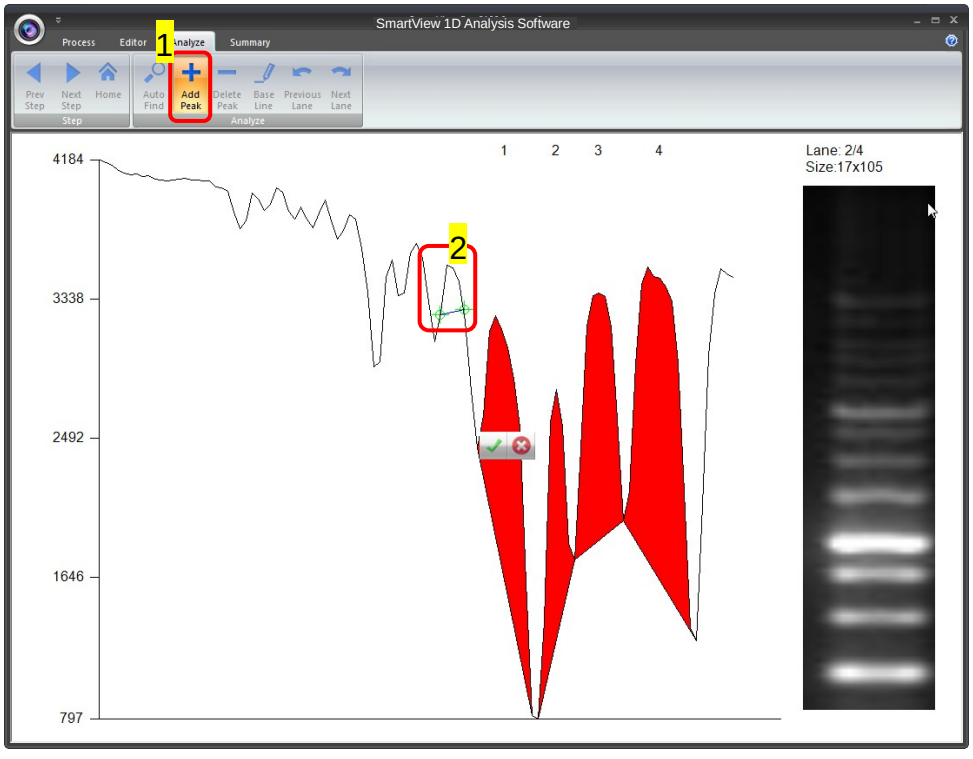
If the density of band (as box 1) is not clear, the Auto Find (as box 2) function

cannot find any peaks. The warning dialogue will pop up on the screen (as box 3).

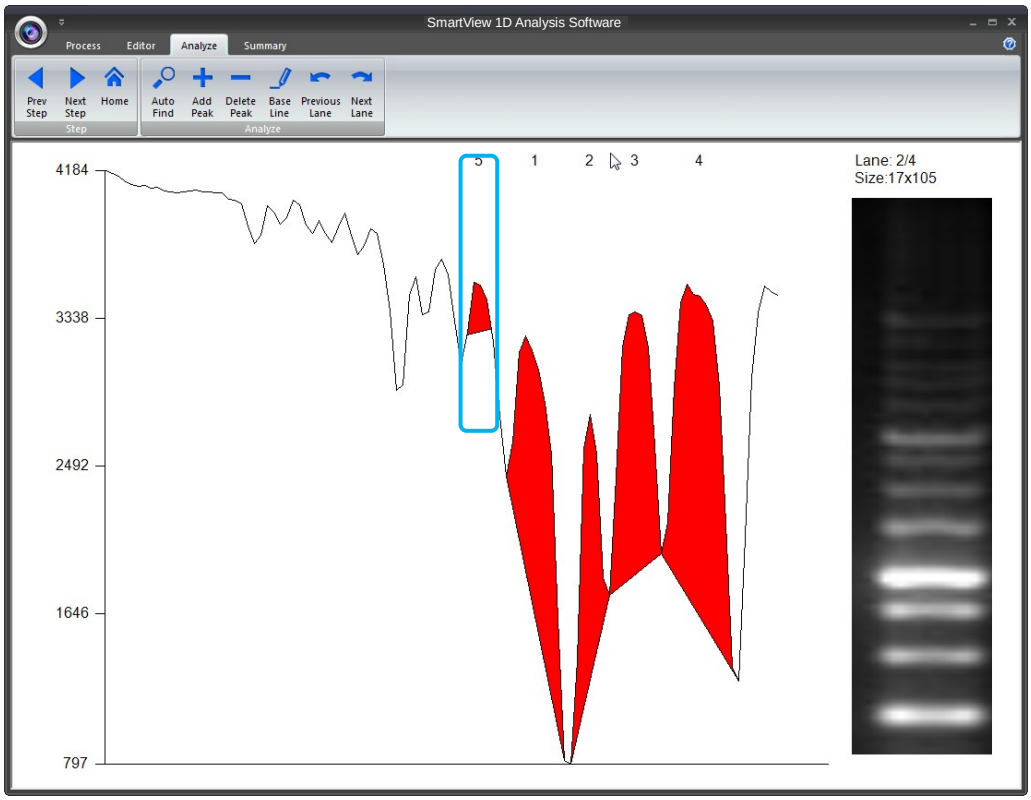


Add Peak:

Click “Add Peak” button (as box 1), choose two points which covers the range of the peak from the screen (select one point from the left side and a second point from the right side of the desired peak) to add a peak (as box 2) and then click the “✓”.

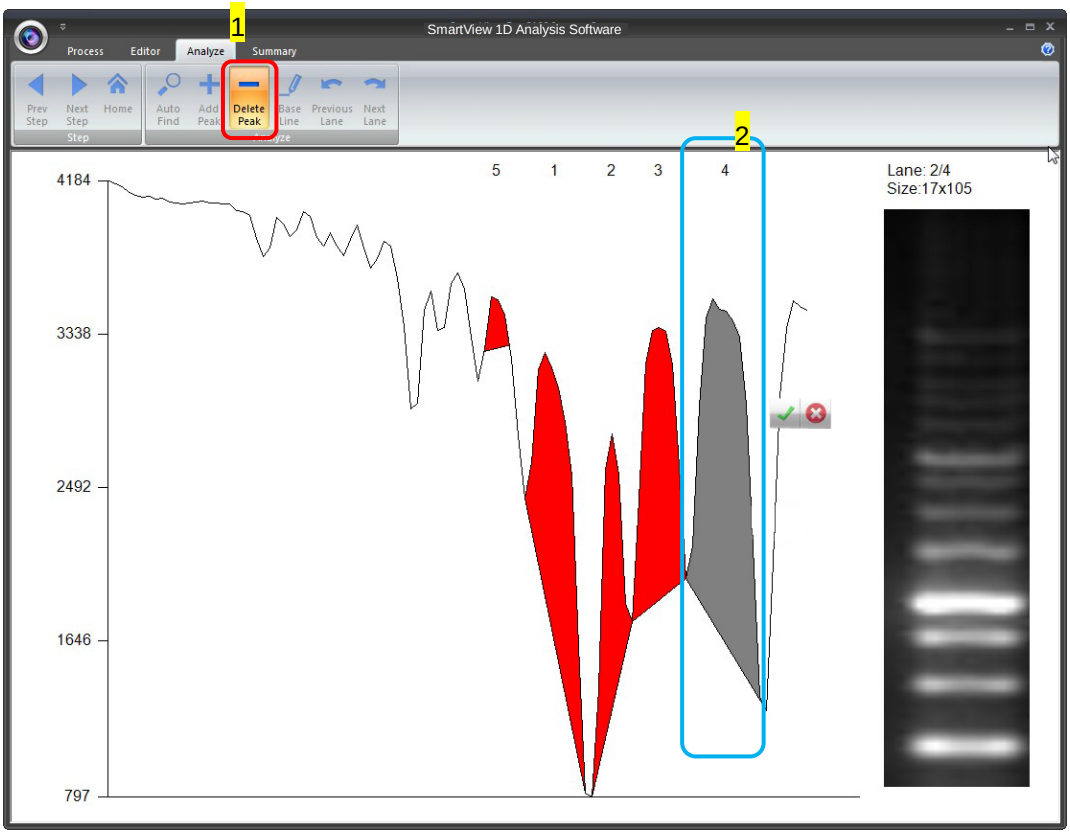


The peak will turn “RED”. The new peak number is 5 (shown below).



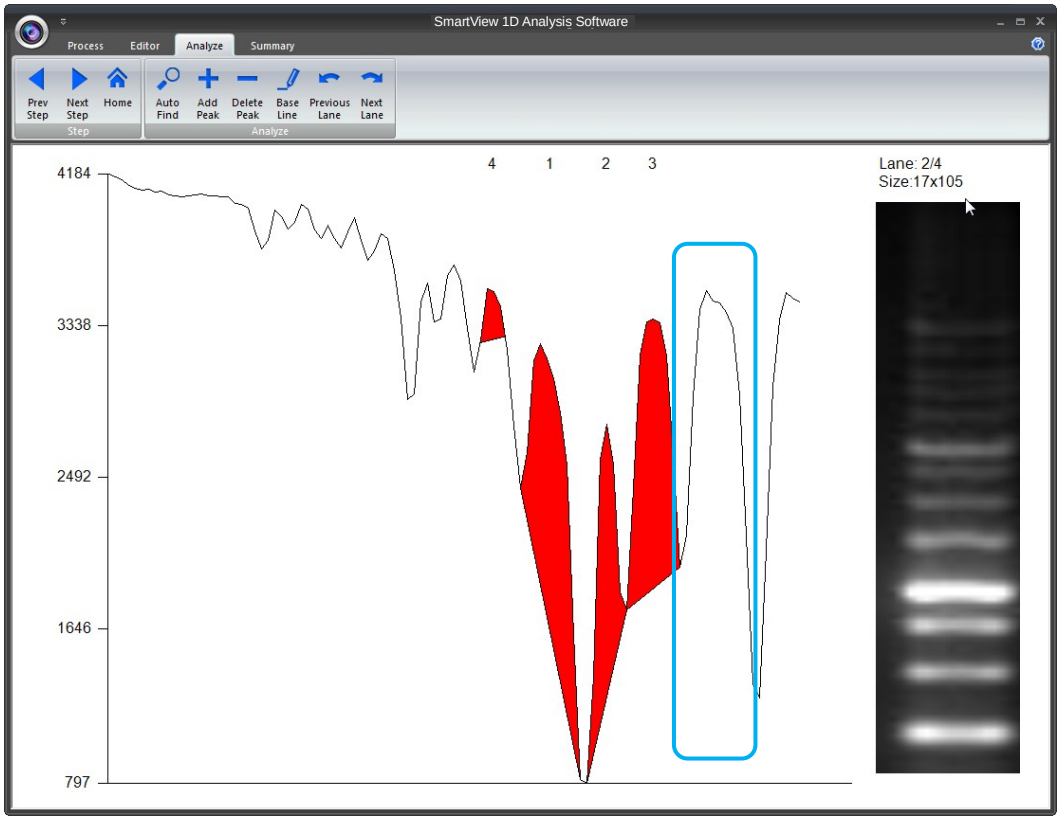
Delete Peak:

Press “Delete Peak” button (as box1), click on that peak (as box 2), the peak will turn gray and then click “✓” to finished.



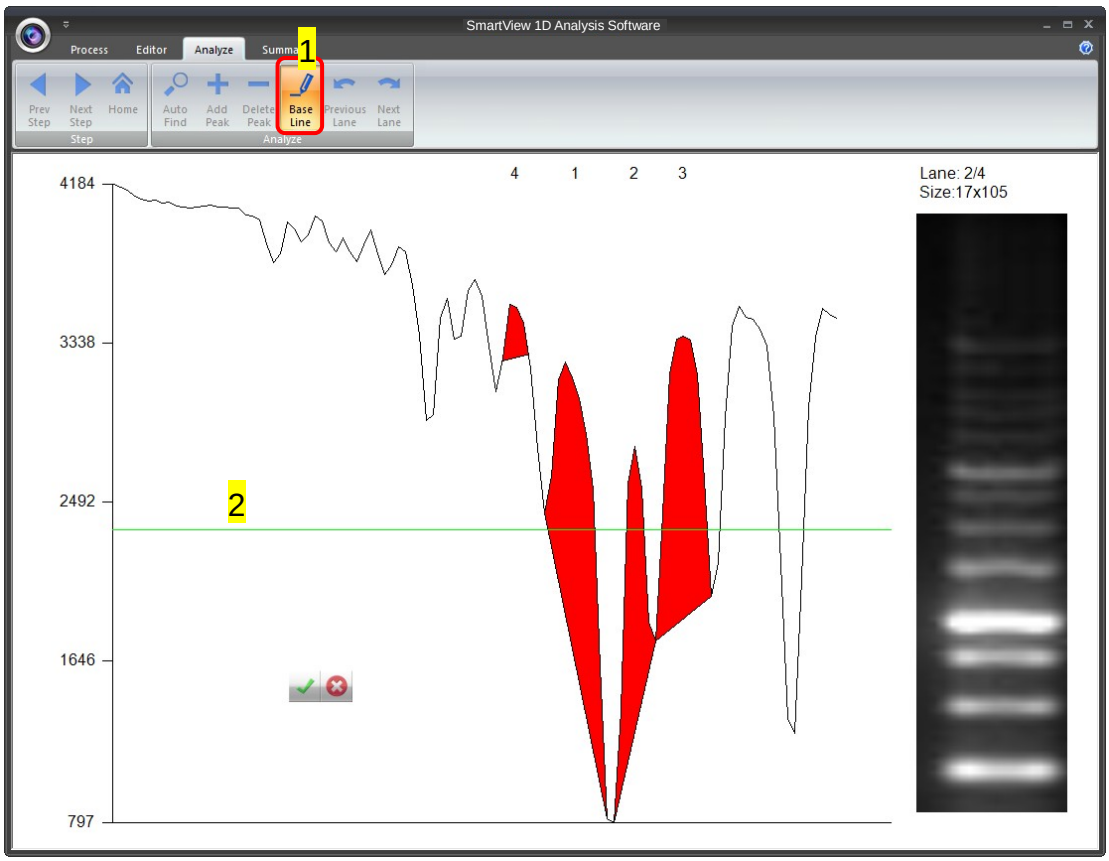
The peak will turn white. The white peak will not be included in the calculation.

The order of the peaks will be rearranged.



