



**Slite 600/600C
Gel Documentation SYSTEM
USER'S MANUAL**

For over 15 years, Pacific Image Electronics Co., Ltd. has been continuously devoting tremendous RD energy toward various fields such as electronic engineering, imaging analysis, and optics application to develop and manufacture the most innovative electronic products that exactly fulfill customers' needs. Based on accumulated professional experiences for more than a decade on developing the latest electronic products PIE has successfully crossed the gaps in between electronics and biomedicine and farther marches forward to biomedical field with a series of innovative lab instrument and reagent products that help researchers to approach their goals in high level of biomedicine research. Further with foresightingly conceptual combinations of product categories on lab required instruments and experimental reagents, PIE has been accomplishing tasks on integration of instruments and reagents to provide quality and innovative lab automatic instruments for researchers to conduct research projects with high efficiency and high accuracy.

SAFETY INFORMATION

NOTE: All PIE UV Transilluminators are powerful sources of Ultraviolet (UV) radiation that can cause damage to unprotected eyes and skin. Be sure all personnel in the area are properly trained and protected before operating any unit that uses UV radiation.

It is further recommended that the transilluminator be installed and operated in a darkroom where access and exposure is limited while the unit is in operation. For your safety and for the safety of those around you, the transilluminator in an PIE darkroom is controlled through the darkroom, and each darkroom is equipped with a safety switch that controls the power to the transilluminator to prevent accidental exposure.

For Research Only

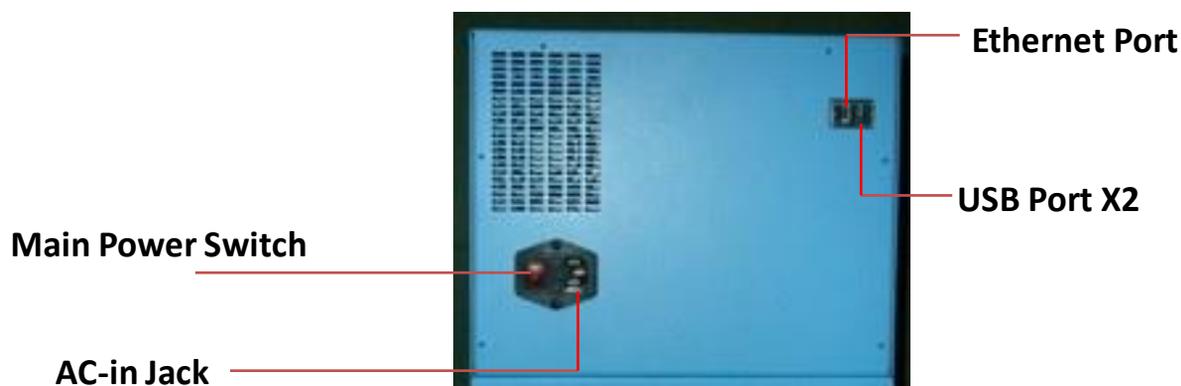
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INTRODUCTION

Slite 600 is a compact gel documentation system with user-friendly features of easy operation and quick response. This imaging system consists of a scientific CCD camera, motor driven lens, 595nm filter, UV transilluminator, and white backlight board. The chemi-fluorescence stains such as EtBr, Cy2, SYPRO Ruby, SYBR Green I/II, SYBR Gold, etc...excited by UV can easily be observed and captured by Slite 600. Followed the design concept of a single, independent workstation on bench-top, Slite 600 does not require any desktops to work with. A built-in touch screen LCD panel Slite 600 can directly handle the image data process without any difficulty. Moreover, smart user friendly interfaces and vivid icons Slite 600 has rapidly capture gel images with an easy manner. With having Slite 600 in the laboratory, you will experience a hassle-free while working on the gel imaging acquisitions..

SYSTEM COMPONENTS



Camera CMOS

A camera equipped with high resolution 6M (3096 x 2080) CMOS sensor



Lens

F1.2, 8.5~51mm zoom lens

EtBr Filter

56mm, 595±45nm Filter



Darkroom

The darkroom is absolutely tightly sealed for optimizing imaging conditions. The darkroom features:

- Overhead white light (Epi white light)
- Roll in-and-out UV transilluminator



White Backlight Board

Provide a bright surface to visualize Coomassie/silver stained gels and colony plates. It also applies for the illumination of samples with transilluminating white light.



