imagER CFx™ imagER Fx™

USER MANUAL

Version 1.3

imagER Eyes™

Capture Software is compatible with all touch screens.

Contents Page

Safety practices

This document describes the general safety practices and precautions that must be observed when operating the GEN-BOX imag**ER** Fx and imag**ER** CFx .

This advice is intended to supplement, not supersede, the normal safety codes in the user's country. The information provided does not cover every safety procedure that should be followed. Ultimately, maintenance of a safe laboratory environment is the responsibility of the user and the user's organization.

Please consult all documentation supplied with the GEN-BOX imag**ER** Fx and imag**ER** CFx before you start working with the instrument. Carefully read the safety information in this document and in the other documentation supplied. When setting up the instrument or performing analyses or maintenance procedures, strictly follow the instructions provided.

Warning notices

	We use 'Warnings' to highlight information or instructions that **MUST** be followed to avoid personal injury to yourself or other people in the vicinity. **For example: Switch off the mains voltage and remove the mains cord before cleaning.**

	**Ensure that all instrument operators read and understand the precautions listed below.** **You are advised to post a copy of the precautions near or on the instrument shelf.**

The following precautions must be observed when using the GEN-BOX imag**ER** Systems.

- Be sure that the voltage of the GEN-BOX imag**ER** instrument corresponds to the voltage used in your laboratory.
- Never remove the rear service doors of the instruments without shutting down the instrument and disconnecting the instrument power cord from line power.
- The power cord must be an appropriately rated and approved cord-set in accordance with the regulations of the country it is used in.
- Do not replace the power cord with one of inadequate rating.

Symbols

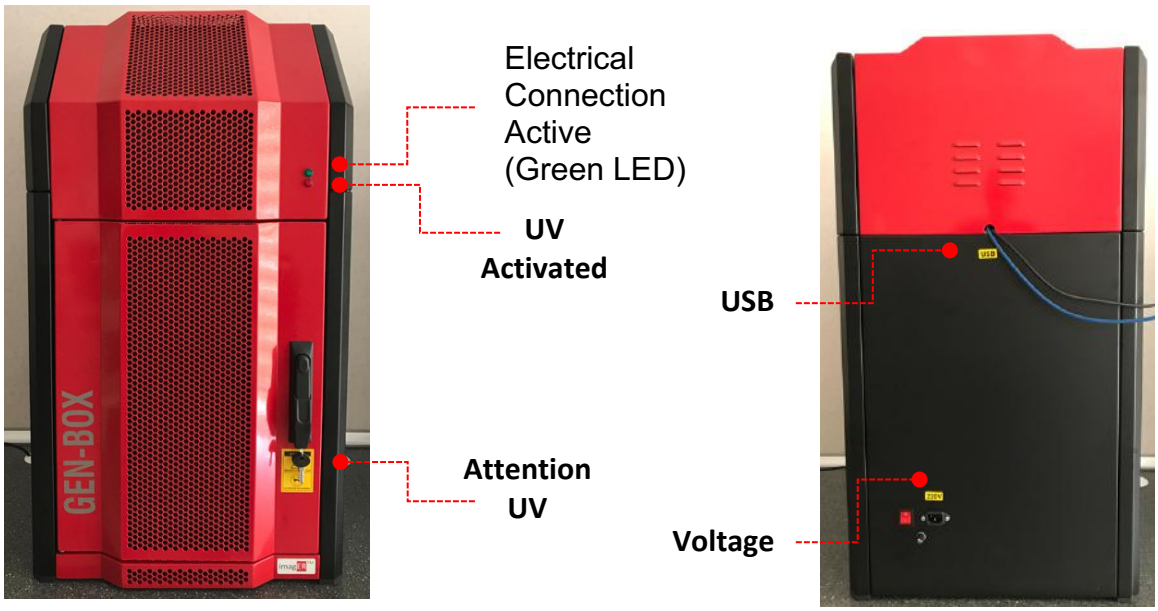
Symbol	Definition
	Attention: See instructions for use.
	Attention: Use of UV lights. Please Read UV Safety Warning.
	Attention: Danger of electric shock.
	Serial Number.
	Symbol indicating "Not for general waste." For European Union (EU) States, this symbol should be used to mark devices that are reusable and not contaminated at the end of the device life.
	This symbol is a mandatory marking for devices entering the European market to indicate conformity with the essential health and safety requirements set out in European Directives.
	Symbol for "Manufacturer." This symbol shall be adjacent to the name and address of the manufacturer.
	Symbol for "temperature limitation." The upper and lower temperature limits will be indicated on either side of the symbol.
	Symbol used to indicate that the product should be kept dry.
	Symbol indicating that the device is "fragile" and should be handled with care.

	Symbol indicating the correct upright position of the transport package.

	**Warning labels attached to the instrument draw your attention to specific hazards. You must refer to this user guide and other documentation provided with your system for more details concerning the potential hazard and any precautions or other actions that must be taken.**

Warning Labels

The following labels are displayed on the outer surfaces of the instrument:



UV Safety Warning

The GEN-BOX imag**ER** Bio-Imaging System has a UV Transilluminator. If you open the door the system will automatically switch the UV off. If you wish to override the UV, please refer to section 6.3.

Our systems has magnetic door sensor for user safety, but it could be disabled if it needs for gel cutting.

Our capture software also has an automated UV on/off function; if you enter the capture pages from the main menu then the system automatically switch the UV 'on' then the UV lights 'off' when you change your current software page or go to edit menu.

Before you override the UV safety interlock, read the following recommendations:

 WARNING	You should wear appropriate personal protection. As a minimum, we recommend the use of full-face shields that meet the necessary levels of UV protection. In addition to face shields, we recommend that you should consider wearing appropriate clothing to protect potential exposure to areas of skin (face, arms, and hands for example).

N.B. The door safety is always 'on' unless you use the magnetic key.

General operating conditions

The GEN-BOX imag**ER** Fx and imag**ER** CFx has been designed and tested in accordance with the safety requirements of the International Electrotechnical Commission (IEC).

If possible, avoid any adjustment, maintenance or repair to the instrument while it is open and operative. However, if any adjustment, maintenance or repair is necessary while the instrument is open, this *must* be done by a *skilled* person who is aware of the *hazards* involved.

Whenever circumstances arise that mean your GEN-BOX imag**ER** Fx and imag**ER** CFx may be unsafe, make it inoperative. In particular, a GEN-BOX imag**ER** Fx and imager CFx may be unsafe if it:

- Shows visible damage
- Fails to perform the intended measurement
- Has been subjected to severe transport stresses
- Has been subjected to prolonged storage in unfavorable conditions

Transportation and Storage Conditions

The system should only be transported and stored in its original packaging to ensure maximum protection. It is recommended to keep the original packaging.