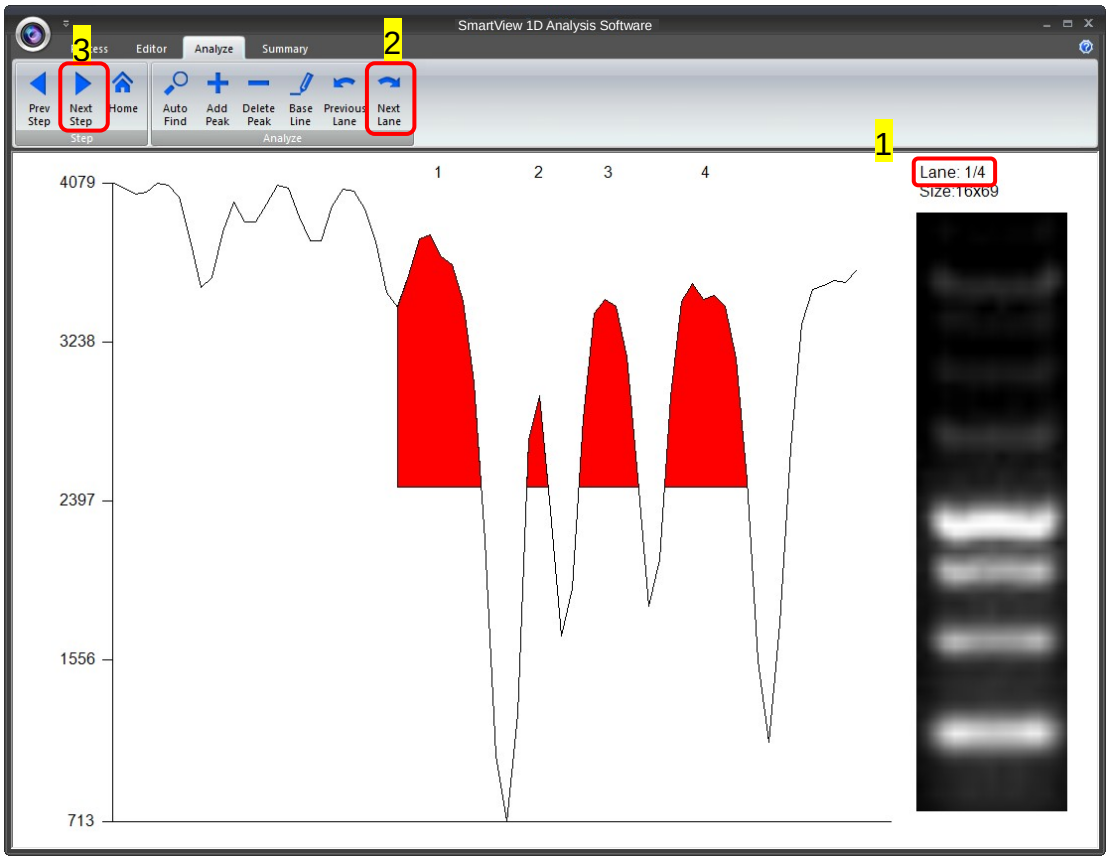
Base Line:

This feature is used to help you increase (or cut off) the peaks you want (or do not want) to include in the quantification step. Press “Base Line” button (as box 1) a green line will show up on the screen, you could move the line to the position you desiredand the peaks above the base line will be selected, then press “✓” (as box 2) to confirm it.



Note: You need to have at least one peak in order for Base Line feature to function.

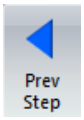
The software will only count the peaks that are above the base line. There were three lanes selected (as box 1) in this example, so you need to press on the “Next Lane” button (as box 2) go to select peaks for lane3 before proceeding to summarizing the data. Click “Next Step” button (as box 3) to move to summarizing the data.



5.5 Summary

1.-2.

Step:

1. 

Previous Step: Return to previous step, current setting will be deleted.

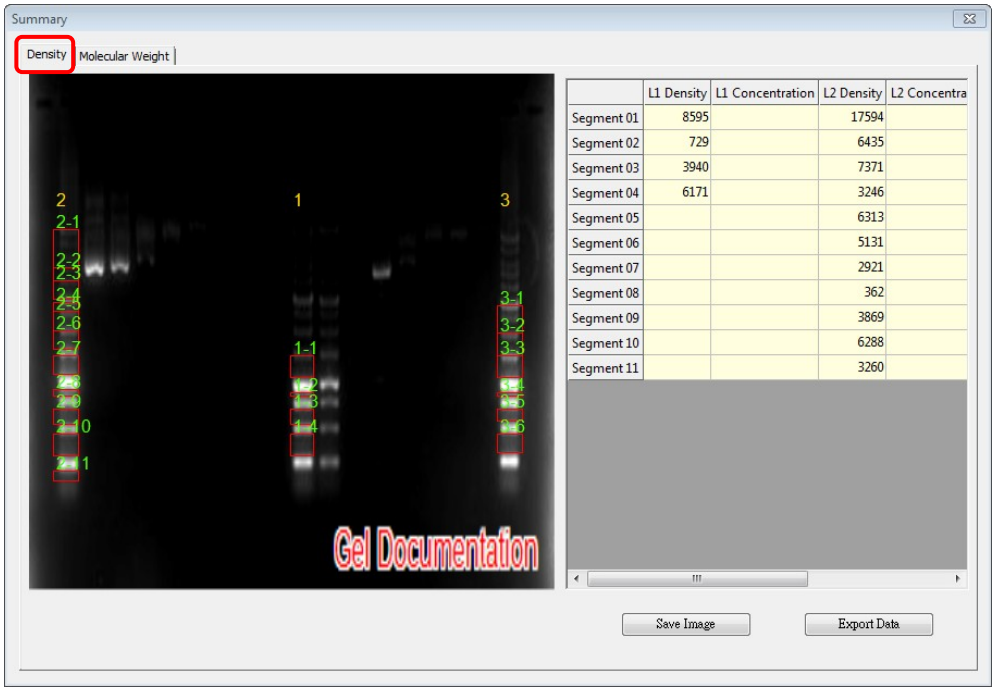
2.

Home: Return to Image Process Interface.

Calculating the density

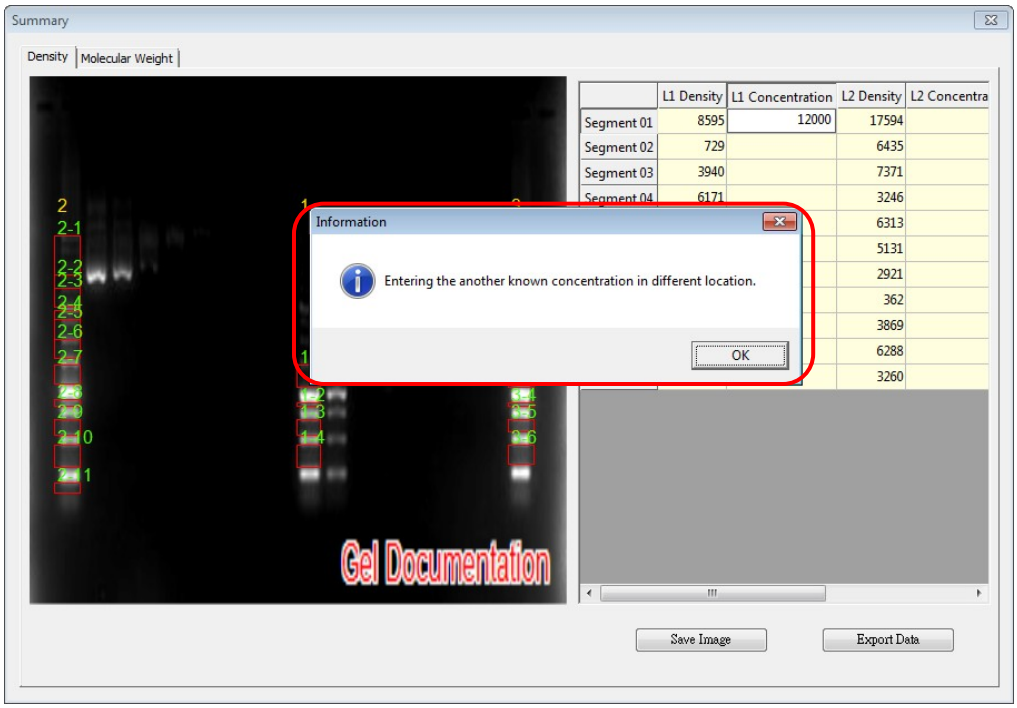
Step1 When clicking the “Density” worksheet (as box 1), you need to input two known concentration from two of the bands from the lane(s).

1

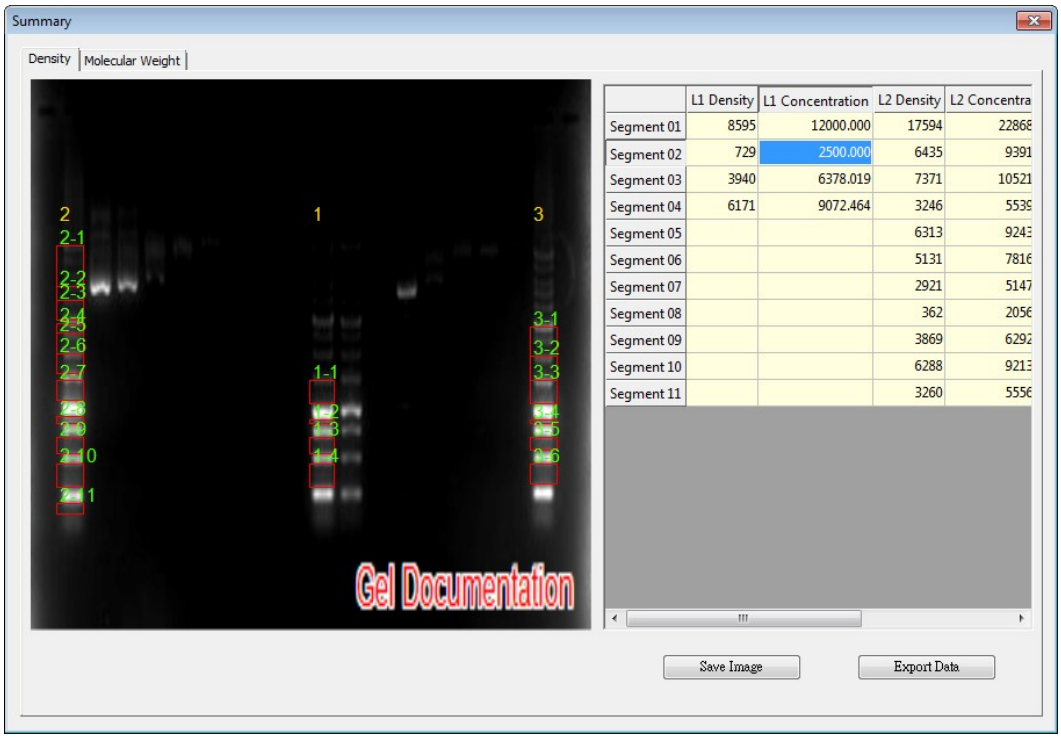


Step2 Double click the blank L1 Concentration box associated with the known marker size. After key in the first value, the system will show a dialog to remind you to key in the second value.

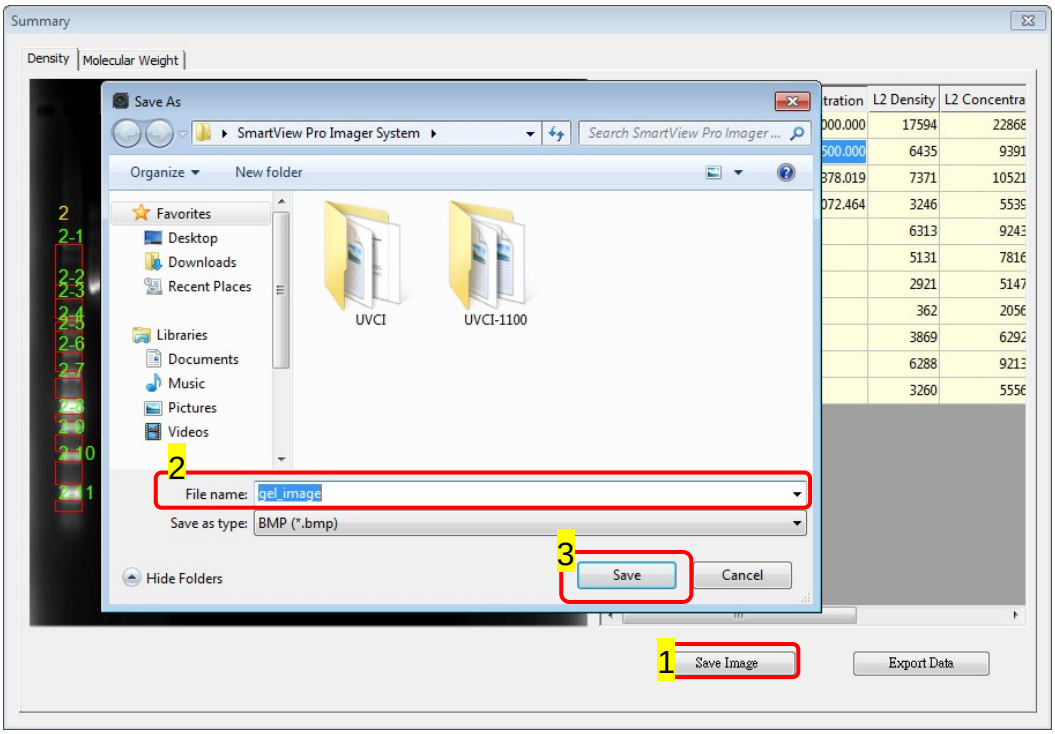
Note: The “concentration” values of marker are provided by marker manufactuerer.



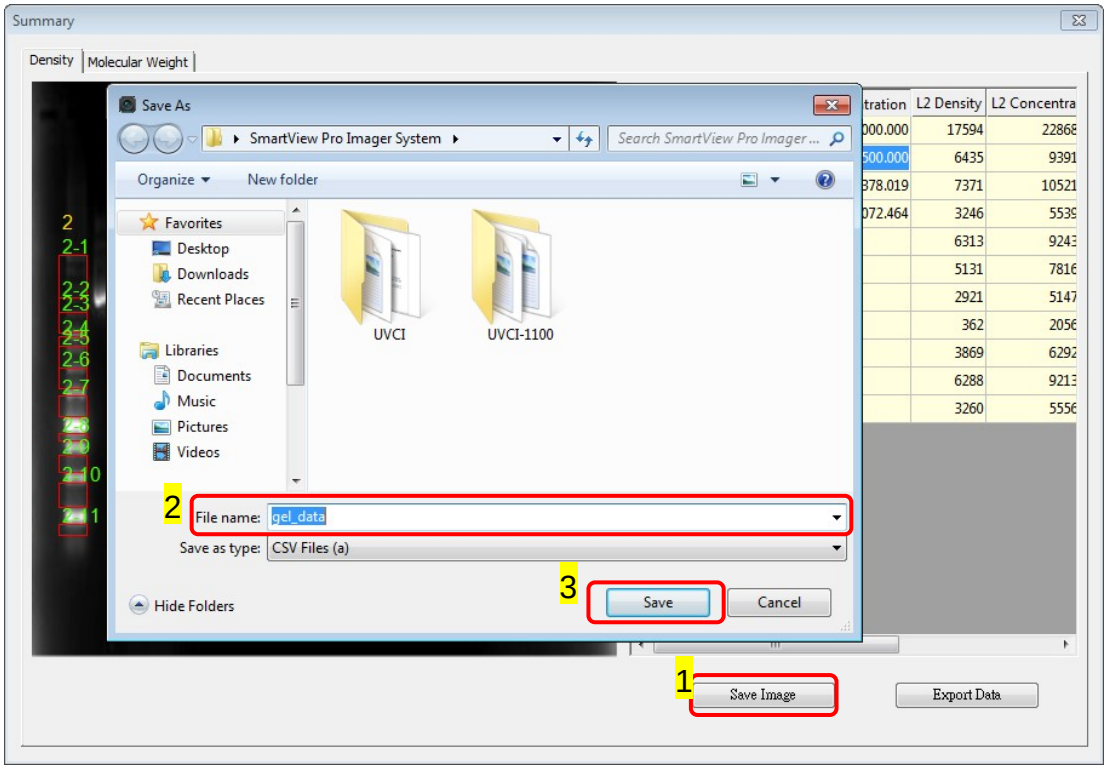
Step3 Entering the second value of known concentration then hit **Enter** on your keyboard to finish, the analysis software will project all the other unknown concentrations based on the 2 known (input) concentrations.



Step4 Click “Save image” button (as box 1) to store this image from the screen. Choose a destination location to save your image. Give the image a file name (as box 2) and press “Save” (as box 3) to finish.

