

# COMPACT DIGIMAGE SYSTEM



## Instruction Manual



**Model : LUVDI/LUVDI-CB**

Please read this manual carefully before using the instrument

**Labnics Equipment**

---

# • Table of Content •

<b>Sr.No.</b>	<b>Contents</b>	<b>Pg. No.</b>
1.1	Un packing list	1
1.2	Packing list	1
1.3	Warning	2
1.4	Safety Information	3
1.5	Product Specifications	4
1.6	Product Description	5
<b>2</b>	<b>Introduction</b>	<b>5</b>
2.1	Overview	5
2.2	Controls and Features	6
<b>3</b>	<b>Installation Instructions</b>	<b>7</b>
3.1	Assemble Digimage System	8
3.2	Camera Set Up Menu	9
<b>4</b>	<b>Operation Instructions</b>	<b>11</b>
4.1	Operating for Agarose Gel	11
4.2	Operating for X-ray file	13
4.3	Operating for Western Blot membrane	13
<b>5</b>	<b>Troubleshooting Guide</b>	<b>13</b>
<b>6</b>	<b>Ordering information</b>	<b>14</b>
<b>7</b>	<b>Warranty</b>	<b>15</b>

## 1.1 Un Packing list

### LUVDI:

- 1 x Canon S5 IS digital camera package  
(Includes all the accessories and manuals; exclude a 32 memory card) - 1 x build-in UV transilluminator
- 1 x camera adaptor
- 1 x 8" TFT color screen
- 1 x Chamber
- 1 x 1 G memory card
- 1 x Multi-card reader
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4 ea of M3 screws
- 1 x Compact Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

### LUVDI-CB:

- 1 x build-in UV transilluminator
- 1 x camera adaptor
- 1 x 8" TFT color screen
- 1 x Chamber
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4 ea of M3 screws
- 1 x Compact Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

**LABNICS EQUIPMENT** is only responsible for all parts / accessories replacements within 7 days after customer receives this instrument package. If any part is missing or damaged, please contact **LABNICS EQUIPMENT** immediately. If no response within such time period from consignee party, that will be consignee party's whole responsibility.

## 1.2 Packing list

### LUVDI:

- 1 x Canon S5 IS digital camera package  
(Includes all the accessories and manuals; exclude a 32 memory card.  
For other language version of Canon S5 IS manuals, please visit [www.canon.com](http://www.canon.com) to download. )
- 1 x build-in UV transilluminator

- 1 x camera adaptor
- 1 x 8" TFT color screen
- 1 x Chamber
- 1 x 1 G memory card
- 1 x Multi-card reader
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4 ea of M3 screws
- 1 x Compact Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

#### **LUVDI-CB:**

- 1 x build-in UV transilluminator
- 1 x camera adaptor
- 1 x 8" TFT color screen
- 1 x Chamber
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4 ea of M3 screws
- 1 x Compact Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

### **1.3 Warning**

LUVDI/LUVDI-CB Compact Digimage System has been tested and found to comply with safety limits for the CE regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. It is strongly recommended the user to read carefully the following points before this equipment is operated.

1. Read and follow carefully the manual instructions.
2. Do not alter the equipment. Failure adhered to these directions could result in personal and/ or laboratory hazards, as well as invalidate equipment warranty.
3. Use a properly grounded electrical outlet of correct voltage and current handling capacity.
4. Disconnect from power supply before maintenance and servicing. Refer servicing to qualified personnel.
5. In the event, solution is accidentally spilled into the chamber, disconnect grounded plug and might turn instrument upside down to avoid solution contacting the internal components. Remove cover and inspect to

- assure solution has not contacted elements, thermostat or connector. Replace damaged parts.
6. Do not use in the presence of flammable or combustible material; fire or explosion may result. This device contains components, which may ignite such materials.
  7. Refer maintenance and servicing to qualified personnel.
  8. Ensure that the system is connected to electrical service according to local and national electrical codes. Failure to properly connect may create a fire or shock hazard.
  9. The unit is operated only by qualified personnel.

