序号	时间	更改内容	更改人	标记	数量

EQ-600 牙科 X 射线摄影用影像板成像装置

EQ600 英文使用说明书

印刷技术要求：

1. 使用 297mm*210mm，128g 铜版纸。
2. 封面彩色印刷。
3. 字迹清晰，无歪斜，无污迹，模糊及变形。

涉及字体，思源黑体 CN Regular，方正黑体简体，方正大黑简体。

拟 制		EQ600 英文使用说明书	代号：EQP050000046		
审 核					
工 艺			版 本	第 1 张	共 1+73 张
批 准			V1.00		

S4

VRN

EQ–600

Image Plate Scanner

User Manual

Guilin Veirun Medical Technology Co., Ltd.

CE

CONTENTS

Copyright & Declaration

Congratulations on your purchase of EQ–600 Image Plate Scanner from Guilin Veirun Medical Technology Co., Ltd.   .It will bring you a new experience and convenience.

The manual is compiled in accordance with the relevant laws and regulations of China and the specific conditions of the EQ–600 manufactured by Guilin Veirun Medical Technology Co., Ltd. The manual includes the latest information as of the time of printing. Guilin Veirun Medical Technology Co., Ltd.   is solely responsible for the revision and explanation of the simplified Chinese version of the manual, and reserves the right to change the relevant content after the manual is printed without prior notice.

The pictures involved in this manual are schematic diagrams and are for reference only. If the pictures do not match the actual product, the actual product shall prevail.

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The operator must strictly follow this manual to operate. Otherwise, Guilin Veirun Medical Technology Co., Ltd.　shall not be responsible for any errors and equipment failures caused by illegal operations.

Limited quality guarantee：

The manual of EQ-600 clarifies the product quality assurance responsibilities, after-sales service rights and obligations between Guilin Veirun Medical Technology Co., Ltd. and users, as well as the agreements of generation and termination.

If the device sold by Guilin Veirun Medical Technology Co., Ltd. and its authorized agents breaks down due to manufacturer or material problems during normal use, Guilin Veirun Medical Technology Co., Ltd. will provide one-year free service from the date of device installation.

The obligation of Guilin Veirun Medical Technology Co., Ltd. under this guarantee is only for maintenance, and does not include economic losses or additional costs caused by the device deactivation.Examples include:

- ■ Freight（including customs charges）.
- ■ Economic and time losses caused by the inability to use the device.
- ■ Boarding, meals or other travel expenses.
- ■ Loss caused by inconvenience.
- ■ Other expenses.

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service rights will be regarded as unconditionally and permanently waived.

- Device that are not used normally, are not maintained or are damaged.
- Use accessories not provided or approved by Guilin Veirun Medical Technology Co., Ltd. .
- The user or others do not follow the manual of EQ–600 to operate, resulting in misoperation and damage to the device caused by negligence.
- Replace parts not approved by Guilin Veirun Medical Technology Co., Ltd. or people who are not authorized by Guilin Veirun Medical Technology Co., Ltd. to maintain, repair or modify the device.
- Components are disassembled, stretched and re–commissioned

If the various hospitals or institutions that use the device that do not implement a set of standardized maintenance plans, the device will invalid.

Guilin Veirun Medical Technology Co., Ltd. will provide a circuit diagram for a fee when the user requests it, and a list of calibration methods and other information will be provided to help

the user to have qualified technicians to repair those Guilin Veirun Medical Technology Co., Ltd. believes that the user can repair and maintenance of the device part.

⚠️ **Notes：**

Guilin Veirun Medical Technology Co., Ltd.　does not promise that the device will be used for a certain special purpose and make any implied guarantee for its marketability and applicability.

We encourage you to call us when you have some problems.Our company's user service department has opened a user technology and service hotline to provide users with technical support and troubleshooting.

If the device breaks down, please keep the relevant samples and immediately notify the authorized agent of Guilin Veirun Medical Technology Co., Ltd.　or directly contact the user service department of Guilin Veirun Medical Technology Co., Ltd. .

If the device breaks down and cannot be solved by telephone guidance, Guilin Veirun Medical

Technology Co., Ltd.   will send professional engineers or regional service representatives to provide you with timely and complete services.

Product Information

Product name：Image Plate Scanner
Model：EQ–600
Manufacturer name：Guilin Veirun Medical Technology Co.,Ltd.
Address: No. D–07 Information Industry District, High–Tech Zone, 541004 Guilin, Guangxi, PEOPLE'S REPUBLIC OF CHINA
Tel: +86(773)5880619   Fax:+86(773)2260519
Web: www.veirun.com   E–mail: info@veirun.com
SRN：CN–MF–000035683
Version No.：07/2020   Date：July 2020

Date of manufacture

Refer to product label for detail

Use by date

The service life of the device is designed for 5 years.

Technical Support

We encourage you to call us when you have some problems.Our company's user service department has opened a user technology and service hotline to provide users with technical support and troubleshooting.

If the device breaks down, please keep the relevant samples and immediately notify the authorized agent of Guilin Veirun Medical Technology Co., Ltd. or directly contact the user service department of Guilin Veirun Medical Technology Co., Ltd. .

