

EDAN

C3, C6
Video Colposcope
Version 1.3



About this Manual

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Statement

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Terms Used in this Manual

This guide is designed to give key concepts on safety precautions.

WARNING

A **WARNING** label advises against certain actions or situations that could result in personal injury or death.

CAUTION

A **CAUTION** label advises against actions or situations that could damage equipment, produce inaccurate data, or invalidate a procedure.

NOTE

A **NOTE** provides useful information regarding a function or a procedure.

Table of Contents

Chapter 1 Safety Guide	
1.1 Intended Use	
1.2 Safety Precautions	
1.3 Definitions and Symbols	3
Chapter 2 Introduction	7
2.1 Workstation	
2.1.1 Trolley/Host	
2.1.2 Monitor	
2.1.3 Keyboard and Mouse	
2.1.4 Printer	9
2.1.5 Foot Switch	
2.2 Camera	9
2.2.1 Camera Keys	10
2.2.2 Stand	12
Chapter 3 Basic Operations	13
3.1 Opening and Checking Package	
3.2 Placing/Moving the Trolley	
3.3 Placing/Moving the Camera Stand	
3.4 Adjusting Camera Height	
3.5 Adjusting Camera Angle	
3.6 Adjusting Monitor Angle	
3.7 Connecting AC Power	
3.8 Switching on the System	
3.9 Switching off the System.	
Chapter 4 Clinical Operation	
4.1 Preparation	
1	
4.2 Observing	
Chapter 5 Operation of Workstation	
5.1 Starting up Workstation System.	
5.2 Main Interface	
5.3 Inputting Patient Information	
5.3.1 Adding a Patient's Information	
5.3.2 Viewing Today's Exam Schedule	
5.3.3 Browsing Examination Record	
5.3.4 Modifying Patient Information	
5.3.5 Deleting Patient Information	
5.3.7 Making an Appointment	
5.3.8 Searching for an Appointed Patient	
5.3.9 Modifying an Appointment	
5.3.10 Deleting Appointed Patient Information	
5.4 Examining	
5.4.1 Capturing Images	
	26
5.4.2 Freezing the Image	
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen	26 27
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen 5.4.5 Editing the Image	26 27 27
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen 5.4.5 Editing the Image 5.4.6 Measuring the Image	
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen 5.4.5 Editing the Image 5.4.6 Measuring the Image 5.5 Analysing	
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen 5.4.5 Editing the Image 5.4.6 Measuring the Image 5.5 Analysing 5.5.1 Present Patient Image Comparison	
5.4.2 Freezing the Image 5.4.3 Taking Video 5.4.4 Full-Screen 5.4.5 Editing the Image 5.4.6 Measuring the Image 5.5 Analysing	26 27 27 28 30 32 33

	5.6 Printing	36
	5.6.1 Printing the Report	36
	5.6.2 Changing Print Settings	
	5.6.3 Exporting the Report	
	5.6.4 To PACS	
	5.7 Operation Record	
	5.7.1 Print	
	5.7.2 Record	
	5.8 Case History Database	
	5.8.1 Searching for a History Case	
	5.8.2 Browsing Examination Record	
	5.8.3 Browsing Patien Report	
	5.8.4 Modifying Patient Information	
	5.8.5 Modifying Examination Record	
	5.8.6 Deleting Patient Information	
	5.9 Statistics	
	5.9.1 Statistics	
	5.9.2 Exporting Case Histories	
	5.9.3 Exporting Chart	
	5.10 Switching User	
	5.11 System Setup	
	5.11.1 Inputting Hospital Information	
	5.11.2 Adding a User	
	5.11.3 Modifying User Information	
	5.11.5 Adding an Applicant	
	5.11.6 Deleting an Applicant	
	5.11.7 Changing Date Format	
	5.11.8 Choosing Foot Switch Function	
	5.11.9 Switching Report Export On or Off	50
	5.11.10 SwitchingTo PACS On or Off	51
	5.11.11 Switching Run on Startup On or Off	51
	5.11.12 Switching Patient Appointment On or Off	51
	5.11.13 Database Backup	52
	5.11.14 Database Restoring	52
	5.11.15 DICOM Setup	
	5.12 Exit	53
Cl	hapter 6 Maintenance and Cleaning	54
-	6.1 Inspection	
	6.2 Daily Maintenance	
	6.3 Cleaning	
	6.4 Disinfecting and Sterilizing	
CI	hapter 7 Warranty and Service	
	7.1 Warranty	
	7.2 Contact information	57
A	ppendix 1 Product Specifications	58
	A1.1 Environmental Specifications	58
	A1.2 Physical Specifications	58
Д	ppendix 2 Troubleshooting	
△ 1	A2.1 Trouble with Starting Up	
	A2.1 Trouble with Starting Op	
	A2.3 Trouble with Operating System	
	A2.4 No Access to Video Colposcope Software and Error Reporting	
	A2.5 Access to Video Colposcope Software with Error Reporting	
	AZ O TIOUDIC WIII IIIIAYE LANDIAV	n/2

A2.7 Trouble with Printing	63
A2.8 Trouble with DVD Writer	64
A2.9 Trouble with Identifing U Disk or Other USB Device	64
A2.10 Trouble with Keyboard Input	64
A2.11 Trouble with Mouse	65
A2.12 Trouble with the Camera	65
A2.13 Trouble with Foot Switch	66
A2.14 Blown Fuses	66
Appendix 3 Ordering Information	67
Appendix 4 EMC Information – Guidance and Manufacture's Declaration	68
A4.1 Electromagnetic Emissions – for all EQUIPMENT and SYSTEMS	68
A4.2 Electromagnetic Immunity – for all EQUIPMENT and SYSTEMS	69
A4.3 Electromagnetic Immunity – for EQUIPMENT and SYSTEM that are not LIFE-SUPPO	ORTING 71
A4.4 Recommended Separation Distance	73

Chapter 1 Safety Guide

CAUTION

Federal (U.S.) Law restricts this device to sale by or on the order of a physician.

NOTE:

- 1 In order to ensure the operator and the patient's safety, read through this chapter before using the device.
- 2 This user manual is written to cover the maximum configuration. Therefore, your model may not have some of the parameters and functions described, depending on what you have ordered.

1.1 Intended Use

- C3, C6 video colposcope is intended for gynaecological examination of gynaecological outpatients, cervical outpatients, gynaecological inpatients, anti-cancer outpatients and in physical examination center.
- C3, C6 video colposcope is intended to be used by trained and qualified personnel.
- C3, C6 video colposcope is not intended for home use and to touch woman body.

1.2 Safety Precautions

WARNING and CAUTION messages must be observed. To avoid the possibility of injury, observe the following precautions during the operation of the instrument.

WARNING

- 1 This device is provided for the use of professionally trained and qualified physicians, or under guidance of these personnel. Familiarize yourself with the contents of this user manual before operation.
- 2 Do not use the device in the presence of flammable anesthetics due to explosion risk.
- 3 SHOCK HAZARD In order to protect the patient and the operator, the system case should be grounded. When connecting or disconnecting the grounding wire, avoid damaging the equipotential grounding terminal or making it loose.
- 4 **SHOCK HAZARD** Do not attempt to connect or disconnect a power cord with wet hands. Make sure that your hands are clean and dry before touching a power cord.
- 5 The power receptacle must be a three-slot grounded outlet.
- 6 **Electromagnetic Interference** Ensure that the environment in which the device is installed is not subject to any source of strong electromagnetic interference, such as CT, radio transmitters, mobile phone base stations, etc.

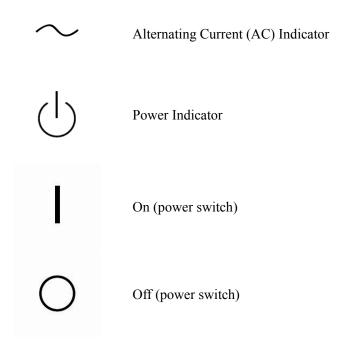
WARNING

- 7 **Electromagnetic Interference** Please do not use mobile phones nearby the device, otherwise it will interfere with device operation.
- 8 Do not touch the signal input or output connector and the patient simultaneously.
- Accessory equipment connected to the analog and digital interfaces must be certified according to the respective IEC/EN standards (e.g. IEC/EN 60950 for data processing equipment and IEC/EN 60601-1 for medical equipment). Furthermore all configurations shall comply with the valid version of the system standard IEC/EN 60601-1-1. Anybody who connects additional equipment to the signal input connector or signal output connector to configure a medical system must ensure that the system complies with the requirements of the valid version of the system standard IEC/EN 60601-1-1. If any quesiton, please consult our technical service department or your local distributor.
- 10 Do not exceed the maximum permitted load when using multiple portable socket-outlets to supply the system. You can refer to the label or silk-screen for the maximum permitted load.
- 11 The electrical equipment for non-medical use can be only connected to the isolating transformer as attached. If connected to the wall socket directly, earth leakage current and enclosure leakage current may exceed the standard limits. The isolation for electrical equipment for medical use and AC mains may not meet the requirement of equipment for medical use. The operator or patient may get an electric shock.
- 12 The portable multiple-socket provided with the system shall be only used for supplying power to equipment which is intended to form part of the system. If the elec tric device that does not belong to the system plug in the socket, the total power may exceed the maximum load of the isolating transformer and cause high temperature and fire. Enclosure leakage current within the system exceeds the standard limit, which may lead an electric risk.
- 13 Portable multiple-sockets shall not be placed on the floor. Other portable multiple-socket or extending wire cannot plug in the system.
- 14 Only accessories supplied by EDAN can be used. Or else, the performance and electric shock protection can not be guaranteed, and the patient may be injuried.
- 15 Make sure that all the components and accessories are connected and checked correctly befor powering on.
- 16 There is no part for the user to maintain in the system, so the unauthorized serviceman cannot open the enclosure.
- 17 Please use the accessories as attached. Otherwise, the patient or operator may receive electrical shock or other injury.
- 18 This system is not intended for treatment.
- 19 The camera lamp is very bright. When the camera is on, do not aim the camera at the patient's eyes or stare at the lamp.
- 20 The system is a non-contact examination device. Avoid touching the patient when it is used.

CAUTION

- 1 The system is designed for continuous operation. Please do not water the device.
- 2 Keep the environment clean. Make it far from corrosive medicine, dust area, high-temperature and humid environment. Avoid vibration. Do not move it with the power cord connected.
- 3 Do not operate the unit if it is damp or wet because of condensation or spills. Avoid using the equipment immediately after moving it from a cold environment to a warm, humid location.
- 4 Keep the trolley at least 5cm away from the wall for the sake of heat and air dissipation.
- 5 Do not sterilize the device or any accessory with autoclave or gas.
- 6 This system is medical equipment. Unauthorized third party software is forbidden to be installed on it.
- 7 This system is built in Win 7 operating system with genuine label on the device. If the label is lost or damaged, EDAN will not exchange.
- 8 Do not delete the system files. That's to avoid system running improperly.
- 9 Do not change the time of the system unless especially necessary, otherwise the appointment data may be lost.
- 10 The device and accessories are to be disposed of according to local regulations after their useful lives. Alternatively, they can be returned to the dealer or the manufacturer for recycling or proper disposal.