The unit should be transported and stored in an environment -10°C to +50°C, not condensing.

If you must move the imaging system any great distance please contact your local distributor to advise you about moving your system.

	The GEN-BOX imag**ER** instruments requires two people to lift it safely.
	The GEN-BOX Instruments must be carried and installed with two people.

Environmental conditions

- The instrument should only be used under the following conditions:
- Indoors
- Altitudes below 2000m
- Ambient temperature between 5°C and 40°C
- Relative humidity below 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C
- Electrical supply fluctuations not exceeding ± 10% of the nominal voltage

	**The protection provided by the equipment may be impaired if the operating conditions do not lie within these parameters.**

Electrical safety

The instrument has been designed to protect the operator from potential electrical hazards. This section describes some recommended electrical safety practices.

	Lethal voltages are present at certain points within the instrument.

 WARNING	**When the instrument is connected to line power, removing the instrument covers is likely to expose live parts.** **Even when the power switch is set to off, high voltages can still be present – capacitors within the instrument may still be charged even if the instrument has been disconnected from all voltage sources.**

The instrument must be correctly connected to a suitable electrical supply. The supply must have a correctly installed protective conductor (earth ground) and must be installed or checked by a qualified electrician before connecting the instrument.

 WARNING	**Any interruption of the protective conductor (earth ground) inside or outside the instrument, or disconnection of the protective conductor terminal is likely to make the instrument dangerous.** **Intentional interruption of the protective conductor is prohibited**

 WARNING	**Ensure that the electricity supply inlets on the instrument are not obstructed, i.e. leave a gap to allow easy disconnection from the electricity supply.**

When working with the instrument:

- Connect the instrument to a correctly installed line power outlet that has a protective conductor connection (earth ground).
- Do not operate the instrument with any covers or internal parts removed.
- Do not attempt to make internal adjustments or replacements except as directed in the manuals.
- Disconnect the instrument from all voltage sources before opening it for any adjustment, replacement, maintenance or repair. If the opened instrument must be operated for further adjustment, maintenance or repair, this must only be done by your supplier's Service Engineer or authorized persons.
- Whenever it is possible that the instrument is no longer electrically safe for use, make the instrument inoperative and secure it against any unauthorised or unintentional operation. The electrical safety of the instrument is likely to be impaired if, for example, the instrument:
  - Shows visible damage
  - Has been subjected to prolonged storage in unfavorable conditions
  - Has been subjected to severe stress during transportation

- Pollution Degree 2: Normally only non-conductive pollution occurs. Occasionally, however, temporary conductivity caused by condensation must be expected.

Changing fuses

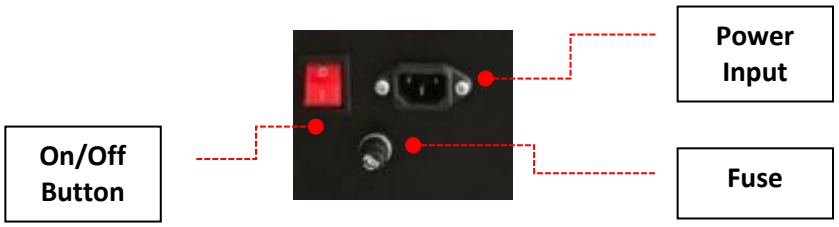
There are two sets of fuses that you may need to replace: the first set is located near the electrical power cord socket on the rear of the darkroom; the second set is located on the rear of the UV Transilluminator inside the darkroom (if supplied).

To change the fuses on the rear of the darkroom:

- Switch off the darkroom and remove the line power cord from the electrical supply.
- Gently screw the fuse holder on the rear of the darkroom:
- Replace the fuse holder.

Note: It is recommended to always replace both fuses at the same time, even if only one of them has blown, as the other may have been weakened.

If the instrument still does not work correctly after replacing the fuses with the correct replacements, or if the fuses blow repeatedly, contact your supplier's office or representative.



Chapter One- Introduction

The GEN-BOX imag**ER** Fx and imag**ER** CFx system has been designed to make your gel imaging simple, quick and easy. This system is the perfect choice for gel imaging and features a compact darkroom which has an internal LED white light, transilluminator, filter wheel and a motorised zoom lens.

The GEN-BOX systems supports multiple applications including DNA/RNA gel imaging such as EtBr, SYBR Green and visible stained gels i.e. Coomassie Blue and silver stain.

1.1 Applications supported

Gen-Box CFx **Modeli ile uyumlu temel boyalar :**		
UV Transilluminator	**WL Converter**	**Blue Light Converter**
Ethidium Bromide SYBR Green SYBR Gold SYBR Safe Gel Green Gel Red DAPI SYPRO Ruby Stain-Free	Coomassie blue stain Copper stain Zinc stain Silver stain	SYBR Gold SYBR Green SYBR Safe FITC UltraSafe Blue
Epi-Blue	**Epi-Green**	**Epi-Red**
Alexa Fluor 488 DyLight 488 Qdot525 FITC Cy2 and similar universal dyes.	Alexa Fluor 546 DyLight 549 DyLight 550 Qdot 605 Rhodamine Cy3 and similar universal dyes.	Alexa Fluor 647 Alexa Fluor 680 DyLight 649 DyLight 650 Cy5 and similar universal dyes.
Kemilüminesans Uygulamalar		
ECL ECL Pus (No filter is used)	Camera sensor cooling (Single Stage: -30, Dual Stage -60 C), high quantum efficiency, new generation HAD sensors, scientific cameras.	

Gen-Box Fx **Modeli ile uyumlu temel boyalar :**		
UV Transilluminator	**WL Converter**	**Blue Light Converter**
Ethidium Bromide SYBR Green SYBR Gold SYBR Safe Gel Green Gel Red DAPI SYPRO Ruby Stain-Free (Fx+) vb.	Coomassie blue stain Copper stain Zinc stain Silver stain vb.	SYBR Gold SYBR Green SYBR Safe FITC UltraSafe blue vb.