If the device breaks down and cannot be solved by telephone guidance, Guilin Veirun Medical Technology Co., Ltd. will send professional engineers or regional service representatives to provide you with timely and complete services.

How to use the manual

The manual contains general information about the use of the device, which is a guide for new users to use. Users read the manual from beginning to end before using it for the first time.If you also read the manual, you will learn about the characteristics and operating methods of the device.In your daily use, you can use the content to quickly find the information you need.

The manual includes the operation,maintenance and precautions of the device. In order to maintain the performance of the device, the device must be operated and maintained in accordance with manual.

Conventions used in the manual：

⚠**Notes**：

It is the information you should know how to avoid harm to the operator or others.

⚠**Notes**：

It is the information you should know how to avoid damage to the device and lead to unreliable analysis results.

Guilin Veirun Medical Technology Co., Ltd. is hereinafter referred to as VRN.

CHAPTER Ⅰ Safety Guidelines

This chapter provides important safety information for the use EQ−600.

1.1 Intended Use

Cooperate with diagnostic X−ray equipment to realize the display, storage and transmission of digital images, etc.

1.2 Contraindication

Use with caution in children and pregnant women.

1.3 Structure

The product is composed of image plate scanner, power adapter, image plate, protective bag of image plate, software of dental image plate scanner control system .

1.4 Warnings and Notes

In order to use the product safely and effectively, and avoid the possibility of system invalidation, you must firstly be familiar with the operating methods of Windows, and read the manual carefully, and ensure that you are familiar with the correct operating methods of PC. The following warnings and precautions is required special attention during operation.

⚠Notes:

1.This product is not suitable for the family.
2.The pictures and windows in the manual are for reference only.

1.4.1　Safety Warnings

⚠ **Warnings：**
1. It's not following the safety instructions to operate device and system that may endanger patient safety.The manufacturer is not liable for damages caused by improper use.
2.The product should be installed by a qualified service engineer. Do not turn on the power supply until all cables are installed and confirmed correctly.
3.Before using the system, users should obtain professional training and carefully read the manual.
4.The device is not used for treatment.
5.The device is not used for family..
6.The device's diagnosis and inspection functions should be combined with the patient's clinical research, and the diagnosis results are only for doctors' reference.
7.Explosion hazard–equipment cannot be used in flammable anesthesia gas environment and gas environment mixed with air or Oxygen or Nitrous Oxide.
8.The device does not have any waterproof device, do not use the system where water may enter the equipment.
9.Do not spill any liquid on the system or let it flow into the system, otherwise there is a danger of electric shock.

10.Do not spray cleaning agents on the device to prevent the cleaning agents from entering the device and damaging electronic components. At the same time, avoid organic solvents from forming combustible gases or damaging internal components.

11.Once the device breaks down, please turn off the device immediately and contact VRN or authorized representative.

12.When more than one type of medical device is connected to the patient, the sum of the leakage currents of all devices should be considered. Please use carefully.

13.Electric shock hazard–do not plug or unplug the power supply with wet hands. Make sure that the hands touching the power line are clean and dry.

14.Do not touch the accessible parts of non–medical electrical equipment and patient at the same time.

15.Any non–medical equipment (such as external printer) is not allowed to be used within 1.5m/6ft. from the patient.

16.Do not move the main parts or image plate during working.

17.Only accessories provided and recommended by the manufacturer can be connected to the system.

18.Pay attention to and prevent electrostatic discharge (ESD) and electromagnetic interference (EMI) with other instruments.

19.Using the device under strong electromagnetic interference sources, such as electrosurgical equipment, MRI equipment, etc., may have negative effects.

1.4.2 Cautions

⚠**Cautions：**
  1.Before use, the user must check that the host and accessories have no obvious performance damage that may affect the the patient safety.The recommended inspection cycle is once a week or less.If obvious damage is found, it is recommended to replace the damaged parts before use.
  2.If the power line is missing, damaged or not provided, please select a power line that meets the original specifications and local regulations.
  3.Equipment and accessories should be disposed of in accordance with local regulations, or returned to the manufacturer or distributor for recycling or proper disposal.
  4.Please choose a power line which has standard power as the adapter of network power input to reduce risks.
  5.There is no part of the system that can be repaired by the user. All repairs must be completed by the maintenance person of VRN.

1.4.3 Notes

⚠**Notes：**
In order to avoid damage to the device, please do not use in the following environments：
1.Location in direct sunlight;
2.Environment with drastic temperature changes;
3.Environment with more dust;
4.Near the heat source;

5.Environment with higher humidity.

