



## FastGene® GelPic LED Box



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## **GENERAL INFORMATION**

Thank you for purchasing our FastGene® GelPic LED Box. This Manual includes the operation procedure. In order to use the instrument properly, please read this manual carefully before using FastGene® GelPic LED Box. This instrument is suitable for research use only.

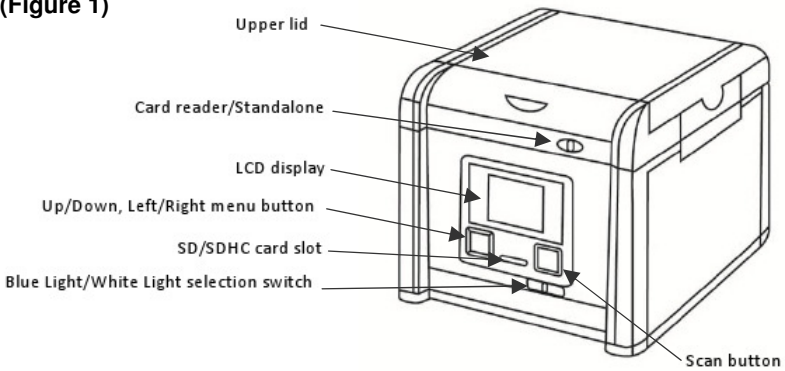
## **FIRST QC CHECK**

Please check the instrument and the packing list when you first open the instrument packing case. If you find there is something wrong with the instrument or the packaging content, please contact Nippon Genetics Europe or your local distributor.

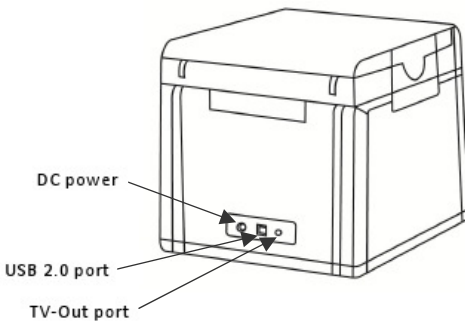
**PACKAGING CONTENT**

<b>FastGene® GelPic LED Box</b>	
Scanner Unit	Black plastic board (in box)
A/C adapter (12V, 1.5A, DC)	Amber filter board (in box)
USB 2.0 cable	Gel shovel
TV-out cable	Gel cutting knife
SD card (4G)	Quick Installation Guide
Sample tray (in box)	Manual

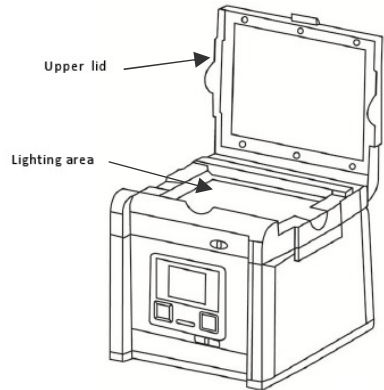
**Front (Figure 1)**



**Back (Figure 2)**



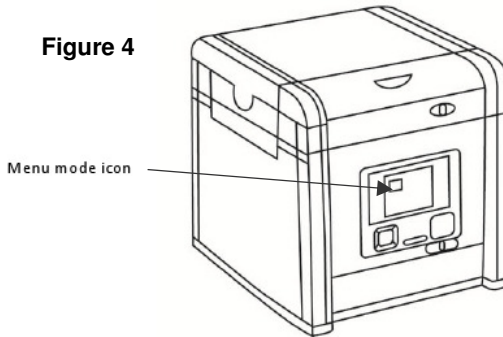
**Inside (Figure 3)**



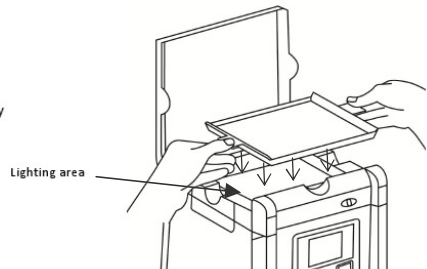
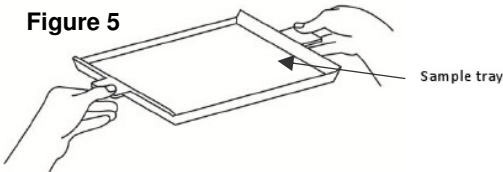
## SETUP OF THE INSTRUMENT

