

## **LAS 4000 Mini (PSC 563, NSC 438)**

### **LAS 3000 (NSC 438)**

**Every time you use the imager, you MUST sign the log book.  
Please sign the reserve calendar as soon as you know the time you are going to use it.  
Clean up any spills inside and outside the imager.**

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## **LAS 4000 Mini**

1. Turn imager power on.
2. Double click ImageQuant LAS 4000 button on desktop.
3. The camera needs to be cooled down to exactly  $-25^{\circ}\text{C}$  before usage. The cooling time should be less than 10 minutes. If it is longer than 10 minutes, please write down the notes.
4. Click Method/Tray position button, choose either Chemiluminescence or Digitization. Also choose the position, which must match with the physical position in imager. Click OK button and return to main window.
5. In the pull-down menu of Exposure Type, choose Precision, Increment, Repetition, or Program.
6. Choose the Exposure Time. You can set it Auto or Manual. In Manual mode, you need to choose the right exposure time by typing in the number and choosing the time unit (hr, min, or sec); or click some preset exposure time (15hr, 2hr; 60min, 30min, 10min, 5min, 2min, 1min; 1sec, 1/2sec, 1/4sec, 1/8sec, 1/15sec, 1/30sec, 1/60sec, and 1/100sec).
7. Choose Sensitivity/Resolution from High Resolution, Standard, High, Super, Ultra, High Binning, Super Binning, and Ultra Binning.
8. Click Focusing button, adjust brightness and focus until you are satisfied. Click Return button.
9. Click Start button. The picture is taken.
10. You can choose Print to print your image; or Save to save your image in the directory you specify and the format you specify (\*.gel for ImageQuantTL, \*.tif for other image processor).
11. Click Complete button when you are done for that image.
12. Close software when you are totally done. If you are going to use this imager within one hour, choose Keep the CCD cooling after quit; otherwise, choose Stop the CCD cooling now.
13. Click OK button.
14. Turn imager power off.

## **LAS 3000**

Every time you use the LAS 3000, you MUST sign the logbook.  
Do Not turn the power switch of IDX (Intelligent Dark Box) off before quitting the reading software; Image Reader LAS-3000). Turning the power off without first quitting the reading software could permanently damage the camera system.  
DO NOT use any organic solvent cleaning solutions to clean the tray and interior of IDX. Use only water dampened soft-cloth to clean tray. Please consult core facility personnel for any questions about cleaning.

- A. Turn on Power Switch of IDX (bottom right corner of IDX front side).
- B. Open software from computer- double click Image Reader LAS 3000 Icon. The software will initialize the IDX. Not ready sign – software waits until camera has cooled to -30oC.
- C. Open IDX Door
  1. Choose and change Image and sample tray depending on detection method and samples.
  2. Trays are in the drawer under the IDX Table.

**Chemiluminescence**

Membrane	Black EPI tray
Titer Plate	NP tray

**Fluorescent** – gel

UV detection	White Translucent DIA tray
LED detection	Black EPI tray

**Digitize**

Membrane	Black EPI tray
Gel (CCB, Silver)	White Translucent DIA tray

3. Open IDX Door
  4. Place your sample on the tray (make sure you use right tray type)
  5. Close the IDX Door.
  6. Go to the Initial screen of the LAS 3000 software.
  7. From Top of Left Control Panel
    - (a) Choose mode of Operation (Lite or Pro). Whichever was used last will show up.
    - (b) Lite Mode: All corrections are done automatically. Just select detection method and exposure time.
    - (c) Pro Mode: The exposure can be performed manually with more detailed conditions. (Not for occasional users).
- D. When you see PRO button on the screen, you are in Lite mode and vice versa.
1. Go to Bottom panel of control box. (In Lite Mode)
  2. Open Method/ Tray button
    - (a) Select detection Method - Chemi
    - (b) Select Tray level (depend on the size of your sample, bottom level for larger size of sample). Camera can't zoom, so you will need to change tray level to accommodate the size of your sample
    - (c) Click OK button
    - (d) Open Focusing button

- (e) Confirm the sample position and focus.
- (f) Click the Return button.
- 3. Go to left control panel
  - (a) Choose Exposure Type. Precision is most often used.
  - (b) Choose Expose Time
    - Auto: Software will determine the expose time. However, auto mode may not give you the best picture.
    - Manual: Go with manual exposure time, if you have had experience with similar type of exposure or to get better picture than auto mode.
  - (c) Choose the level of Sensitivity. Go with Standard first, and then try others. Ultra can lose resolution.
- 4. Make sure IDX door is closed and click Start button.
- 5. During Exposure Do Not Open the Door.
- E. After the screen displays the image, adjust the gradation of the exposed image.
- F. Save and print the Image.
- G. Click the Complete button. The display returns to the initial screen.
- H. Quit the program from pull down file menu. Choose quitting with "STOP CCD Cooling down".