## 1.4 Safety Information

Use the high level of precautions against any electrical device. Before connecting with the electrical supply, check the supply voltage is within the range stated at the rating label and this device must be earthed. Place the unit in a safe and dry location and MUST NOT touch things in the surrounding. Also do follow the safety precautions for chemicals / dangerous materials. If needed, please contact a qualified service representative.

### Environmental Conditions

Ensure the instrument is installed and operated strictly in the following conditions: <95% RH

- 75 KPa-106 Kpa
- Altitude not to exceed 2000 meters
- Ambient~ 40°C operating temperature.

### Avoiding Electrical Shock

Follow the guidelines below to ensure safe operation of the unit.

The Compact Digimage System has been designed for use with shielded wires thus minimizing any potential shock hazard to the user. LABNICS EQUIPMENT recommends against the use of unshielded wires.

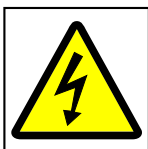
To avoid electrical shock:

1. NEVER connect or disconnect wire leads from the power jacks when the power is on.
2. WAIT at least 5 seconds after stopping a run before handling output leads or connected apparatus.
3. ALWAYS make sure that hands, work area, and instruments are clean and dry before making any connections or operating the power supply.
4. ONLY connect the power supply to a properly grounded AC outlet.

### Avoiding Damage to the Instrument

1. Do not attempt to operate the device if damaged.
2. Protect this unit from physical damage, corrosive agents and extreme temperatures (direct sunlight etc).
3. For proper ventilation and safety concerns, leave at least 10 cm of space behind the instrument, and at least 5 cm of space on each side.
4. Do not operate the dry bath incubator in high humidity environments (> 95%), or where condensation may occur.
5. Before using any cleaning or decontamination method except those recommended by the manufacturer, users should check with the manufacturer that the proposed method will not damage the equipment.

## Symbol



The symbol used on the Compact Digimage System is explained below.

Used on the Compact Digimage System to indicate an area where a potential shock hazard may exist.

Used on the Compact Digimage System to indicate a warning. Consult the manual to avoid possible personal injury or instrument damage.

## 1.5 Product Specifications

### Camera:

S.No.	Features	Specifications
1.	Camera	Canon S5 IS
2.	Effective pixels	Approx. 8.0 million
3.	CCD	1/2.5" type CCD; Approx. 8.31 million pixels
4.	Max field of view	29 x 22 cm
5.	Image	640 x 480 up to 3,264 x 2,448
6.	Resolution Lens	6.0 (W) -72.0 (T) mm
7.	F / -number	f/2.7 (W)-f/3.5 (T)
8.	File format	Design rule for camera file system and DPOF compliant
9.	Focus-area selection	Five-area multi AF, manual selection available
10.	Filter	Either one 58 mm Ethidium Bromide or one SYBR Green

For detailed specification of Canon S5 IS Camera, please see Canon S5 IS Operating Manual.

### Chamber:

S.No.	Features	Specifications
1.	Multi power source	For camera, inner light lamp, TFT screen Inner white lamp x 2 tubes
2.	Safety door switch	Automatically shut down UV transilluminator while opening the operation door
3.	Monitor	8" TFT liquid crystal screen
4.	Display Format	8" TFT liquid crystal screen
5.	Luminance	250 cd/mm
6.	Display mode	NTSC/PAL mode switchable
7.	Video and audio Input	Yes
8.	Chamber Dimension	340 x 370 x 460 mm (W x 0 x H)
9.	Rated voltages	110 or 220 Volt
10.	Weight	20.0 kg

## UV Transilluminator :

S.No.	Features	Specifications
1.	Wavelength	254/312/365 nm ( optional)
2.	Filter Size	21 x 21 cm
3.	Light Source	8W x 6 tubes

## 1.6 Product Description

The Compact Digimage System uses a digital camera with 8.0 mega pixel resolution. It is computer free for compact space requirements and small budget. One integrated chamber with a build-in UV transilluminator and viewing images from the large 8" TFT color liquid crystal display are its specific features. Another feature of the Compact Digimage System is the new design of convenient accesses on two sides of the chamber makes it easy and safe to recover the agarose gel for further experiments. The system is suitable to capture image for fluorescent gels, colorimetric gels, auto radiography film, blotting membrane and others.