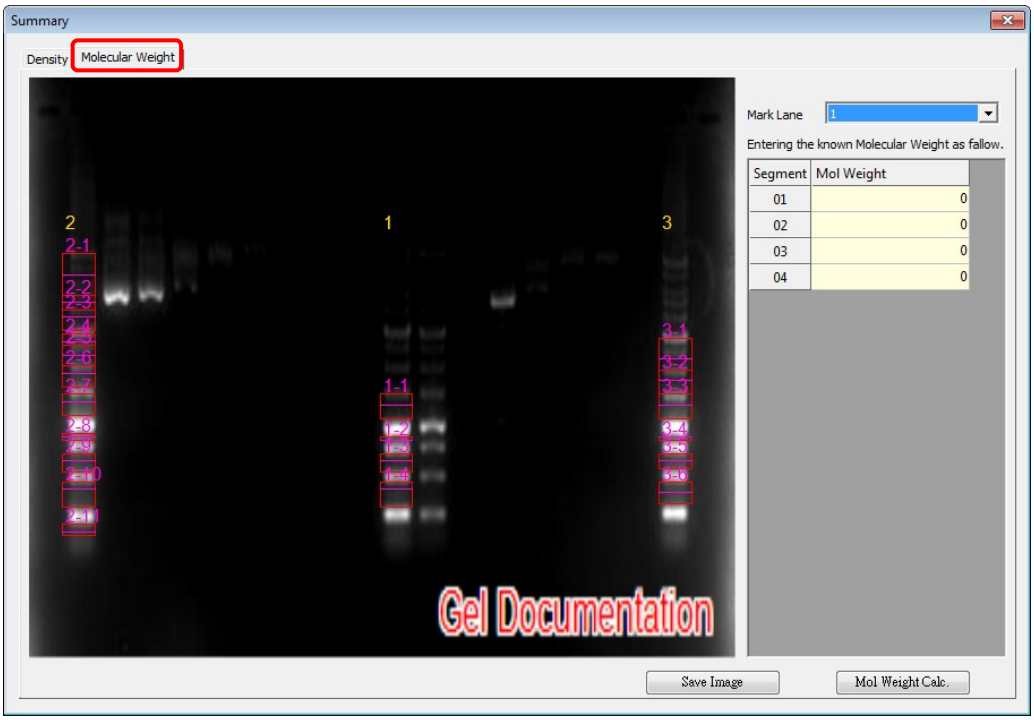


Step5 Click on the “Export Data” button (as box1), a window pops up to ask you to select a destination location to save your file. Give the data a file name (as box 2) and press “Save” (as box 3). (Data is then exported using the CSV file format, which could be easily access by using Microsoft Excel)



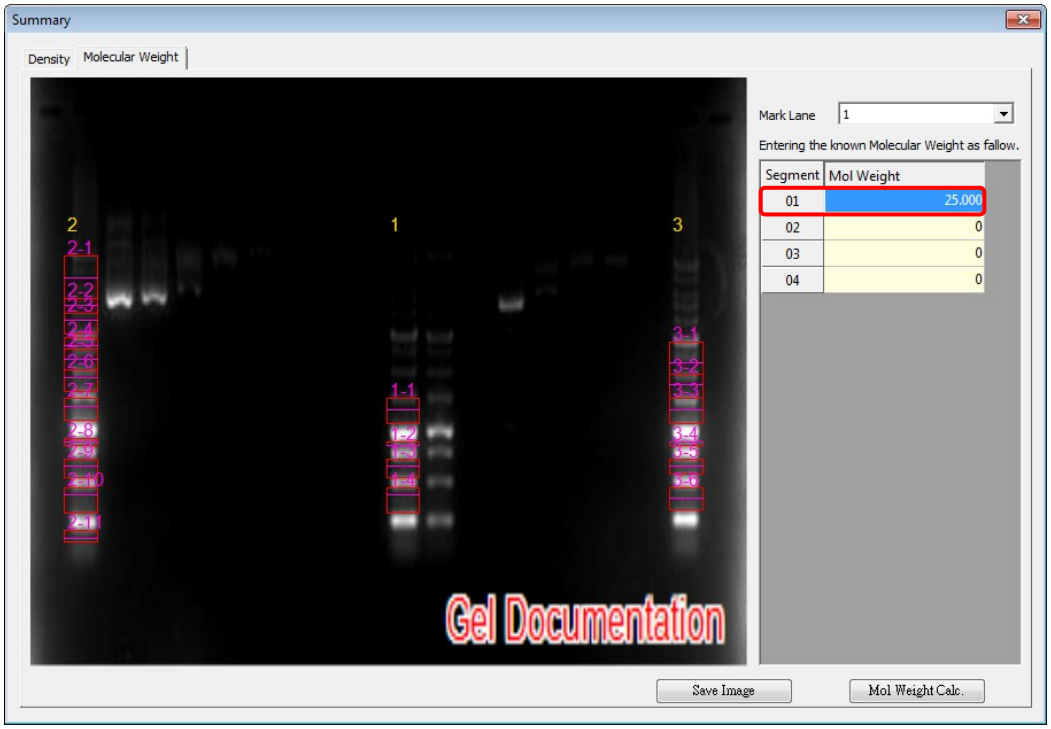
Calculating the molecular weight

Step1 Select “Molecular weight” worksheet to move forward with quantification analysis by calculating the molecular weight.

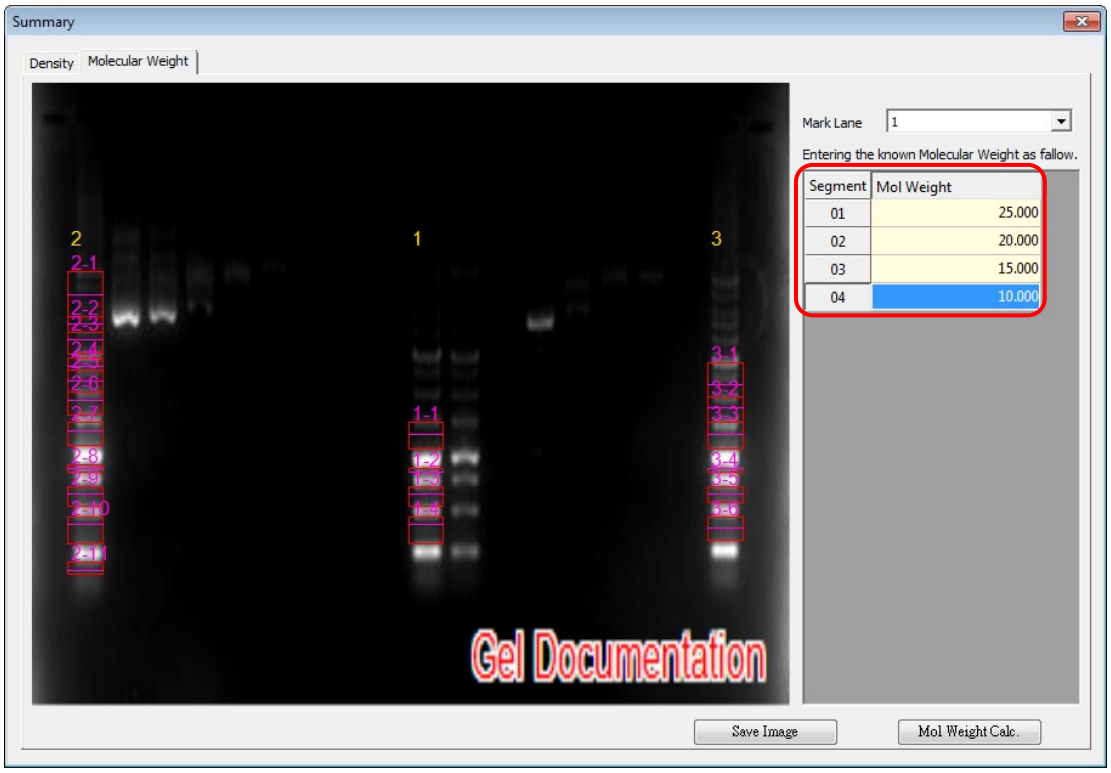


Step2 Key in the respective molecular weight values of the marker in this page.

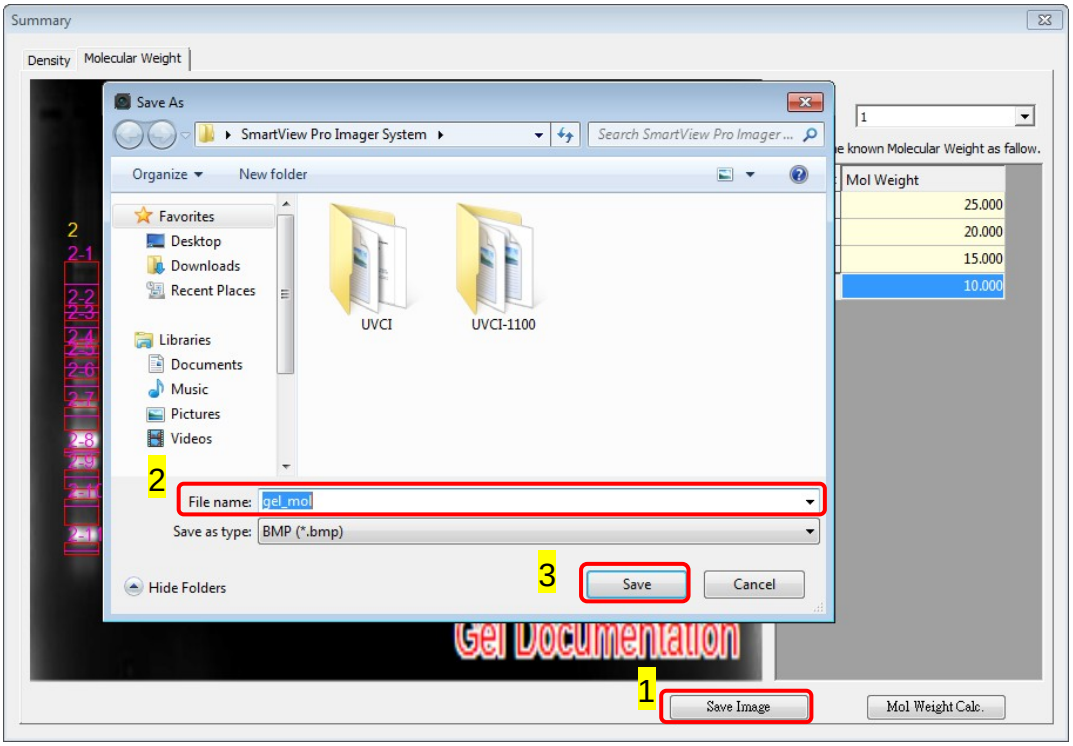
Note: The ”Mol weight” values of marker are provided by marker manufacturer. Click on the “Mol weight” box and then input all known values.



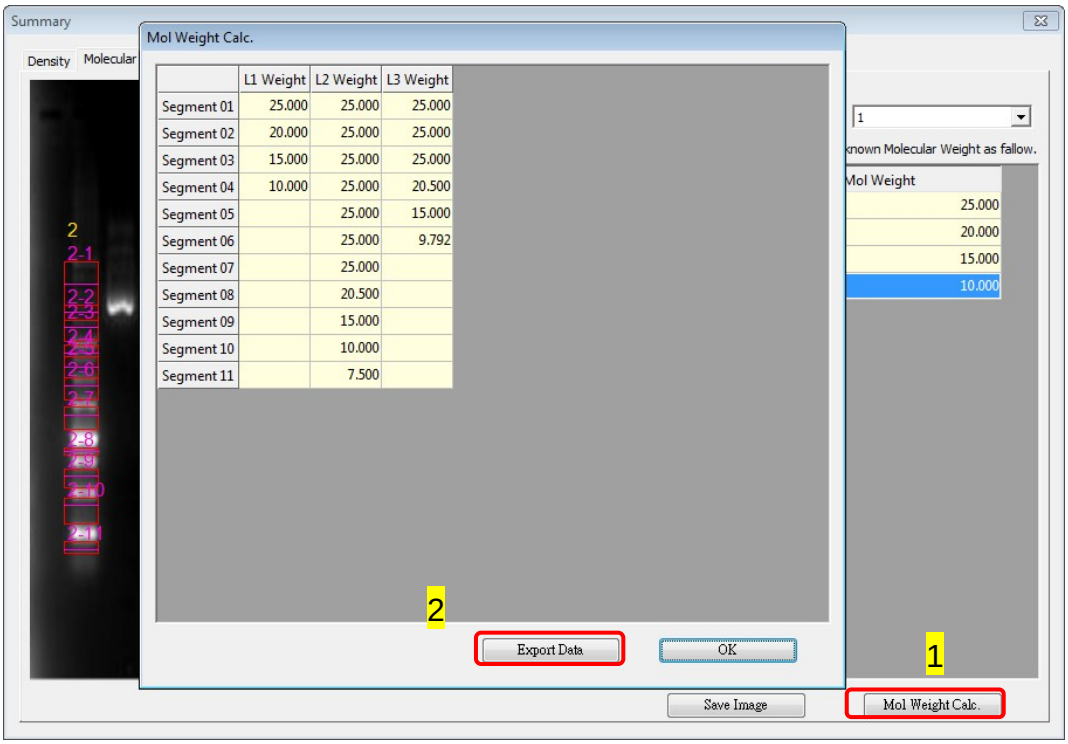
Step3 Fill in all known values of the marker on the list.



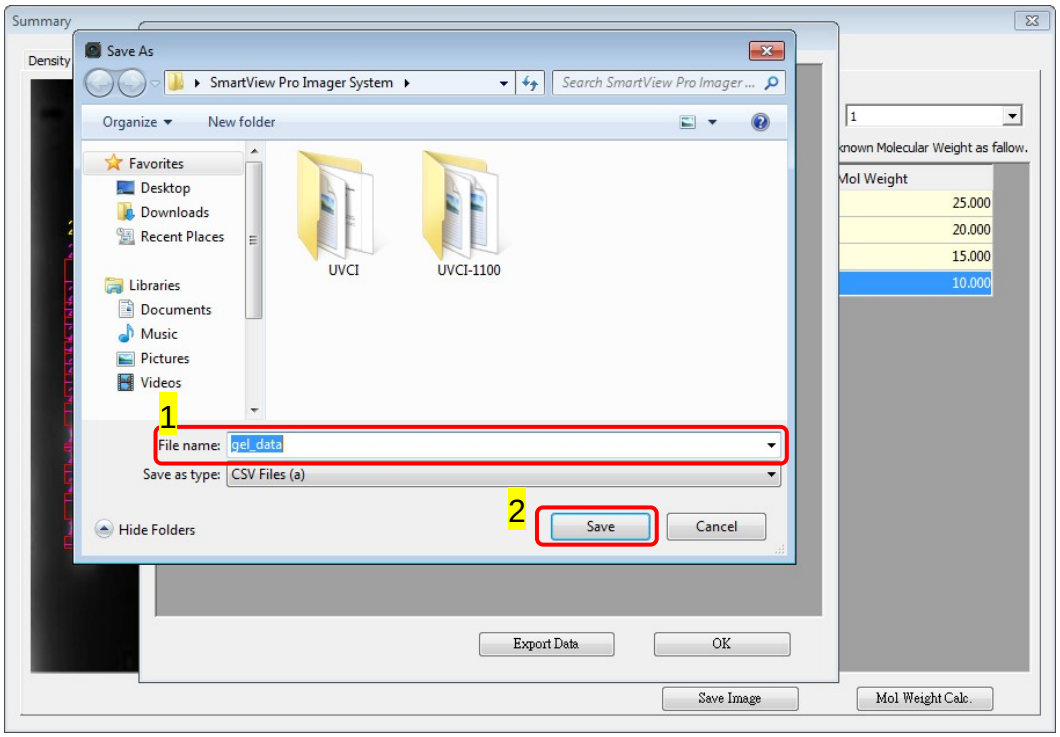
Step4 Click “Save image” button (as box 1) to store this image from the screen. Choose a destination location to save your image. Give the image a file name (as box 1) and press “Save” (as box 2) to finish.