1.3 Definitions and Symbols





On/Off switch



Equipotential Grounding System



Fuse



Caution



USB socket



Serial port socket



VGA output socket, connect to external equipment



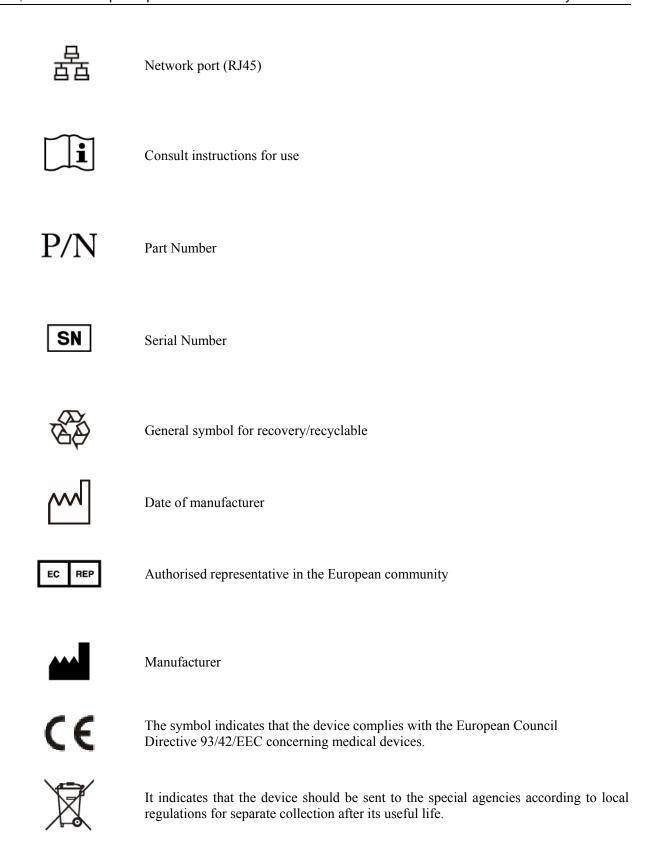
Foot switch



Caps lock indicator



Keyboard connection indicator



Rx only (U.S.) Federal(U.S.) Law restricts this device to sale by or on the order of a physician.



No pushing.



Watch your hand.

Chapter 2 Introduction

2.1 Workstation

NOTE:

The pictures and interfaces in this manual are for reference only.

The workstation consists of trolley (with computer host built in), monitor, keyboard, mouse and foot switch (with printer as an option).



Figure 2-1 Workstation

1	Monitor	2	Mouse
3	Keyboard	4	Trolley
5	Printer	6	Trolley casters
7	Camera	8	Camera stand

2.1.1 Trolley/Host

The computer host is built in the top platform of the trolley. The Windows 7 32-bit Operating System is applied. The operation of the system is the same as the common computer.

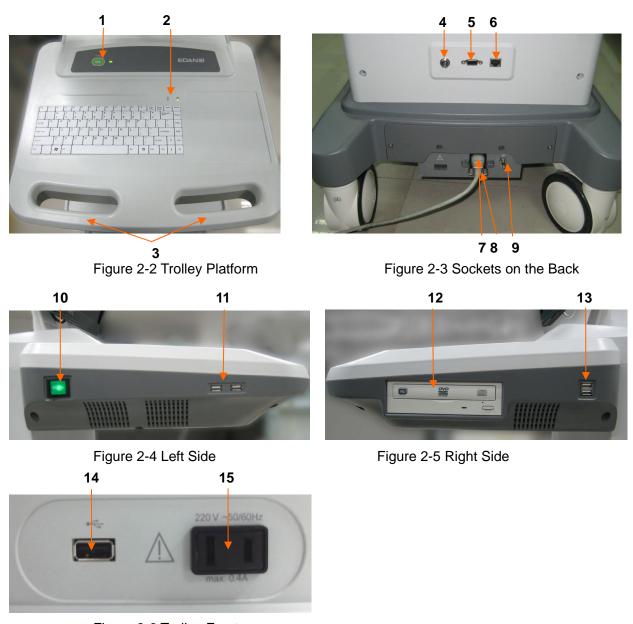


Figure 2-6 Trolley Front

1	Power switch and indicator of the host	2	Keyboard indicators	3	Trolley handle
4	Foot switch socket	5	Camera signal cable socket	6	RJ45 network interface
7	Workstation power socket	8	Fuse compartment	9	Equipotential grounding terminal
10	Workstation power switch	11	Host USB interface	12	DVD recorder
13	Host USB interface	14	Printer USB interface	15	Printer power interface

2.1.2 Monitor

A 19" monitor is applied and mounted to the trolley through a vertical arm. The monitor can be

rotated horizontally or vertically as required.

2.1.3 Keyboard and Mouse

The keyboard and wireless mouse are as attached in the package, and you can turn on the wireless mouse for use.

2.1.4 Printer

As an option, a multicolor printer is provided for printing the colposcopy report and LEEP operation report.

CAUTION

When you choose other printer, please keep the voltage as 220V \sim 50/60Hz and maximum current as 0.4A.

2.1.5 Foot Switch

A foot switch is provided. The operator can capture the image by simply stepping on the foot switch.

2.2 Camera



Figure 2-7 Camera

1	Key plate	2	Image capturing trigger	3	Camera handle
4	Camera lens	5	LED lamps		

2.2.1 Camera Keys

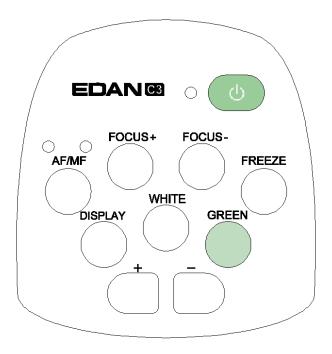


Figure 2-8 Camera Keys

(1) Power switch

and power indicator

Function: Switch on or off the camera.

Operation: Press this key, the camera is switched on, and the power indicator lights up in green. Press it again, the camera is switched off, and the power indicator goes off.

(2) FREEZE key

Function: Freeze or unfreeze the current image.

Operation: Press this key to freeze the current image, press it again to unfreeze it.

(3) FOCUS- key

Function: Adjust the camera focus.

Operation: In MF mode, press this key to pull close the focus.

This key is invalid in auto focus (AF) mode.

(4) FOCUS + key

Function: Adjust the camera focus.

Operation: In MF mode, press this key to pull away the focus.

This key is invalid in AF mode.

(5) AF/MF key and indicator

Function: change between AF mode and manual focus (MF) mode.

Operation: In AF mode, press this key to enter MF mode with the right indicator bright. In MF mode, press this key to enter AF mode with the left indicator bright. The system enters AF mode

by default.

(6) DISPLAY key

Function: Display or not display message on the screen and keep time.

Operation: Press this key, the screen displays the magnification and the time, marked by T0:00. The messages disappear after 4 minutes, or press this key again to close these messages. The system does not display the messages by default.

(7) WHITE key

Function: Enable normal white light.

Operation: The key has 3-level functions. It's natural light by default. Press the key, the image is noted W1 on the top, when the light gives prominence to the observation of white vinegar epithelium. Press the key again, the image is noted W2 on the top, when the light gives prominence to the observation of white vinegar epithelium or grapy tissue on column epithelium. Press the key again, it returns to natural light imaging.

(8) GREEN key

Function: Activate green filter.

Operation: Press this key, the system activates the green filter to filter the red parts of the images, in order to give prominence to the blood vessel status.

The system has 3-level green filter: G1, G2 and G3. Press this key to activate the first green filter and press the key again to change among the 3 levels. The second green filter based on the first one is better for local highlight or observation of micro blood vessels on white vinegar epithelium. The third green filter based on the second one gives prominence to blood vessel contrast by reducing background brightness. Press the WHITE key to exit green filter function.

Function: To decrease the magnification and zoom out the image.

Operation: Press this key to zoom out the image.

Function: To increase the magnification and zoom in the image.

Operation: Press this key to zoom in the image.

(11) Image Capturing Trigger **Function:** To capture image.

Operation: Pull this trigger, the current image is captured.

2.2.2 Stand

The stand is used to place and support the camera.



Figure 2-9 Camera Stand

1	Vertical angle adjustment knob	2	Horizontal angle adjustment knob	3	Stand post
4	Camera platform	5	Lifting post	6	Height adjustment knob
7	Stand casters				

Chapter 3 Basic Operations

3.1 Opening and Checking Package

The package is in large size and of heavy weight. Please do not turn it upside-down. Visually examine the package prior to unpacking. If any signs of mishandling or damage are detected, contact the carrier to claim for damage.

Open the package and check the components according to the packing list. Inspect the components for any damage. Let the service engineer of the manufacturer assemble the system for you.

Keep the package for possible future transportation or storage.

3.2 Placing/Moving the Trolley

On each caster of the trolley, there is a locking pedal.

When the trolley is placed somewhere, you should step down the pedal to lock the casters and stop the trolley from moving around.

When you need to move the trolley, hold the trolley handle with your hands and then push up the pedal of each caster to release it. When the destination is reached, step down the pedals.

CAUTION

When moving the trolley, move the camera stand synchronously and pay attention not to overextend the cable and cause falling over of the stand.

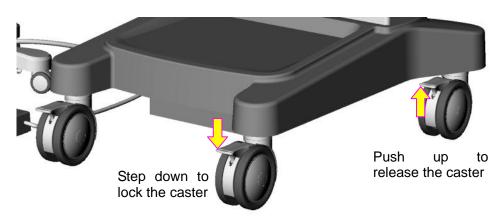


Figure 3-1

3.3 Placing/Moving the Camera Stand

There are 3 locking pedals on the caster of the camera stand.

When the stand is placed somewhere, you should step down the pedal to lock the casters and stop the stand from moving around.

When you need to move the stand, hold the lifting post with your hand and then push up the pedal of each caster to release it. When the destination is reached, step down the pedals.

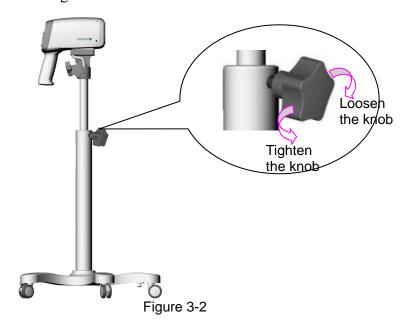
CAUTION

Hold the lifting post of the stand when moving it. The camera may be damaged if the stand is moved by grasping the camera handle.

3.4 Adjusting Camera Height

In order to get a clear image, you may need to adjust the height of the camera. Perform the following steps:

- 1. Step down the pedal of each caster to stop the stand from moving around.
- 2. Hold the lifting post with one hand, anticlockwise rotate the height adjustment knob to loosen it. Lift the post up or push it down to a proper height.
- 3. Rotate knob clockwise to tighten it.



CAUTION

Take care for the camera sudden fall when you adjust its height...

3.5 Adjusting Camera Angle

In order to get a clear image, you may need to adjust the angle of the camera. Follow the instructions:

Adjust horizontal angle: Grasp the camera handle with your left hand and rotate the horizontal angle adjustment knob anticlockwise with the other hand. Now you can tilt the camera left or right as necessary. Rotate the adjustment knob clockwise to tighten it.

Adjust vertical angle: Grasp the camera handle with your right hand and rotate the vertical angle adjustment knob anticlockwise with the other hand. Now you can tilt the camera up or down as necessary. Rotate the adjustment knob clockwise to tighten it.



Figure 3-3

3.6 Adjusting Monitor Angle

In order to observe the image conveniently, you may want to adjust the angle of the monitor sometimes. Perform the following instructions:

Adjust horizontal angle: Grasp the left and right edge of the monitor with both hands and apply a certain amout of power to tilt it left or right. The maximum adjustment angle is 90°.