1.2 Hardware

1.2.1 Specification

	Imager FX	**Imager CFX**
Camera	5/6.4 /10MP Higher resolutions are optional	Cooled 4/6/9 MP (TE/Peltier Cooling) Higher resolutions are optional
Quantum Efficiency	> %62	> %82
Grayscale	65536	65536
A/D	12/16 Bit	12/16 Bit
Zoom	Software Controlled (Motorized) zoom/iris/focus 8-48mm, F1.2 12.5-75mm, F1.0 8-80mm, F1.5	Software Controlled (Motorized) zoom/iris/focus 8-48mm, F1.2 12.5-75mm, F1.0 25mm F0.80/F0.85
Camera Sensor Cooling	No	Yes (-30°C or -60°C)
Filter Wheel Capacity	6/8/10 Position	6/8/10 Position
UV Filter size	20 x 24 cm 21 x 26 cm 25 x 30 cm	20 x 24 cm 21 x 26 cm 25 x 30 cm
UV Filter	Standard	Standard
Wavelenght Options	254nm, 302nm,312nm,365nm	254nm,302nm,312nm,365nm
Dark Room	Scientific CCD camera, Microprocessor Controlled Secure Dark Room, Auto UV safety door switch (magnetic), door lock (key), visual warning lights, filter wheel (max 8 filters), camera connections, power cord, user manual, UV filter. <u>Illumination modes:</u> Trans-UV Trans-Dual-UV Trans Blue (BL Converter) Trans-White (WL Converter) Epi-UV Epi-Dual-UV Epi-White Epi-LED(RGB) (6 excitation modes) (*) We have different Filter Wheel and different lens options.	Scientific Cooled CCD camera, Microprocessor Controlled Secure Dark Room, Auto UV safety door switch (magnetic), door lock (key), visual warning lights, filter wheel (max 8 filters), camera connections, power cord, user manual, UV filter. <u>Illumination modes:</u> Trans-UV (Std) Trans-Dual-UV Trans Blue (BL Converter) Trans-White (WL Converter) Epi-UV Epi-Dual-UV Epi-White (Std) Epi-LED(RGB) No Light (for Chemi Apps) (10 excitation modes)

(*) Different cscientific camera and diaphram options (F0.85, F0.95 and others) are available.

1.2.2 System Components

SDR
Smart Dark Room
Service Doors

POWER INDICATOR
Green : System has power

POWER INDICATOR
Red : UV lights are active

USER SAFETY
Microprocessor controlled, Automatic UV on/off function

SAFETY SWITCHES
To prevent accidental UV exposure when door is open

DOOR
Include door lock with key

TRANSILLUMINATOR
For UV, white or blue light

- UV transilluminator slides in and out of darkroom
- Blue light converter (Option)
- Visible light converter (Option)

1.2.2.1 Darkroom / Openin the door

Closed

Pull the Handle

Turn 90 degrees (clockwise)

Pull the door

The darkroom has a hinged door. The darkroom features:

- Slide out mid wave 302nm (254nm, 312nm or 365nm) UV Transilluminator
- Internal white light (LEDs)
- Safety switches to protect from accidental UV exposure
- SDR (Smart Dark Room) has a unique control system for temperature and light source controls. (Optional)

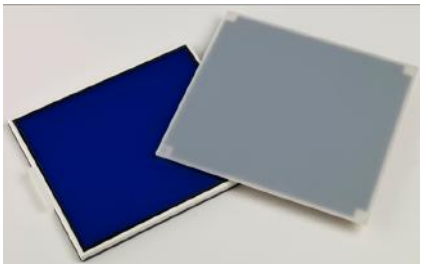
1.2.2.2 UV Transilluminator

The UV Transilluminator will excite many fluorescent stains such as Ethidium bromide, SYBR™ stains, Gel Red™. The standard wavelength is 302nm (254nm, 312nm or 365nm).

To protect users from accidental exposure, the UV light is automatically shut off if the door is opened (or capture process is complated). The Transilluminator can be slid easily in and out of the cabinet.

1.2.3 Accessories

1.2.3.1 Visible or blue light converter screens (Optional)



ER Biotech offers a visible light converter that can be placed on top of the UV Transilluminator for imaging Coomassie and silver stained gels.

ER Biotech also offers a blue light converter that can be placed on top of the UV Transilluminator for safely imaging gels stained with SYBR Safe, Gold and Green, GelGreen and UltraSafe blue.

1.2.3.2 Analysis software

The analysis software is optional for GEN-BOX imag**ER** Fx and imag**ER** CFx system;

- Quantitative 1D gel analysis for Protein, DNA and RNA research
- Quantitative Western blots with multiplex analysis
- Colony counter and analysis for protein/antibody arrays
- Analysing a wide variety of common image formats from all scanners & gel docs
- 21CFR compliance for GLP/GMP laboratories Automated detection algorithms for fast and accurate image analysis
- Easy to use and rapid automated analysis of data
- Generate reports and publication quality images of your results

Chapter Two- Installation

2.1 Installation

CAUTION: Do not connect power supply to any of the components until you are satisfied that everything is connected correctly.

For assistance please contact your supplier or ER Biotech directly.

2.1.1 Transilluminator set-up

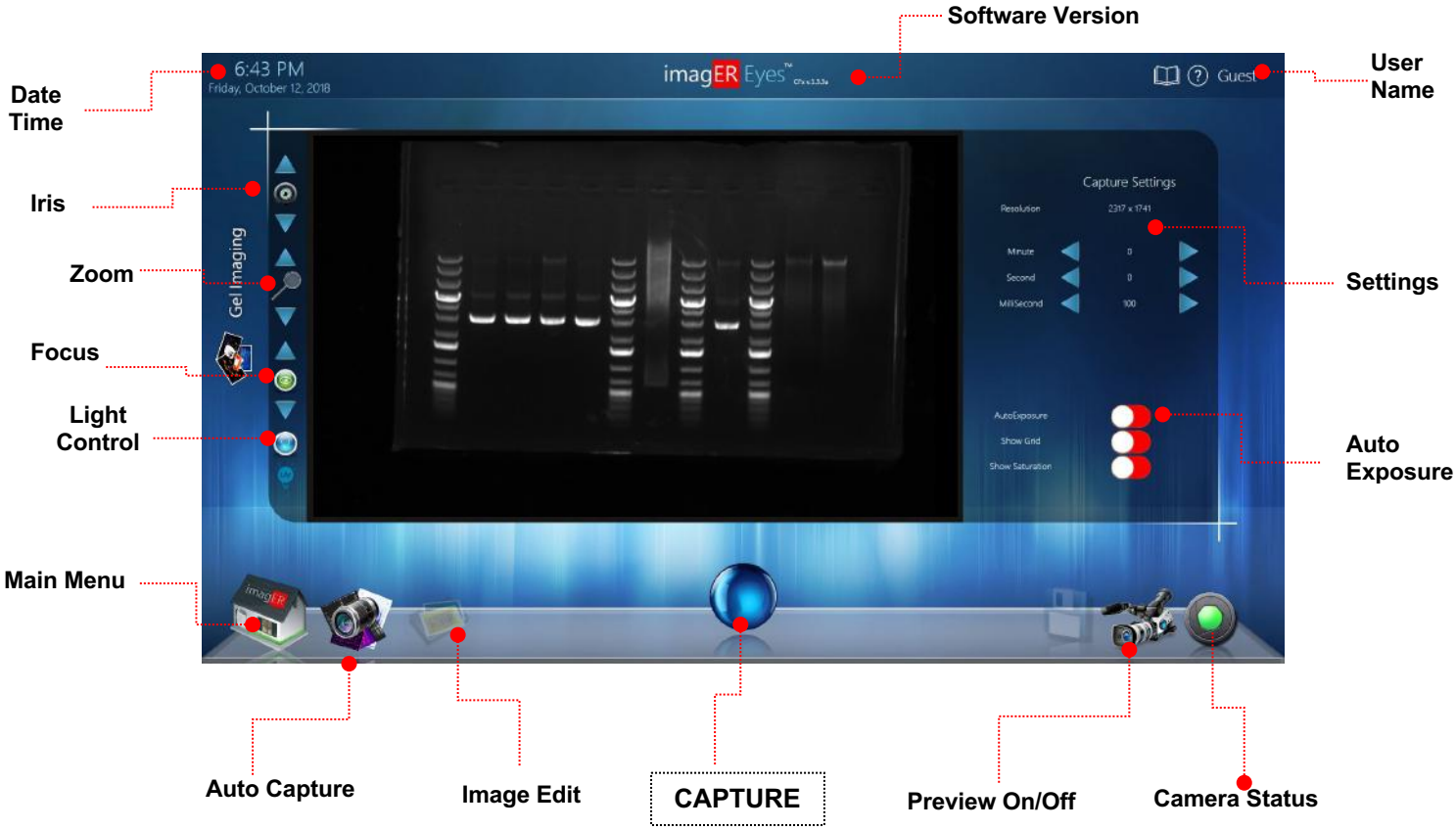
Place the UV Transilluminator inside the dark room, plug the power cord, turn the switch ON position.