Step5 When clicking the “Mol Weight Calc.” button (as box1), this analysis software will calculate the unknown “Mol weight” based on the input marker values. Press the “Export Data” button (as box 2), the software will export the data to a CSV file sheet.

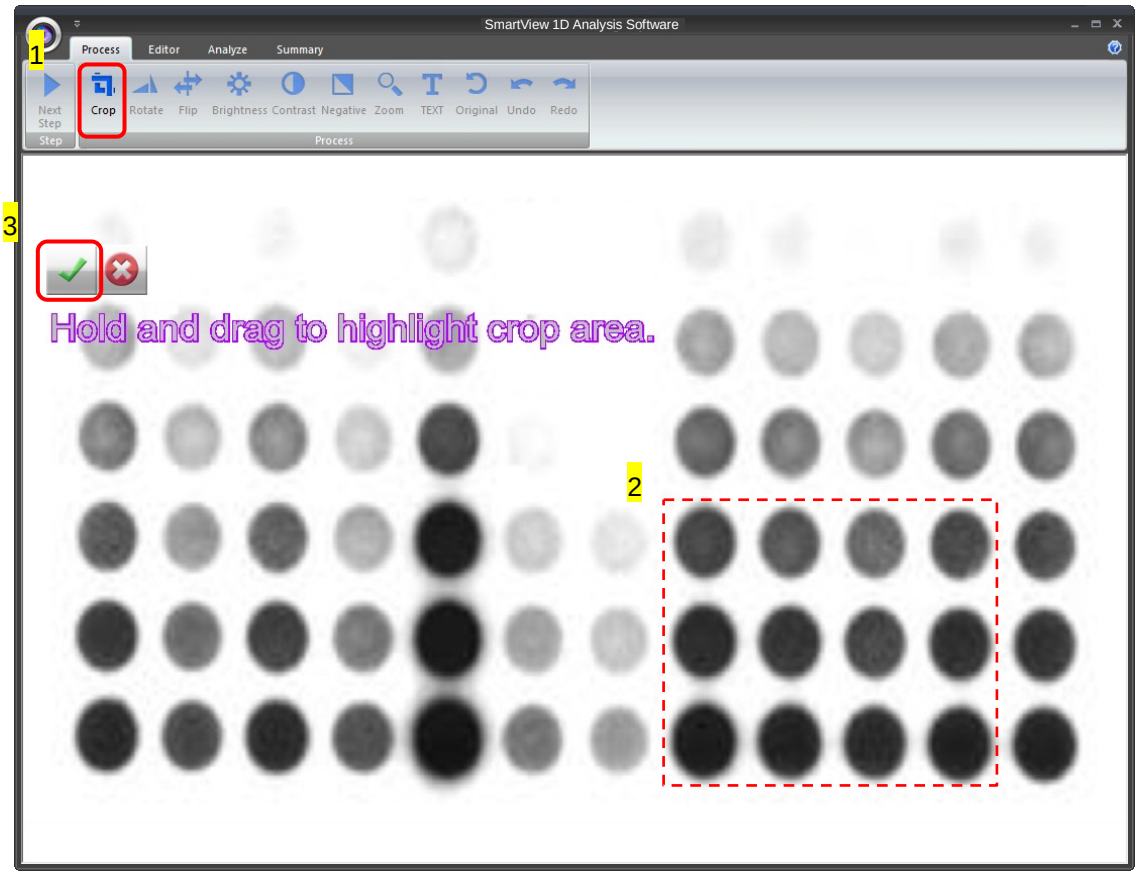


Step6 Choose a destination location to save your export. Give the data a file name (as box1) and press “Save” (as box 2) to finish.



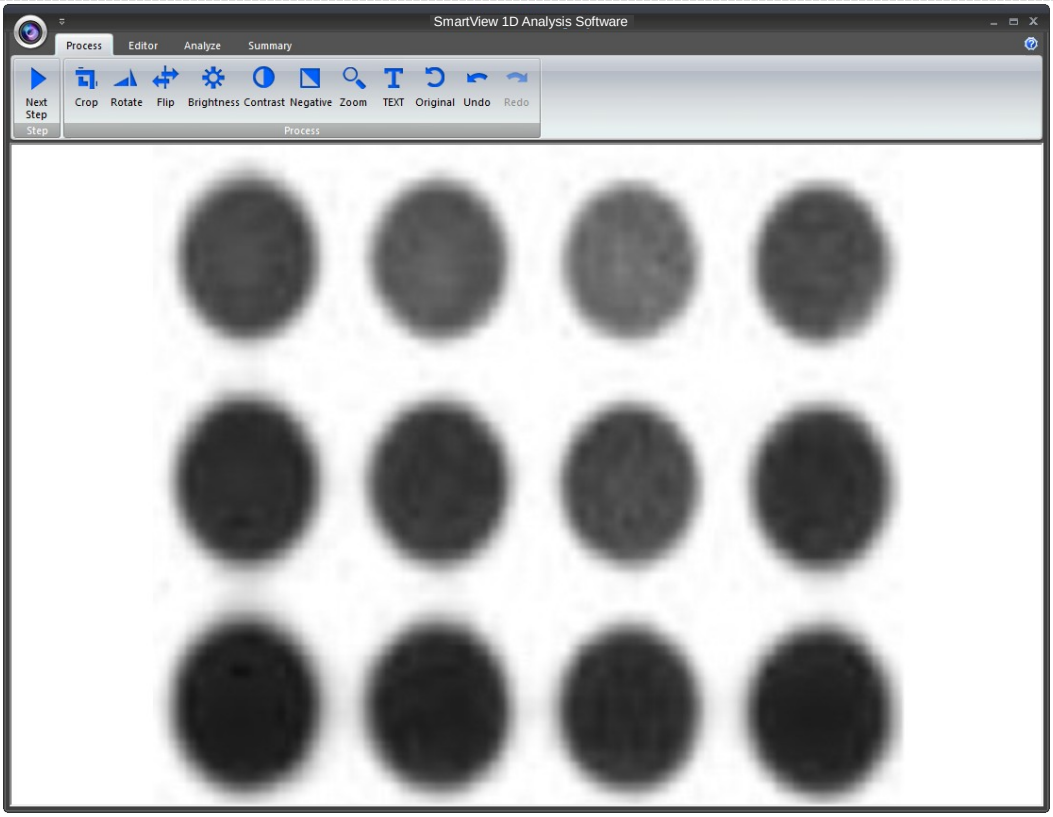
Dot Blot Analysis Sample

Crop: Crop the image by press the “Crop” button (as box 1). In order to select the cropping area of the image, hold and drag the cursor to select the area you want (as box 2). Once you are done. Press “✓” (as box 3) button to confirm or press “x” to cancel.



The image will be shown below as you selected.

*** Remember: Always rotate the image before you crop.**



Rotate: To rotate the image, first select the “Rotate” button (as box1) and the toolbar (as box 2) will pop up.

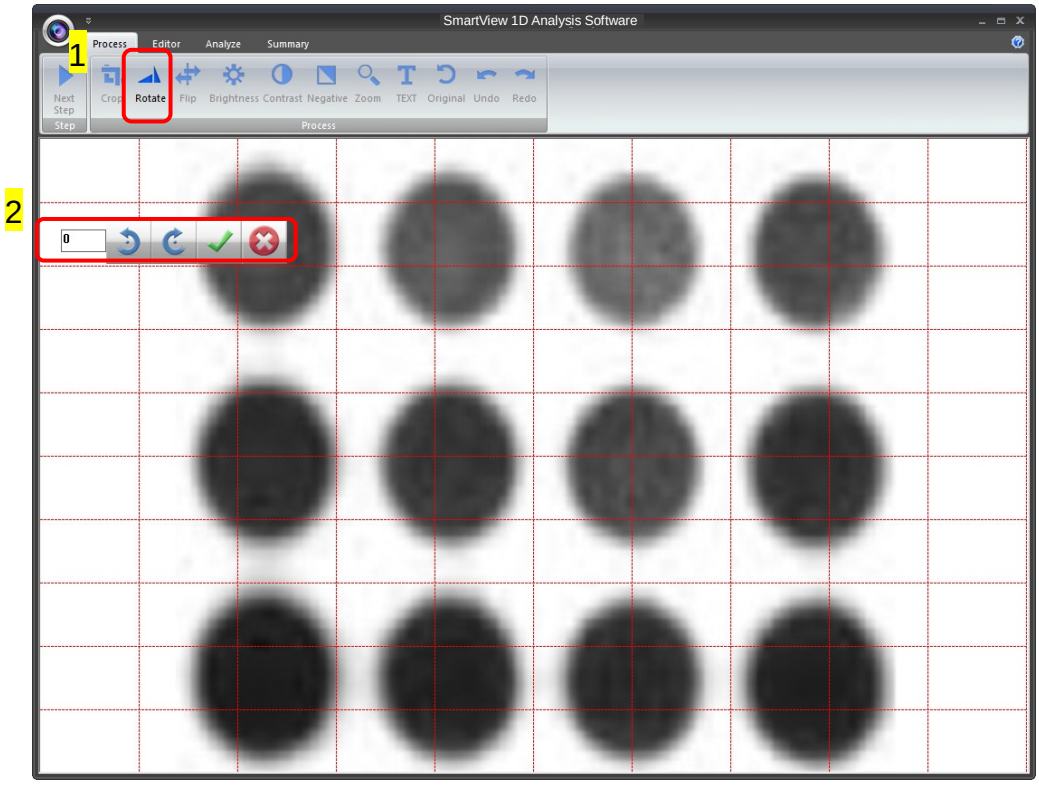
Toolbar:

a. : Rotate counter-clock wise

b. : Rotate clock wise

c. : Confirm action

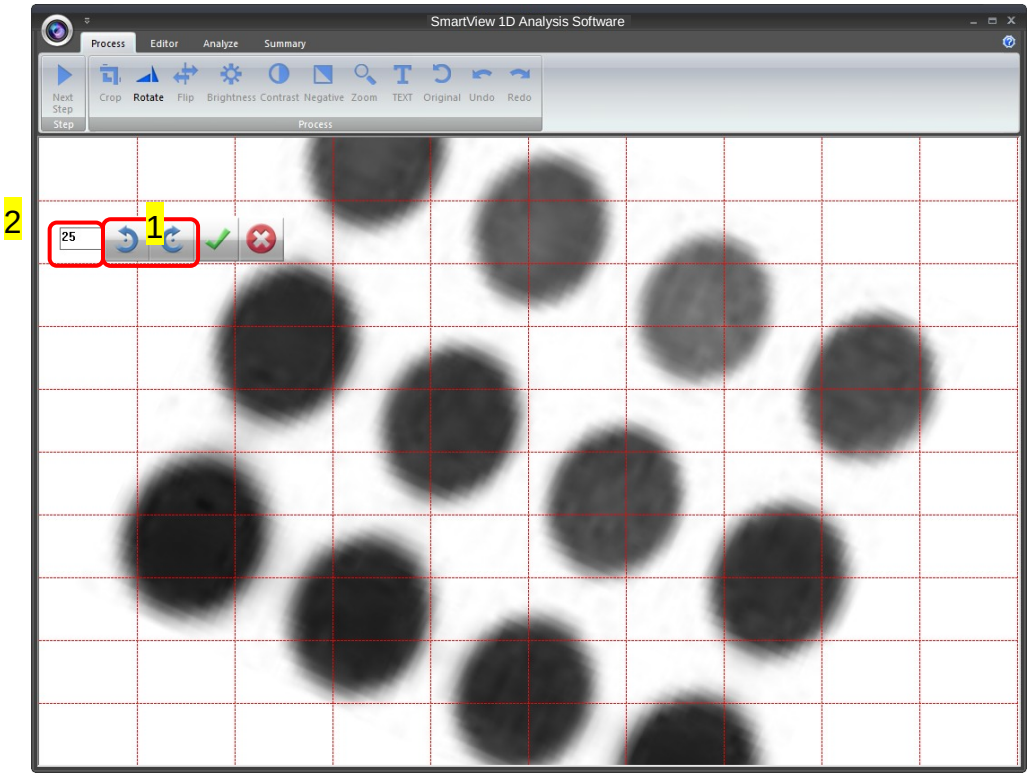
d. : Cancel



You may rotate the image counter-clock wise or clock wise in two ways:

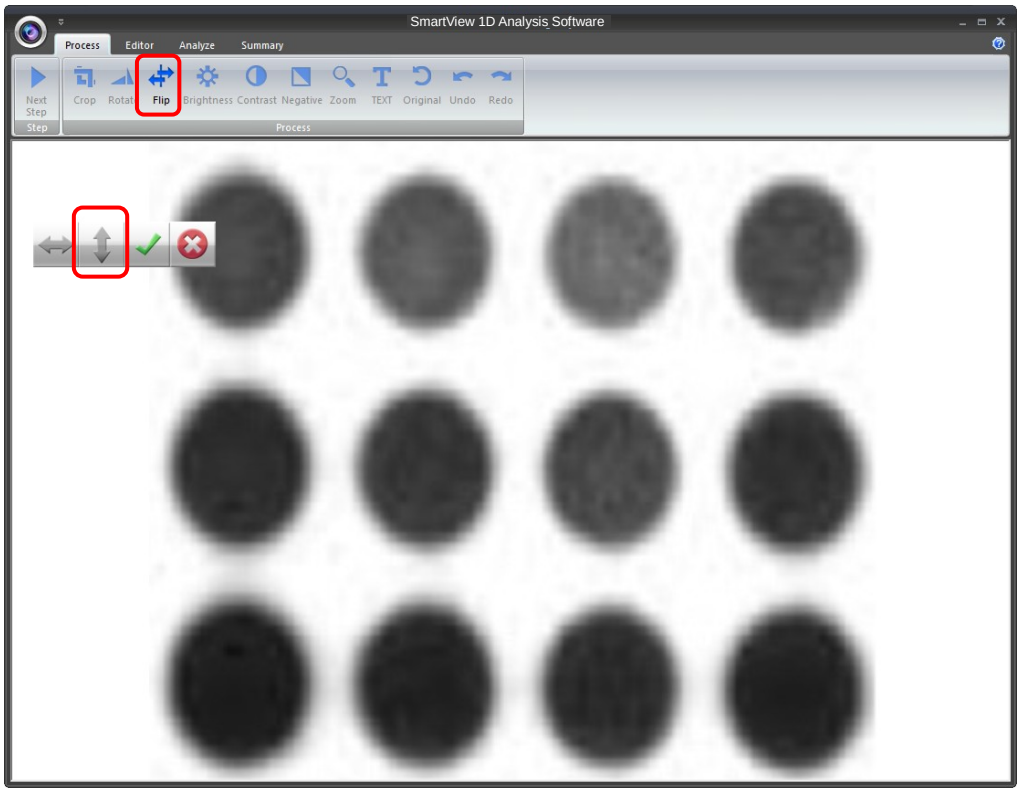
a. Using the toolbar labelled as box 1, press "✓" to confirm action.

b. Input the desired angle (0~359) directly in the blank space labelled as box 2, press **ENTER** first before pressing "✓" to confirm action.