Adjust vertical angle: Grasp the top and bottom edge of the monitor with both hands and apply a certain amout of power to tilt it up or down. The maximum adjustment angle is 30° upward and 25° downward

Caution

- 1 When tilting the monitor, be careful not to jam your hands or arms between the stand arm and the monitor.
- 2 Do not exert pressure downward more than 15KG on the camera or it may hurt you or damage the device.

3.7 Connecting AC Power

• Make sure that the AC power supply complies with the following specifications:

Operating Voltage and Input Voltage: 110V 1.4A / 220V 0.7A

Operating Frequency: 50Hz/60Hz

◆ Apply the provided power cable. Plug one end of the power cable to the power socket of the system, and the other end to a power output special for hospital usage.

Caution

Please ensure euipotential connection with the video colposcope.

3.8 Switching on the System

Prior to switching on the system, check if all the components are correctly connected, and if the cables are all in good condition. Make sure the system is linked to the protective earth.

If any sign of damage is detected, stop using the system. Replace the damage parts or contact biomedical engineer in the hospital or our service engineer immediately.

To switch on the system, take turns to switch on the power of the whole system, the host, the monitor and the camera. The power switch of the whole system is located on the left panel of the trolley, that of the monitor on bottom panel of the monitor, that of the host on the trolley platform and that of the camera on the key panel.

3.9 Switching off the System

When the examination is completed, exit from the software system, take turns to switch off the power of the camera, the host, the monitor and the whole system. Cover the camera with the dust cover.

Chapter 4 Clinical Operation

NOTE:

- The colposcope is used to observe the tissues of vagina, cervix and external genitalia. Reduce interference and stimulation to the check parts before examination. For example, sexual intercourse, gynecological check, local biopsy or treatment should be avoided within 24 hours before vaginal or cervical colposcopy.
- 2 For the patient with acute infection, such as trichonomal vaginitis, monilial vaginitis, treatments should be taken to control the infection first, and do not perform colposcopy before local acute inflammation is cured.
- 3 To acquire optimal examination effect, it's recommended to perform colposcopy examination 3 to 7 days after the menstruation.

4.1 Preparation

Before the colposcopy, prepare the patient and the equipment for the examination.

- 1. Let the patient lie on the examination bed in the bladder lithotomy position.
- 2. Choose a proper speculum for the patient according to her age, figure and examination purpose.
- 3. According to the bed and patient position, adjust position and height of the stand to get an appropriate match for examination.
- 4. Switch on the system and start up the software.
- 5. Input the patient information and start the examination.

4.2 Observing

When everything is ready, you can start the examination with the camera.

- 1. Place the speculum. Gentle insertion is specially needed for the patients with cervical cancer.
- 2. Remove the lens cover and turn on power of the camera.
- 3. Observe the images on the monitor and make some adjustments accordingly.

Observe the spot, tilt the camera to locate it at an optimal position. The normal distance the camera away from the patient is as below.

- C3:170mm 300 mm (1-6 times), 220mm 300 mm (7-28 times).
- C6:170mm 300 mm (1-6 times), 220mm 300 mm (7-36 times).

If coarse image is obtained, adjust the camera focus (by ajusting the distance between the camera and target in AF mode, using "FOCUS+" or "FOCUS-" in MF mode), until

the image is clear.

Choose the filter by pressing the **WHITE** or **GREEN** key. Show or hide the messages by pressing the **DISPLAY** key. Zoom in or zoom out the image by pressing the "+" or "-" key. C3 can magnify the image by 28 times maximumly, and C6 by 36 times.

When an optimal image is observed, press the **FREEZE** key to freeze the image.

4. Image capturing can be done by pulling the trigger of the camera, stepping on the foot switch or capturing it in the workstation system.

Chapter 5 Operation of Workstation

5.1 Starting up Workstation System

Double click on the workstation icon



on the desktop. Log in to the system first.



Figure 5-1

Open the pull-down menu of **Name** to view all existent usernames. Select your user name, input the correct password and then click on **Login** to open the main interface. This username is shown

on the top of the main interface.



When logging in for the first time, use the name **sys**. When you enter the system you can add more users by using the procedures introduced in 5.11.2 Adding a User.

5.2 Main Interface

After login, the main interface is open.

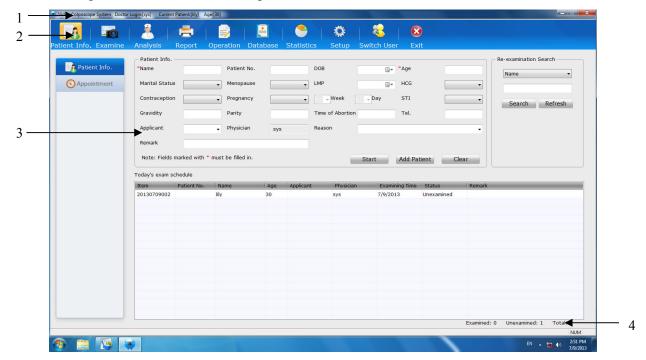


Figure 5-2

Item	Name	Description
1	Title bar	The system name, user name and current patient information are shown
1	Title bai	here.
2	Tool bar	The function modules are shown here. You can open their operation
2	1001 0a1	interface by clicking on these buttons.
2	Operation	It corresponds with the buttons in the tool bar.
3	interface	it corresponds with the buttons in the tool bar.
1	Patient	It calculates the number of patiens examined and to be examined.
4	statistics	it calculates the number of patiens examined and to be examined.

5.3 Inputting Patient Information

The system opens the Patient Information operation interface after login. Or you can click on

the **Patient Info.** button Patient Info. to open it. On this interface, you can input a new patient's information, view the present-day patient list, or make an appointment for a patient (after this feature is activated).

5.3.1 Adding a Patient's Information

Click on the **Patient Info.** tag

to open its sub-menu, input the patient information, e.g. name, age, chief complaint in the **Patient Info.** area. Click on **Add Patient**, this patient is added to the present-day patient list. Or click on **Start**, this patient is added and the system enters the **Examine** interface automatically. Click on **Clear** to delete all the inputted information.



Figure 5-3

5.3.2 Viewing Today's Exam Schedule

The today's exam schedule lists the patients of the present day, who have been examined or are to be examined.

The list is sorted in the order of **Item** by default. You can click on another item name, and the list is then sorted in this order. Click on it again, the list is sorted in reverse order.

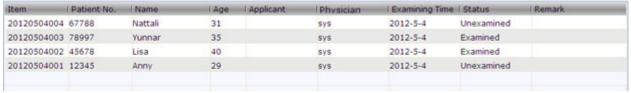


Figure 5-4

Choose a patient from the list and then right click on the mouse, you can browse her examination record, modify her information or delete her information.

5.3.3 Browsing Examination Record

Choose a patient from the list, right click on it and then choose **Browse Examination Record**. This patient's examination record opens.

You can only view the examination record but not edit it.

5.3.4 Modifying Patient Information

Choose a patient from the list, right click on it and then choose **Modify Patient Information**. In the pop-up window you can edit the information and then click on **OK**. You can modify **LMP** and **Applicant**. Click on **OK** to confirm modifying, or click on **Cancel** to cancel it.

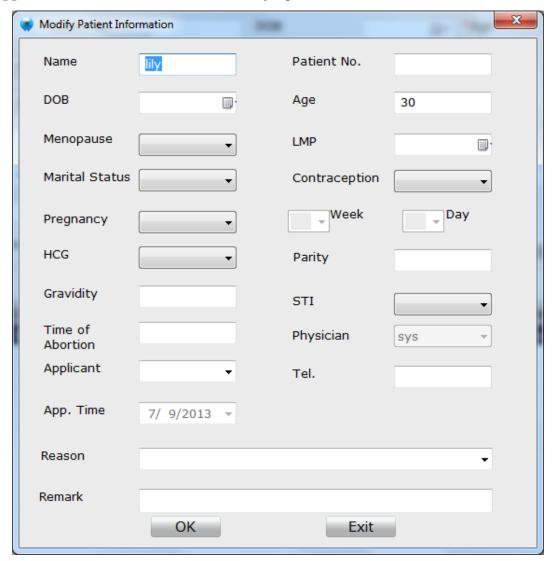


Figure 5-5

NOTE:

If an appointed patient in the **Today's exam schedule** list is not examined, her information will be deleted the next day. Therefore, you need to modify her **Examining Time** and the system makes the appointment for her.

5.3.5 Deleting Patient Information

Choose a patient in the list, right click on it and then choose **Delete Patient Information**. A prompt is issued. Click on **OK** to confirm deleting, or click on **Cancel** to cancel it.

NOTE:

Once a patient's information is deleted, this examination record of hers in the database is deleted as well.

5.3.6 Searching for an Reexamining Patient

To search for an examined patient in the system, perform the following procedures to find her quickly:

Select a condition: **Name** or **Patient No.** and then input the keyword. You can search by inputting part of the keyword. The more information you input the more accurate result you will get.

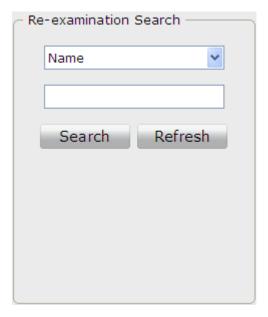


Figure 5-6

Click on **Search** and all the patients that meet the requirements are listed.

Click on **Refresh**, the original today's exam schedule is shown.

5.3.7 Making an Appointment

You can make an appointment for the patient in this system after this feature is activated in the **General Setup** menu.

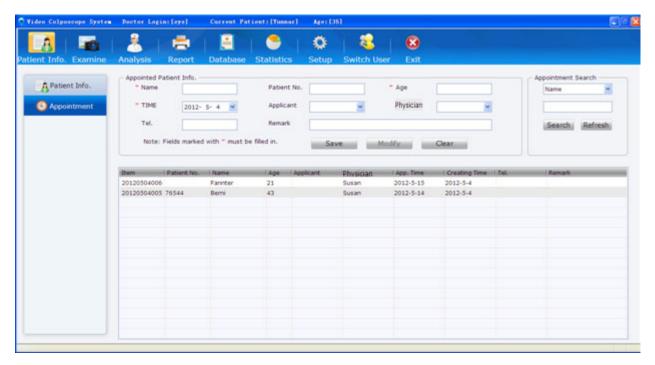


Figure 5-7

Click on the **Appointment** tag on the **Patient Info.** interface, input the information, e.g. patient name, age, appointment time, and then click on **Save**. The appointment is made, and her information is shown in the appointed patient list on the screen.

The appointment time can be the present day or a future day. The system moves the patients whose appointment time is the present day to the today's exam schedule list.

NOTE:

- 1 Every user can view all the appointed patient information.
- 2 A patient's information is shown in the today's exam schedule list when the appointed date is the present day and her appointed physician is the current login user or the physician information is not enterred.

5.3.8 Searching for an Appointed Patient

To search for an appointed patient in the system, perform the following procedures to find her quickly:

In the **Appointment Search** area, select a condition: **Name** or **Patient No.** and then input the keyword. You can search by inputting part of the keyword. The more information you input, the more accurate result you will get.

Click on **Search** and all the patients that meet the requirements are listed.

Click on **Refresh**, the original list is shown.

5.3.9 Modifying an Appointment

Choose a patient in the list, her appointment information is shown in the above. You can edit it and then click on **Modify**. A prompt is issued. Click on **OK** to confirm modifying, or click on **Cancel** to cancel it.

