

FastGene[®] Blue/Green GelPic LED Box

Cat. No. GP04LED



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1. SAFETY INFORMATION

Please read carefully the following notes to be able to properly use the FastGene® Blue/Green GelPic LED Box Imaging System.

- ▲ Please wear the appropriate personal protective equipment.
- ▲ Using FastGene® Blue/Green GelPic LED Box will normally not injure eyes, skins, and samples. However, prolonged exposure of human naked eyes with light irradiation in the blue spectrum may increase the probability of suffering from retina diseases. Therefore, we recommend wearing the amber goggle included in the box, when handling the FastGene® Blue/Green GelPic LED Box with an open lid.

2. WARRANTY

The FastGene® Blue/Green GelPic LED Box is warranted against defects in materials and workmanship for 1 year. In case of any defects occurring in the instrument or accessories during this warranty period, Nippon Genetics Europe will repair or replace the defective parts at its discretion without charge.

The following defects, however, are specifically excluded:

- Defects caused by improper operation.
- Repair or modification done by anyone other than Nippon Genetics Europe or an authorized agent.
- Damage caused by substituting alternative parts.
- Use of fittings or spare parts supplied by anyone other than Nippon Genetics Europe.
- Damage caused by accident or misuse.
- Damage caused by disaster.
- Corrosion caused by improper solvent or sample.

For any inquiry or request for repair service, contact Nippon Genetics Europe or your local distributor. Please send a message containing information about the model and serial number of your instrument.

3. REGULATORY NOTICE

IMPORTANT: This Nippon Genetics Europe instrument is designed and certified to meet safety standards and EMC regulations. Certified products are safe to use when operated in accordance with the instruction manual. This instrument must not be modified or altered in any way. Alteration of this instrument will:

- Void the manufacturer's warranty
- Void the safety and EMC certification
- Create a potential safety hazard

Nippon Genetics Europe is not responsible for any injury or damage caused by the use of this instrument for purposes other than those for which it is intended, or by modifications of the instrument not performed by Nippon Genetics Europe or an authorized agent.

4. IMPORTANT NOTICE

Please read the installation instruction carefully before installing the FastGene® Blue/Green GelPic LED Box Imaging System. This instrument is meant for use only by specialized personnel that know the health risks associated with blue/green light radiation and with reagents that are normally used with this instrument. Please wear the amber goggle for your own protection!

5. SPECIFICATION

Imaging Capturing Unit

Sensor	CMOS Sensor
Resolution	9 Mega Pixels
Exposure Time	0.2~ 2 sec (11 scales)
Image Storage	USB flash drive
View Area	16 x 10.5 cm (fixed lens)

Lens and Filter

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

Lighting

Blue/Green Light	Peak at ~505 nm Cyan LED Light
Epi White Light	LED White Light
White Back Light	LED White Light Panel

Interface

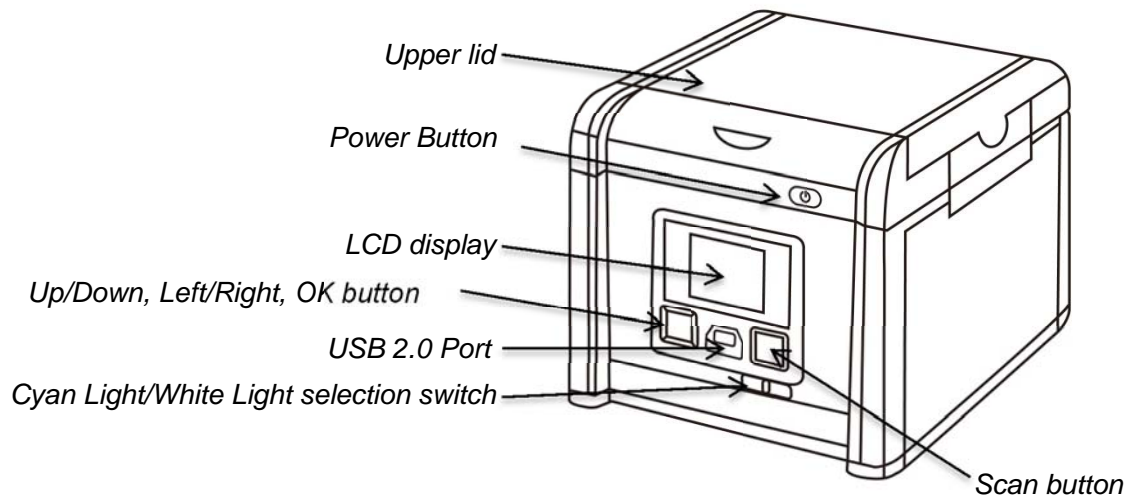
Display	Build-in 2.7" TFT LCD
USB out	2 x 2.0 (Mitsubishi P95D thermal printer and USB flash drive)
VGA out	Resolution: 800 x 600 and 1024 x 768