UV Transilluminator

UV transilluminator allows the excitation of multiple fluorescent dyes to occur. To protect users from UV exposure, UV light is automatically shut off when door is open. UV transilluminator can be slid in/out of cabinet smoothly.



LCD Touch Screen

A built-in 8-inch Multi-Touch LCD screen allows users to preview, snap, save and print images, as well as to select certain preference options without the connection of extra external keyboard or mouse.





Cyan/Red Epi illuminator

Cyan/Red Epi illuminator allows the excitation of several fluorescent dyes, coming with high efficient light intensity for full excitation stained by both EtBr & its substitutes (Safe dyes). It can be placed on top of UV transilluminator and be well accommodated with Slite 600.

Optional Accessories and Parts

Please contact your local PIE dealer for more information of the optional accessories and parts

Filters

· 535nm/35: For gels or plates stained with SYBR Green, SYBR Safe, SYBR Gold, Fluorescein, Green Fluorescent Protein stains.

Thermal Printer

The USB connected compact digital thermal printer may print out archive quality prints in seconds (default: **SONY D897 thermal printer**)

SYSTEM SET UP

Please read Slite 600 manual

Follow Package Unpacking Guide to unpack the package before use.

The Initial Configuration Settings Before Use

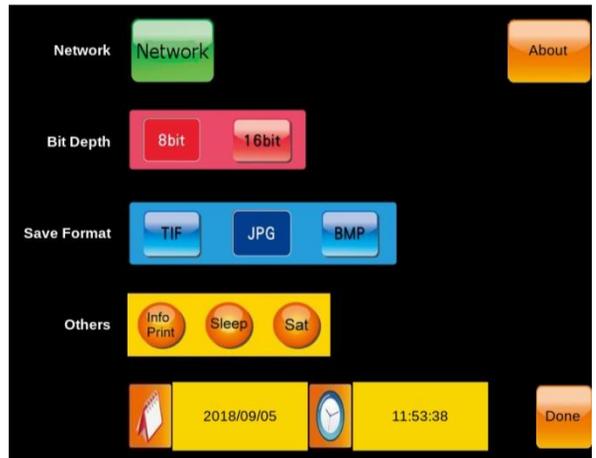
After turning on the power of Slite 600 , the “IMAGE CAPTURE MENU” page will show on screen.

To enter “Settings” page you may press  on “IMAGE CAPTURE MENU” page. The parameter settings on “Tool” page may help you to obtain the desired image data. The parameters such as “ Network”, “Image Size”, “Bit Depth”, “Save Format”, “Date” / “Time” and many other settings can be reset more directly on screen

Image Capture Mode



Settings



USB Flash Drive (FAT, FAT32, NTFS)

Please note the USB flash drive pre-formatted in the most popular FAT, FAT32, or NTFS type file system is applied to Slite 600. All three USB ports on system are available for USB Flash Drive installation for data storage.

Only one USB Flash Drive may be recognized for data storage when more than one USB Flash Drive are Inserted.



USB Flash Drive Insertion

Slite 600 FOR AGAROSE ETBR GEL

- ◆ Switch to power on the system by pressing the Main Power Switch located on the rear side of the instrument.
- ◆ Turn the system on by one-press of the Power Button on the front side of the instrument. A “Beep” sound is heard.
- ◆ The system will initiate the boot-up step.
- ◆ When boot-up is completed, the LCD on Slite 600 will display the **IMAGE CAPTURE MENU** page as on Page 7.
- ◆ Open the chamber door. (The automatic turn-on of Epi white light while door is open makes users easy to place the sample into the cabinet.)
- ◆ Slide out the UV transilluminator and place the staining gel onto UV transilluminator or light board.

- ◆ Slide the transilluminator back to the original position in chamber.

- ◆ Press  to enter **SETTING MENU** as on Page 7.

- ◆ Select      for basic settings.