5.3.10 Deleting Appointed Patient Information

Choose a patient in the list, right click on it and then choose **Delete Appointed Patient Information**. A prompt is issued. Click on **OK** to confirm deleting, or click on **Cancel** to cancel it. You can also select multiple pieces of the appointed patient information to delete.

5.4 Examining

Once a patient is selected in the patient list, click on **Start** or the **Examine** button in the tool bar, the system enters the examining menu and the examination starts. On this interface, you can capture images, take video, edit or measure the images.

NOTE:

You can enter the **Examine**, **Analysis**, **Report**, and **Operation** interface after connecting to and activating the camera.

5.4.1 Capturing Images

According to the target and operation requirements, adjust the direction, height and distance of the camera. Try to obtain a clear image on the screen by using the keys on the camera.

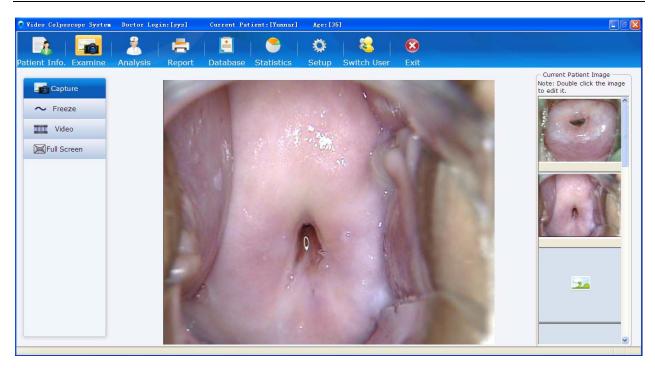


Figure 5-8

Click on the **Capture** tag press the Image Capturing Trigger or step on the foot switch, the system captures the current image. The captured image is shown on the right of the screen. You can double click on the image to edit it. At most 50 images can be captured for a patient.

If the foot switch is connected, you can step on the pedal to capture (and freeze) the current image, depending on the system setting.

5.4.2 Freezing the Image

Click on the **Play** tag to unfreeze the image and return to the real-time observation interface.

5.4.3 Taking Video

Click on the **Video** tag

Stop

to stop taking video. It takes at most an hour to take video. If you press the **Display** button on the camera, it shows the video time.

The video is saved in a .avi file and a video symbol is shown on the right of the screen. You can double click to play it.

5.4.4 Full-Screen

Click on the **Full Screen** tag

Click on the **Full Screen** tag, the image area zooms in to occupy the whole screen. Double click on the mouse or press Esc button to exit the **Full Screen** mode.

5.4.5 Editing the Image

Double click on the captured image on the right of the screen to edit it.

1) Adding Image Description

Input the content in the blank of the **Image Description** area, and then click on the **Save** button underneath it. This description will be shown together with the image.

2) Adding Image labels

You can add labels on the image by performing the following: click on the round circle in front of the **Label** item. Move the mouse to the image area and then click on it. A broken line frame is shown. You can input the label content in it. In the same way you can add more labels. After all labels are added, click on the **Save** button in this area to save them.

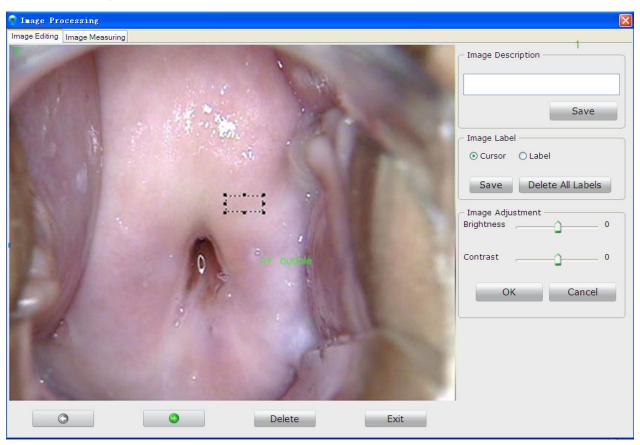


Figure 5-9

The labels can be modified, moved or deleted.

To modify a label: click on the label on the image, the cursor flashes and the label becomes

editable. Modify the content and then click on the **Save** button in this area.

To move a label: with the mouse, drag the label to the target position. The label is moved. Click on the **Save** button in this area to save the modification.

To delete a label: right-click on the label and then choose **Delete**. Click on the **Save** button in this area.

To delete all labels: click on the **Delete All Labels** button in the **Image Label** area, all labels are deleted.

3) Adjusting Brightness and Contrast

Drag the block of the **Brightness/Contrast** leftward to decrease or rightward to increase the brightness/contrast. Click on the **OK** button to save the setting.

4) Deleting the Image

Click on the **Delete** button underneath the image to delete it. A prompt is issued. Click on **OK** to confirm deleting, or click on **Cancel** to cancel it.

If multiple images are included, click on the or button to switch to the previous or next image and then edit it in the same way. Click on the **Exit** button or to close this interface.

5.4.6 Measuring the Image

Double click on the captured image on the right of the screen to measure it. You can choose manual calibration or default calibration.

NOTE:

- 1. When you measure the image, please calibrate it before measuring it.
- 2. If you choose default calibration, please keep the camera at the distance of 25cm vertically while capturing the image and make the calibration magnification consistant with the real magnification.
- 3. C3 camera magnification is 1-28 times and C6 is 1-36 times.

1) Default Calibration

Select **Default** and its magnification and you can measure the image by **Line**, **Perimeter** or **Area**. When you select the desired area, the result displays hereabout.

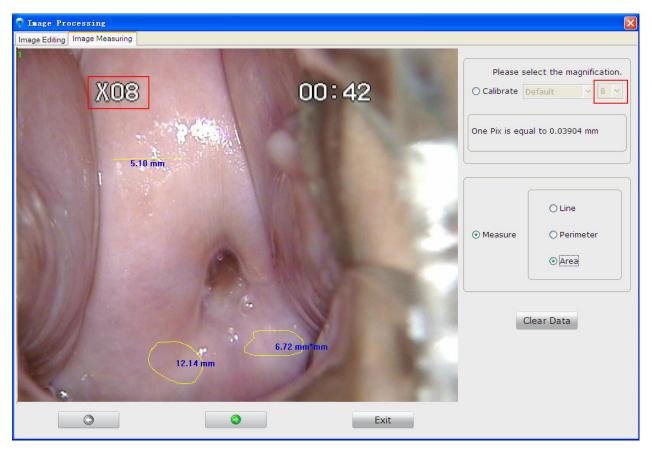


Figure 5-10

2) Manual Calibration

Select **Manual** and draw a line with your mouse. Input the length (mm) of the line and select **OK**. If you input 0 or invalid value, it indicates that **The input value is invalid, please input again**. Select **Cancel** to return to the measuring interface.

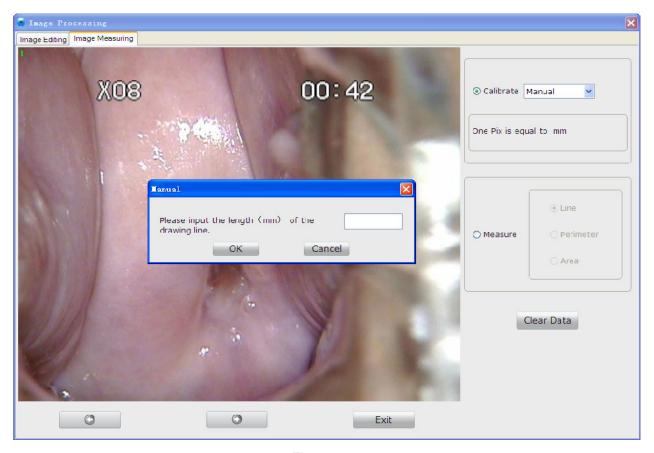


Figure 5-11

You can measure the selected area by **Line**, **Perimeter** or **Area** and the result displays hereabout, but the colposcope does not save the result.

You can also select **Clear Data** to cleat all the data in the image.

NOTE:

The colposcope cannot save the measuring result.

5.5 Analysing

After examination, you can make an analysis on the Analysis interface. Click on the Analysis

button Analysis in the tool bar to open this interface.

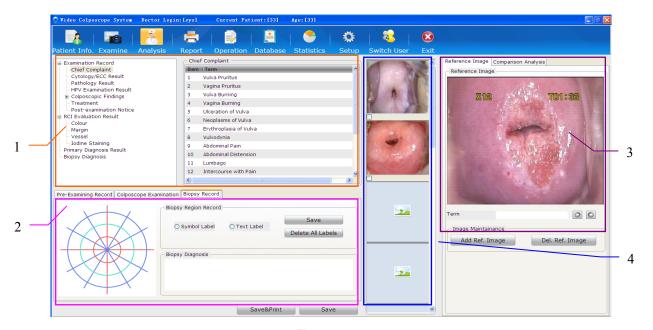


Figure 5-12

- 1 Term Database
- 2 Result Inputting Area
- 3 Image Comparison Area
- 4 Capatured Image Area

The diagnosis should be inputted in the **Examination Record** area on the bottom left of the screen. You can either input the analysis with the keyboard, or select the terms from the term database above. For example, click on **Chief Complaint**, the commom used terms are listed on the right. Double click on this item, it is added to the analysis area. Multiple items are allowed.

You can take biopsy record by **Symbol Label** and **Text Label**. You can select **Save** button to save all the notes on the biopsy image; you can right click on the label and select **Delete** the symbol or text or select **Delete All Labels** to all the notes.

You can also move the symbol or text.

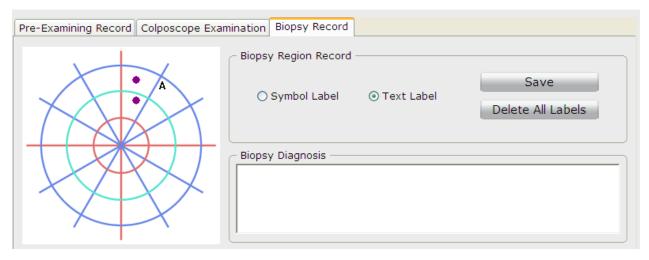


Figure 5-13

You can also conduct **Term Maintenance**. Click on **Examination Record** > **Chief Complaint**, and right click on **Term Maintenance**, you can also add, delete, move up or move down your desired item. For detailed operation refer to the following picture.

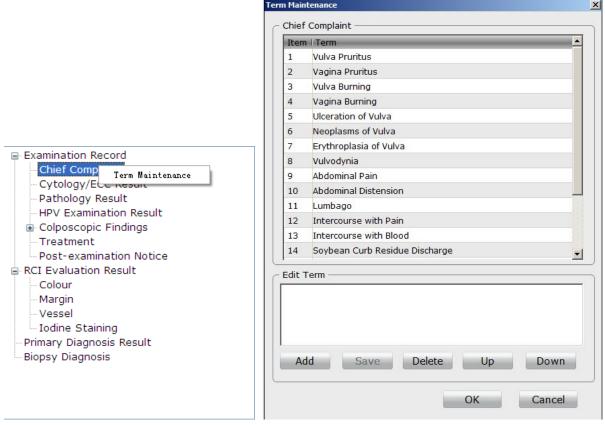


Figure 5-14 Figure 5-15

NOTE:

You can modify the terms in RCI Evaluation Result. When you first enter the **Term Maintenance** interface, the **Add**, **Save**, **Delete**, **Up** and **Down** button are invalid. They are valid after you double click the certain term.