General Info

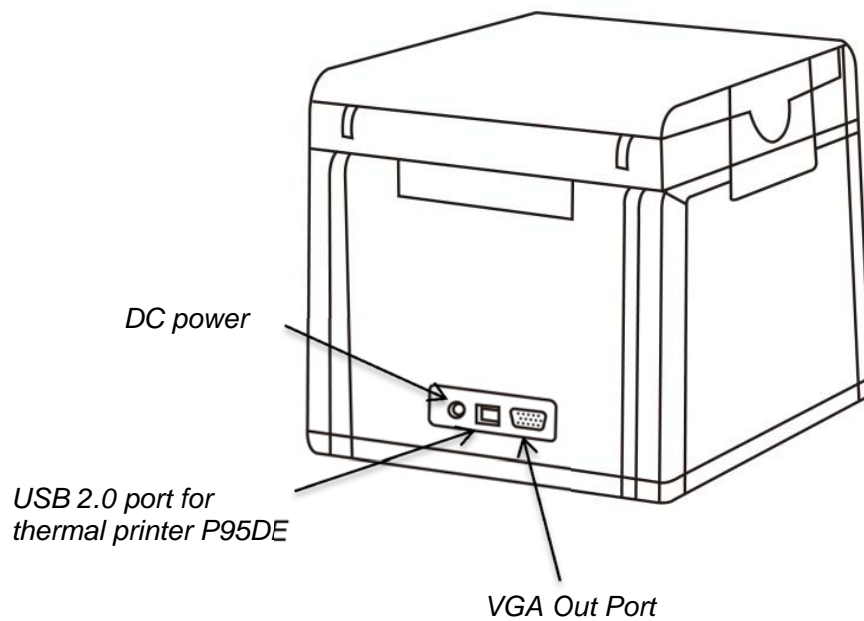
Power	AC Adaptor, 12V/4.16A
Dimension (W x H x D)	230 x 230 x 254mm (9.05 x 9.05 x 10 in)
Gel Tools	Shovel, Amber View Shield, Gel Tray, USB-Stick, Amber Google
Weight	3.2Kg (7.05 lb)
Certification	CE, FCC