2.2.2 Power on/off

At the back of the device is a power button located just above the entry where the power cord is plugged into the device. Set the unit to 'ON' to start operation. The system is suitable for use with standard mains voltage of 220V / 50Hz. (We have options for power options for other countries.) Set it to '' OFF '' to turn off the device.

2.2 User Interface (Manuel Capture)

The user interface is shown below.



Chapter Three- Image Acquisition

3.1 Capturing an image of an agarose EtBr or similar gel

Step 1 – Position sample and choose lighting

Please check the below qauesitons ;

- Did you connect the system to power source?
- If yes, Green LED in the front side is ON?
- UV filter is set/attached in front of the camera?
- Did you start the imagER Eyes Software?

If all answers are 'YES' then you can start captururing an image.

Press the 'Manuel Capture' button on the Main Menu and then position the sample on the centre of the Transilluminator and close the door. Image will be displayed automatically on the screen.

Step 2 – Adjust lens

Adjust the aperture, zoom and focus settings until a suitable image is displayed, preferably with the sample filling the screen for maximum resolution.

Please note that opening the aperture too far may result in areas of the sample being saturated.

Step 3 – Set exposure time

The exposure time can either be set manually or automatically. Adjusting the exposure time will alter the brightness of the image. To manually increase or decrease the exposure time, use the following icons.

Set an exposure time you are happy with and press 'CAPTURE' (Sphere).

Alternatively, the auto-exposure function sets the exposure time to a level that ensures no saturation of the image occurs. To use the auto-exposure function press 'AUTO'.

You can then save or print the image.

3.2 Capturing an image of a protein gel (Coomassie, silver stained) or other white light image (Colony plate, autorad, microtitre plate etc)

Step 1 – Position sample and choose lighting

Please put the 'VISIBLE-LIGHT CONVERTER' on the Transilluminator.

Press the 'Manuel Capture' button on the Main Menu and then position the sample on the centre of the Transilluminator and close the door.

Step 2 – Adjust lens

Adjust the aperture, zoom and focus settings until a suitable image is displayed, preferably with the sample filling the screen for maximum resolution.

Please note that opening the aperture too far may result in areas of the sample being saturated.

You can select to display any saturation on screen by pressing the 'DISPLAY SATURATION' button.

Step 3 – Set exposure time

The exposure time can either be set manually or automatically. Adjusting the exposure time will alter the brightness of the image. To manually increase or decrease the exposure time, use the following icons.

Set an exposure time you are happy with and press 'CAPTURE'.

Alternatively, the auto-exposure function sets the exposure time to a level that ensures no saturation of the image occurs. To use the auto-exposure function press 'AUTO'.

You can then save or print the image.

3.3 Capturing an image of an agarose "safe" dye gel

Step 1 – Position sample and choose lighting

Please put the 'BLUE-LIGHT CONVERTER' on the Transilluminator.

Press the 'Manuel Capture' button on the Main Menu and then position the sample on the centre of the Transilluminator and close the door.

Step 2 – Adjust lens

Adjust the aperture, zoom and focus settings until a suitable image is displayed, preferably with the sample filling the screen for maximum resolution.

Please note that opening the aperture too far may result in areas of the sample being saturated.

You can select to display any saturation on screen by pressing the 'DISPLAY SATURATION' button.

Step 3 – Set exposure time

The exposure time can either be set manually or automatically. Adjusting the exposure time will alter the brightness of the image. To manually increase or decrease the exposure time, use the following icons.

Set an exposure time you are happy with and press 'CAPTURE'.

Alternatively, the auto-exposure function sets the exposure time to a level that ensures no saturation of the image occurs. To use the auto-exposure function press 'AUTO'.

You can then save or print the image.

Image Capture Software Screens

Run the control software :