- ◆ Press  back to **IMAGE CAPTURE MENU**.

- ◆ Press  to turn UV light on.

- ◆ Press  to adjust aperture.

- ◆ Press  to adjust zoom in or zoom out.

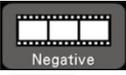
- ◆ Press  to adjust focus .

Slite 600 FOR AGAROSE ETBR GEL (CONTINUE)

◆ Press  to get into  for No 1. filter selection , press for  ETBR gel observation.

◆ Adjust exposure time, then press  to capture image, Slite 600 screen will get into

IMAGE PERUSE MENU.

- ◆ Press  to convert the color into its complementary color.
- ◆ Press  to print image (Digital thermal printer must be connected.).
- ◆ Press  to save image to USB flash drive.
- ◆ Press  to delete the on-screen image, press  to clear all images.
- ◆ Press  to back to **IMAGE CAPTURE MENU**.

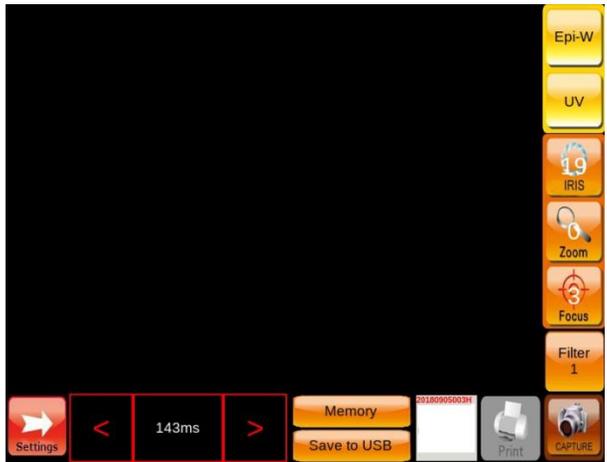
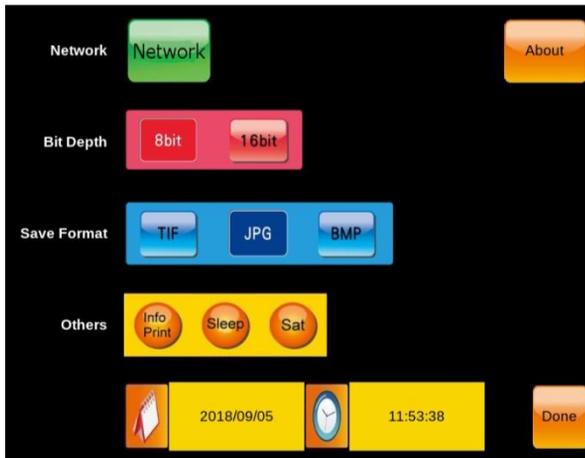


IMAGE CAPTURE MENU



SETTING MENU

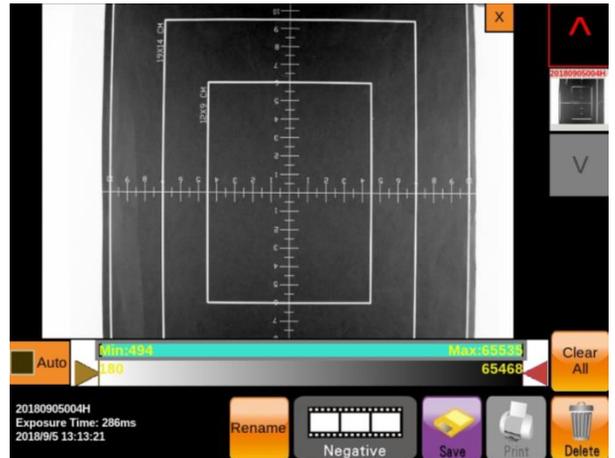
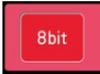
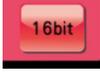


IMAGE PERUSE MENU

SETTING MENU:

Network: Please refer to page 16

Bit Depth: Select 8-bit by pressing  , select 16-bit by pressing  .

Save Format: Choose desired format of image file by pressing TIF (8-bit, 16-bit), JPG (8-bit), and BMP (8-bit) while saving the files. 