6. NOMENCLATURE

Front

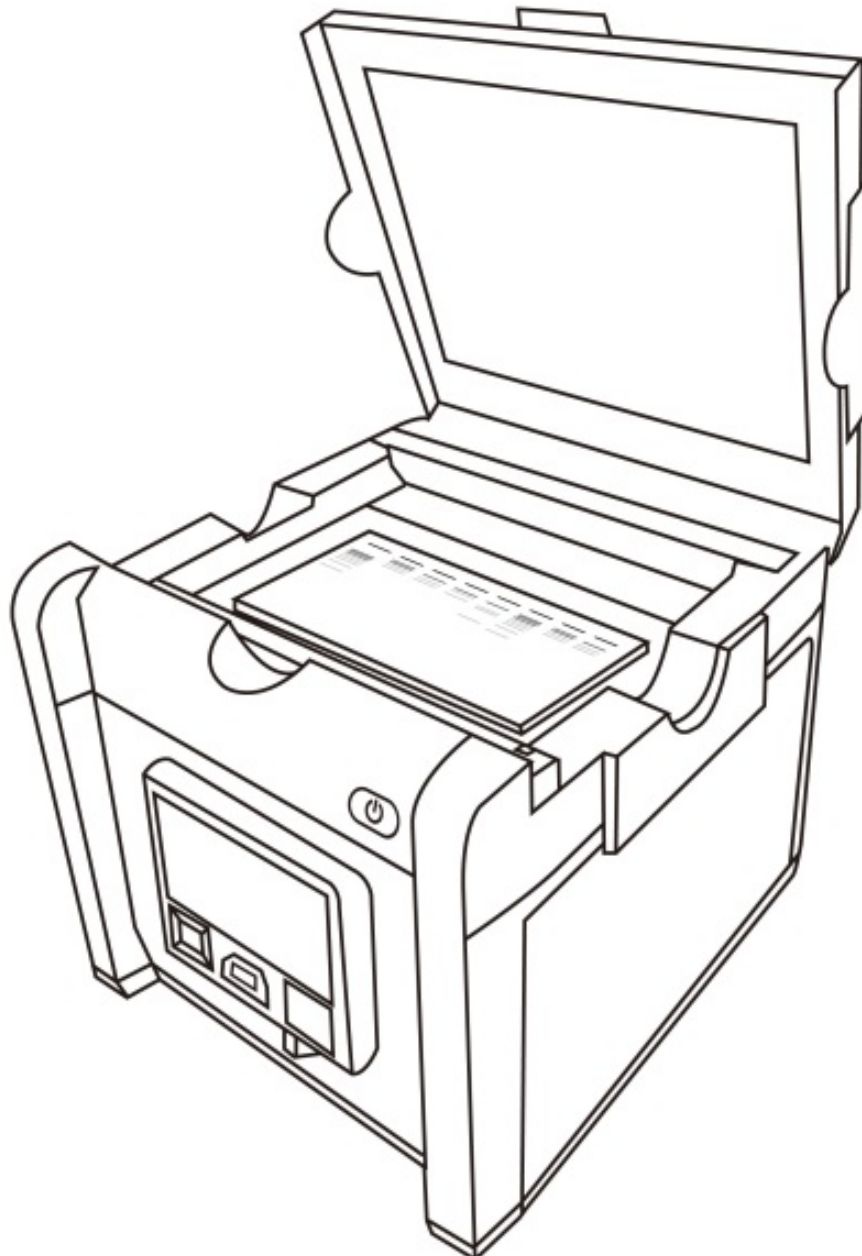


Back



7. INITIAL SETUP

- I. Remove all tapes that hold items in place for shipping.
- II. Place the FastGene® Blue/Green GelPic LED Box unit on a flat surface.
- III. Connect the included AC adapter to the back of the unit then plug into an electrical outlet.
- IV. Push the power button.
- V. Insert the USB flash drive.
- VI. Initiate the desired application (see sections 8 to 11).



8. SCANNING AN AGAROSE GEL

Open the lid of the FastGene® Blue/Green GelPic LED Box.

- I. Slide the black velvet sheet into the groove of the lid to cover the white light area of the lid (see figure below).
- II. Place the gel tray with the agarose gel on to the view area and close the lid.
Note: the view area is water-proof. Hence, the usage of the gel tray is not obligatory.
- III. Slide the **Light Selection Switch** on the front side of the instrument to choose the cyan light source.
- IV. A live image of the gel will be shown on the display.

Remark: Image adjustment and scanning is only possible in the "live view" mode. If the following described icons are not shown at the menu bar after pressing OK button please refer to section 14/A.2 to switch between "playback mode" and "live view" mode.

Image Adjustment (Exposure)


- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired exposure value (-5 to +5).
- IV. Press the OK button to confirm the exposure value.
- V. Wait until the image exposure is adjusted.

