Mini Gel Imaging Analysis System
User Manual

Thank you for using our product. Please read this manual before use.

Precautions before use

1. Open the package, take out the equipment and accompanying accessories, and visually inspect the appearance of the equipment and accessories for any defects.

2. Check whether the quantity of varieties matches according to the supporting list.

3. If you have any questions, please contact our after-sales service in a timely manner, and we will promptly replace or replenish for you.

Product accessory list

Gel imaging system	1
Blue light transmission plate	1
UV light transmission plate	1
White light transmission plate	1
Rubber cutting protective plate	1
mouse	1
keyboard	1
power line	1

System parameter

1. CCD resolution: 3089*2064, 6.38 million, pixel density 16bit;
2. Frame rate: 35;
3. Image resolution: 1200 DPI;
4. Interface: USB3.0;
5. Target surface (inch): 1/1.8;
6. Pixel size (micrometer): 4.8*4.8;
7. Single exposure time: 1ms-5000ms;
8. LED sample workbench: UV300nm, blue light 465nm, full-wavelength cool white light.

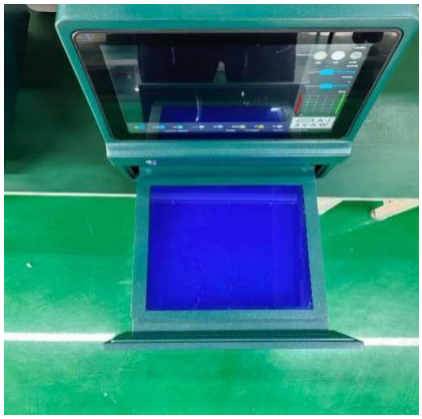
Usage

1. Connect the power cord to the device and plug it into a power outlet. Turn on the main power switch to power up.

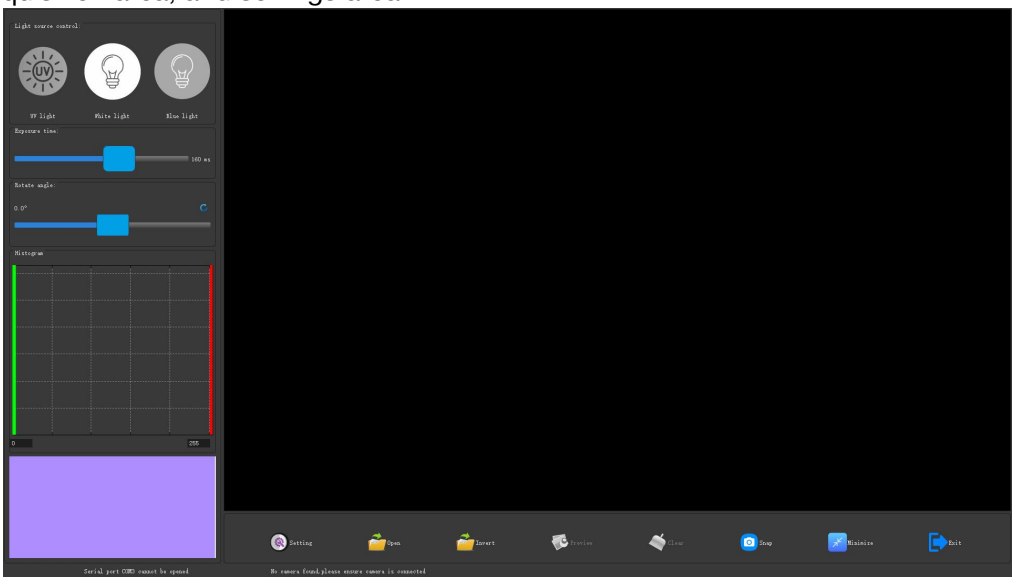
2. The computer will automatically start, and the instrument software will be opened automatically after the computer is turned on. Just wait. If you need to use it again after turning off the computer, simply turn on the computer switch  on the front panel.

3.After the computer is turned on, it will automatically launch and enter the gel imaging and shooting software. If you exit during use, you need to re-enter by double-clicking the icon  on the desktop.

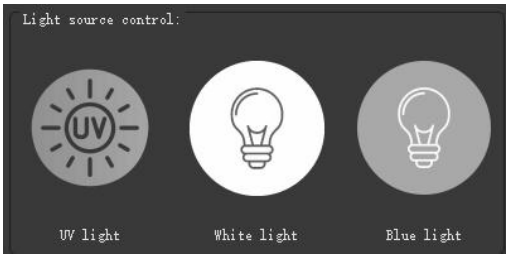
4.Open the drawer and place the corresponding tray (taking the Blu-ray tray as an example), then put in the sample to be photographed.