About: Press  to check the basic information of the system such as Machine ID, IP, Software Version, Firmware Version,...etc. Press  to resume all settings back to factory default value.

Others:

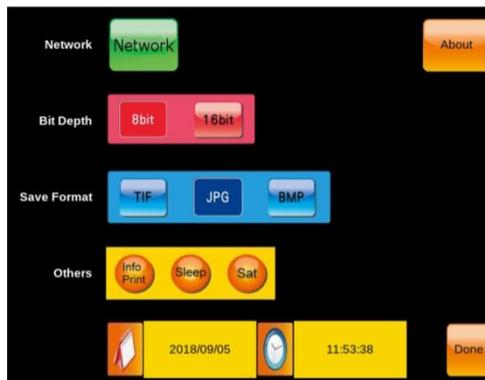
Info Print: Press  to display the image info on the printout data.

Sleep: Press  to activate the hibernating mode. Press screen to wake up hibernating system.

Sat.: Press  to activate “saturation display” function.

Date and Time: Press  to set Date/time.

When settings are all finished, press  , your settings are saved and the LCD screen will be back to **IMAGE CAPTURE MENU**. You can start to capture the images.



SETTING MENU

Slite 600 OPERATION MANUAL

Slite 600 is an easy-operated gel documentation system. Users may easily capture gel images through their fingertips by touching the functional icon showing on the built-in touch LCD screen.

User Interface Preview

Through functional icons showing on touch LCD screen, image data can be selected, adjusted, saved, and printed with convenience.

IMAGE CAPTURE MENU:

Light Source: For all light sources, press the light source icon to turn on the light source; press the same icon again to turn off the light source.

Press  to turn on 312nm UV light.

Press  to turn on Epi white light in the chamber.

Press  to turn on white backlight.

(When white backlight board is installed, the white backlight board light source selection icon will automatically display on screen.)

Press  to turn on cyan light*

(When cyan light board is installed, the lighting source selection icon will be available & displayed on screen.)

***Cyan Epi illuminator unit is only available on XXX model.**

Press  to adjust aperture value.

Press  to adjust zoom in and zoom out for image size.

Press  to adjust focus. Press  below pull par to process auto-focus function when needed. Auto-focus will be processed one round per press.

Filter Lens Selection: Press



to select the filter lens.



Press the icon to select the desired lens (Filter lens will always come to position 1 (595 nm) automatically when the light source changes)*.

*: Position 2 to 5 are empty and are available for further filter lens installation.

Capture Image: Press



to capture image.

Exposure Time Setting:



Press arrows on screen to select the desired

exposure time, the range is from 0.001 seconds ~ 10 seconds.

Captured Image Preview: Captured image will be temporarily stored in the system.

Press the image to display the captured image in IMAGE PERUSE MENU.



Users may further process the captured image by using the functional icons in the menu.

Press arrows to select the desired captured image.

Prefer: Press

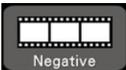


into **SETTING MENU**.



IMAGE CAPTURE MENU

IMAGE PERUSE MENU:

Press  to convert the color into its complementary color.

Press  to print image (Digital thermal printer must be connected.).

Press  to save image to USB flash drive.

Press  to delete the on-screen image, press  to clear all images.

Press the image to display the captured image in IMAGE PERUSE MENU. Users may



further edit the captured image by using the functional icons in the menu.



Press arrows to select the desired captured image.



Change the file name of the captured image:

Press , a keyboard will show on the screen.

Users may delete the filename by pressing the

backspace key on the keyboard and rename the file by typing the desired letters..

Once the filename is retyped, press “OK” to complete the file rename work.

Filename of the captured image 

20180905004H
Exposure Time: 286ms
2018/9/5 13:13:21

Press  to back to **IMAGE CAPTURE MENU**.



IMAGE PERUSE MENU

ILLUMINATOR SETTING AND OPERATION

Slite 600 is an easy-operated gel documentation system. Users may easily capture gel images through their fingertips by touching the functional icon showing on the built-in touch LCD screen.