Image Adjustment (BW/BW-invert)


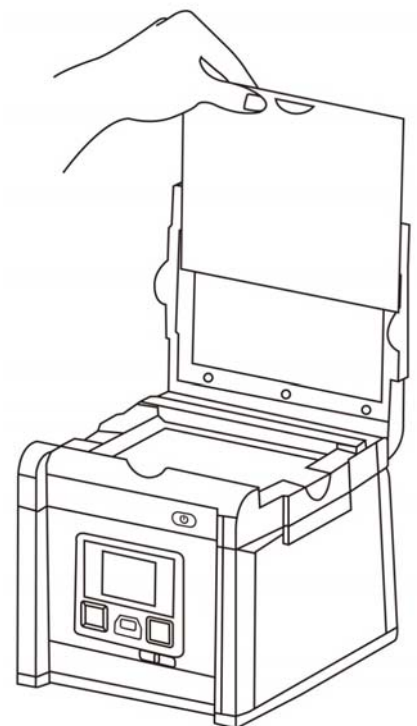
- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired BW-option.
- IV. Press the OK button to confirm your selection.
- V. Wait until the image is adjusted.

Image Recording

- I. Press **SCAN** button, green LED will flash and "**Saving, don't remove USB**" will be displayed on the screen. The scanned image will automatically save to the USB flash drive. "**Printing Yes/No**" option will be displayed on the screen if a thermal printer is connected to the FastGene® Blue/Green GelPic LED Box.

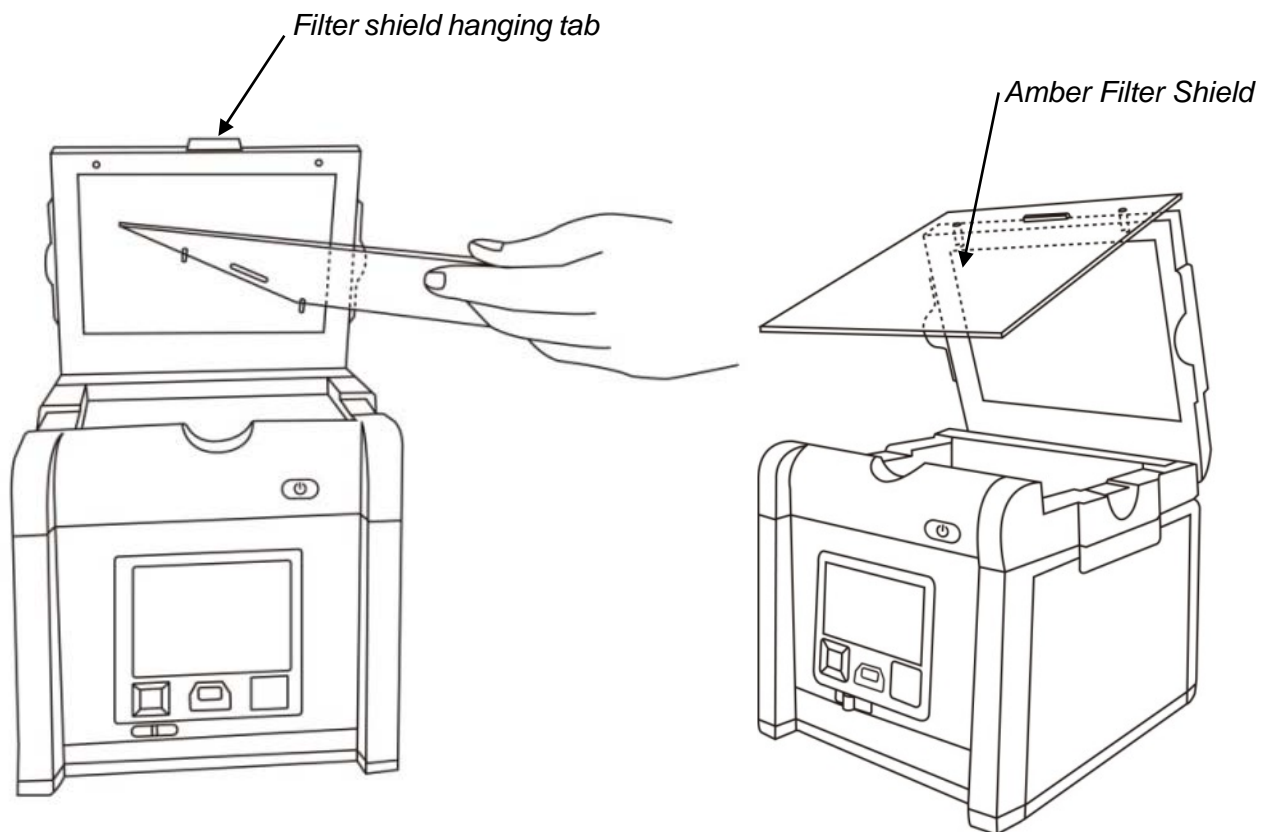
Scanning of the gel sample is now complete.