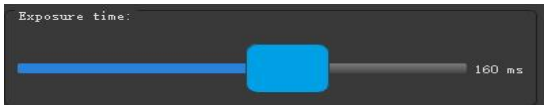
5.Introduction to the main interface of the software, which is divided into control area, acquisition area, and settings area



A. Light source control area: UV, white light, blue light. Click the light source button to turn on the relevant light source. When switching light sources, first click the light source button to turn off the already turned-on light source, and then click the button of the other light source. The main light source of this device is blue light, corresponding to the blue light sample platform and blue light gel cutting protective cover。

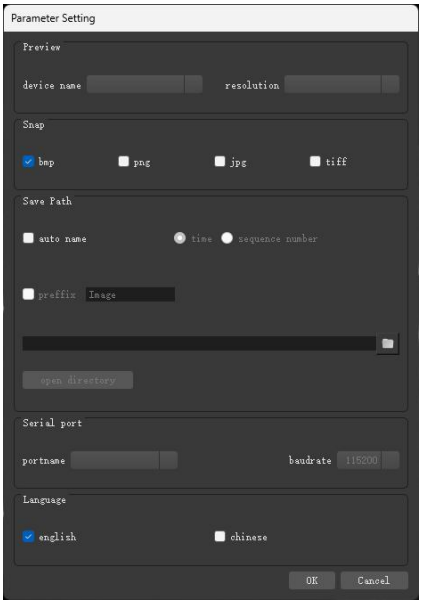


B. Exposure time adjustment: The default exposure time for blue light settings is 1ms, and for ultraviolet settings, it is 300ms. When the corresponding light source is turned on, the exposure time is automatically set to the default. Manually adjust the exposure time to achieve the appropriate brightness in the field of view。



C. In the image acquisition area, there are settings for opening previously captured images, previewing, acquiring, and setting the ROI (Region of Interest) area。

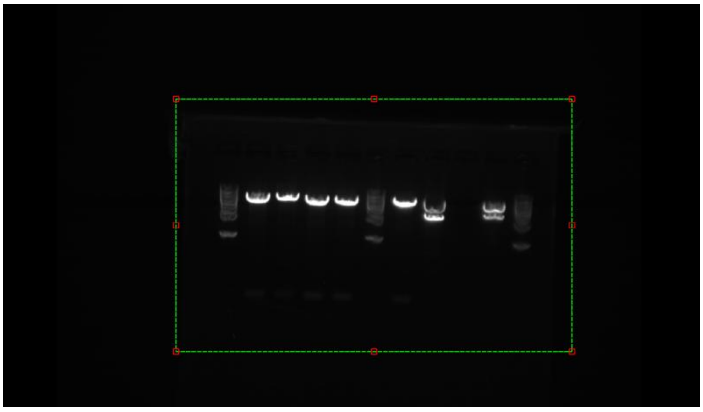
Click the "Settings" button below to pop up the settings dialog box



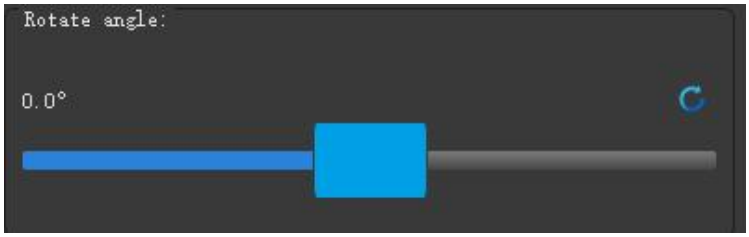
It is recommended to choose "tiff" for the file format of captured images.
Select "Auto Name" and the system will automatically name the photo after shooting. By default, if "Time" is selected, the photo name will display the date of shooting.
If you want to name the pictures individually, disable "Auto Name" and manually name the pictures each time you take a photo.
Set the storage path for selected photos to the target folder.
You can choose between Chinese or English interface, with one-click switching.