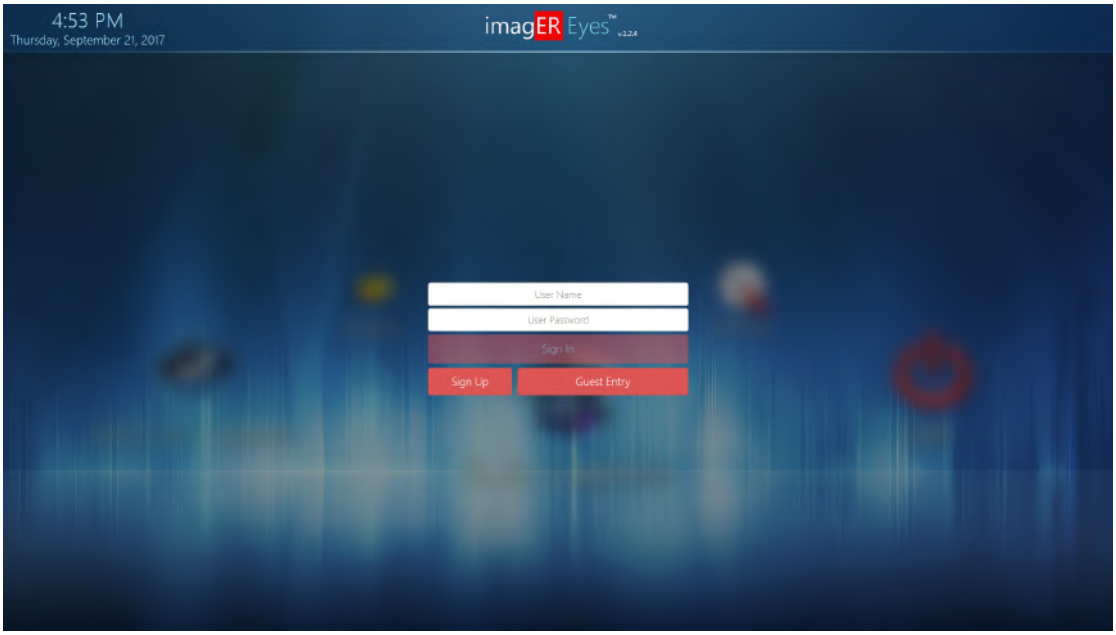


Figure 1. Login Screen

Opens the Login screen (Figure 1) You can crate a new user by entering a new '**User Name**' and '**User Password**' then please press '**Sign Up**' button. If the user name is not created before then you'll get a 'successfully created' message on the screen. You can enter the Home Page by pressing '**Sign In**' button.

If you create a new account then all your saved files goes to your own folder, you can save your picture in another directory if you wish by using 'Save As' menu.

You can easily enter the Home Page by pressing '**Guest Entry**' button without creating a user if you wish.

Figure 2. Main Screen

The main screen of the capture software includes 5 main options/pages. You can enter the pages by pressing the icons directly.

Auto Capture
The software configures the most appropriate display protocol for your hardware configuration using a large database.

Manuel Capture
It allows you to control every function of the system.

Images (Image Edit Menu)
Allows you to browse all saved images and upload images from USB devices and enter the View or Edit properties screens to work on previously stored images. Lets you browse through all saved opened or unsaved images.

Settings
The user settings can be individually edited and the parameters stored in the registry.

Camera Status Icons

Figure 3.a Figure 3.b

The camera status icon tells you whether the camera is connected (Figure 3b) or not connected (Figure 3a).

Follow the steps below in accordance with the type of sample you use, the nature of the material, or the color of the biological dye used;

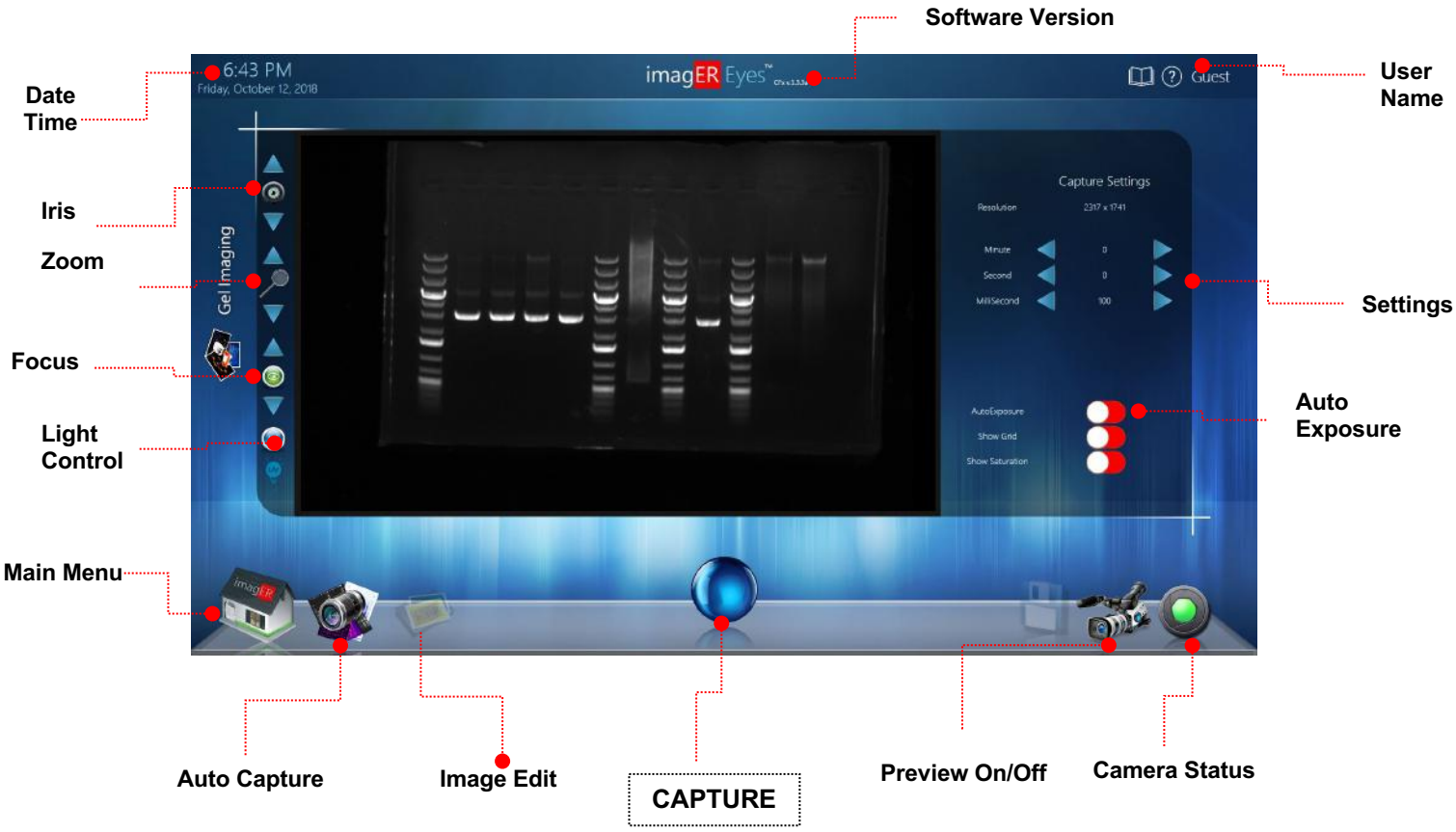
a) **Suitable Filter** (use UV/Orange filter for agarose gel painted with EtBr)
b) **Suitable light source** (Use the appropriate excitation source for the type of material, eg Trans-UV sources for light permeable samples such as Agarose gel, Epi-UV light sources for light-permeable matte membranes such as q-Dot)
c) **Appropriate exposure time**: Test with 0.5 milliseconds or 1 second.
d) **Iris Value**: Make sure that iris is not closed completely.

NOTE: You can access to the Excitation and Emission list of universal colors from the product catalog.

Image Capture Screen

➔ **GEL IMAGING**

The user interface is shown below.