### Features:

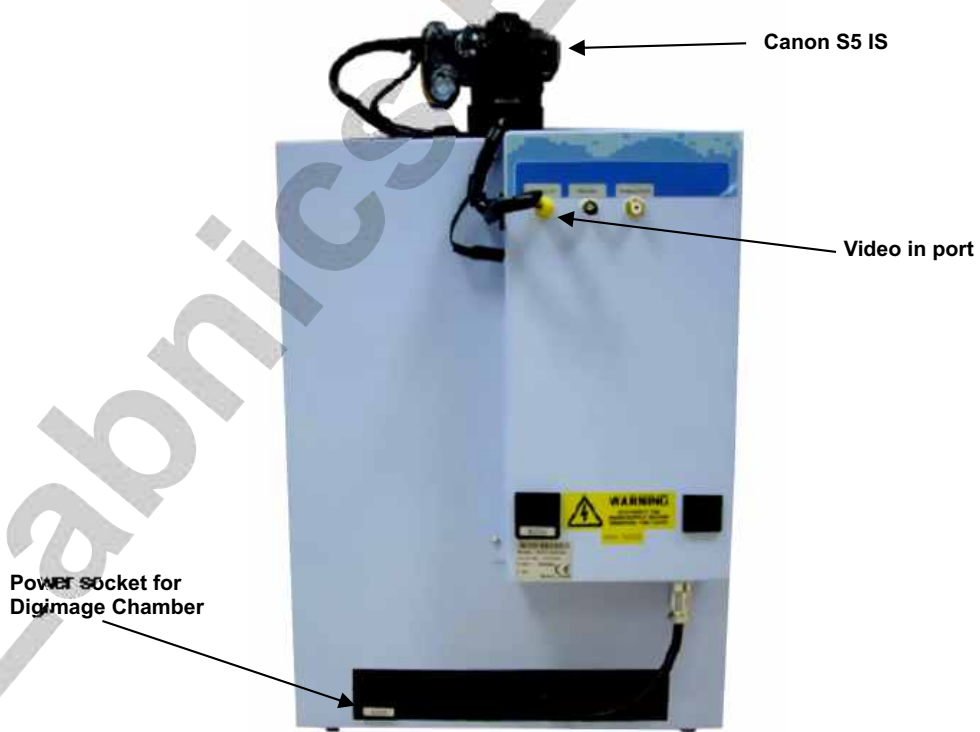
- Great Observation from front view window and TFT screen convenient access on two sides for gel operation.
- 8.0 mega pixel digital camera.
- View image from a 8" TFT color monitor.
- Light weight compact chamber with easy access door and inner build-in light lamps and UV Transilluminator.
- Computer free to capture image.
- Contain safety door switch device.

## 2. Introduction

### 2.1 Overview

LABNICS EQUIPMENT Compact Digimage System is a very user friendly design for gel documentation and operation purposes. It is a space compact instrument and having flexible options connecting with a computer for dealing with gel images just caught. Compact Digimage System offers a competitive pricing with great value and convenience to the user. More importantly, Compact Digimage System is designed to comply with the CE regulation.

## 2.2 Controls and Features



### 3. Installation Instructions



1. UV Transilluminator (as Option Item)
2. Power Cord for Camera Chamber
3. Power Cord for connecting Chamber and UV transilluminator
4. 58 mm Close up lens
5. Camera Holder with 4 ea of M3 screws
6. Camera with Batteries
7. Chamber with monitor
8. Lens Adapter
9. A 58 mm EtBR Filter or a SYBR Green filter