1. Remove all tapes used to hold items in place for shipping.
2. Place scanner unit on flat surface.
3. Insert SD/SDHC card (up to 32GB).
4. Connect power source (see Figure 2):  
Connect AC adapter to back of unit then plug into electrical outlet.
5. The Menu Mode icon will be displayed on the top left side of the display (Figure 4).
6. Wet the gel and place gel at the center of the sample tray (Figure 5).
7. Place sample tray into the Lighting area of the system (Figure 6).  
*Caution: Do not place the gel directly on the surface of the Lighting area. Fail to do so may lead LED damage caused by buffer leakage.*
8. Start to adjust the image condition and scan.


**Figure 4**



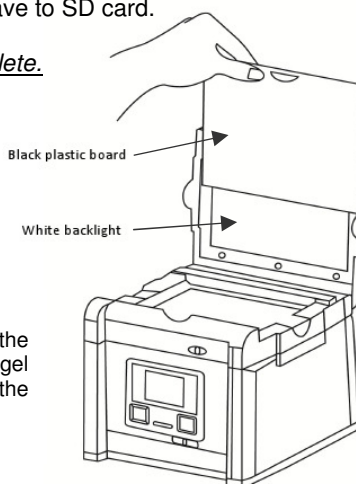
**Figure 6**



## SCANNING GEL

1. In “Scanning Mode” , lift scanner lid and take the sample tray out of the scanner.
2. Wet the gel and place the gel at the center of the sample tray.
3. Place the sample tray back to the Lighting Area of the scanner.  
*Caution: Do not place the gel directly on the surface of the Lighting Area. Failing to use the tray may cause buffer leakage and damage the LED (Figure 6).*
4. Slide the black plastic board into the groove of the white backlight to block the white light on the lid (Figure 7).  
  
*It is suggested to slide the black plastic board to block the white backlight on the lid for fluorescent stained gel scanning. For colorimetric gel scanning, leave the white backlight unblocked on the lid.*
5. Close the scanner lid.
6. Slide the Light Selection Switch on the front side of the scanner to choose blue light source for scanning stained gel.
7. Set and adjust the desired image quality through the Functional Menu if necessary (Please check “Functional Descriptions” section for the details of all functions).
8. Press SCAN button, green LED will flash and “CAPTURING” will be displayed on the screen. The scanned image will automatically save to SD card.

Scanning of the gel sample is now complete.



**Figure 7**

Slide the black plastic board to avoid the background light for fluorescent stained gel scanning. For colorimetric gel scanning, leave the white backlight unblock on the lid.

## **SCANNING WESTERN BLOT/COLORIMETRIC STAINED GEL**

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1.



In “Scanning Mode” lift scanner lid and take the sample tray out of the scanner.

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2. Place the blot membrane at the center of the tray for which the signal side of the membrane is facing toward the bottom of the tray.

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3. Place the sample tray back into the Lighting area of the scanner.

---

4. Slide the black plastic board into the groove of the white backlight to block the white light on the lid

*It is suggested to slide the black plastic board to block the white backlight on the lid for fluorescent stained gel scanning. For colorimetric gel scanning, leave the white backlight unblocked on the lid.*

---

5. Close the scanner lid.

---

6. Slide the Light Selection Switch on the front side of the scanner to select the white light source for stained gel scanning.

---

7. Set “Transmitted” or “Epi” item through Functional Menu (Please check “LED Lighting” of “Functional Descriptions” section for details of turn-on of “Transmitted” or “Epi” application ).