IRIS: The iris control adjusts the iris pattern so that it can be clearly seen. Slide the slider up button to open the iris and allow more light to reach the camera sensor and move the slider down button to block the light comes to camera.

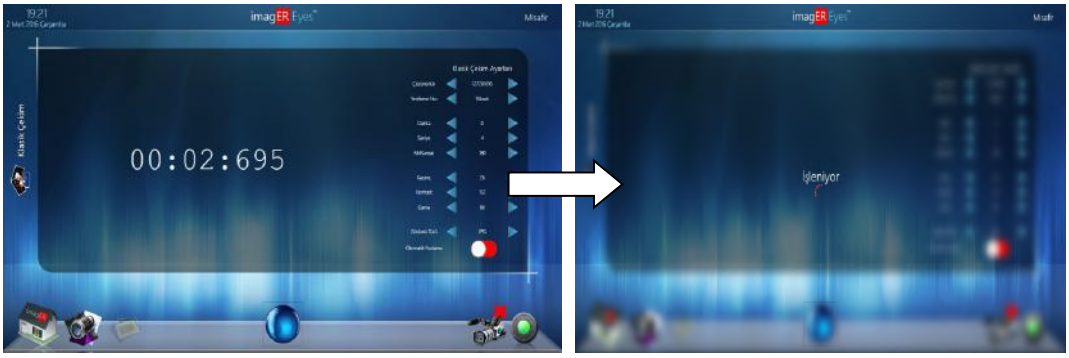
ZOOM: To zoom the image; use the zoom control (up/down) buttons.

FOCUS: To focus the image in any zoom level; use the up/down buttons.
To turn the UV light on and off, touch the 'lamp' icon in the bottom corner

Close the auto exposure on the right side of the screen. Then you can enter the values you want to use during shooting.

- **GAMMA:** It enhances the details of these areas by acquiring contrast in very dark and dark areas on the image.

After you finish capture settings, press ‘CAPTURE’ button;



After the exposing time you set, the image will be displayed on the screen.

Figure 4.c Manuel Capture Image

The image has been successfully imported.

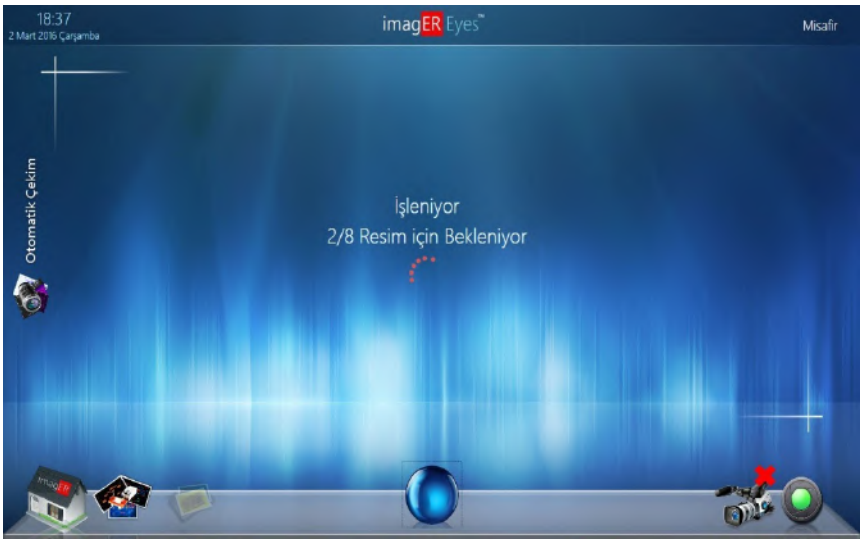
To make changes on the image;
Click on 'Images’ (Image Edit Page) from the main menu.

➔ BLOT IMAGING

Enter the desired "Number of Image Shots" and "Exposure Interval" for automatic capturing and press ‘CAPTURE’ button.

***** IMPORTANT *****

The iris of the zoom lens must be fully opened before starting image capture series.



With the exposure times you set, the automatic shooting will be completed and the images will come up on the screen.

Select your picture, then it'll be checked then press Images (Image Edit Menu) to edit or save.

Example:

For a chemiluminescence imaging; if you select '4 image' then if you select the exposure time for '1 minute' then;

1. Image come to screen with 1 minute exposure time
2. Image come to screen with 2 minute exposure time
3. Image come to screen with 3 minute exposure time
4. Image come to screen with 4 minute exposure time

Select the best one then go to image edit menu.

Note:

You can change 'Black & White' values to be able to see or adjust the best chemi image.

Select Preview Mode to start a new auto serial capture.

Chapter Four- Saving/ Opening Images and Printing Images

4.1 Saving images

 You can save your image by pressing ‘SAVE’ button. If you enter a user account then your images’ll be saved directly to your own folder.

 You can save your image into a different folder or directory, then please ‘SAVE AS’ button.

You can save your images in different formats;

- JPEG
- PNG
- BMP
- TIFF etc.

 You can open and edit saved photos with 'Open file' option

4.2 Printing

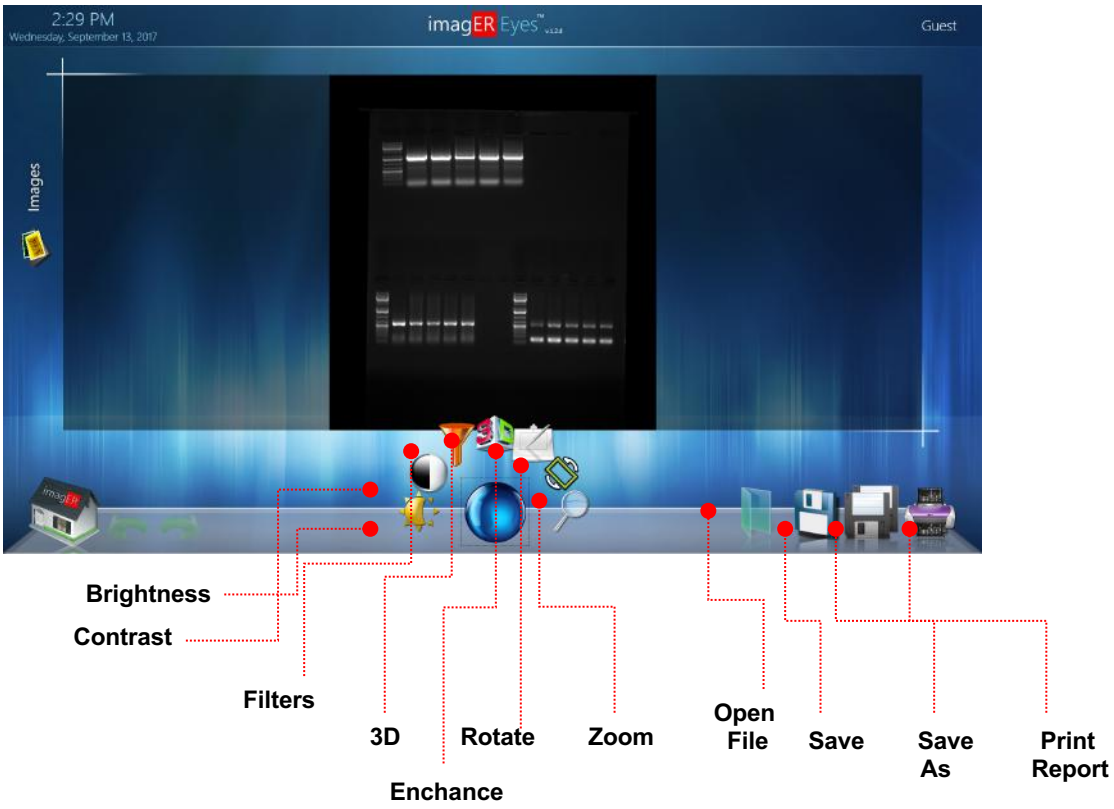
You can print a report that include photo, user, capturing date, capturing parameters etc) by pressing ‘PRINT’ icon.