Click on **Save** to save the analysis, or click on **Save & Print** to save the analysis and then open the printing interface.

In the middle of the screen, the captured images of this patient are shown. You can also double click to edit them.

5.5.1 Present Patient Image Comparison

You can compare or refer to the present patient image.

Tick the image and right click on **Compare**, and the selected images can magnify. You can compare 2-6 images in the same time. You can also delete multiple images after selection.



Figure 5-16



Figure 5-17

5.5.2 Reference Image

Some of the terms are provided with reference image(s). When a term is chosen, its reference image is shown on the right. You can double click the reference image to magnify and double click the magnified image or press Esc button to exit.

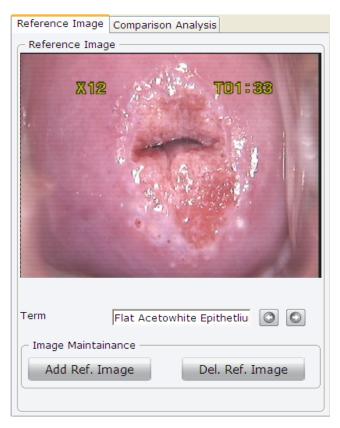


Figure 5-18

If more than one image is provided, the page turning tool next to this term turns green. You can click on this tool to view the previous or next image.

When a typical image is captured, you can add it to be a reference image. Follow these procedures: select a term in the term database, tick the block under the typical image in the captured image area or click on the image to select the image and then click on **Add Ref. Image** or right click on **Add Ref. Image**. This image is added as a reference image of this term.

To delete a reference image, you should open it in the reference image area and then click on **Del. Ref. Image**. A prompt is issued. Click on **OK** to confirm deleting. This image is deleted from the reference image area, but remains in the captured image area.

5.5.3 Comparison Analysis

When analyzing a case, you can open an old case on the screen for comparison and reference.

Click on **Comparison Analysis**, search for the case by choosing a search condition, inputting the keyword and then clicking on **Search**. The result is shown in the **Case List**. Choose a case, the patient information and the images are shown. You can click on **Record** to view the examination record. You can double click on the image to magnify and double click on the magnified image or press Esc button to exit.

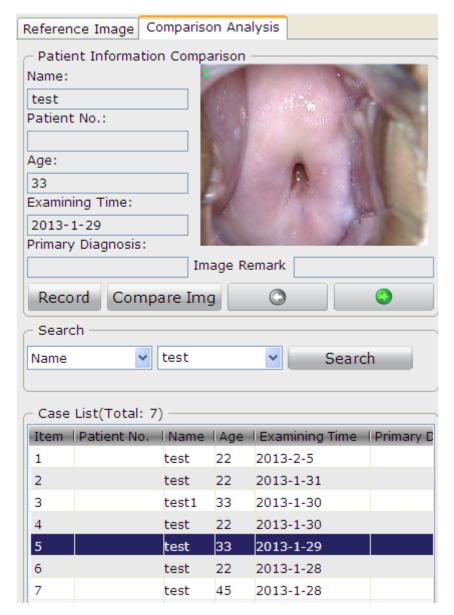


Figure 5-19

Click on **Compare Img** to compare image of the present patient with that of the other patient. If you select several images, it starts comparison from the first selected, otherwise it starts from the first patient image.

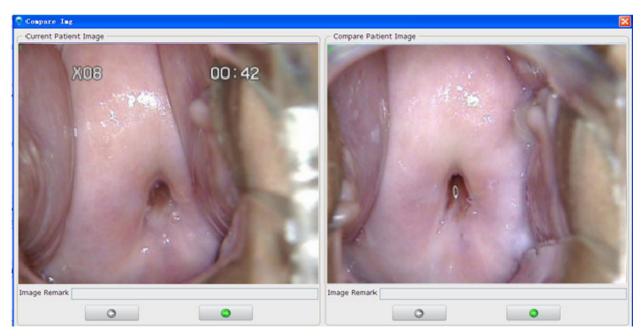


Figure 5-20

NOTE:

The previous check result can be loaded automatically in *Comparison Analysis* for the patient re-examined. All the check records are listed in the *Case List* by date.

5.6 Printing

5.6.1 Printing the Report

Select a patient and then click on the **Report** button Report in the tool bar to open the printing interface, or double click on the row of patient information to open the printing interface.

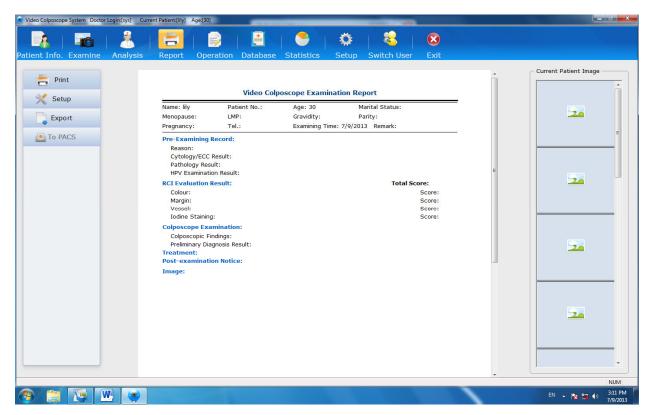


Figure 5-21

The report is shown in detail in the middle of the screen. The captured images are shown on the right. You need to tick them or click on them to have them shown on the report.

Click on the **Print** tag on the left of the screen to start printing the report.

To obtain an optimal report, you should set the printing items properly in advance.

NOTE:

- 1. You can double click the image for magnification or exit.
- 2. Click the magnified image on the left or right of the image, and you can switch to the previous or next one.

5.6.2 Changing Print Settings

On the printing interface, click on the **Setup** tag on the left of the screen to open the print setup menu.

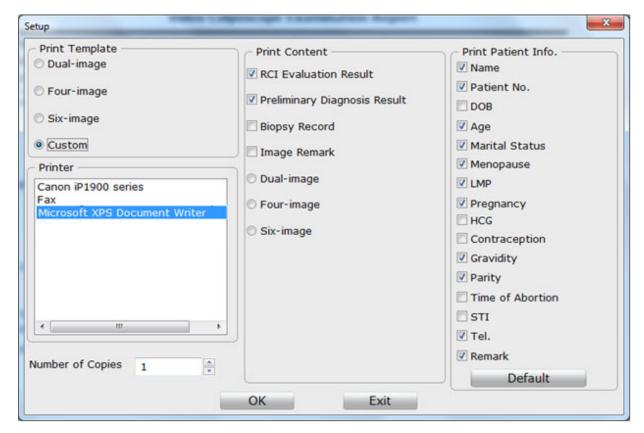


Figure 5-22

Tick a print template, select a printer, select the number of copies and then click on \mathbf{OK} to save the settings.

If you tick **Dual-image**, **Four-image** or **Six-image**, the Print Content and Print Patient Info. are set automatically by the system and can not be changed. If you tick **Custom**, you can select the options on your will.

The printing content includes:

Item	Description
RCI Evaluation Result	Whether to print the RCI evaluation result.
Preliminary Diagnosis Result	Whether to print the preliminary diagnosis result. This option is selected by default.
Biopsy Record	Whether to print the biopsy record.
Image Remark	Whether to print the image remark.
Dual-image	At most 2 images are allowed in the report.
Four-image	At most 4 images are allowed in the report. This option is selected by default.
Six-image	At most 6 images are allowed in the report.

5.6.3 Exporting the Report

The report can be exported to a .PDF file.

On the printing interface, click on the **Export** tag a directory and then click on **Save**.



on the left of the screen, select

The report is exported to the target directory.

5.6.4 To PACS

You can send the examination report to PACS server which is short for Picture Archiving and Communication System.

Click on the **To PACS** button report to PACS.



on the left of the screen to send the

NOTE:

- 1. The button becomes grey after you select it, and it turns valid after sending. If you want to send to the PACS, please enable DICOM first.
- 2. You can send patient information, examination report, doctor and hospital information and device model to the server.
- 3. The system keeps sending state with disconnection to the server when you send the information to PACS. You can retart the system and click **To PACS**.

5.7 Operation Record

You can take a record and print it.



and open the Operation interface.

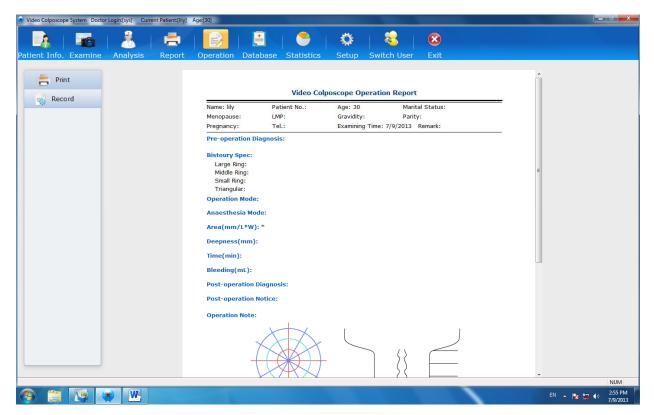


Figure 5-23

5.7.1 Print

Click on **Print** and print one piece of operation report by default. If you want to print multiple pieces, please configure it in the print set up.

5.7.2 Record

Select **Record**, you can set up the **Pre-operation Diagnosis**, **Bistoury Spec**, **Operation Mode**, **Anaesthesia Mode**, **Time**, **Deepness**, **Bleeding**, **Area**, **Post-Operation Diagnosis**, **Post-Operation Notice** and so on.

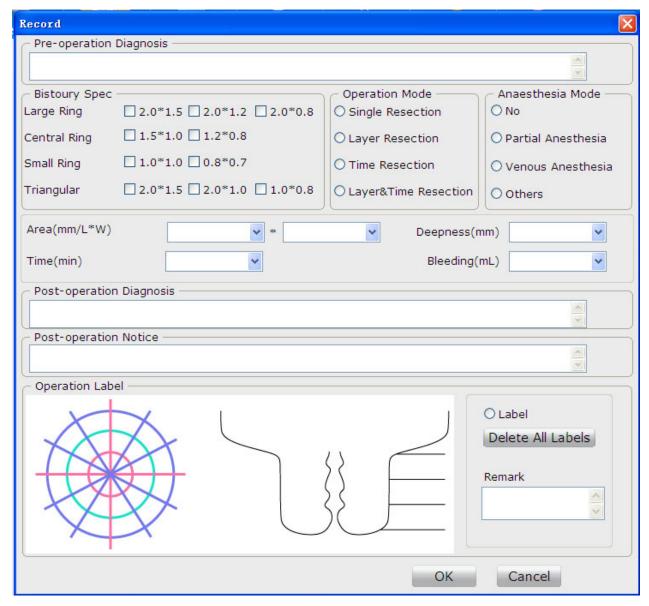


Figure 5-24

When you select the Label in the operation label area, the pointer becomes / to make labels with. If you want to delete all labels, click **Delete All Labels**.

NOTE:

The print configuration of operation record is the same as that of the operation report.

5.8 Case History Database

Click on the **Database** button Database in the tool bar to open the **Database** interface.