### 3.1 Assemble Compact Digimage System



1. Fix Monitor



2. Connect Cable



4. Fix Lens Adapter and Close up Lens on Camera



4. Insert Camera to Camera Adaptor



5. Fix Camera



6. Connect S-video cable to the Camera

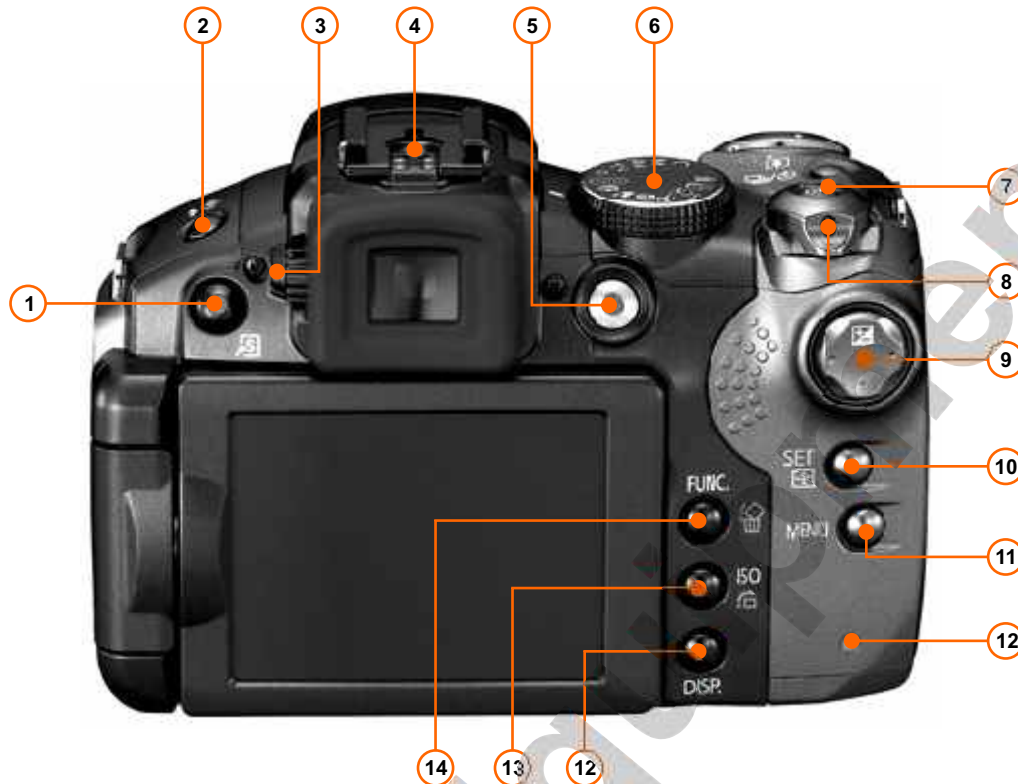


7. Connect power cable to the Camera



8. Plug in DC power IN and Video OUT

### 3.2 Camera Set Up Menu



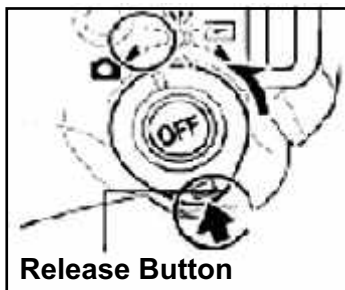
- |   |                                   |   |   |
|---|-----------------------------------|---|---|
| ① | 🖨️ (Print/Share) / 📄 (Shortcut)   | ⑩ | SET / 📄 (AF Frame Selector) Button                |
| ② | ⚡ (Flash) / 🎤 (Microphone) Button | ⑪ | MENU Button                                       |
| ③ | Diopter Adjustment Dial           | ⑫ | Indicator   |
| ④ | Hot Shoe                          | ⑬ | DISP. (Display) Button                            |
| ⑤ | Movie Button                      | ⑭ | ISO / 📏 (Jump) Button                             |
| ⑥ | Mode Dial                         | ⑮ | FUNC. (Function) / 🗑️ (Single Image Erase) Button |
| ⑦ | OFF Button                        |   |   |
| ⑧ | Mode Lever                        |   |   |
| ⑨ | Omni Selector                     |   |   |
|   | ▲ (Up) / 📄 (Exposure) Button      |   |   |
|   | ▼ (Down) Button                   |   |   |
|   | ◀ (Left) Button                   |   |   |
|   | ▶ (Right) Button                  |   |   |

#### Preparing the Camera

1. Before install camera, please review all function key on Basic Camera User Guide in advance.
2. Installing the SO card as Basic Camera User Guide (Installing the Batteries are not necessary, because the LUVDI contains a DC power supply, it can offer DC power for Camera used).