*“Transmitted” mode is to scan the gel stained with colorimetric stain such as the SDS-PAGE gel stained with coomassie blue stain.*

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8. Adjust the desired image quality through the Functional Menu if necessary (Please check “Functional Descriptions” section for the details of all functions).

---

9. Press SCAN button, green LED will flash and “CAPTURING” will be displayed on the screen. The scanned image will automatically be saved to SD card.


*Scanning of the blot is now complete.*

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## **BROWSE SCANNED IMAGES/DELETE SCANNED IMAGES**

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### **1. Examine Scanned Images**

a) When  icon displays on top left corner of the screen, press “OK” to get into functional options.

b) When “Scan Mode” icon is highlighted , press “OK” again to get into “Play Mode”.

c) The “Play Mode” icon  will display on top left corner of screen. The captured images can then be reviewed one by one by pressing right arrow button.

---

### **2. Delete Scanned Images**

a) When viewing the image that needs to be deleted, press “OK” to get into Function Descriptions II.

b) Press right arrow button to choose “**Edit Mode**” 

c) Press up/down arrow button to choose “Delete”. Press right arrow button to select (yes/no) to delete the file.

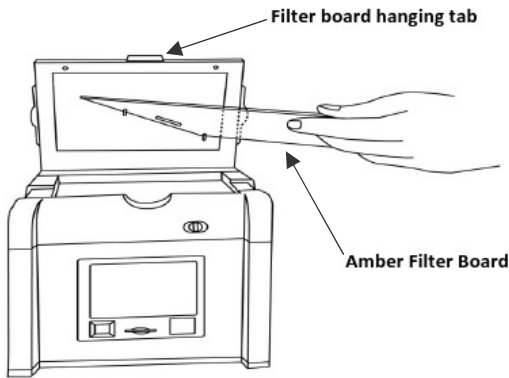
d) Press up/down arrow button to select “Yes”. Press “OK” to save the setting. The image is thus deleted.

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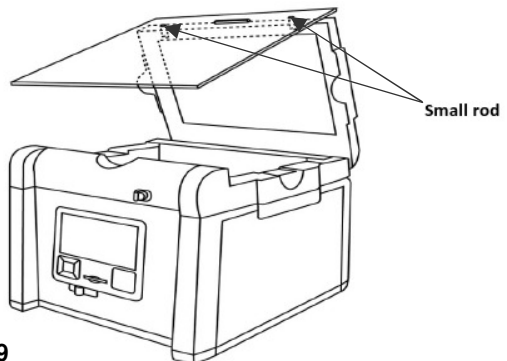
## **INSTALLATION OF AMBER FILTER BOARD**

FastGene® GelPic LED Box is equipped with an amber filter board for blue light protection and gel cutting purposes. Open the lid and install the filter board so the gel cutting task may be conducted.

1. Open the lid.
2. Lift the lid to its maximum open angle.
3. Position the amber filter board with the hole for hanging on lid in front (Fig.8).
4. Place the amber filter board onto the filter board hanging tab so the filter board may hang as shown in Figure 9.
5. When hanging on the lid, make sure the two small rods on the filter board are placed closely against the lid.
6. The installation is completed. One may turn on blue LEDs for further gel cutting purpose.



**Figure 8**



**Figure 9**



## **ACCESS STORED SCANNED IMAGE FILES WITH COMPUTER**

The files stored on the SD/SDHC card can be accessed by a computer.

- 
1. Connect the provided USB cable to the computer USB port.
  2. Connect the other end of the cable to the USB port on the back of the scanner.
  3. Switch Card reader/Standalone to Card Reader mode.
  4. Through the operating system on PC, the contents of the SD/SDHC card will be available as removable media.
  5. Copy the files to PC's hard drive for storage or for further use.
- 

## **DISPLAY SCANS ON TV**

The display from the scanner can be displayed on a television rather than the built in scanner preview screen using the AV video port.