UV Transilluminator

Through functional icon  showing on touch LCD screen,

UV transilluminator can be activated and the image data stained by UV-excited fluorescent dye can be selected, adjusted, saved, and printed with convenience.



White Backlight Board

White Backlight Board is designed for observing the colorimetric dye stained gel data. The gel image data may also be obtained through Slite 600.

Through functional icon  showing on touch LCD screen,

White backlight board can be activated and the image data stained by colorimetric dye can be selected, adjusted, saved, and printed with convenience.



Cyan/Red Epi illuminator

Cyan/Red Epi illuminator module is designed for observing the Cyan light-excited fluorescent dye-stained gel data. The gel image data may also be obtained through Slite 600.

Through functional icon  showing on touch LCD screen, Cyan light source can be pre-activated and the image data stained by either Cyan fluorescent dyes can be selected, adjusted, saved, and printed with convenience.



Light Board Installation

1. Open the door of the chamber
2. Sliding the UV transilluminator out of the chamber
3. Place the light board on top of the UV transilluminator with the pads of the light board fitting in the positioning holes on the UV transilluminator.
4. Make sure the light board is immobilized.
(Continue next page)



Light board connector

5. Insert the connector of the light board into the inlet on the front panel of UV transilluminator . The system will identify which light board is inserted and will automatically show the light source icon on the screen.
6. Operate the further image process work.

Inlet for light board



How to change the illuminator:

1. Turn system power off.
2. Slide out the illuminator from the chamber
3. Unplug the power cord (and connector, if any) on the right side of the back of the illuminator
4. Slide the illuminator out of the chamber to the end.
5. Find the plastic pad on the track underneath the illuminator, one plastic pad per track.
6. Hold the illuminator and press the plastic pad per hand and slightly slide the illuminator out of the track.
7. For the new illuminator installation, find the plastic pads on the track underneath the new illuminator. Hold the illuminator, press the plastic pads, and align the tracks of the illuminator to push the illuminator gently into tracks. The illuminator is on the right track when a “click” sound is heard.
8. Connect the power cord (and connector, if any).
9. Turn on the power once again.

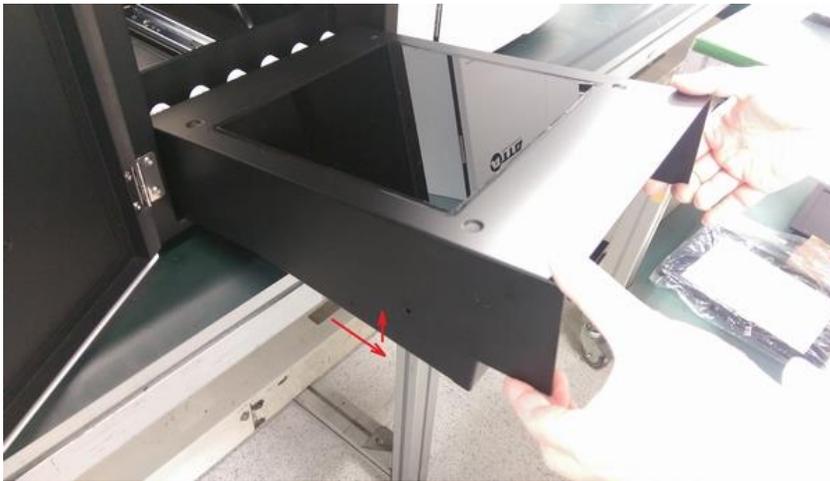
Slite 600

UV Lamps Exchange Manual

1. Open device door and pull out UV box. Use screwdriver to remove side screw (as circled).



2. Slowly lift the enclosure cover and toward approximately 5cm to take it off.



3. Gently rotate UV lamps by hands approximately 90 degree till logo imprints and connector pins can be seen below to take off the lamps, then exchange UV replacement(s) accordingly.



WIFI SETTING AND CONTROL

Slite 200W series has a build-in wireless access point (AP) and is controlled by web browser interface (IE, Chrome, Safari, firefox, etc.). After turning on the power, user can connect Slite 200W series wirelessly with PC, Mac, tablet, and smartphone which have wifi connection ability and web browsers. The interface and the controls are the same as Slite 200W standalone interface (page 7).