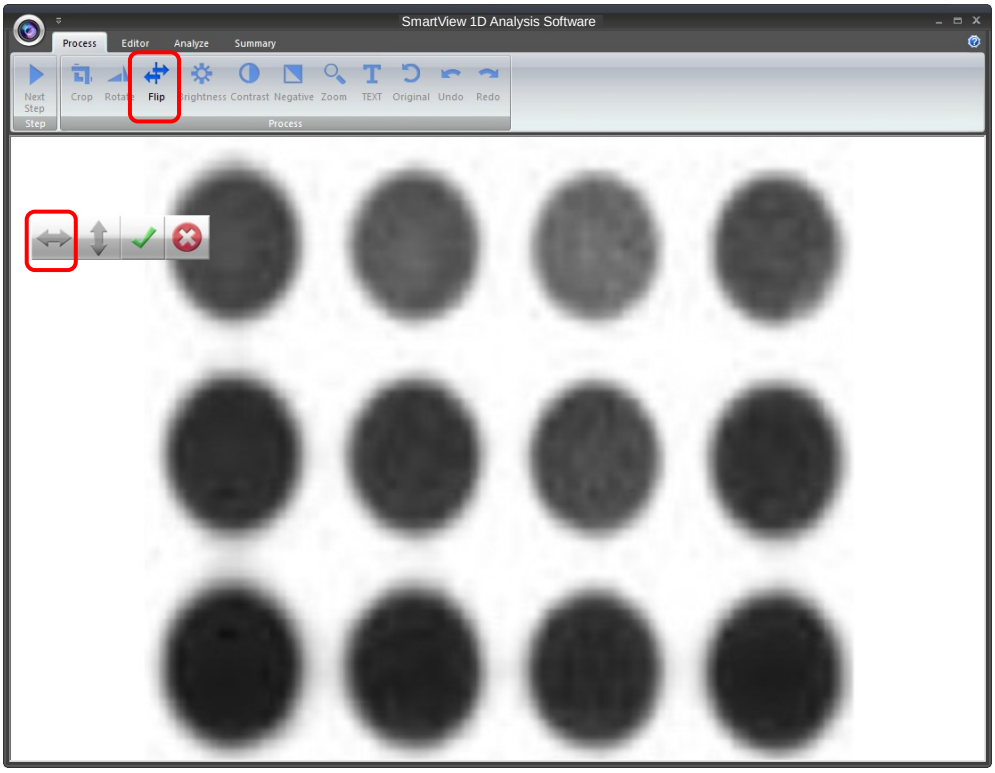


Flip: To flip the image according to the orientation you desired.

a. : Invert the image upside down.



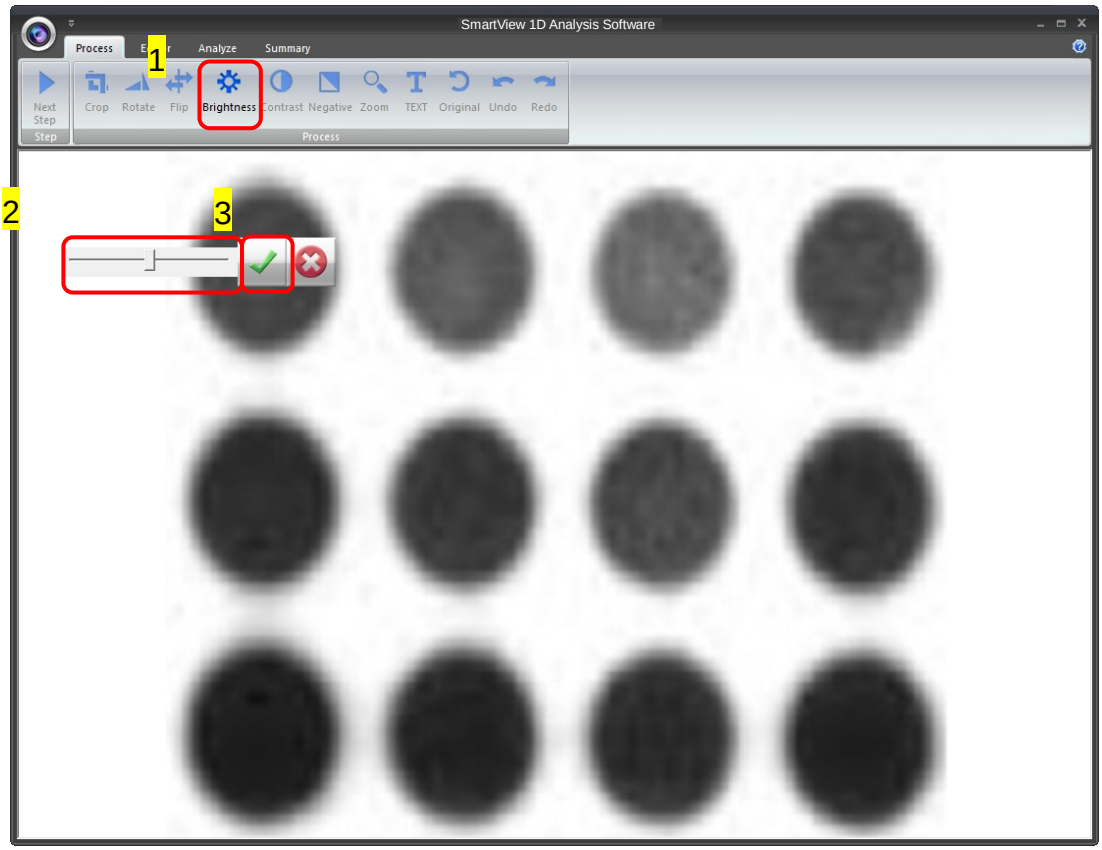
b. : Invert the image from left to right.



c. : Confirm action d. : Cancel

Brightness: Adjusting the brightness of the image by pressing on the “Brightness” button (as box 1), then use the scrollbar (as box 2) to adjust the brightness level.

a. : Low – High

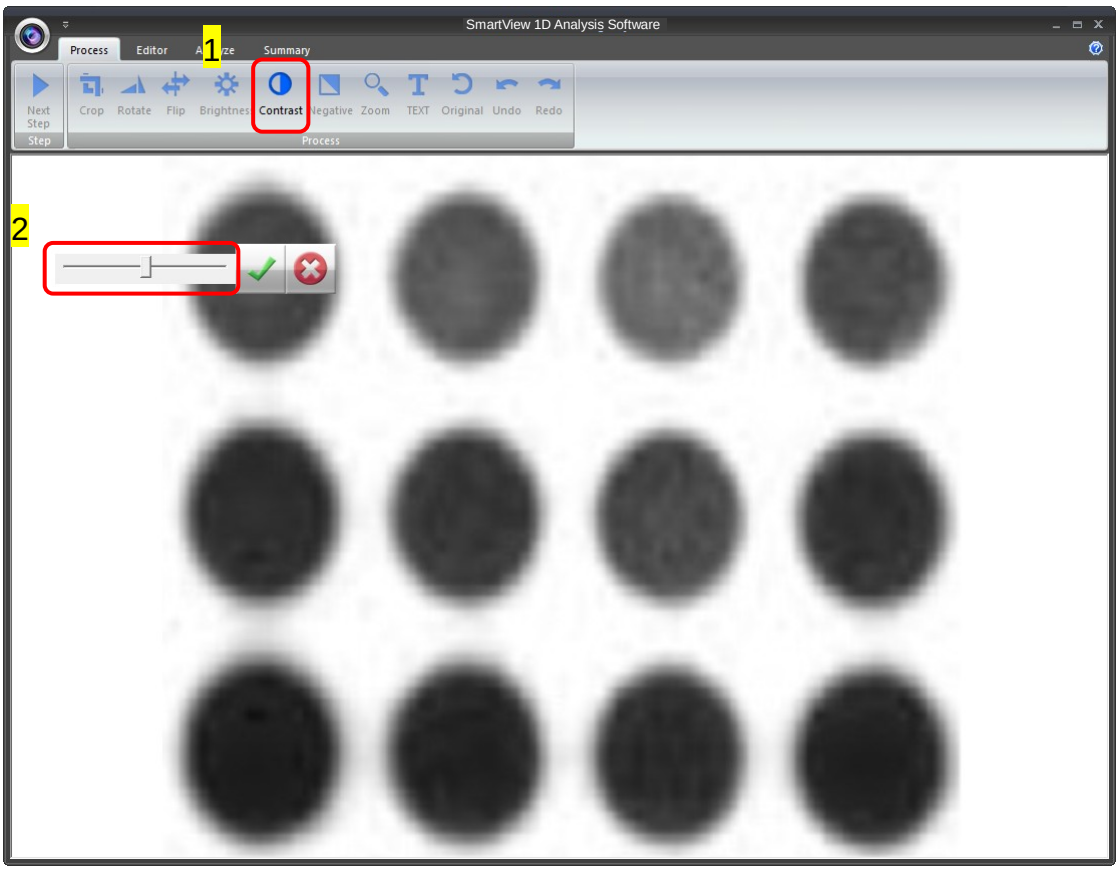


The result of Brightness is shown below. Press “✓” to proceed or press “X” to cancel.

b. : Confirm action c. : Cancel

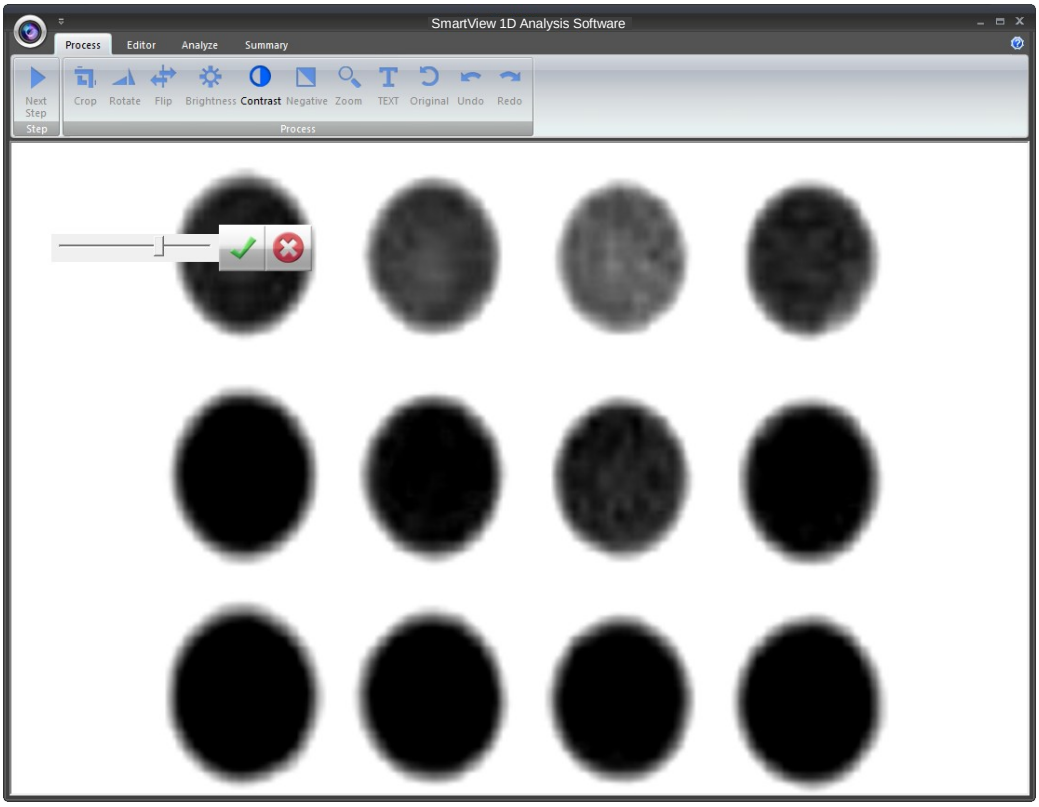
Contrast: Adjusting the contrast level of the image by pressing the “Contrast**”** button (as box 1), then use the scrollbar (as box 2) to adjust the contrast level.

a. : Low – High

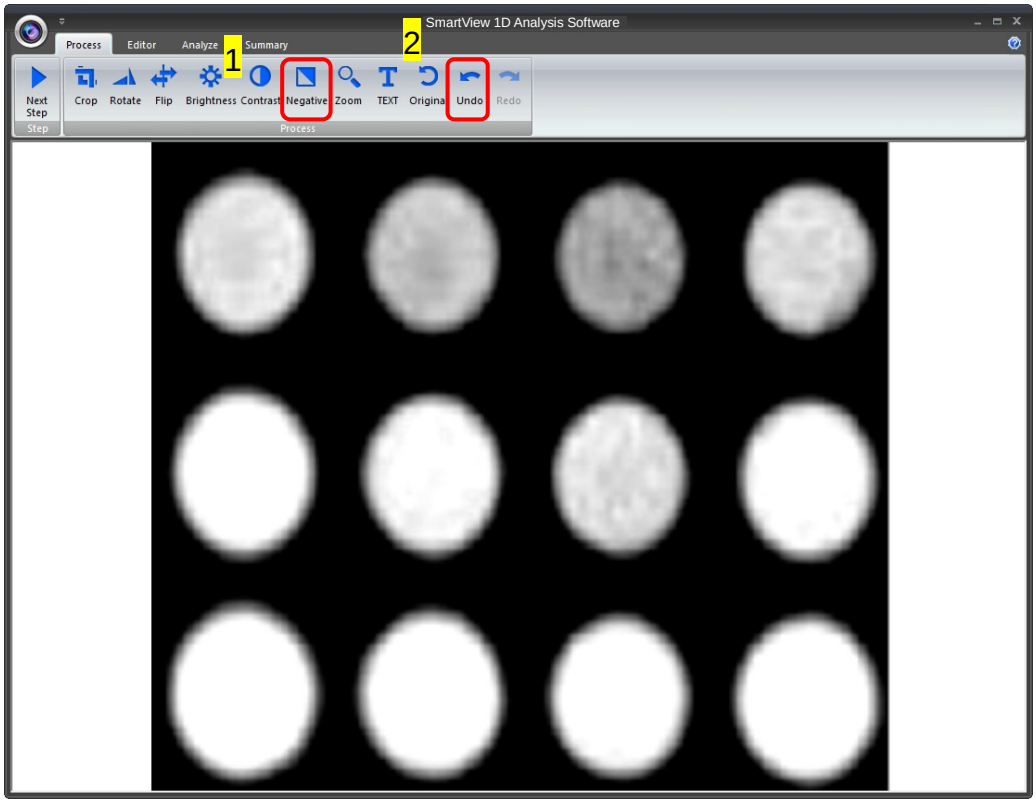


The result of Contrast is shown below. Press “✓” to proceed or press “x” to cancel.