- 
1. Set the television to AV mode (see TV documentation for details).
  2. Connect the included TV-Out cable to the video port on the TV.
  3. Connect the other end of the cable to the TV port on the back of the scanner.
  4. Video output from the scanner can now be seen on the connected TV including the full menu interface.
-

## FUNCTIONAL MENU: FUNCTION DESCRIPTION I



**Scan Mode:** The object is able to be scanned in this mode.



**LED Lighting Mode:** To select the white light application for Transmitted/Epi image scan, respectively (Note: this mode is available only when white light application is selected.)



**Exposure Mode:** To adjust the exposure time frame in this mode.



**B/W Switch Mode:** To scan/display the image in colorimetric or monochrome mode. The default setting of the image is monochrome (black & white).




**Set Up Mode:** To set up the following parameters:

- a) LCD: Dark, Normal, Bright
  - b) Display: NTSC, PAL (NTSC = USA, PAL = Europe)
  - c) Quality: S. Fine, Fine, Normal (JPEG Compression)
  - d) Size: 12M, 9M, 5M, 1M (Megapixels, "9M" is default setting)
  - e) Power Save: 1 min, 3 min, 5 min, 10 min, off (Power shut off)
  - f) Language: English, 繁體中文
  - g) Format: Yes, No. (Format SD card)
  - h) Reset: Yes, No. (Reset all current settings back to factory default).
-



### **Scan Mode**



When  icon displays on top left corner of the screen, the object is ready to be scanned.


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### **LED Lighting Mode**

*This mode is only available when switching to white light application*



- 
- When in “Scan Mode”, press “OK” to get into functional option list.
- 

- Press right arrow button to choose “LED Lighting Mode” 
  - Press up or down arrow button to choose light source (Transmitted & Epi).  
“Transmitted” mode is to scan the gel stained with colorimetric stain such as the SDS-PAGE gel stained with coomassie blue stain.
- 

- Press “OK” to save the setting.
-





## **Exposure Mode**

- 
- When  icon displays on top left corner of the screen, press “OK” to get into functional option list.
- 
- Press right arrow button to choose “Exposure Mode” 
  - Press up or down arrow button to choose the desired exposure level.
  - When the desired exposure level is selected, press “OK” to get back to “Scan mode”.
- 





## **B/W Switch Mode**

- 
- When  icon displays on top left corner of the screen, press “OK” to get into functional option list.
- 
- Press right arrow button to choose “B/W Switch Mode” 
  - Press up or down arrow button to select the desired display mode (color or B & W; color invert or B & W invert). The default setting of the scanner is Black & White.
  - Press “OK” again to return to “Scan Mode”.
-



## **Set Up Mode**

- 
- When  icon displays on top left corner of the screen, press “OK” to get into functional option list.
- 

- Press right arrow button to choose “Set Up Mode” .
  - Press down arrow button to get into “Setup Menu” and select the desired setting item.
  - Press right arrow button to get into setting mode. Then press up and down arrow button to select the desired setting. Press “OK” to save the setting.
  - Press down arrow button to select other setting mode; or press “OK” again to return to “Scan Mode”.
- 

### Setup Menu and related setting items:

- LCD: Dark, Normal, Bright
  - Display: NTSC, PAL (NTSC = USA, PAL = Europe)
  - Quality: S. Fine, Fine, Normal (JPEG Compression)
  - Size: 12M, 9M, 5M, 1M (Megapixels, “9M” is default setting)
  - Power Save: 1 min, 3 min, 5 min, 10 min, off (Power shut off)
  - Language: English, 繁體中文
  - Format: Yes, No. (Format SD card)
  - Reset: Yes, No. (Reset all current settings back to factory default)
-

## **FUNCTIONAL MENU: FUNCTION DESCRIPTION II**



Play Mode: To play the captured images. To examine the captured image.



Auto Play Mode: To automatically play the captured images one by one.



Edit Mode: To edit the captured images (such as to rotate or to delete the captured image, etc.).



Preview Mode: To preview the captured images in a multi image thumbnail panel.






Set Up Mode: Same as the “Set Up Mode” functions in Function Descriptions I.

