



GeneFlash

Gel Documentation System

Installation and Image Capture Guide

The system components:

GeneFlash consists of the following parts:

Darkroom (Epi white lighting factory fitted)

High performance CCD camera with zoom lens pre-fitted to the camera

If purchased you will also have a UV transilluminator, thermal printer (analogue)

NovaGlo visible light converter

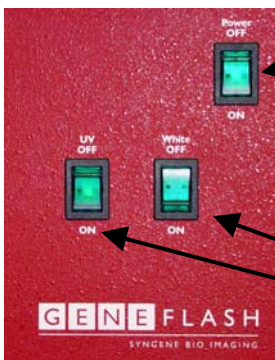
You are provided with a full set of leads and cables

DO NOT CONNECT POWER TO ANY OF THE COMPONENTS UNTIL YOU ARE SATISFIED THAT EVERYTHING IS CONNECTED CORRECTLY. FOR ANY ASSISTANCE PLEASE CONTACT YOUR SUPPLIER OR SYNGENE DIRECTLY.

Installation

After unpacking the GeneFlash system, place the UV transilluminator inside and connect it to the free flying mains lead inside the GeneFlash system. Turn on the transilluminator and for a Syngene transilluminator set to 100%. For other manufacturers' UV transilluminators, follow their instructions to set for optimum illumination conditions.

Connect the thermal printer as follows: 'Video Out' on the back of the GeneFlash to 'Video In' on the printer, 'Print Trigger' on the back of the GeneFlash to 'Remote' on the printer; connect the mains lead from the printer to the mains power supply. Switch on the thermal printer.



Connect the mains lead from the GeneFlash system to the mains power supply and power on.

After a few seconds a 'GENEFLASH' screen will be displayed.

Place the sample on the UV transilluminator and close the door until the interlock clicks.

Select the appropriate light source -

White or

UV

On the key pad press 'Live'.



The live image will be displayed on the screen.

Note - if the door is not fully closed, then the UV transilluminator will not be turned on and no image will be displayed.

1) Installation

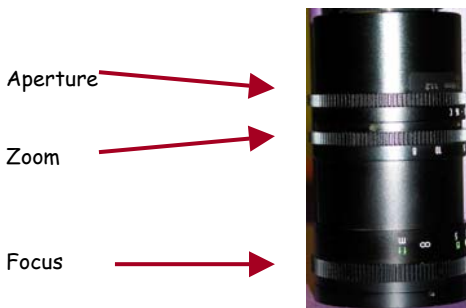
2) Power On

3) Acquiring a live image

There are occasions when you may want the UV transilluminator to remain on when the door is open, in order to cut bands out of the gel. Therefore, the safety interlock will need to be overridden. This is achieved by pulling down the safety interlock switch which is located above the door opening on the right.

Note - Please take adequate precautions to ensure that the UV light cannot enter your eyes or anyone else's by wearing the appropriate protective eye or face shield.

Note - The interlock will be re-set when the door is closed.



Adjust Aperture, Zoom and Focus settings manually until a suitable image is displayed. Note that opening the aperture too far may result in areas of the sample being saturated as shown by the red overlay.

Press 'Freeze' on the Key pad.

Place the UV/EtBr filter with the thread pointing upwards in the filter drawer (found below the camera on the top of the GeneFlash system). This filter can be interchanged with other filters for different dyes.

If a thermal printer is connected press 'Print' on the key pad. Note if 'Print' is selected from the printer then any annotations on the displayed image will also appear on the print out. To avoid such annotations press 'Cancel' on the key pad prior to pressing 'Print' on the thermal printer.

In 'Live' mode it is also possible to alter the integration parameters of the camera (exposure time) by using the 'Up' and 'Down' arrows on the key pad. Values between 0.04 and 10secs can be set.



Insert the USB memory stick (if purchased), ensuring the correct orientation. The LED light will flicker and then turn off

To save to a USB memory stick press 'Save' on the key pad. The screen will display "Saving Image". Whilst the image is being saved do not remove the USB memory stick (the LED light will flicker while the image is being saved).

To determine the file format see Section 4 of Settings below*.

Note - The time taken to recognise the stick and save images increases significantly if there are a lot of files stored in the stick. As soon as you have successfully transferred the files to your PC we recommend that you delete them from the stick.

4) UV safety override

5) Camera adjustments

6) Filter drawer

7) Print image

8) Exposure time settings

9) Saving to a USB memory stick

System set up

Pressing 'Select' on the key pad will allow access to the main menu options: Image Review and Settings. Use the 'Up' and 'Down' arrows to select an option and then press 'Select'. For all cases pressing 'Cancel' will take you back to the previous menu, and again to the main menu. Taking these options in turn:

Image review:

- 1) Load image - 'Select' to display all images currently stored on the USB memory stick;
- 2) Delete image - use 'Up' or 'Down' arrows then 'Select' to delete an image from the USB memory stick.

Image processing:

- 1) Invert Image - white bands on a black background now appear black on a white background;
- 2) Sharpen Image - the displayed image can be sharpened.

Media management:

- 1) Media status - indicates whether the USB memory stick is present;
- 2) Format media - for use if prompted or if the USB memory stick is not recognised.

Settings:

- 1) System status - displays serial number and software versions;
- 2) Integration time - allows the setting of a default exposure time between 0.04 and 10secs;
- 3) Set date and time - allows the date and time to be set;
- 4) *Set save format - the user can choose the default save file format ie BMP or TIFF by following the on screen instructions;
- 5) Set print format - the date and time can be printed above the gel image;
- 6) Update software - new releases of software can be installed from the USB memory stick.

Insert the USB memory stick into your PC and view files via Explorer.

The USB memory stick is a temporary storage device and should just be used for transporting images from the GeneFlash system to a PC. Access to the USB memory stick from the GeneFlash system will slow down as more images are added to the USB memory stick. We recommend that images are transferred to a PC in batches of 20 to 30 and the USB memory stick is emptied after each transfer. High capacity USB sticks are not required, we advise using a fast USB 2 stick with either 128MB or 256MB capacity.

11) Downloading images
from a USB memory
stick to a PC

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