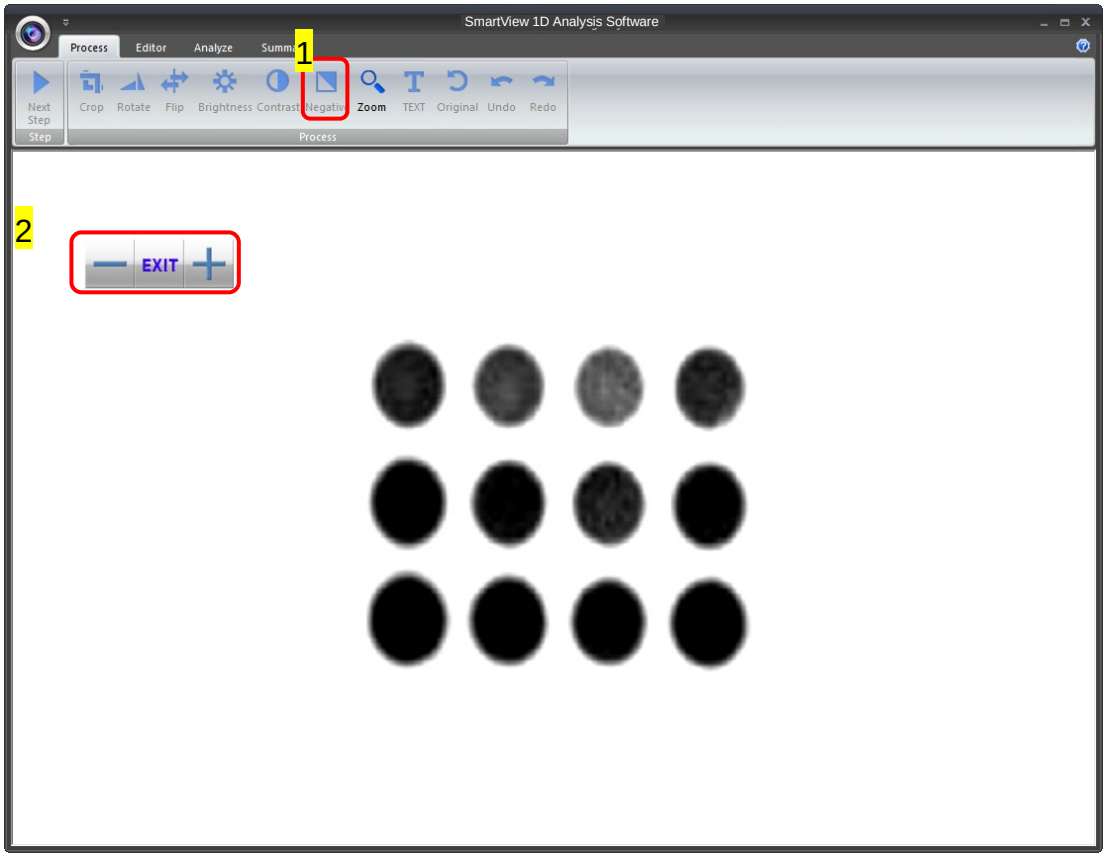
b. : Confirm action c. : Cancel



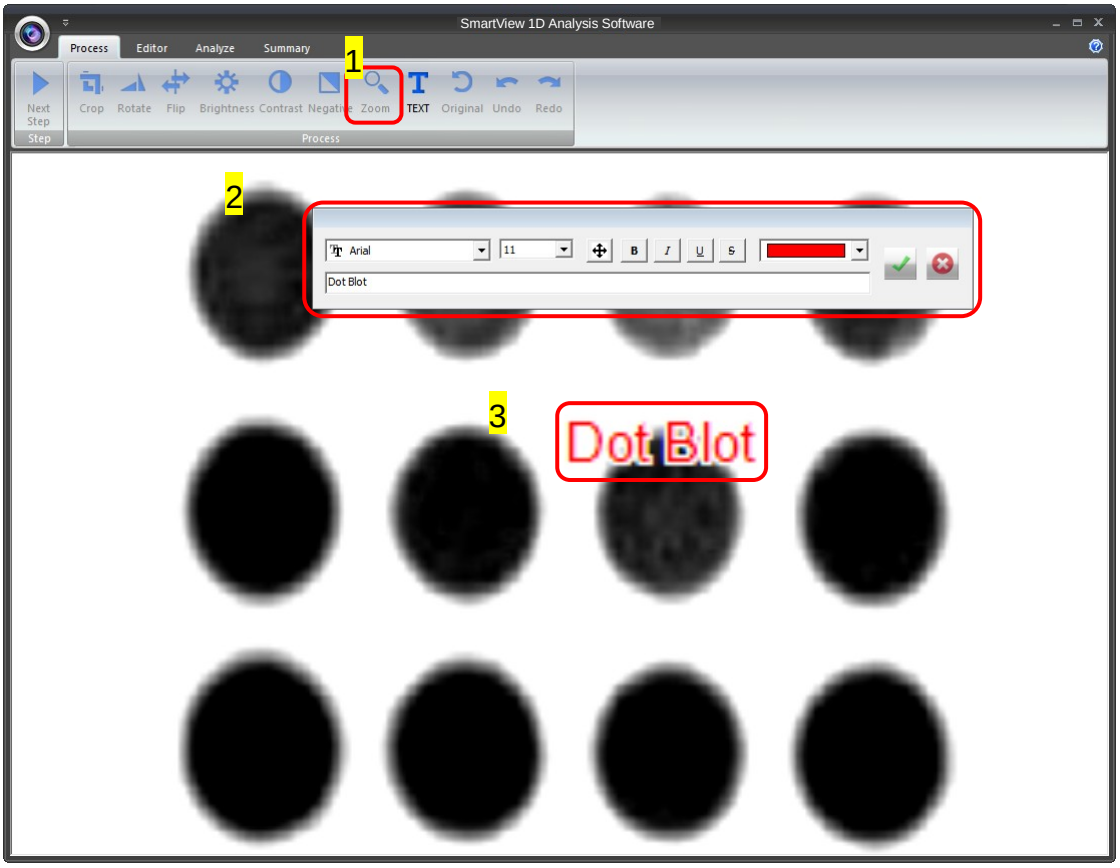
Negative: To reverse the image between black and white by pressing on the "Negative" button (as box 1). If you don't want to negative the image, you can press the "Negative" button again or you can press the "Undo" button (as box 2) to recover the image.



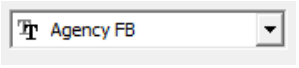
Zoom: Adjusting the zoom of the image by pressing on the “Zoom” button (as box 1) and then a toolbar will pop out. If you want to zoom in the image, press the ”+” button (as box 2). If you want to zoom out the image, press the “-“button (as box 2). Press “EXIT” to finish. This feature simply lets you zoom in and zoom out of the image but will not make any changes to the image file.



Text: You could add text onto the image. Click on the “Text” button (as box 1) and then the toolbar (as box 2) will show up. The sample text (as box 3) will show on middle of the screen.

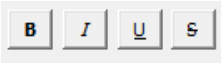


Click on the input box, type in your text here. You could adjust your text using this toolbar. The toolbar functions are explained as below.

a.  : Change the font type

b. : Change the font size.

c. : Move the text to the desired location by move the mouse cursor to the desired location on the image and click the left button of the mouse.

d.  : Change the font properties.

e. : Change the color of the font.

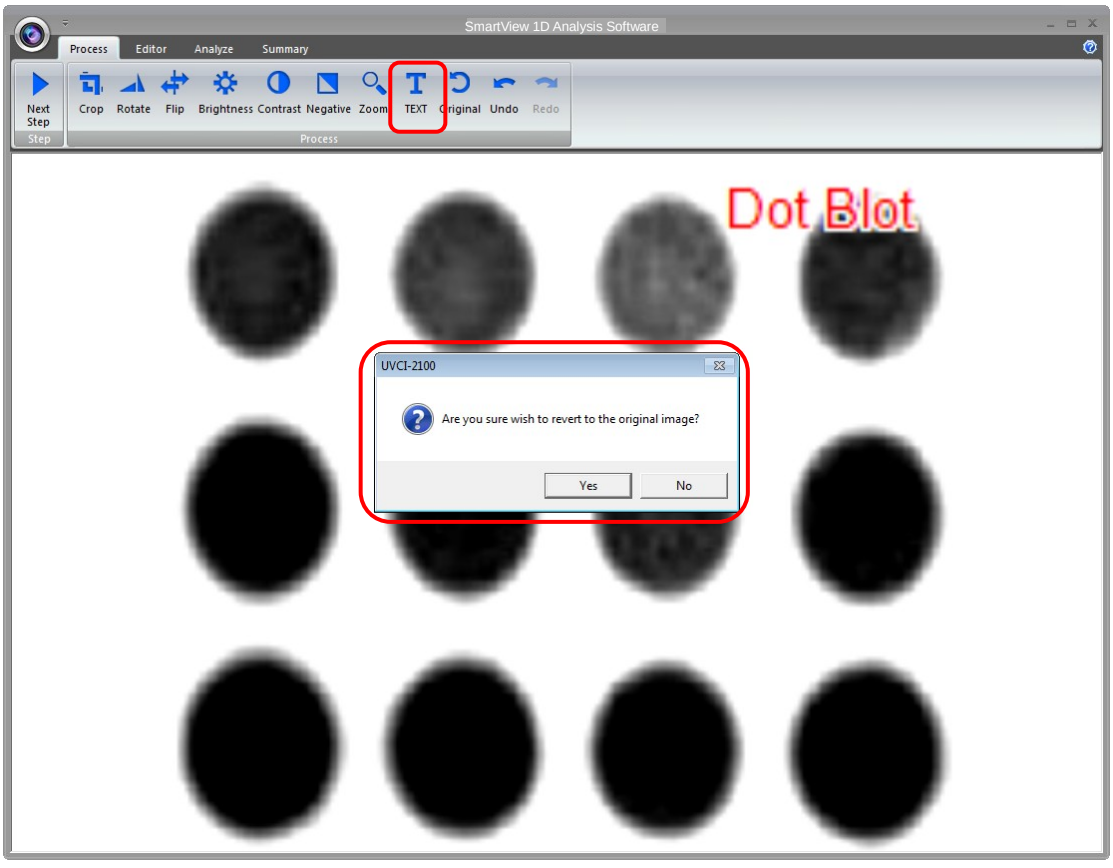
f. Input box: Type in your text here, press **ENTER** first before pressing "✓" to confirm action.

g. : Confirm action

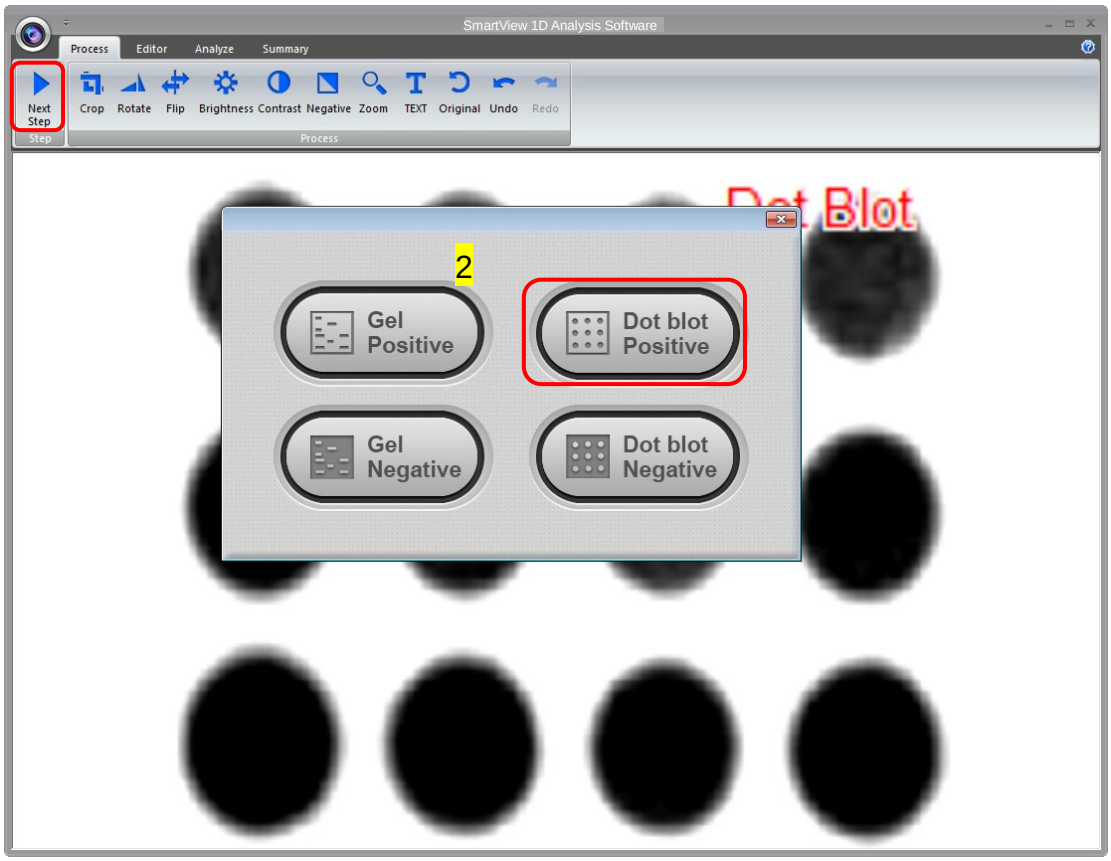
h. : Cancel

Note: **1. To add another set of text, please press "TEXT" again.**
2. To remove a text, please use “Undo”.

Original: This is the master undo button. It will undo ALL the changes you made to the image and revert it back to the original image. A massage will pop up to ask for confirmation once you press the “Original” button. Press “Yes” to proceed.

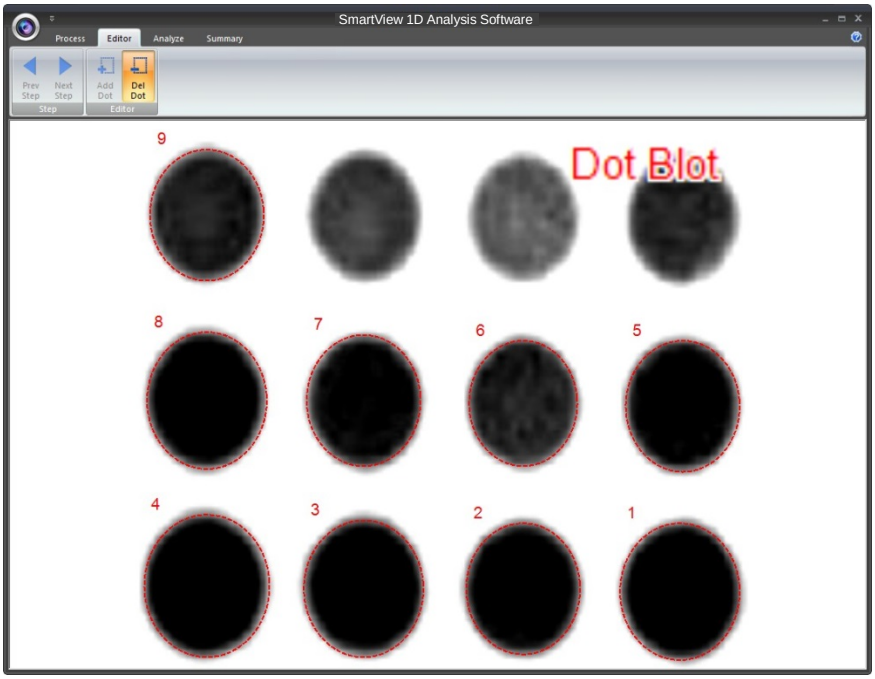


Next Step: Press “Next Step” button (as box1) to continue the analysis. There are 4 analysis methods for you to choose depending on your application. For example, we choose “Dot blot Positive” (as box 2) for DNA gel electrophoresis. (This instruction for operating under Dot blot Positive and Dot blot Negative is the same)