## Camera Shooting Menu

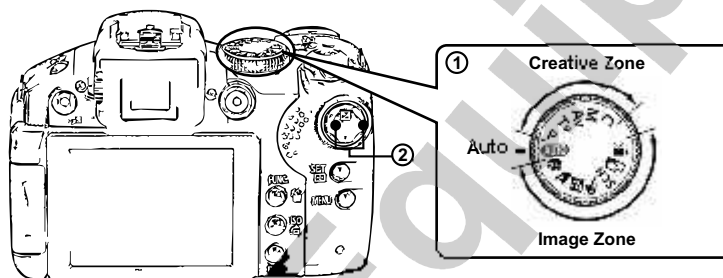
1. Turn the mode lever to  while pressing the release button. (Please see Basic Camera User Guide).



2. This camera is equipped with two modes (C and M) on Mode Dial Switch, allowing you to save two types of custom setting. The C mode will be for black& white photo and M for color photo.

### For M setting (for Color photo)

- a. Use the mode dial to switch to M



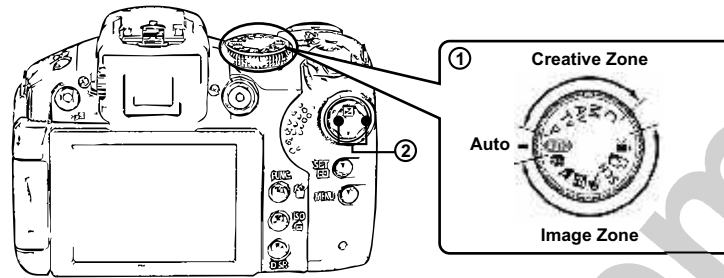
- b. Press MENU to set some parameter as following

S.No.	Menu Item	Setting
1.	FlexiZone	On
2.	Digital Zoom	Off
3.	Flash Sync	1-st curtain
4.	Red-Eye	On
5.	Self-timer	2 sec
6.	Spot AE Point	AF Point
7.	MF-Point Zoom	On
8.	Safety MF	On
9.	AF Mode	Continuous
10.	AF-assist Beam	Off
11.	Tally Lamp	Off
12.	Review	2 sec
13.	Reverse Disp.	On
14.	Auto Category	On
15.	IS Mode	Continuous
16.	Coverter	None
	Custom Display	----
	Set Shortcut button	----
	Save Setting	Press SET bottom and then save these parameters

- c. Continue to set C mode for Black and White photo as bellow procedure (Don't turn off the Camera).

### For Setting C (for Black and White photo)

- a. After **M** have been set as above procedure.  
 b. Switch the mode dial to the **C** mode.



- c. Press **FUNC.** Key to change photo color as following (Please see Advance Camera User Guide)

S.No.	FUNC. Item	Setting
1.	AWB	N/A
2.	Off	BW
3.	Flash Output	N/A
4.	Metering Mode	N/A
5.	Recording Pixels/ Frame Rate (Movies)	N/A
6.	Compression (Still image)	N/A

**Note:** "Press FUNC. Key to set color is un-necessary on M Mode for Color photo"

- d. Press **MENU** bottom, and Save Setting for C Black & White Mode.