9. EXTRACTION OF DNA FROM AGAROSE GELS

FastGene® Blue/Green GelPic LED Box is equipped with an amber filter shield and amber goggle to filter the blue/green excitation light enabling the extraction of DNA from the agarose gel.

- I. Open the lid to its maximum opening and the blue/green light will automatically turn off.
Note: Light bleaches the DNA dye. The light is switched off to avoid excessive bleaching.
- II. Position the central opening of the amber filter shield on the hanging tab. After hanging the filter on lid, make sure the two bent areas are placed against the lid. Alternatively, use the amber goggle.
- III. Turn on and off the blue/green LED by pressing “Scan button”.
- IV. Excise the DNA.



10. SCANNING A COLORIMETRIC STAINED GEL

- I. Open the lid of the FastGene® Blue/Green GelPic LED Box.
- II. Remove the black velvet sheet from the inside of the lid.
- III. Place the gel tray with the protein gel on to the view area and close the lid.
Note: the view area is water-proof. Hence, the usage of the gel tray is not obligatory.
- IV. Slide the **Light Selection Switch** on the front side of the scanner to select the white light source for stained gel scanning.
- V. Selecting Transmitted Mode:
 - a. Press OK button to activate the menu.
 - b. Use left or right keys to select  icon.
 - c. Use up and down keys to select **“White Back Light”**.
 - d. Press the OK button to confirm.
 - e. A live image of the gel will be shown on the display.

Remark: Image adjustment and scanning is only possible in the “live view” mode. If the following described icons are not shown at the menu bar after pressing OK button please refer to section 14/A.2 to switch between “playback mode” and “live view” mode.

Image Adjustment (Exposure)


- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired exposure value (-5 to +5).
- IV. Press the OK button to confirm the exposure value.
- V. Wait until the image exposure is adjusted.

Image Adjustment (Color option)


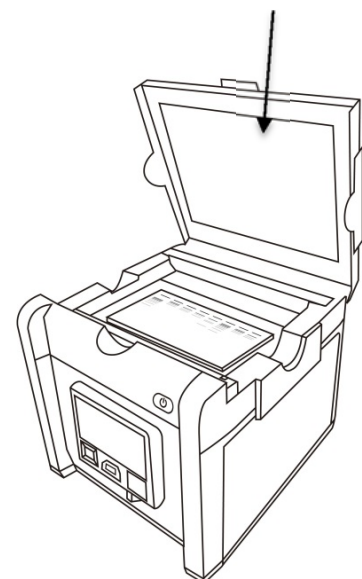
- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired Color-option.
- IV. Press the OK button to confirm your selection.
- V. Wait until the image exposure is adjusted.

Image Recording


- I. Press **SCAN** button, green LED will flash and **“Saving, don’t remove USB”** will be displayed on the screen. The scanned image will automatically save to the USB flash drive. **“Printing Yes/No”** option will be displayed on the screen if the Mitsubishi P95D thermal printer is connected to the FastGene® Blue/Green GelPic LED Box.

Scanning of the gel sample is now complete.

Built-in White light plate



11. SCANNING WESTERN BLOT MEMBRANE / PETRI DISHES

- I. Open the lid of the FastGene® Blue/Green GelPic LED Box.
- II. Slide the black velvet sheet into the groove of the lid to cover the white light area of the lid.
- III. Place the gel tray with the membrane/petri dish on to the view area and close the lid.
Note: the view area is water-proof. Hence, the usage of the gel tray is not obligatory.
- IV. Slide the **Light Selection Switch** on the front side of the scanner to select the white light source for stained gel scanning.
- V. Selecting Epi Light Mode:
 - a. Press OK button to activate the menu
 - b. Use left or right keys to select  icon.
 - c. Use up and down keys to select **“White Epi”**.
 - d. Press the OK button to confirm.
 - e. A live image of the gel will be shown on the display.