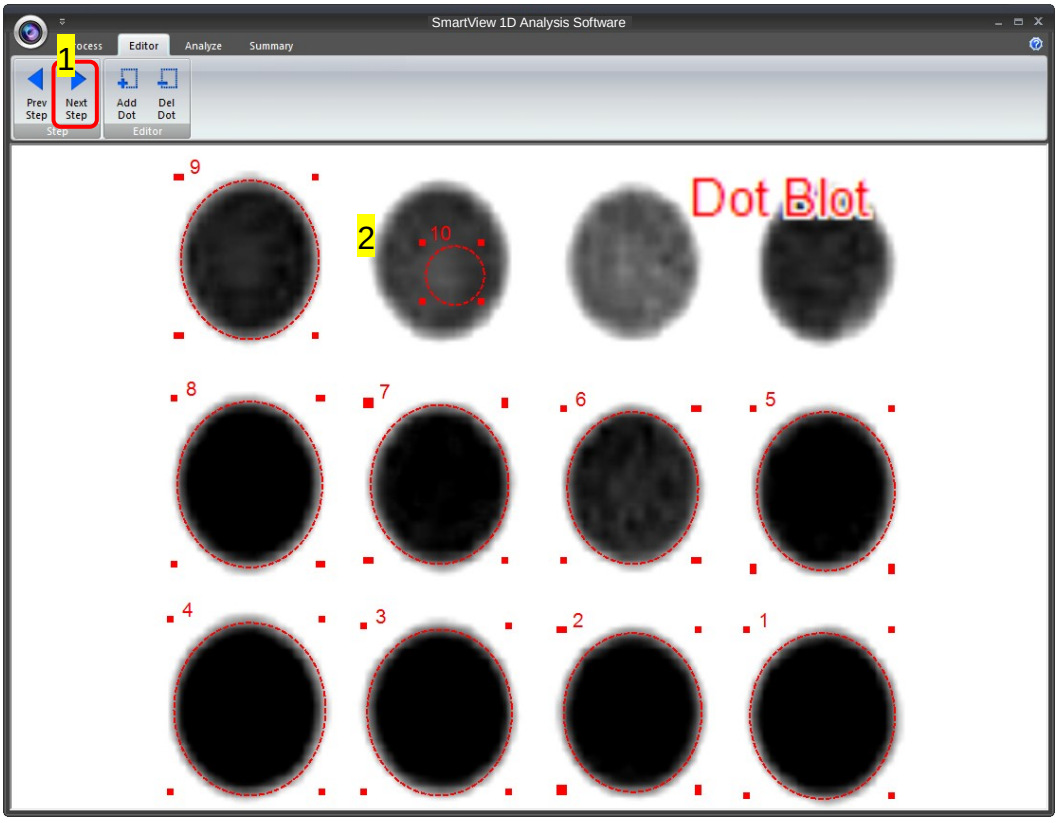


Selecting the Image Dot

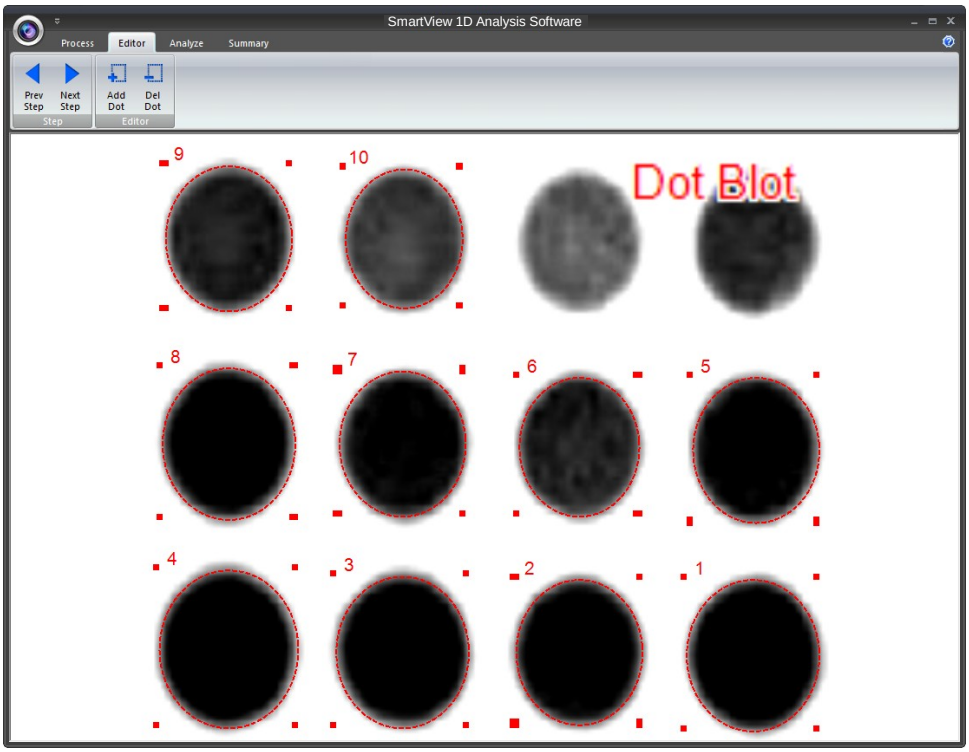
Press “Dot blot Positive” button and the software will automatically analyze the dot-blot samples from the image.



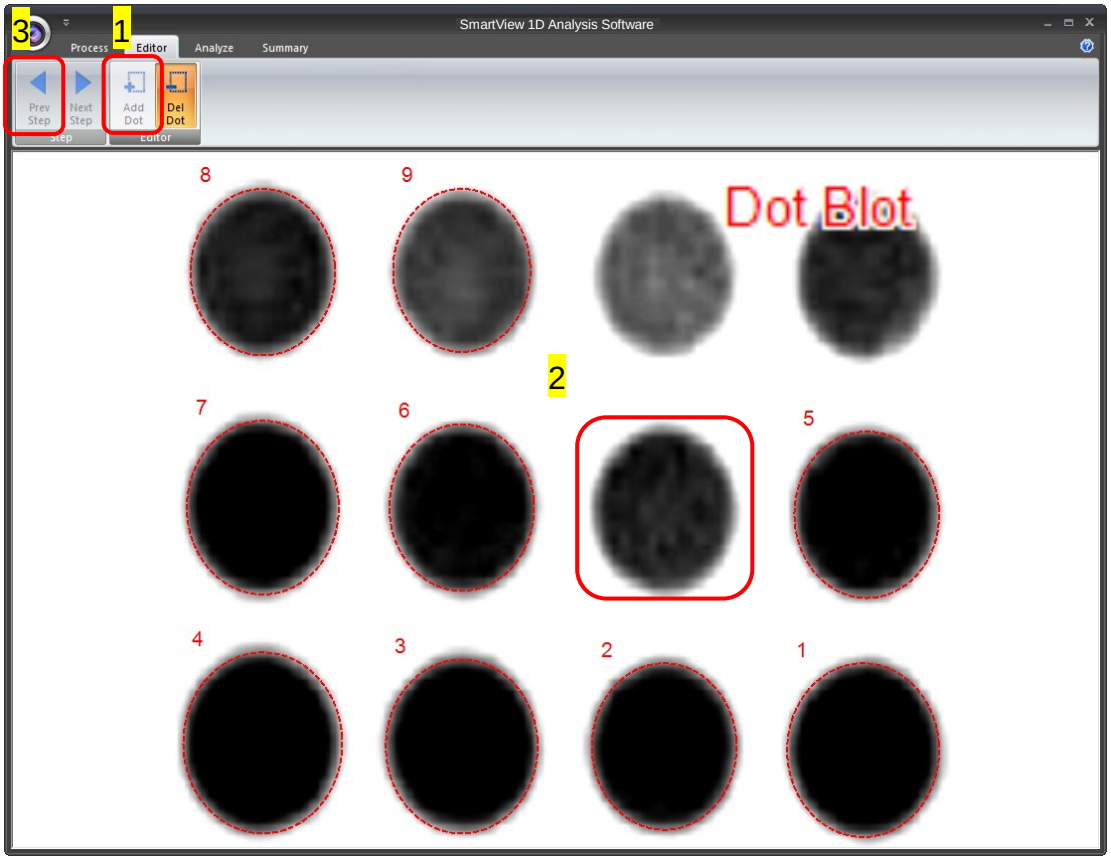
Add Dot: Click “Add Dot” button (as box 1) to add one sample. Use the mouse to select the sample (as box 2) from the screen. Each time you press the “Add Dot” button, the system will duplicate a random circle size. Use the cursor to adjust the circle size.



The image will be shown below as you have selected.

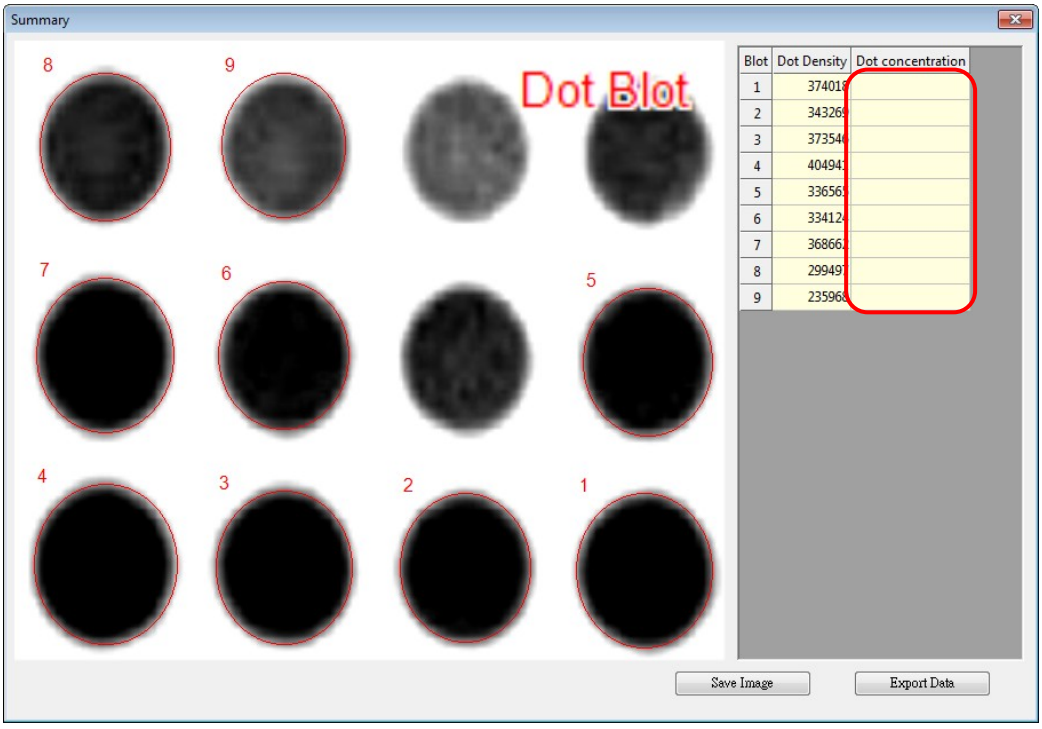


Delete Dot: Press “Del Dot” button (as box 1), and then select the dot (as box 2) you want to delete. After selecting the dot, click on “Next Step” button (as box 3) to move forward to next step.

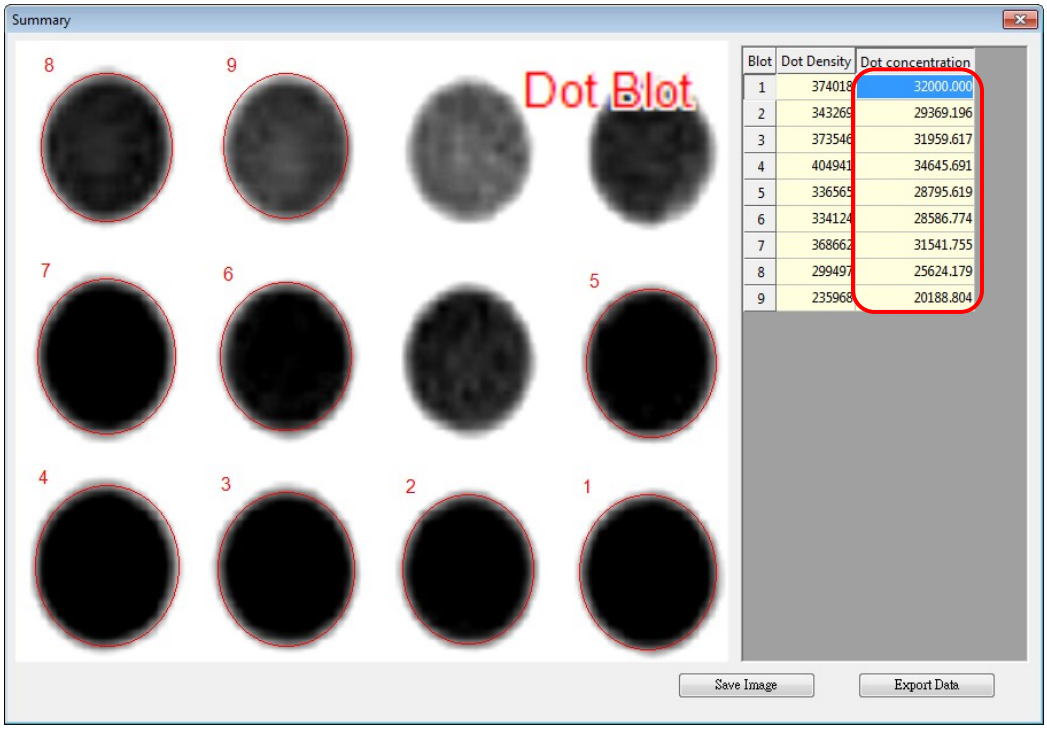


Calculating the density

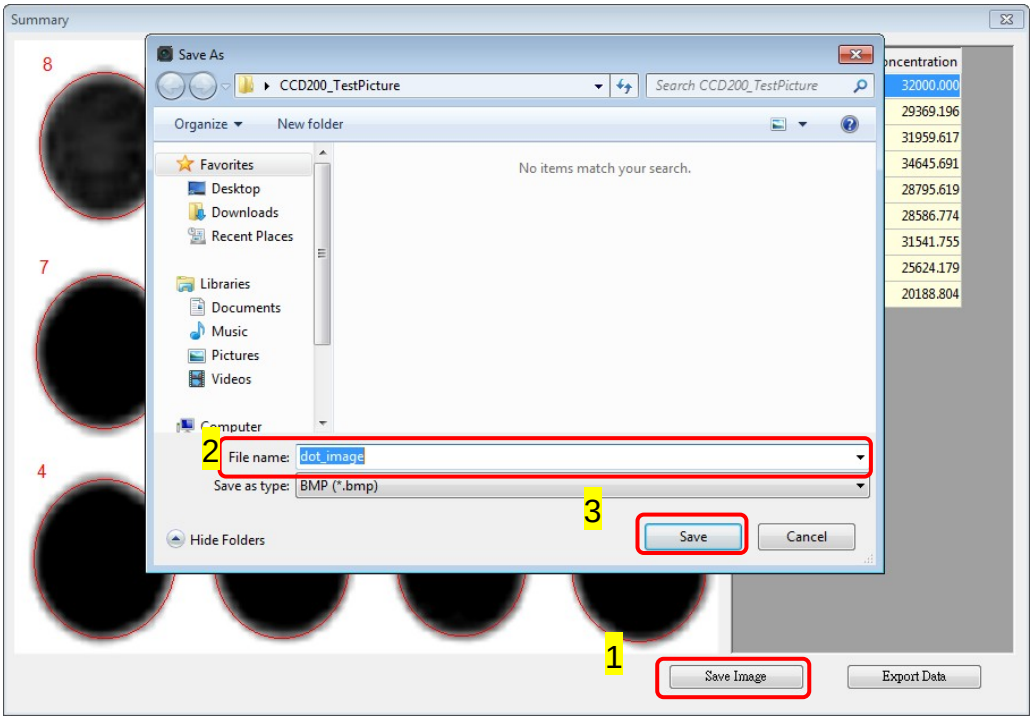
Step1 Double click on the “Dot concentration” blank boxes to input the real density of each sample. (You will need at least one value in order to calculate the rest of the numbers.)