6. After starting the software, it will automatically enter the preview mode. Turn on the corresponding light source to see the preview image in real time. At this point, adjust the exposure time to make the image brightness appropriate, and then click "Capture".
7. For ROI (Region of Interest) area shooting, use the mouse to press and hold the left button in the preview area to select the area to be shot. After selecting, you can drag the selection box to move it, making the shooting area more accurate. Click the "Clear ROI"

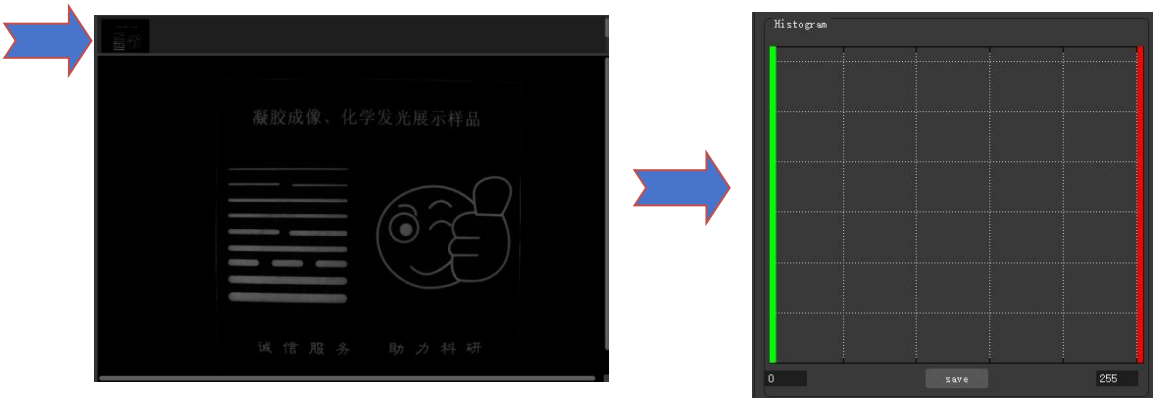
button below to cancel the selection. After the selection is accurately positioned, click "Capture" below, and the resulting image will be the area within the selected box。



8.Rotation function: When our sample is not placed correctly, we can adjust the sample by rotating the angle button to make the sample position correct. Move the mouse cursor over the button and adjust the mouse wheel up and down. The adjustment speed is 0.01 ° per step. Normally, first select the sample and use the frame as a reference to rotate it until it is correctly positioned。

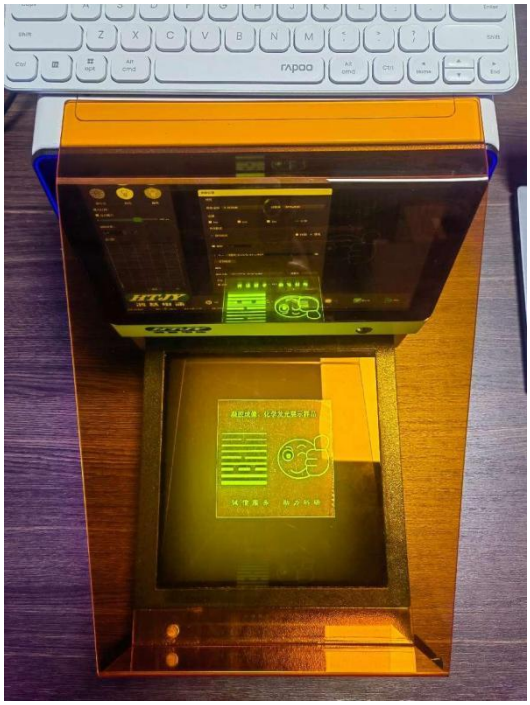


9.Image beautification function, histogram adjustment function. After shooting, click on the image in the image cache area at the top of the software. The selected image will be displayed in the preview area. Adjust the boundaries of the histogram at both ends with the left mouse button to adjust the background and brightness of the image. After adjusting to your liking, click the save button and select the save path and name。



10.Gel cutting operation: With the software open, pull out the drawer, place the sample inside, and position the gel cutting protective plate above the drawer, ensuring that both sides are flush with the drawer. The blue light will automatically turn on. After the gel cutting is complete, slowly lift the protective plate vertically, and the blue light will

automatically turn off, indicating that the gel cutting is complete.



11. If it is an EB-stained gel, replace the black sample tray with a purple one and use the software to activate UV light.
12. If taking photos for staining or silver staining of gel, it is necessary to replace the white tray and use software to turn on white light.

Attachment description:

The mouse and keyboard have built-in receivers. Simply turn the switch to the position shown in the picture to use them。

Maintenance and upkeep of instruments:

After use, wipe the sample tray dry with a paper towel. It is recommended to clean it with anhydrous alcohol once a week. If the instrument is not to be operated for a long time, it is recommended to close the software. If not in use for the day, it is recommended to turn off the computer and the main power supply.

Be careful not to spill liquid on the light board inside the drawer during use, as this may cause corrosion and short circuit of the board, affecting its functionality。