How to connect Slite 600 to your wireless device through WIFI (PC, Notebook, tablets, smartphone)

1. Open the internet wireless connection in the control panel of your wireless process ends.
2. Find “MyWLAN” and connect.
3. From your wireless process end, open a web browser. On the webpage address site type in 192.168.1.66 then press enter.

4. A dialogue for log on the connection is shown..

Login name: admin

Password: 0000

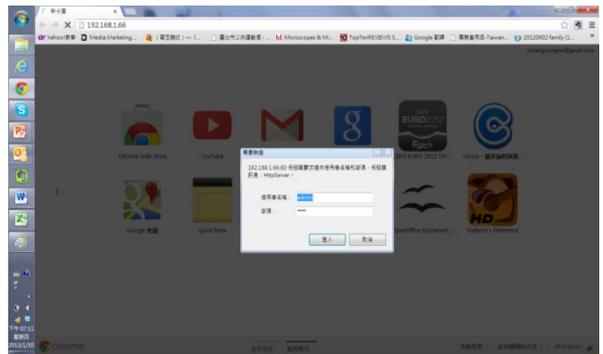
Press Ok to log in.

For guest login,

Login name: admin

Password: 0000

Maximum 5 people are allowed for guest login.



5. You will see the main operation page of Slite 200W shown on your wireless process end.



6. You may thus start to operate the system.

TROUBLESHOOTINGS

<p>No Power to the Darkroom</p>	<p>Check the connection of main power cord to main power port located on the rear side of Slite 600.</p> <p>Check fuse; the fuse cassette is located on the rear side beside the power port. You will need a flatted-head screwdriver to lever the fuse cassette out of the insertion site. In the fuse cassette, you may find a spare fuse underneath the working fuse. Observe the working fuse to see if there is any break in the wire inside the glass tube. If so, replace the torn fusen with the spare one. If fuses are consistently blown, contact you local PIE dealer.</p>
<p>Transilluminator Will Not Turn On</p>	<p>There is a power cord connecting Slite 600 with UV transilluminator. Check to see if the power cord is loose by sliding UV transilluminator out of cabinet to the end. If so, tightly plug the power cord back to UV transilluminator.</p> <p>If still not turning on, unplug the power cord and replace with other power cord, hook up replaced power cord to UV transilluminator and plug into the power socket anywhere you can find except the ones in Slite 600. If the UV transilluminator lights on, it represents that there may have problem on electric circuits inside of Slite 600. Contact your local PIE distributor for further repair process. If still not on, it represents the UV transilluminator is out of order. Also contact your local PIE distributor for further assistance.</p>

HARDWARE SPECIFICATIONS

Image Capturing Unit	CMOS Sensor	6M CMOS Monocolor
	Pixel Size (µm, VxH)	2.45 x 2.45
	Exposure Time	Up to 10 sec
	Cooling Temperature	Room Temperature
	Capture Resolution	High: 2927 x 2054
		Standard: 1463 x 1027
	Bit Depth	14 bit
	PC Interface	None
	Lens Type	6 X Zoom Lens
	Powered Lens	V
	Auto Focus	V
Filter Set	Filter Turret	Motor-Driven, 6 position
	Emission Filter (One standard set; Five for optional order)	595 nm (EtBr Stain)
Control Set	Display Panel	Build-in 8" Touch TFT LCD
	Standalone Control	Touch Screen Interface
	PC Control Interface	None
	Image Storage	USB Storage & Wi-Fi
Lighting Set	UV Transillumintor (20cm X 20cm)	V
	White Back Light	V
	Epi White Light	V
	Cyan/Red illuminator	Optional
General Info	Power	100V-240V
	Dimension (WxHxD)	303x450x600mm
	Weight	30Kg
	Certification	FCC,CE

WARRANTY

The warranty of PIE Corporation shall be of no force and effects if buyer has modified or damage the product.

TECHNICAL SUPPORTS

Please contact your local PIE distributor for further assistance & technical support in needed.



Slite 600 Gel Documentation System

Input : AC100-240V

50/60Hz

200W

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