***** IMPORTANT *****

You have to SAVE your image before printing your report.

Chapter Five- Image Enhancement

The imag**ER** Eyes software offers a variety of functions ranging from image enhancement to annotation.




To access the enhance functions select the '**CAPTURE**' button.

BRIGHTNESS:

You can increase (+) or decrease (-) the values.

CONTRAST:

You can increase (+) or decrease (-) the values.

FILTERS:

- **AVG (Avarage Filter):**
  The average filter is used to erase these noises if there is noise on the image.

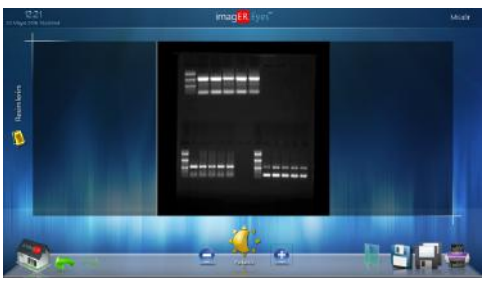
- **GAU (Gaussion Filter):**
  It is used to erase noises coming from the sensor on the image and coming from the normal distribution. (gouging, tingling etc)

- **MED (Medial Filter):**
  The median filter is used to erase the salt-pepper (black or white) noises on the image if they are present.

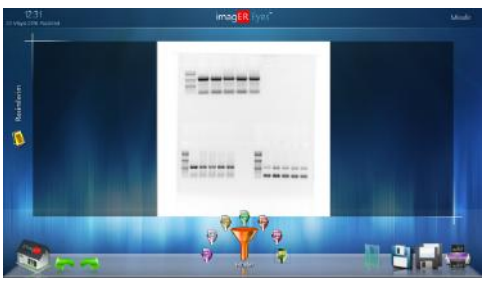
- **MAX (Maximum Filter) :**
  It is used to make the bright components in the image more specific than the background.

- **MİN (Minimum Filter):** It is used to further emphasize non-bright scenes in relation to the background; it's mostly used to eliminate white dots on the black gel image.
-
- **LOG (Logaritmik Filter):**
  The image is used for contrast enhancement (to increase detail) in bright and very bright areas.

- **NEG (Negatif Filter) :**
  It inverts the hite portions of the image in black and the black portions in hite. In this way, it removes to some extent the reduction in detail perception lost due to human adaptation.



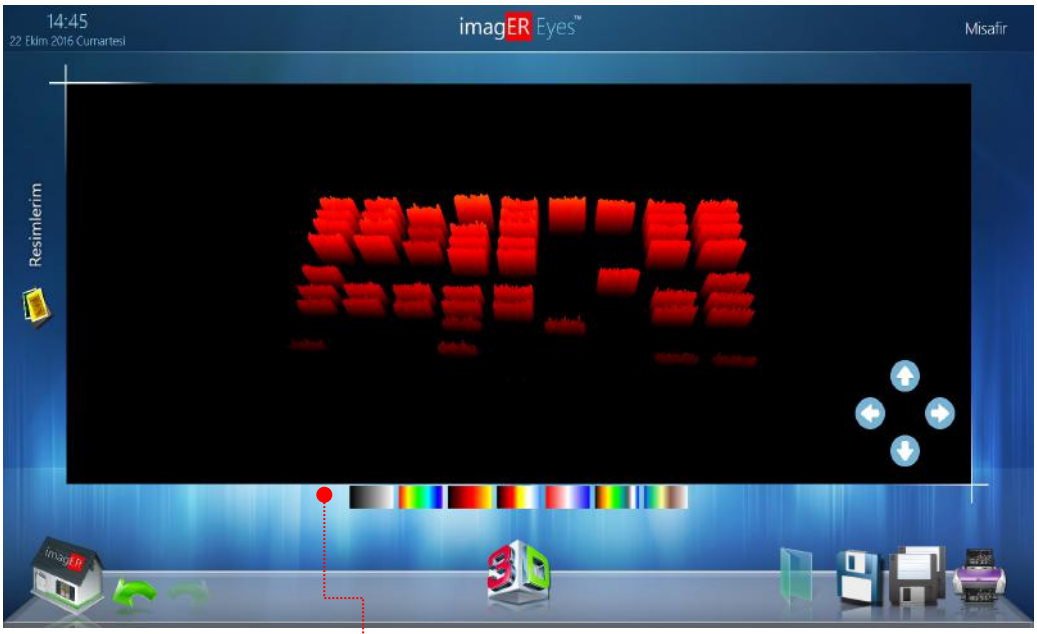
Jel image



Negative filtered gel image

3D (THREE DIMENSION) DISPLAY:

Displays the image in 3D. The more DNA-containing bands are solved, the more transitions that can not be recognized by the human eye can be evaluated more clearly. All the mentioned filters can also be used on the 3D screen.

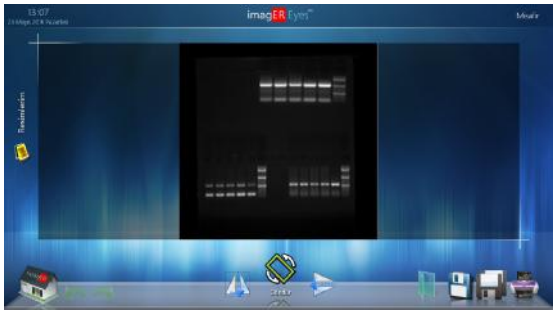


You can use different color filters for your 3D image view.