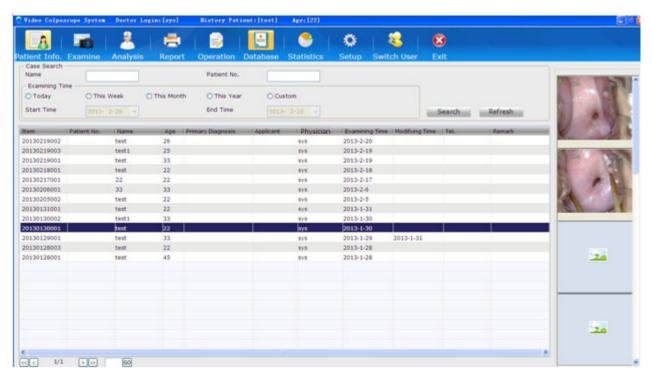


Figure 5-25

On this interface, all the cases of the examined patients are listed. Click on one of the cases, the images contained in this case are shown on the right of the screen.

The list is sorted in the order of **Item** by default. You can click on another item name, the list is then sorted in this order. Click on it again, the list is sorted in reverse order.

By double-clicking on the row of a case, the current doctor can open the printing interface of the patient examined by the current doctor, and view the report of the patient examined by other doctors.

On the bottom left corner of the screen, the number of the page (in the form of current page/total page, e.g. 1/10) and page turning tools are provided. If there are multiple pages, you can use these tools to turn the pages: click on to jump to the first page, click on to jump to the previous page, click on to jump to the next page or click on to jump to the last page. Alternatively, you can input the page number in the blank and click on .

NOTE:

- 1. Double click the image to magnify or exit.
- 2. Click on the left or right of the image to view the previous or next image.

5.8.1 Searching for a History Case

To search for a history case in the system, perform the following procedures to find it quickly:

Input the name and/or patient number in the Case Search area. You can search by inputting part of the keyword. You can also input examing time to search. The more information you input the

more accurate result you will get.

Click on **Search** and all the cases that meet requirements are listed.

Click on **Refresh**, the original list is shown.

5.8.2 Browsing Examination Record

Choose a case in the list, right click on it and then choose **Browse Examination Record**. This examination record opens.

You can only view the examination record but not edit it.

5.8.3 Browsing Patien Report

Choose a case in the list, right click on it and then choose **Browse Patient Report**. This patient report opens.

5.8.4 Modifying Patient Information

Choose a case in the list, right click on it and then choose **Modify Patient Information**. In the pop-up window you can edit the information and then click on **OK**. A prompt is issued. Click on **OK** to confirm modifying, or click on **Cancel** to cancel it.

NOTE:

You can only modify information of the patients whom you examined. Information of other doctor's patients cannot be changed.

5.8.5 Modifying Examination Record

Choose a case in the list, right click on it and then choose **Modify Examination Record**. In the pop-up window you can edit the information and then click on **Save&Print** or **Save**.

NOTE:

You can only modify records of the examinations you performed. Other records are inaccessible.

5.8.6 Deleting Patient Information

Choose a case in the list, right click on it and then choose **Delete Patient Information**. A prompt is issued. Click on **OK** to confirm deleting, or click on **Cancel** to cancel it.

NOTE:

You can only delete information of the patients whom you examined. Information of other doctor's patients is inaccessible.

5.9 Statistics

NOTE:

If there are a large amount of data in the system, making statistics or exporting may take a few seconds, and a progress bar will be shown. Please wait patiently and do not perform any operation to avoid the system down.

5.9.1 Statistics

Click on the **Statistics** button statistics in the tool bar to open the **Statistics** interface. On this interface, you can take statistics of the case histories.

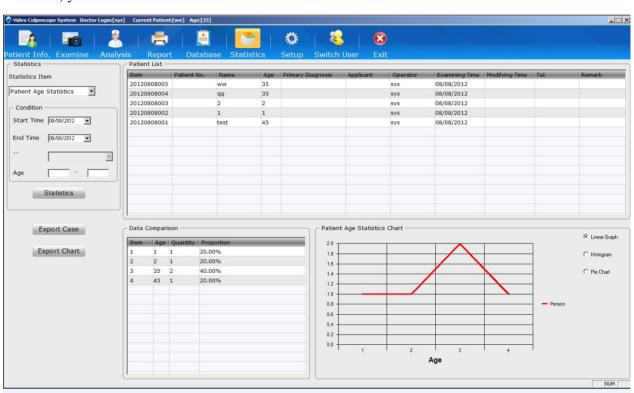


Figure 5-26

Choose a statistics item, input the condition and then click on **Statistics**. The result is shown on the right, including:

Name	Description
Patient List	It lists all the case histories that meet the requirement.
Data Comparison	Compare the case histories that meet the requirement and those that don't meet requirement.
Chart	The image version of the comparison, three formats are provided: Linear Graph, Histogram or Pie Chart.

Click on the circle in front of the chart format, the chart is shown.

Linear Graph

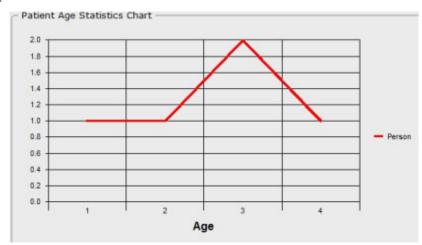


Figure 5-27

Histogram

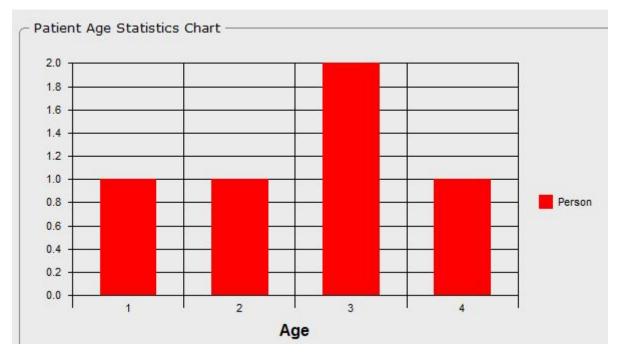


Figure 5-28

Pie Chart

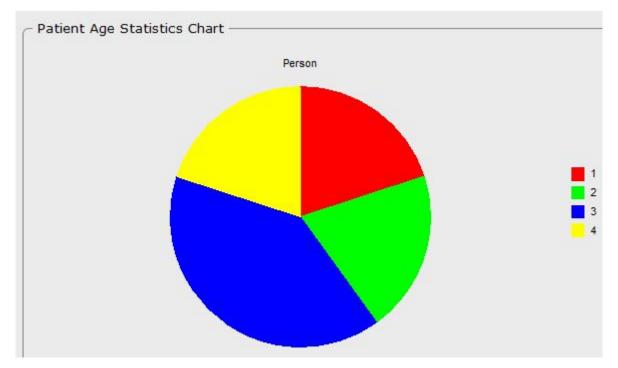


Figure 5-29

5.9.2 Exporting Case Histories

The case history list can be exported into an Excel file.

After statistics is taken, click on the **Export Case** button. Select a directory, input the file name and then click on **Save**.

The Excel file is saved in the target directory.

NOTE:

You should install the Microsoft Office software in the system before you can open the exported file.

5.9.3 Exporting Chart

The chart can be exported into an Excel file, including the data comparison list and chart.

After statistics is taken, click on the **Export Chart** button. Select a directory, input the file name and then click on **Save**.

The Excel file is saved in the target directory.

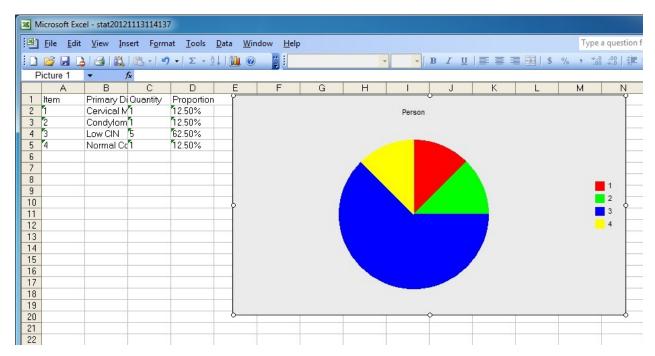


Figure 5-30

5.10 Switching User

The authorities of each user vary. You can switch user without exiting the system.

Click on the **Switch User** button Switch User in the tool bar to open the login menu.



Figure 5-31

Select a user name and then input the correct password. Click on **Login**, the user is switched. Or click on **Exit**, the previous user remains.

5.11 System Setup

5.11.1 Inputting Hospital Information

You are recommended to input the hospital information, which appears in the examination report.

- 1) Click on the **Setup** button Setup to open the **User Management** interface.
- 2) Input the hospital name, address and telephone number in the **Hospital Information** area. Click on the icon to import a picture of the hospital logo.
- 3) Click on OK.
- 4) Click on **OK**. Exit the system and restart the software immediately.

5.11.2 Adding a User

You can add a user on the User Management interface.

- 2) In the **User Info.** area, input the user name, type and password (**Confirm Password** should be the same as **Password**). Click on the icon next to **Signature** to import a picture signature of this user, choose the authority.
- 3) Click on **Add**. This user is added to the user list on the right.
- 4) Click on **OK**. Exit the system and restart the software immediately.

5.11.3 Modifying User Information

You can modify a user's information on the **User Management** interface.

- 1) Click on the **Setup** button Setup to open the **User Management** interface.
- 2) Select a user in **User List**, his/her information is shown on the left. You can edit the information directly.
- 3) Click on Modify.
- 4) Click on **OK**. Exit the system and restart the software immediately.

5.11.4 Deleting a User

You can delete a user on the User Management interface.

to open the User Management interface.



- 1) Click on the **Setup** button
- 2) Select a user in User List.
- 3) Click on Delete.
- 4) Click on OK.
- 5) Exit the system and restart the software immediately.

5.11.5 Adding an Applicant

You can add an applicant on the General Setup interface.

- 1) Click on the **Setup** button setup and then the **General Setup** button.
- 2) Input the applicant name in the **Applicant Information** area.
- 3) Click on Add.
- 4) This applicant is added to the applicant list.
- 5) Click on OK.
- 6) Exit the system and restart the software immediately.

5.11.6 Deleting an Applicant

You can delete an applicant on the **General Setup** interface.

- 1) Click on the **Setup** button setup and then the **General Setup** button.
- 2) Select an applicant in the applicant list.
- 3) Click on **Delete**.
- 4) Click on **OK**.
- 5) Exit the system and restart the software immediately.

5.11.7 Setting the Video Capture Card

You can set the video capture card on the **General Setup** interface.



2) Click on the **Capture Card Setup** button. On the displayed interface, set brightness, contrast, hue, and saturation based on actual requirements by inputting a specific value or dragging the slider. The setting will take effect immediately.

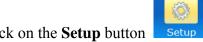
3) Click on **Exit**.

NOTE:

You can click on the **Restore Factory Config** button to restore to the default setting.

5.11.8 Changing Date Format

You can change the data format on the **General Setup** interface.



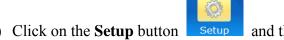
- 1) Click on the **Setup** button and then the **General Setup** button.
- 2) Choose a data format in the **Date Format** pull-down menu.
- 3) Click on **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The date is shown in the same format as that of the operation system by default, unless the date format is changed.

5.11.9 Choosing Foot Switch Function

When the foot switch is stepped, the system captures the image. As an option, you can choose to freeze and capture the image when stepping on the foot switch. When the image is frozen, step the foot switch and stop capatuing the image.



- 1) Click on the **Setup** button Setup and then the **General Setup** button.
- 2) Choose Capture Image Only or Freeze & Capture Image.
- 3) Click on OK.
- 4) Exit the system and restart the software immediately.