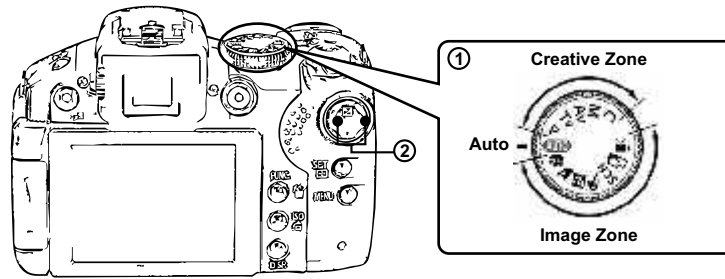
### For other "Camera Set up" Menu

- a. please see (Advance Camera User Guide).

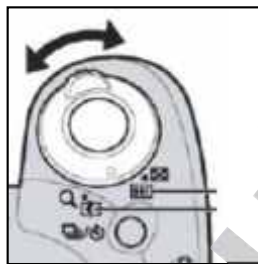
## 4. Operation Instructions

### 4.1 Operating for Agarose Gel:

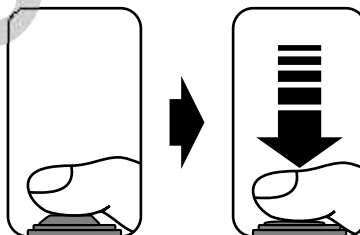
- a. Switch on main power and light.  
 b. Turn on Camera as (Basic Camera User Guide).  
 c. Use the mode dial to switch to C (for Black/White photo)  
 d. Open the chamber door. (The door contains a safety switch, the UV Transilluminator will auto off when door is opening).





- e. Put the gel on the UV Tranilluminator.
- f. Switch off the light.
- g. Close the door.
- h. Switch Zoom lever to zoom in and out on image. (Basic Camera User Guide)

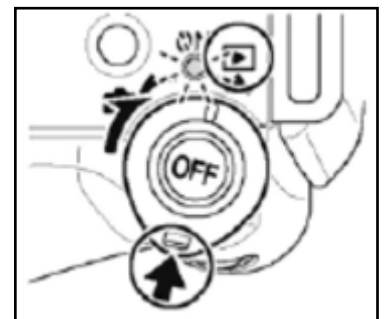


- i. Switch left or right on "Omni selector" (please see Basic Camera User Guide to looking for this key) to change shutter speed (1/2000 - 15"). For this application, we advice to set 1" or longer.
- j. Switch up or down on "Omni selector" to change aperture value (F2.7 -S.O). For this application, we advice to set F2.7
- k. You also could press ISO bottom (please see Basic Camera User Guide to looking for this key) to change ISO value (ISO SO 1600). For this application, we advice to use ISO SO
- l. The specific feature for Canon Power Shot S5IS is, before capture image, you can preview the image from the display while you change shutter speed, aperture value or ISO value.
- m. Focus -Press the shutter-release button halfway to set focus and exposure. And then press shutter release bottom the rest of the way down to take the picture.



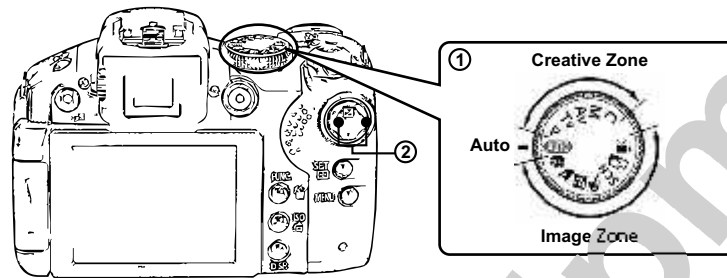
- n. Turn the mode level to  to view the pictures on the memory card full-frame in the monitor (see Camera User Guide)

- o. Press the DISP. Bottom to show the data for the displayed image.
- p. Press the FUNC.  bottom to quickly delete the displayed image.
- q. Finish capturing image, please switch Chamber and Camera off.
- r. Moving gel from Chamber.