ROTATE :

It allows the image to be projected to the right and to the left, up to down, mirror image, which is easily corrected even if the sample table is misplaced.

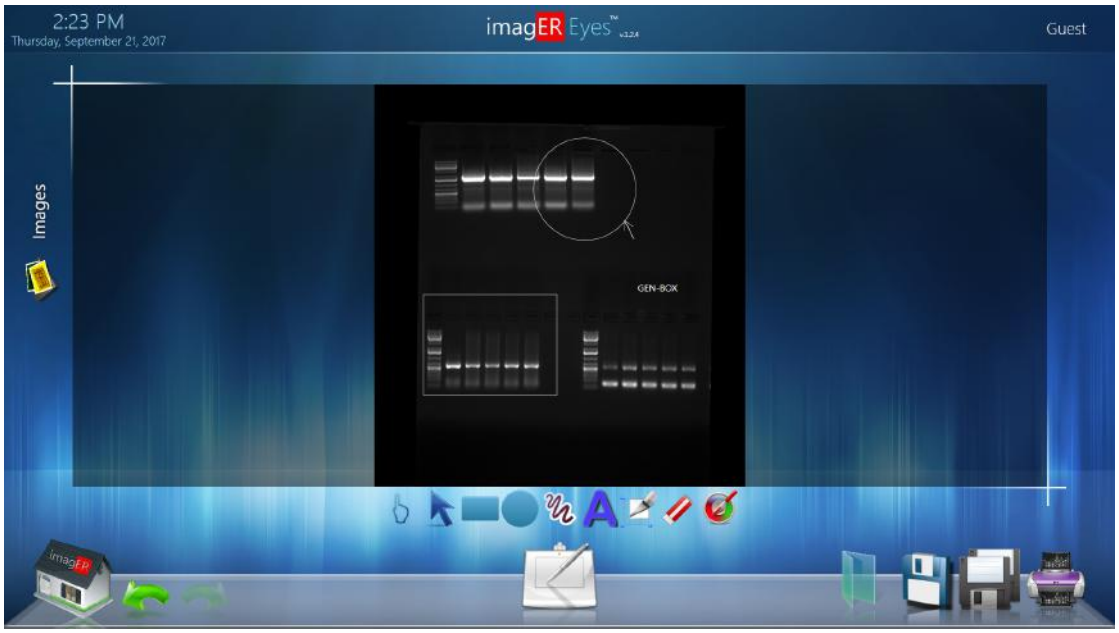
Normal jel image



Mirrored jel image

5.2 ANNOTATION

It provides functions for making selections, arrow-drawing, rectangle-circling, drawing, adding text, cutting the desired part of the image, changing color and thickness, and clearing all these changes.



5.3 DIGITAL ZOOM

You can use digital zoom function by using mouse scrool wheel or (+) and (-) buttons.

Chapter Six- User Preferences

6.1 Settings

From the Settings menu, each registered user can set their own parameters , also report parameters can be set from this page.

6.2 UV safety

GEN-BOX imagER System has a microprocessor controlled magnetic door safety system which control UV light (on/off) automatically. In addition dark room can be locked manually by the authorized person with a key if it needs. But user can use a magnetic tool to deactivate the safety system if it needs (for gel cutting etc). User must wear a UV blocker and UV protective eye glasses for this kind of operations.

WARNING: UV light can be hazardous to your health, please refer to the UV Safety instructions.

Chapter Seven- Troubleshooting and Contact Information

7.1 Troubleshooting

Green Power LED is not ON

- Check connection of main power cord to main power plug on the rear of the GEN-BOX imag**ER** Fx and imag**ER** CFx instrument.
- Try another power socket within the laboratory.
- If it doesn't solve the problem then please contact with support@erbiotech.com or authorized distributor.

Transilluminator is not working

- Check the ON/OFF switch on the Transilluminator, be sure about that it is ON position.
- Check the power cord back side of the Transilluminator by sliding. If loose push back in.
- If still not on, remove power cord and attach another one plugged in elsewhere. If Transilluminator comes on there is an electrical supply problem within the system. If it still does not come on it is likely the Transilluminator has failed.
- If it doesn't solve the problem then please contact with support@erbiotech.com or authorized distributor.

NOTE: Please use the UV blocker and UV protective eye glasses during the controls.

System is working but no image on the screen

- Check the ON/OFF Power Button of the imagER System, it must be ON position.
- Check the ON/OFF Button of the Transilluminator, it must be ON position.
- Check the IRIS, it must be opened, not closed complately.
- Increase the exposure time manually, check the results.
- If it doesn't solve the problem then please contact with support@erbiotech.com or authorized distributor.

7.2 Contact with the Manufacturer

ER Biotechnology Products Ltd
Address:
Kiratli Residance, Sehit Osman Avci Mah. 2651.Cad No: 5A/54
Etimesgut (06820)
ANKARA/TURKEY

Tel : +90 312 247 47 65
Fax : +90 312 247 47 65

Email : info@erbiotech.com
Web : www.erbiotech.com

Support System: http://erbiotech.com/tr/destek/

Local Produce Document Number: 2018101532005

Other Quality Certificates:

Appendix A- Looking after your System

The system does not require regular maintenance or calibration other than occasional checking and cleaning.

Cleaning the imaging system

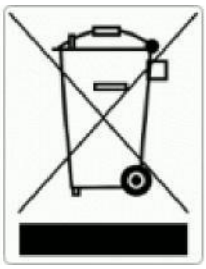
	**Switch off the mains voltage and remove the mains cord before cleaning.**

You can clean the outside of the GEN-BOX imagER Fx and imagER CFx using a soft lint-free cloth, moistened if required with a little water. Mild detergent may be used, if necessary. Do not use abrasive or solvent based cleaning materials. Always perform a patch test on an inconspicuous area before you clean the entire accessory.

Avoid spilling any liquid into the body of the GEN-BOX imagER Fx and imagER CFx and clean any external spills immediately. If any liquid enters the main body of the instrument, make the system inoperative and contact your dealer.

Appendix B – Disposing of your Imaging system

The Waste Electrical and Electronic Equipment (WEEE) Directive



OR

A label with a crossed-out wheeled bin symbol and a rectangular bar indicates that the product is covered by the Waste Electrical and Electronic Equipment (WEEE) Directive and must **not** be disposed of as unsorted municipal waste. Any products marked with this symbol must be collected separately, and in accordance with the regulatory guidelines in your area.

The objectives of the WEEE Directive are to preserve, protect and improve the quality of the environment, protect human health, and utilise natural resources prudently and rationally. Specific treatment of WEEE is indispensable in order to avoid the dispersion of pollutants into the recycled material or waste stream. Such treatment is the most effective means of protecting the customer's environment.