5.11.10 Switching Report Export On or Off

You can switch the report export function on or off.



- and then the **General Setup** button. 1) Click on the **Setup** button
- 2) Select or deselect the **Export** item.
- 3) Click on **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

When you tick **Export** in **General Setup**, the **Export** button is displayed.

5.11.11 Switching To PACS On or Off

You can activate **To PACS** in **General Setup**.



- 1) Click on the **Setup** button Setup and then the **General Setup** button.
- 2) Tick or untick **To PACS**.
- 3) Click on **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

When you tick To PACS, it will display on the Report interface.

5.11.12 Switching Run on Startup On or Off

For operation convenience, you can choose to run the software automatically after startup.



- 1) Click on the **Setup** button setup and then the **General Setup** button.
- 2) Select or deselect the **Run on Startup** item.
- 3) Click on OK.
- 4) Exit the system and restart the software immediately.

NOTE:

If you run on startup in windows7 system, you need to close User Acount Control (UAC) as follows:

- 1. Select *Start* button, input *uac* in the search box to enter **Change User Account Control Settings**.
- If you want to turn off UAC, please slide the column to Never notify and select OK. If the system indicates to enter administrator password, please input it and restart your computer.

5.11.13 Switching Patient Appointment On or Off

You can switch the patient appointment function on or off.

- 1) Click on the **Setup** button and then the **General Setup** button.
- 2) Select or deselect the **Patient Appointment** item.
- 3) Click on **OK**.
- 4) Exit the system and restart the software immediately.

5.11.14 Database Backup

You can backup data in **Database**.



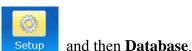
- 1) Click on the **Setup** button
- and then the **Database** button.
- 2) Select the backup path and the default path is D:\DataBaseBackup.
- 3) Select Backup Type (Auto Backup or Manual backup). If you select auto backup, please select the days (1-100) and it starts backup after restart the system; if you select manual backup, please click **Start Backup** and it stars backup immediately.
- 4) Click on **OK**.
- 5) Exit the system and restart the software immediately.

NOTE:

You can backup the image in manual back which is invalid in auto backup.

5.11.15 Database Restoring

You can rebuild data in **Database**.



- 1) Click on the **Setup** button
- 2) Select Rebuild Path.
- 3) Click **Start Restoring**.
- 4) Click on **OK** after restoring.
- 5) Exit the system and restart the software immediately.

5.11.16 DICOM Setup

DICOM is short for Digital Imaging and Communications in Medicine which includes Digital Imaging in medicine and Communications.



- 1) Click on the **Setup** button and then the **DICOM Setup**.
- Tick Enable DICOM.
- 3) Input the PACS IP, Port Number, Calling AE Title and Called AE Title according to your server configuration.
 - ◆ PACS IP: PACS server IP address
 - ◆ Port Number: Port number of PACS server
 - ◆ Calling AE Title: Please input according to the server configuration. If it is not

configured by server, it is suggested to input with capital English character by yourself.

- ◆ Called AE Title: Please input according to the server configuration.
- 4) Click on OK.

NOTE:

- 1. Please enable DICOM first and the DICOM related configuration should be inputted correctly.
- 2. Before you use DICOM, please ensure that the system connects to the server successfully.

5.12 Exit



Click on the **Exit** button in the tool bar. Click on **Yes** to exit or click on **No** to keep the system.

Chapter 6 Maintenance and Cleaning

6.1 Inspection

(1) Visual Inspection

Prior to using the system every time, perform the following inspections:

- 1) Check the system and accessories to see if there is any visible evidence of damage that may affect patient's or the operator's safety.
- 2) Check all the outer cables, power socket and power cables for damage and connection.
- 3) Check if the system functions properly.

If any damage is detected, stop using the system on the patient. Replace the damage part(s) or contact the manufacturer for service before reusing it.

(2) Routine Inspection

The overall check of the system, including safety check and function check, should be performed by qualified personnel every 12 months or according to local regulations, and each time after service.

The equipment should undergo periodic safety testing to ensure proper patient isolation from leakage currents. This should include leakage current measurement and insulation testing. The recommended testing interval is once a year or as specified in the institution's test and inspection protocol.

WARNING

Failure on the part of the responsible individual hospital or institution employing the use of this equipment to implement a satisfactory maintenance schedule may cause undue equipment failure and possible health hazards.

6.2 Daily Maintenance

Work Station:

- ◆ To avoid the potential accidence resulted from unexpected power lost or unsteady power supply, it is recommended to connect the system to a UPS.
- ◆ This system is medical equipment. Third party software without authorization is prohibited to be installed to protect the system from virus and crash.
- ◆ To ensure the normal work of the operation system and the software, do not delete or modify the files on the hard drive.

Camera:

- ◆ When the camera is not in use, turn off the power and cover the lens with the dust cover.
- ◆ Do not touch the lens with fingers. The grease on the fingers may damage the plating film on the lens, and the finger print may infect the image quality as well.

6.3 Cleaning

The system should be kept clean from dust, medical solution and reagent. Clean the system when necessary.

Clean the external dust:

- 1. Switch off the system and remove the power cord.
- 2. Wipe the external surface of the workstation components, camera and cables with a soft cloth dampened in cleaning solution.
- 3. Wipe the surface with a soft dry cloth.

Cleaning the lens:

- 1. Wipe the dust off the lens with a soft brush.
- 2. Apply a drop of lens cleanser on a dedicated cleaning cloth, and wipe the lens gently.
- 3. Clean the lens with a soft dry cloth in the end.

WARNING

Make sure the power is off and the power cords are disconnected prior to cleaning the system.

CAUTION:

- 1 The system components are not waterproof. Do not immerse any components in water or allow liquids to enter the cases.
- 2 In case of liquid splashing on the equipment, wipe it with dry cloth immediately to stop the liquid from entering the interior. Stop using the system and contact the service personnel if accidental wetting occurs.
- 3 Do not allow any remaining solution on the surface of the equipment, wipe it clean with a cloth.
- 4 Do not use strong solvent, for example, acetone.
- 5 Never use an abrasive such as steel wool or metal polish.
- 6 Make sure a dedicated cleaning cloth is used when cleaning the lens. Common paper or tissue may scratch the lens.
- 7 Only dedicated lens cleanser should be used to clean the lens, and it should not be applied on the lens directly.

6.4 Disinfecting and Sterilizing

This system does not have direct contact with the patient, and in order to protect the product, disinfecting and sterilizing are not recommended unless this is necessary according to your hospital regulation.

Clean the equipment prior to disinfecting and sterilizing. Make sure no liquid enters the cases, and the surface must be wiped clean in the end.

Chapter 7 Warranty and Service

7.1 Warranty

EDAN warrants that EDAN's products meet the labeled specifications of the products and will be free from defects in materials and workmanship that occur within warranty period.

The warranty is void in cases of:

- a) damage caused by mishandling during shipping.
- b) subsequent damage caused by improper use or maintenance.
- c) damage caused by alteration or repair by anyone not authorized by EDAN.
- d) damage caused by accidents.
- e) replacement or removal of serial number label and manufacture label.

If a product covered by this warranty is determined to be defective because of defective materials, components, or workmanship, and the warranty claim is made within the warranty period, EDAN will, at its discretion, repair or replace the defective part(s) free of charge. EDAN will not provide a substitute product for use when the defective product is being repaired.

7.2 Contact information

If you have any question about maintenance, technical specifications or malfunctions of devices, contact your local distributor.

Alternatively, you can send an email to EDAN service department at: support@edan.com.cn.

Appendix 1 Product Specifications

NOTE:

Specifications of the printer and the monitor are shown in their accompany files.

A1.1 Environmental Specifications

Working	Temperature:	+5 °C ~ + 40 °C (+41 °F ~ +104 °F)
	Relative Humidity:	25% ~ 80% (non-condensing)
	Atmospheric Pressure:	860hPa ~ 1060hPa
	Temperature:	-20 °C ~ +55 °C (-4°F ~ +131 °F)
Transport and Storage	Relative Humidity:	25% ~ 93% (non-condensing)
	Atmospheric Pressure:	700hPa ~ 1060hPa

A1.2 Physical Specifications

	'	
	Workstation: $637 \times 510 \times 1235$ (mm)	
Dimensions	The allowable deviation is 5mm.	
Differisions	Camera: The whole height for the camera is 1125±10 (mm); the	
	diameter for the stand isΦ450±5 (mm).	
Weight	Approx. 55kg	
Dawar Sumly	Operating Voltage and Input Voltage: 110V 1.4A / 220V 0.7A	
Power Supply	Operating Frequency: 50Hz/60Hz	
Fuse	Size: Φ5mm*20mm; Model: T5AH 250V.	
Standards Compliance	IEC 60601-1:2005, EN 60601-1:2006, IEC 60601-1-2:2007 EN 60601-1-2:2007	
Anti-electric Shock Type	Class I equipment	
Working System	Continuous operation equipment	
Degree of Protection against Harmful Ingress of Water	Worksatation/Camera: Ordinary equipment (sealed equipment without liquid proof) Pedal: IPX8	

Degree of Safety in Presence of Flammable Gases	Equipment not suitable for use in presence of flammable gases	
Disinfection/Sterilizing Method	Refer to this user manual for details	
EMC	CISPR 11 Group 1 Class A	
Camera		
Pixel:	440000	
Magnification:	1 ~ 28 x (C3); 1 ~ 36 x (C6)	
Focus:	Manual, Auto	
Output interface and video mode:	S-VIDEO, PAL/NTSC	
Operation Distance:	1 ~ 28 x: 170-300mm (C3); 1~36 x: 170-300mm(C6)	
Vertical resolution:	> 470 lines	
Camera illumination:	White ring shape LED group	
Illumination:	≥1600Lux	
Green Filter:	3 levels	
SNR:	> 50dB	
Vision scope:	150mm>Ф>10mm	

Appendix 2 Troubleshooting

A2.1 Trouble with Starting Up

Phenomenon	Possible Cause	Solution
After switching on, the	No AC mains connected.	Check if the power cord is damaged. Check if the power cord is well connected to the power socket of the monitor and hospital AC outlet.
monitor has no display and the fan does not run.	The fuses are blown.	Replace the fuses.
the fan does not run.	Main control board defective.	Replace the main control board.
	The memory bank fails.	Install it again or replace the memory bank.
The fuses blow when	Power board fails.	Replace ATX power supply.
switching on the monitor.	Power board fails.	Look for the short circuit source and fix it.
Abrupt switching off.	The colposcope is stricken by strong high voltage, such as lighting strike.	Check the power supply and grounding system.
	Bad power supply performance.	Replace power supply.
	Power input defective.	Check power supply.
	Main control board defective.	Replace the main control board.

A2.2 Trouble with Monitor Display

Phenomenon	Possible Cause	Solution
Panel power indicator is off.	ATX input cable is loose.	Tighten the ATX input cable.
	Power cable in host is loose.	Open the host to check.

	AC mains voltage is over low.	Check AC mains voltage.
	ATX power fails.	Replace ATX power.
	Mainboard fails.	Replace the mainboard.
Monitor power	Power cable is loose.	Tighten the power cable.
indicator is off.	Displayer fails.	Replace the displayer.
	Host machine fuse is blown.	Replace the fuse.
Device power indicator is off.	Power input cable is loose.	Tighten the cable.
	Power input cable is loose.	Open the host to check it.