Remark: Image adjustment and scanning is only possible in the “live view” mode. If the following described icons are not shown at the menu bar after pressing OK button please refer to section 14/A.2 to switch between “playback mode” and “live view” mode.

Image Adjustment (Exposure)


- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired exposure value (-5 to +5).
- IV. Press the OK button to confirm the exposure value.
- V. Wait until the image exposure is adjusted.

Image Adjustment (Color option)


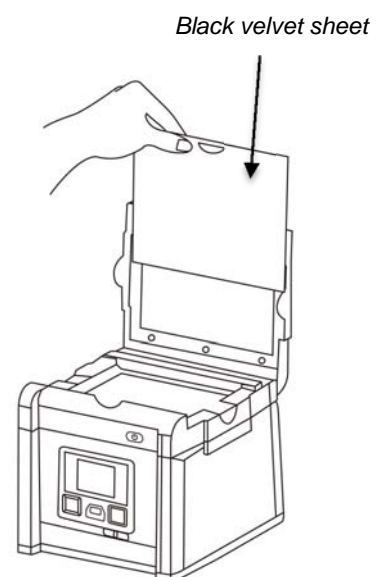
- I. Press the OK-button to activate the menu.
- II. Use left or right keys to select  icon.
- III. Use up and down key to select the desired Color-option.
- IV. Press the OK button to confirm your selection.
- V. Wait until the image exposure is adjusted.

Image Recording

- I. Press **SCAN** button, green LED will flash and **“Saving, don't remove USB”** will be displayed on the screen. The scanned image will automatically save to the USB flash drive. **“Printing Yes/No”** option will be displayed on the screen if the Mitsubishi P95D thermal printer is connected to the FastGene® Blue/Green GelPic LED Box.


Scanning of the sample is now complete.

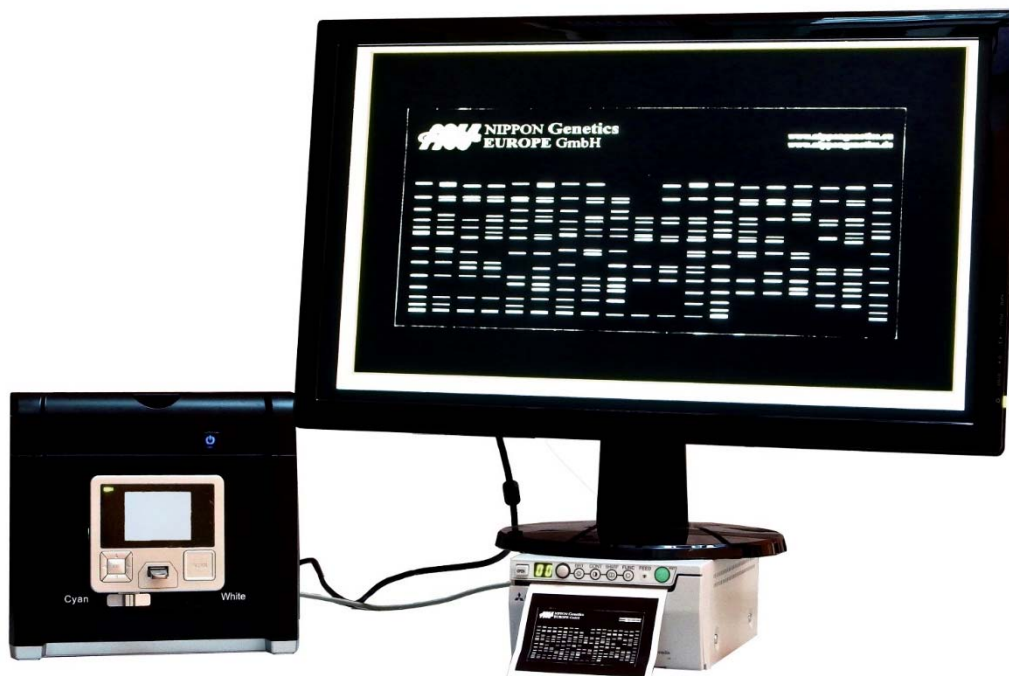


“Epi” mode is to scan the western blot membranes or petri dishes. The black velvet sheet reduces the background.