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### **Play Mode**

- 
- When  icon displays on top left corner of the screen, press “OK” to get into functional options.
- 
- When “Scan Mode” icon is highlighted , press “OK” again to get into “Play Mode”.
- 
- The “Play Mode” icon  will display on top left corner of the screen. The captured images can then be reviewed one by one by pressing right arrow button.
- 
- Press “OK” twice to get back to “Scan Mode” (It will take few seconds to complete the process).
- 






### **Auto Play Mode**

- 
- When in “Play Mode” , press “OK” to get into functional option list .
- 
- Press right arrow button to choose “Auto Play Mode” , then press “OK”.
- 
- The captured image will automatically display on LCD screen one by one.
-



## **Edit Mode**

- 
- When in “Play Mode” , press “OK” to get into functional option list .
- 

- Press right arrow button to choose “Edit Mode” .
  - Press down arrow button to get into “Edit Menu” (Rotate/Delete) and select the desired setting item.
- 

- Press right arrow button to get into setting mode:

Rotate:	Right 90°	Delete:	No
	Left 90°		Yes
	180°		
	Flip H.		
	Flip V.		



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- Press up and down arrow button to select the desired setting. Press “OK” to save the setting.
  - Repeat previous step for “delete mode” setting or press “OK” again to return to “Play Mode”.
-





## **Preview Mode**

- 
- When in “Play Mode” , press “OK” to get into functional option list .
- 

- Press right arrow button to choose “Preview Mode” .
  - Press down arrow button to get into “Preview Menu” (1x1, 2x2, 3x3) and select the desired setting item.  
Preview Mode: 1 X 1 (Display 1 image at a time)  
2 X 2 (Display 4 images at a time)  
3 X 3 (Display 9 images at a time)
- 

- Press “OK” button to save the setting.
  - The captured images will display on the screen based on the selected preview format setting.
- 



## **Set Up Mode**

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Same as the “Set Up Mode” described in “Function Descriptions I” on page 13.

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## TECHNICAL SPECIFICATION

### Image Capture

Sensor	Color CMOS Sensor
Resolution	9M pixels
Exposure Time	- 1.6 sec (11 scales)
Image Types	JPEG
Image Storage	SD Card Storage
View Area	16 x 11,5 cm (fixed lens)

### Lens and Filter

Filter Wheel	Manual-Driven, 2 position
Emission Filter	520 nm Amber Filter

### Lighting

Blue Light	470nm Blue LED Light
Epi White Light	LED White Light
White Back Light	LED White Light Panel

### Interface

Display Panel	Build-in 2.7" Touch TFT LCD
Image Storage	SD Card Storage
Output	USB 2.0 (Card Reader) TV out (3.5 mm end and RCA end)

### General Information

Power	AC Adaptor, 12V/1.5A, 18W
Dimension (W x H x D)	198 x 227 x 254 mm
Gel Tools	Sample Tray, Shovel, Amber Shield
Weight	3,2 kg
Certification	CE, FCC

## **ORDERING INFORMATION**

<b>Product</b>	<b>Cat.No.</b>
FastGene® GelPic LED Box	GP03-LED

<b>Related Products</b>	
FastGene® GelPic Imaging System LED	GP01-LED
FastGene® GelPic Imaging System UV	GP01-UV
FastGene® LED Transilluminator	FG-06
FastGene UV Transilluminator	FG-300
FastGene® LED Illuminator	FG-05
Mupid-One Electrophoresis System	Mu2
Mupid-One LED Illuminator	Mu4
Midori Green DNA Stain (1 ml)	MG02
Midori Green Advance DNA Stain (1 ml)	MG04
Midori Green Direct DNA Stain (1 ml)	MG06
Agarose Gel Band Cutter	FG-830
FastGene® Gel/PCR Extraction Kit (100)	FG-91202
FastGene® Gel/PCR Extraction Kit (300)	FG-91302

## **CONTACT INFORMATION**

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For more detailed product information, contact details, questions, or trouble shooting please visit our English website [www.nippongenetics.eu](http://www.nippongenetics.eu) or our German website [www.nippongenetics.de](http://www.nippongenetics.de)

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