A2.3 Trouble with Operating System

Phenomenon	Possible Cause	Solution
You have no access to BIOS after entering Windows system and the device works with rolling.	Hard disk is loose or damaged.	Plug the hard disk or replace it.
	Memory bank is loose or damaged.	Plug the hard disk or replace it.
	The operating system is not installed.	Install the operating system and software.
Stop at the blank screen after entering	The hard disk is formatted unexpectedly.	Install the operating system and software again.
BIOS.	BIOS setting is wrong.	Configure BIOS by default.

A2.4 No Access to Video Colposcope Software and Error Reporting

Phenomenon	Possible Cause	Solution
	Start too many tasks	
Unsuccessful	when starting the	
connection to data	device or start the	Start the software again.
base.	software before data	
	base running.	

	1. Open data base installing catalog. Eg.
	Open D:\EDAN\Cx_Database\data and
Data base service does	delete postmaster.pid.
not start.	2. Click on Start > Control Panel >
	Administrative Tools > Services and
	enable postgresql-8.3 .

A2.5 Access to Video Colposcope Software with Error Reporting

Phenomenon	Possible Cause	Solution
Video module	Video module breaks down.	Restart the computer.
initialization fails.	Video grabber breaks down.	Check the video grabber.
Insufficient disk space.	The disk space is insufficient to use.	Release some space.
Unsuccessful	Select the incorrect printer in the printing setting.	Open print setting dialogue box and select the desired printer.
connection to the printer.	Printing drive is not installed correctly.	Install the printing drive again.
	No connection to the printer.	Connect to the printer.
Please confirm whether PDFCreator 0.9.6.0 is installed.	No PDFCreator 0.9.6.0 is installed.	Install PDFCreator 0.9.6.0.
WorkStation of Colposcope stops working.	The software breaks down.	Close the system and start the software again.

A2.6 Trouble with Image Display

Phenomenon	Possible Cause	Solution
	The connecting cable is damaged.	Replace the connecting cable.
The camera power indicator is off.	The connecting cable is loose.	Tighten the connecting cable.
	The connecting cable in the device is damaged or	Open the back cover and check it.

	loose.	
	The connecting cable in the camera is damaged.	Open the plastic cover to check it.
	The circuit in the camera breaks down.	Replace the inner circuit.
	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is loose.	Tighten the connecting cable.
	The connecting cable in the device is damaged or loose.	Open the back cover and check it.
Blank screen	The connecting cable in the camera is loose.	Open the plastic cover to check it.
	The circuit in the camera breaks down.	Replace the inner circuit.
	The video grabber breaks down.	Replace the video grabber.
	The shooting module breaks down.	Replace the shooting module.

A2.7 Trouble with Printing

Phenomenon	Possible Cause	Solution	
	USB cable is loose	Check USB connection.	
	The connecting cable in	Check the connecting cable in the	
The device cannot	the device is loose.	device.	
find the printer.	Printer drive fails.	Install the drive again.	
	Select the wrong printer.	Select the printer in the colposcope the same as that in the windows printing setting.	
Print Error	USB cable is loose.	Start windows again.	
	The printer breaks down.	Replace the printer.	
Printer power indicator is off.	The power fuse is blown.	Replace the fuse.	
	The connecting cable is damaged.	Replace the connecting cable.	

l loose.

A2.8 Trouble with DVD Writer

Phenomenon	Possible Cause	Solution
The device cannot	The connecting cable is damaged.	Replace the connecting cable.
find the drive.	The connecting cable is loose.	Tighten the connecting cable.
The device cannot	The software breaks down.	Write the DVD again.
write the CD.	The DVD breaks down.	Replace the DVE writer.

A2.9 Trouble with Identifing U Disk or Other USB Device

Phenomenon	Possible Cause	Solution
	The drive fails.	Replace the device or contact the service provider.
U disk or other USB device cannot be	The connecting cable is damaged.	Replace the connecting cable.
identified.	The connecting cable is loose.	Tighten the connecting cable.
	USB interface board is damaged.	Replace the board.

A2.10 Trouble with Keyboard Input

Phenomenon	Possible Cause	Solution
	The indicator or the board is damaged.	Replace the board.
Keyboard indicator is	The connecting cable is damaged.	Replace the connecting cable.
off.	The connecting cable is loose.	Tighten the connecting cable.
	The board is damaged.	Replace the board.
The keyboard inputs	The keyboard is	Replace the keyboard.

incorrectly or cannot	damaged.	
input.	The board is damaged.	Replace the board.

A2.11 Trouble with Mouse

Phenomenon	Possible Cause	Solution
	USB interface board is damaged.	Replace the board.
The mouse indicator	The connecting cable is damaged.	Replace the connecting cable.
is off.	The connecting cable is loose.	Tighten the connecting cable.
	The mousse is damaged.	Replace the mouse.
The mouse cannot be	The mousse is damaged	Replace the mouse.
identified.	Something is wrong with the operating system.	Replace the mouse.
The mouse is not sensitive.	Something is wrong with the mouse.	Replace the mouse.

A2.12 Trouble with the Camera

Phenomenon	Possible Cause	Solution
Annular LED	Annular LED board breaks down.	Replace the annular LED board.
	Drive circuit breaks down.	Replace the contral board.
indicator is off.	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is loose.	Tighten the connecting cable.
	The circuit breaks down.	Replace the contral board and key board.
The button is not sensitive or cannot control the camera.	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is damaged.	Tighten the connecting cable.
	The shooting module breaks down.	Replace the shooting module.

A2.13 Trouble with Foot Switch

Phenomenon	Possible Cause	Solution
	The connecting cable is damaged.	Replace the connecting cable.
The foot swith does	The connecting cable is loose.	Tighten the connecting cable.
not respond.	The foot switch breaks down.	Replace the foot switch.
	Mainboard serial interface breaks down.	Replace the mainboard.

A2.14 Blown Fuses

WARNING

Turn off the system power and remove the power cord before changing the fuse.

The fuse compartment is located on the back of the trolley under the power socket, in which two fuses are installed. Specifications of the fuses are: Size: Φ5mm*20mm; Model: T3.15AH 250V.

When a fuse is blown, perform the following procedure to replace it:

- 1) Turn off the system power by pressing the power switch on the left of the trolley.
- 2) Move the trolley to an open location with the back facing out. Pull up the the cable clip and then remove the power cable.
- 3) Use a screw driver or a pair of pliers to prize the fuse compartment outwards open.





Figure A-1

- 4) Push the fuse up from the bottom of the container with the screw driver or pliers.
- 5) Take the fuse out and replace it with a new one that is supplied by the manufacturer or of the same specifications.
- 6) Push the fuse container all the way back in position.

Appendix 3 Ordering Information

Caution

Please use the attachment provided or approved by EDAN. If you adopt other attachment, please follow the user manual.

The part provided by EDAN is as follows:

Parts	Part Number
Printer	11.18.052277
Foot Switch	31.10.027149
Mouse	11.18.052279
Power Cord (European Standard)	01.13.36014
Power Cord (American Standard)	21.13.036384

Appendix 4 EMC Information – Guidance and Manufacture's Declaration

A4.1 Electromagnetic Emissions – for all EQUIPMENT and SYSTEMS

Guidance and manufacture's declaration – electromagnetic emission

The C3, C6 Video Colposcopes are intended for use in the electromagnetic environment specified below. The customer of the user of the C3, C6 Video Colposcopes should assure that it is used in such and environment.

Emission test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The C3, C6 Video Colposcopes use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emission CISPR 11	Class A	
Harmonic emissions IEC 61000-3-2	Class A	The C3, C6 Video Colposcopes are suitable for use in all establishments, other than domestic and those directly connected to the public low-voltage power supply network that
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	supplies buildings used for domestic purposes.

A4.2 Electromagnetic Immunity – for all EQUIPMENT and SYSTEMS

Guidance and manufacture's declaration – electromagnetic immunity

The C3, C6 Video Colposcopes are intended for use in the electromagnetic environment specified below. The customer or the user of C3, C6 Video Colposcope should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines	± 2kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line to line ± 2 kV line to ground	± 1 kV line to line ± 2 kV line to ground	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50Hz/60Hz) magnetic field IEC61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

	< 5% U _T	< 5% U _T	
	·	·	
	(> 95% dip in U _T)	(> 95% dip in U _T)	
	for 0.5 cycle	for 0.5 cycle	
			Mains power quality should
	40% U _T	40% U _T	be that of a typical commercial or hospital
Voltage dips, short	(60% dip in U _T)	(60% dip in U _T)	environment. If the users of
interruptions and voltage variations	for 5 cycles	for 5 cycles	the C3, C6 Video Colposcopes require continued operation during
on power supply input lines	70% U _T	70% U _T	power mains interruptions, it is recommended that the
IEC 61000-4-11	(30% dip in U _T)	(30% dip in U_T)	C3, C6 Video Colposcope
	for 25 cycles	for 25 cycles	be powered from an uninterruptible power supply or a battery.
	< 5% U _T	< 5% U _T	
	(> 95% dip in U _T)	(> 95% dip in U _T)	
	for 5 sec	for 5 sec	

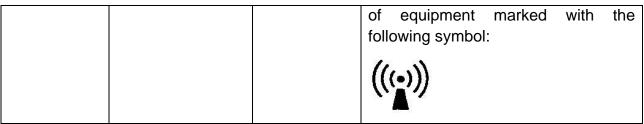
NOTE: U_T is the a.c. mains voltage prior to application of the test level.

A4.3 Electromagnetic Immunity – for EQUIPMENT and SYSTEM that are not LIFE-SUPPORTING

Guidance and manufacture's declaration – electromagnetic immunity

The C3, C6 Video Colposcopes are intended for use in the electromagnetic environment specified below. The customer or the user of C3, C6 Video Colposcopes should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the C3, C6 Video Colposcopes including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Conducted	3 V _{rms}	3V _{rms}	Recommended separation distance
RF IEC 61000-4-6	150 kHz to 80 MHz		$d = \left[\frac{3.5}{V_1}\right] \sqrt{P}$
01000-4-0		3 V/m	$d = \left[\frac{3.5}{E_1}\right] \sqrt{P}$ 80 MHz to 800 MHz
Radiated RF	3 V/m 80 MHz to 2.5 GHz		$d = \left[\frac{7}{E_1}\right] \sqrt{P}$ 800 MHz to 2.5 GHz
61000-4-3			Where <i>P</i> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <i>d</i> is the recommended separation distance in meters (m).
			Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a) should be less than the compliance level in each frequency range. b)
			Interference may occur in the vicinity



NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the C3, C6 Video Colposcopes are used exceeds the applicable RF compliance level above, the C3, C6 Video Colposcopes should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the C3, C6 Video Colposcopes.
- b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

A4.4 Recommended Separation Distance

Recommended separation distances between portable and mobile RF communications equipment and the C3, C6 Video Colposcopes

The C3, C6 Video Colposcopes are intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the C3, C6 Video Colposcopes can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the C3, C6 Video Colposcopes as recommended below, according to the maximum output power of the communications equipment.

	Separation distance according to frequency of transmitter (m)			
Rated maximum output power of	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz	
transmitter (W)	$d = \left[\frac{3.5}{V_1}\right] \sqrt{P}$	$d = \left[\frac{3.5}{E_1}\right] \sqrt{P}$	$d = \left[\frac{7}{E_1}\right] \sqrt{P}$	
0.01	0.12	0.12	0.23	
0.10	0.37	0.37	0.74	
1.0	1.2	1.2	2.3	
10	3.7	3.7	7.4	
100	12	12	23	

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

P/N: 01.54.455506-13



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