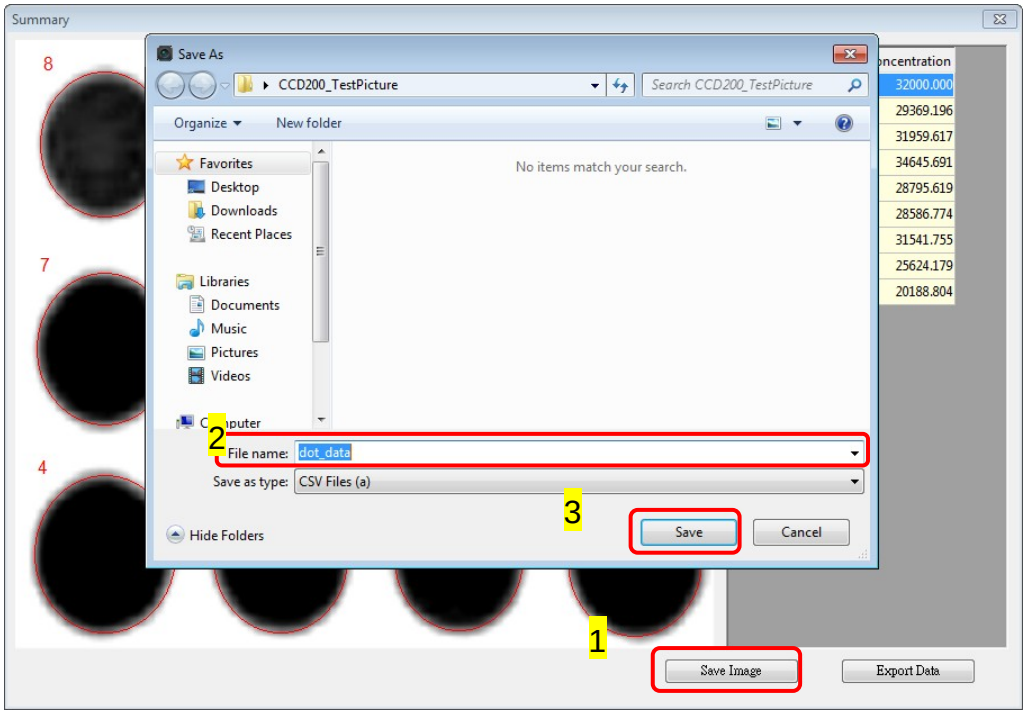
Step2 Enter the value of known concentration. The analysis software will project other unknown concentrations based on the known (input) concentration.



Step3 Click “Save image” button (as box 1) to store this image from the screen. Choose a destination location to save your image. Give the image a file name (as box 2) and press “Save” (as box 3) to finish.

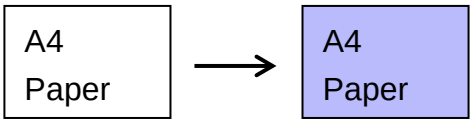


Step4 Click on the “Export Data” button (as box 1), a window pops up to ask you to select a destination location to save your file. Give the data a file name (as box 2) and press “Save” (as box 3) to finish. (Data is then exported using the CSV file format, which could be easily access by using Microsoft Excel)



6 Troubleshooting Guide

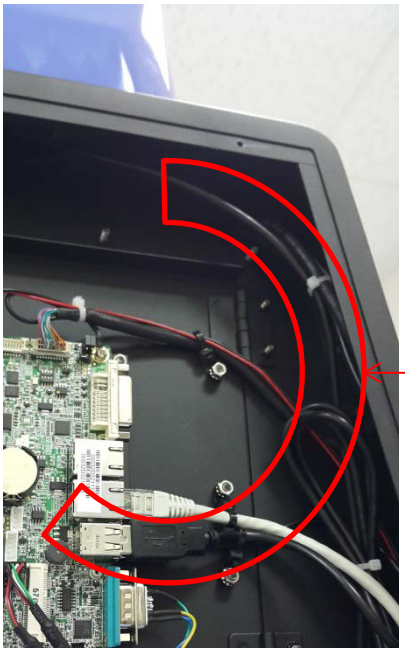
Many operating problems may be solved by carefully reading and following the instructions in this manual accordingly. Some suggestions for troubleshooting are given below. Should these suggestions not resolve the problem, please contact our SERVICE DEPARTMENT or a distributor in your region for assistance. If troubleshooting service is required, please include a full description of the problem.

Problem	Suggestion
Screen doesn't light on.	➢ Check the main power switch is on. Or reboot the system. For further assistance, please contact your local distributor.
No picture from the CCD camera.	➢ Check the video cable of CCD camera is connected. Or reconnect the cable of CCD camera. ***(For the procedure please check *Note 1)***
Lighting module failed.	➢ Check if the specific lighting module switch on the screen is ON. Or reboot the system. For further assistance, please contact your local distributor.
UV light doesn't light up	➢ Check UV transilluminator is switched on. ★ Since 312nm wavelength UV is invisible light, you can put on a sheet of white paper onto the transilluminator to help distinguish if the light is on.  ***Light OFF*** ***Light ON***
Printing function failed.	➢ Turn OFF the system, reconnect the USB cable between your printer and system, check if your printer works normally, then restart the system.
Analysis software failed.	➢ Reconnect your Ethernet cable of computer and system, or reboot the system.
Save picture from remote control function failed	➢ Check if the network is workable.

Note 1:

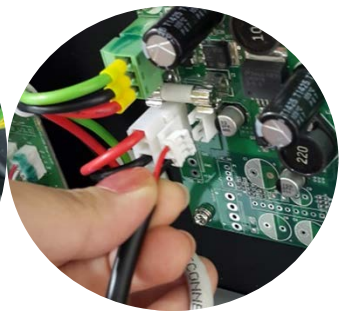
Unscrew the back panel of UVCI-2300/2400, reconnect the USB cable of CCD camera(refer to the picture below).

PLEASE make sure to turn the system off before opening the back panel.



CCD Camera Connect USB Cable

Reconnect the USB port on the board and check again.



◀ NOTE:

Disconnect the ground cable(left) and fan cable(right) carefully when removing the back panel.

7 Cleaning & Maintenance

The painted surfaces of the filter areas on the built-in UV Transilluminator must be cleaned with water and soap, using a sponge or towel. Dry the filter surface with a soft cloth after each operation. Never use abrasive cleaners, solvent based cleaners or scouring pads. The housing may be cleaned with a moist cloth containing a mild soap solution.

Always disconnect the SmartView Pro Imager System from the electrical power prior to cleaning.

7.1 Replacing the Fuse

For additional fuses, contact MS local distributer.

To replace the fuse:

1. Turn off the main power switch at the rear of system and detach the power cord.

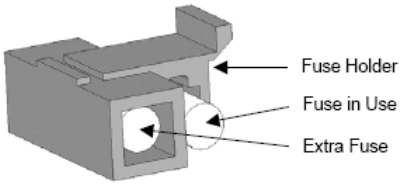
2. Open the fuse compartment located inside the Power Entry Module by inserting a small flathead screwdriver into the slot below the ON/OFF switch. Turn the screwdriver to gently pry open the fuse compartment.

Note: the fuse compartment will not open with the power cord in place.

3. Pull the fuse holder out of the compartment and inspect the fuse. If the fuse is burned or there is a break in the fuse element, replace the fuse with an identical type of fuse (**T2A/250V~**) as provided in the fuse holder (see figure below)

4. Place the fuse holder back into the compartment.

5. Snap the cover close.



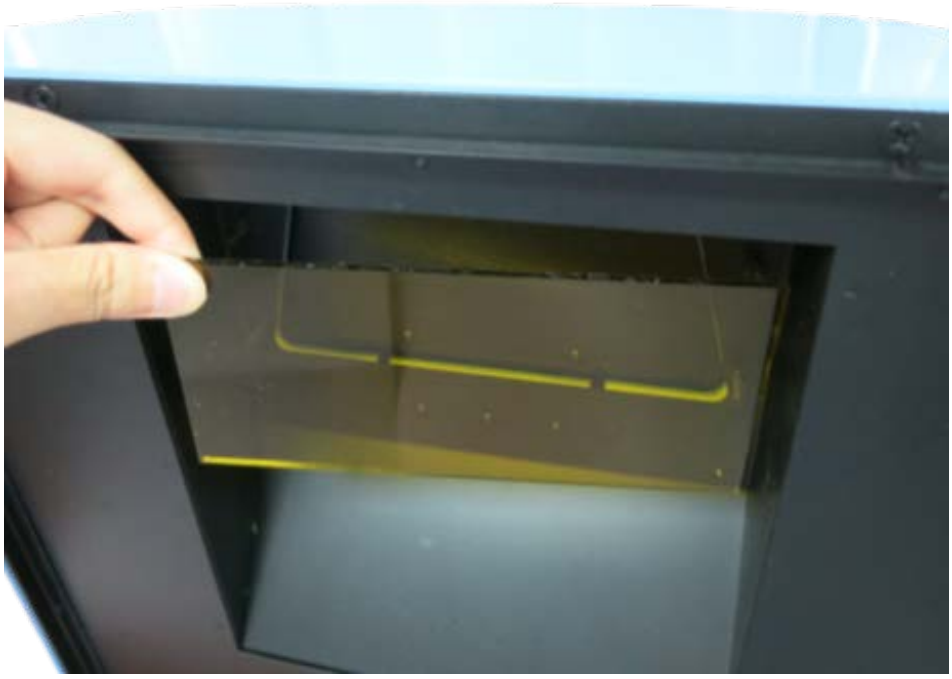
7.2 Replacing Amber Filter on Viewing Window

Two filters (transparent filter and amber filter) are installed as default, if you did not purchase the blue light module and would like to remove the amber filter, please follow the steps below.

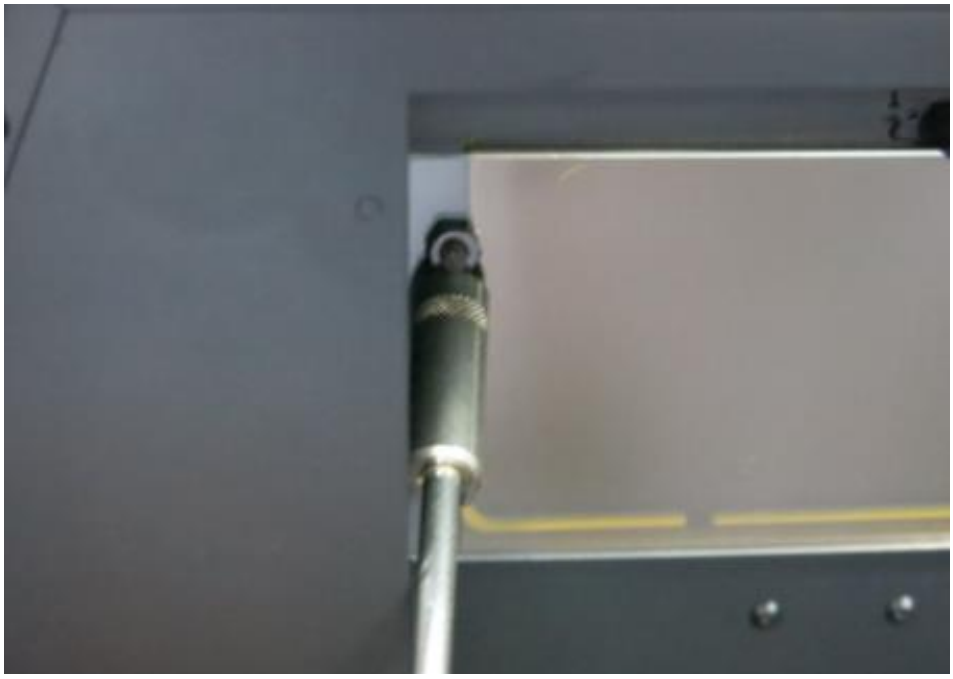
Tool: 7mm socket wrench (not provided)

Step1 Loosen 4 nuts from the corners. Remove the transparent filter.

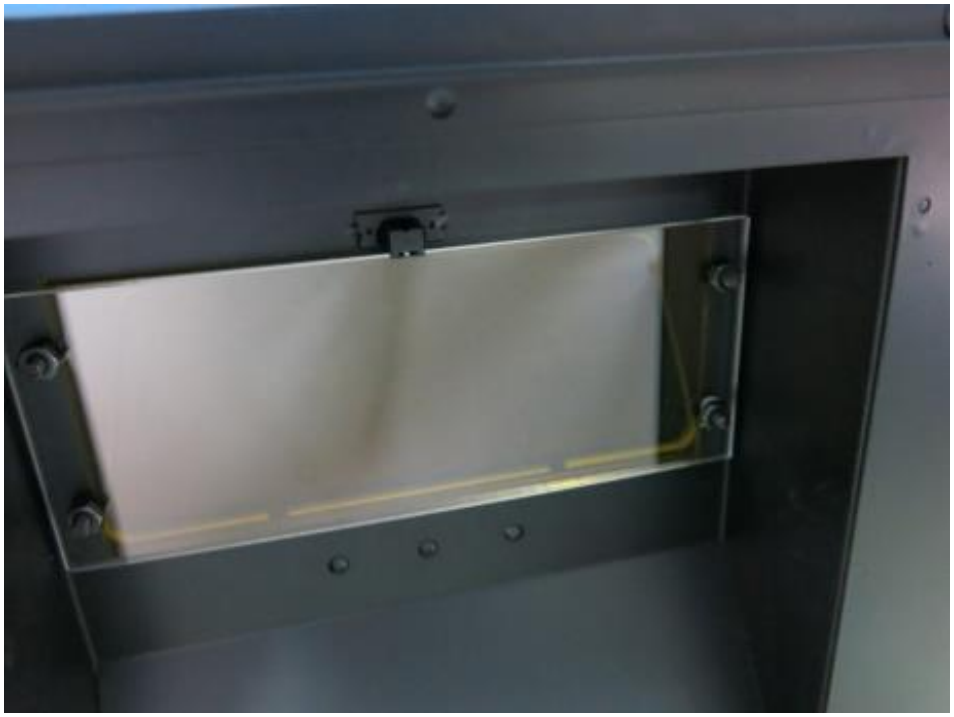
Step2 There are no screw holes on the amber filter, please put the amber filter in between.



Step3 Replace the transparent filter, put the nuts of four corners and then use the socket wrench to tighten the nuts.



Step4 Confirm the transparent filter is fixed in the center of the viewing window.



8 Ordering Information

MODELS & APPLICATIONS	
Cat. No.	**Description**
UVCI-2300	SmartView Pro 2300 Imager System, UV light version
UVCI-2400	SmartView Pro 2400 Imager System, Blue light version
Filter (for camera) ***★Ordered Separately***	
UVCI-2300-EB	SmartView EtBr Filter, 610nm (for UV)
UVCI-2300-SG	SmartView SYBR Green Filter, 520nm (for UV)
UVCI-2300-F4	SmartView Amber Filter, 580nm (for blue light)

ACCESSORIES	
Cat. No.	**Description**
UVCI-2313	SmartView Pro UV protection shield, for 2300 series
UVCI-2314	SmartView Pro lens filter stand, can hold up to 4 lens filters, for 2300 & 2400 series
UVCI-2300-BL	Blue Light table for SmartView Pro 2300 series
UVCI-2300-WL	White Light Plate 21 × 26cm for SmartView Pro 2300 & 2400 series
UVCI-1000-F4	Viewing window Amber filter, 580nm for SmartView Pro 1000 series
CI-CL55+1	55mm Close up lens +1 for CCD Image System
MJC-8-STYLUS-00000	Stylus Pen
DI-CLIQS	CLIQS 1D Gel Analysis Software

9 Warranty

Major Science warrants apparatus of its manufacture against defects in materials and workmanship, under normal service, for ***one year from the shipping date to purchaser***. This warranty excludes damages resulting from shipping, misuse, carelessness, or neglect. Consumable parts (UV lamp and UV filter) are not covered by our warranty. Major Science's liability under the warranty is limited to the receipt of reasonable proof by the customer that the defect is embraced within the terms of the warranty. All claims made under this warranty must be presented to Major Science within one year following the date of delivery of the product to the customer.

Manufacturer:
Major Science Co., Ltd.

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Bade Dist., Taoyuan City 33464
Taiwan

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F/ 1-408-446-1107

MEMO