12. CONNECTING AN EXTERNAL MONITOR OR PROJECTOR

Images from the scanner can be displayed on a monitor using the VGA-out port.

- I. Set the monitor to VGA mode (see monitor documentation for details).
- II. Connect the VGA cable (not included) to the video port of the monitor and of the FastGene® Blue/Green LED GelPic Box.
- III. Press the OK-button to activate the menu.
- IV. Use left or right keys to select  icon.
- V. Use up and down key to select the option "**Display**" and press the OK-button to confirm.
- VI. Use up and down key to select the option "**VGA**" and press the OK-button to confirm.
- VII. Wait until the image is shown on the external monitor and press the OK button within 10 seconds again to confirm the connection to the external monitor.



13. CONNECTING A MITSUBISHI P95D THERMAL PRINTER

- I. Connect the USB cable (not included) to the USB port at the back side of the FastGene® Blue/Green GelPic LED Box and to the Mitsubishi P95D Thermal Printer.
- II. Scan an image and follow the instructions shown on the display.



14. CONTROL MENUS

A 1. Menu I (LIVE MODE)

Press the OK-button to activate the menu.



Live mode Icon: Use left or right keys to select the icon and press OK to switch to playback mode.



LED Lighting Mode: Use left or right keys to select the icon and use the up or down key to select Transmitted or Epi light source. Press the OK button to confirm.
Note: this mode is available only when white light application is selected.



Exposure Mode: Use left or right keys to select the icon and use the up or down key to adjust the exposure value in this mode. Press the OK button to confirm.



B/W or Color Switch Mode: Use left or right keys to select the icon and use the up or down key to select a color option. Press the OK button to confirm.



Setup mode: Use left or right keys to select the icon and use the up or down key to select a setting and press OK to activate it:

- I. **LCD:** Dark, Normal, Bright
- II. **Display:** LCD, VGA
- III. **Video Output:** 800 x 600, 1024 x 768
- IV. **Save Format:** TIF, JPG, BMP ("JPG" is default setting)
- V. **Setup/File Name:** 6 characters combination
- VI. **Quick View:** 1 sec, 2 sec, 3 sec, off ("2 sec" is default setting)
- VII. **Slide Show Interval:** 2 sec, 3 sec, 5 sec, 10 sec ("3 sec" is default setting)
- VIII. **Power Save:** 1 min, 3 min, 5 min, 10 min ("1 min" is default setting)
- IX. **Language:** English, Japanese
- X. **Date:** setup date yyyy/mm/dd
- XI. **Time:** setup time hh/mm/ss
- XII. **Reset:** Yes, No. (YES Resets all current settings back to factory default)
- XIII. **About:** F/W, S/W information, Update

A 2. Menu II (PLAYBACK MODE):

Press the OK-button to activate the menu.



Playback mode icon: Use left or right keys to select the icon and press OK to switch to live view mode.



Auto Playback Mode: To automatically play the captured images one by one. Use left or right keys to select the icon. Press the OK button to start autoplayback.



Edit Mode: To edit the captured images. Use left or right keys to select the icon and use the up or down key select the options (rotate, flip or delete the captured image). Press the OK button to confirm.



Preview Mode: To preview the captured images in a multi-image thumbnail panel (1 x 1, 2 x 2 and 3 x 3 images). Use left or right keys to select the icon and use the up or down key select the options. Press the OK button to confirm.



Set Up Mode: Same as the “Set Up Mode” functions in *Menu I (live mode)*.

15. CONTACT DETAILS

Please contact us for additional information: info@nippongenetics.eu

Please contact our support: support@nippongenetics.eu

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