### 4.3 Operating for X-ray film

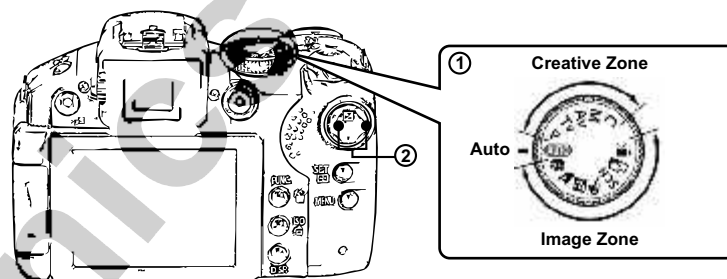
- a. Disconnect the wire cable between Chamber and UV Transilluminator.  
(Please ensure the UV Transilluminator is off.)
- b. Move the hood to White light table.
- c. Switch off the light and turn on the white light table.
- d. Use the mode dial to switch to C (for Black/White photo)



- e. We advise the aperture is fixed on F2.7, change the Shutter Speed from: 1/100, 1/200, 1/300 ....

### 4.4 Operating for Western Blot membrane

- a. Turn off the UV Transilluminator.
- b. Chamber builds in two white light lamps. Use these inner light lamps as a light source for this application.
- c. Use the mode dial to switch to M (for color photo).



- d. The aperture is fixed on F2.8; change the Shutter Speed from 1/10, 1/20, 1/30.

## 5. Troubleshooting Guide

Many operating problems may be solved by carefully reading and following the instructions in this manual accordingly. Some suggestions for troubleshooting are given below. If these suggestions not resolve the problem, please contact our SERVICE DEPARTMENT or a distributor in your region for assistance. If troubleshooting service is required, please include a full description of the problem.

Screen don't light on	If main power switch on There is a "Green" LED on the upper of right side. Please check if its light is on. If not, press "Screen power switch".
No Signal from Camera	Please check, if turn camera on. If power wire to camera connect well. If AV wire to camera connect well.
Light lamp don't light on	If switch on white light lamp.

## 6. Ordering Information

### Model No.

### Description

#### LUVDI-254/312 /365/254 & 365

- 1 x Canon S5 IS digital camera package (Includes all the accessories and manuals; exclude a 32 memory card) 1 x camera adaptor
- 1 x 8" TFT color screen 1 x Chamber
- 1 x 254nm or 312nm or 365nm or 254 & 365 nm UV transilluminator
- 1 x 1 G memory card 1 x Multi-card reader
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4ea of M3 screws 1 x Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

#### LUVDI -CB-254/312 /365/254 & 365

- 1 x camera adaptor
- 1 x 8" TFT color screen 1 x Chamber
- 1 x 254 nm or 312 nm or 365 nm or 254 & 365 nm UV transilluminator
- 1 x 1 G memory card
- 1 x Multi-card reader
- 1 x Power Cord for Camera Chamber
- 1 x Power Cord for connecting Chamber and UV transilluminator
- 1 x Camera Holder with 4 ea of M3 screws 1 x Digimage operating manual
- 1 x Close up lens
- 1 x Lens adapter
- 1 x Ethidium bromide filter or SYBR Green filter

### ACCESSORIES

13380111	Close up lens and EtBr filter 58mm
13380112	Close up lens
13380221	58mm EtBR filter
13380113	58mm SYBR Green filter

## 7. Warranty

LABNICS EQUIPMENT warrants apparatus of its manufacture against defects in materials and workmanship, under normal service, for **two years from the shipping date to purchaser**. This warranty excludes damages resulting from shipping, misuse, carelessness, or neglect. LABNICS EQUIPMENT liability under the warranty is limited to the receipt of reasonable proof by the customer that the defect is embraced within the terms of the warranty. All claims made under this warranty must be presented to LABNICS EQUIPMENT within two years following the date of delivery of the product to the customer.

**Manufacturer:**

LABNICS EQUIPMENT

**Address:**

Labnics Equipment  
43040, Christy St  
Fremont, CA 94538.  
Toll Free: 1-877-620-9992  
Tel: 925 271 4322  
Fax: 925 886 0400

MEMO

Labnics Equipment

MEMO

Labnics Equipment