1.5   Symbol Description

Symbol	Description	Symbol	Description	Symbol	Description
⚠	Caution	○	"OFF" (power)	⟜	USB
⚡	Warning, electricity	∿	Alternating current	⊿	Date of manufacture
⊕	Refer to instruction manual/ booklet	⊸	Power Input	⧗	Use by date
|	"ON" (power)	▲	Manufacturer	⑤	Environment−friendly use period
⌇	Temperature Limit	⊕	Atmospheric pressure limitation	⊗	Humidity limitation

14

Symbol	Description	Symbol	Description	Symbol	Description
SN	Serial number	☀	Keep away from sunlight	↑↑	This way up
(fragile symbol)	Fragile, handle with care	☂	Keep away from rain	(stacking symbol with 3)	Stacking limit by number
(do not roll symbol)	Do not roll	▣	CLASS II equipment	VRN	Manufacturer's logo
(WEEE symbol)	Do not dispose of the product into the ordinary municipal waste or garbage system	C€	CE Marking	EC REP	Authorized representative in the European union
MD	Medical Device	UDI	Unique device identifier		

CHAPTER Ⅱ Product Introduction

2.1 Operational Principle

The EQ−600 Image Plate Scanner (hereinafter referred to as the device) is used to read and process the latent image information stored in the image plate. It consists of laser, optical scanner, photomultipliers, amplifiers, A/D converters and image processing part. It is composed of unit and output interface.After the image plate is installed in the entrance of the image plate scanner, the scanning program is started, and the image plate that need to be interpreted latent image information is scanned line by line, and moving forward at the same time, the image plate can be completely scanned by the laser beam within a predetermined time.The blue fluorescence is excited at the place where the laser is irradiated, and the intensity of the fluorescence brightness has a linear relationship with the density of latent image information at that point.The fluorescence is collected by a high−efficiency photocon arranged along the laser scanning line and introduced into a photomultiplier, thereby converting it into a relative electrical signal.After underwent A/D (analog/digital) signal changes by the circuit

system , it can be used for digital image processing and output to the image display, storage or transmission communication system.

2.2　Technical Parameter

Display: external PC and displayed by the upper computer software.

Operation Method: controlled by the upper computer software.

Threshold Contrast: it should be able to differentiate all four holes with diameters of 1.0mm, 1.5mm, 2.0mm and 2.5mm.

Image Uniformity: no greater than 2%

Effective Scan Image Area: 0#: 22*35mm, 1#: 23*39mm, 2#: 30*40mm, 3#: 26*53mm

Adapter Input: 100 V– 240 V ~ ,50/60Hz,1.5A max.,

　　　output：15V DC,4.8A

Main unit input：15V DC,4.8A
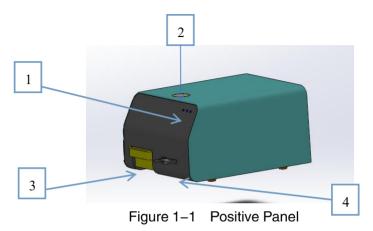
Maximum Input Power: 145 VA

Working Environment: temperature: 10 ℃ ～ 40 ℃; relative humidity: ≤80%; atmospheric

pressure: 70 kPa ~ 106 kPa

Storage and Transport Environment: –20 ℃ ~ 55 ℃; relative humidity: ≤93%; atmospheric pressure: 70 kPa ~ 106 kPa

Dimension: 305 mm ×220 mm×180 mm

Net Weight: 6 kg

Gross Weight: 7 kg

2.3 Components

2.3.1 Front View

Figure 1–1   Positive Panel

1.Indicator Light: after the device is powered on, the indicator light is on, the yellow light indicates the scanning and reading state, and the green light indicates the standby state.

2.Touch Key: control the operation of device.

3.Storage Boxes: place the image plates.

4.Image Plate Tray: place the image plates to be scanned.

2.3.2   Back View

The structure diagram of the rear panel is shown in Figure 1–2.
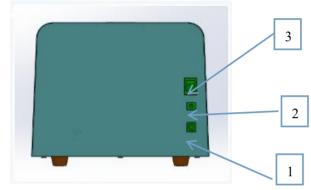
Figure 1−2 The structure diagram of the rear panel

1.USB: communication port, connect to the USB port of PC.

2.Power Socket: connect external power supply.

3.Power Switch: control the device power on and power off.

2.3.3　Image Plate

1.The photosensitive surface of the image plate is white, as shown in the figure:

2.The opposite is black,as shown in the figure:

CHAPTER Ⅲ Product Installation

In order to ensure the performance of the device and achieve satisfactory clinical results, the first installation must be installed and debugged by an engineer sent by VRN or an engineer authorized by VRN and if device has be moved ,the installation and use should be in accordance with the installation procedure.

⚠**Notes：**

Any unauthorized or non-professionally-trained person to install the device may cause damage to the device, which is not covered by company's free warranty. Any person who is not authorized by company shall not install or use the device which has be moved.

3.1   Working Conditions

Normal Working Conditions：

    a）Adapter Input: 100 V– 240 V ~ ,50/60Hz,1.5A max.

    b）Maximum Input Power: 145 VA

    c）Working Environment: temperature: 10 ℃ ~ 40 ℃ ; relative humidity: ≤ 80%; atmospheric pressure: 70 kPa ~ 106 kPa

The computer system (including the monitor) is the user's self–contained accessory, and its configuration requirements are as follows:

Table 1–1 Computer Configuration

Computer system	Standard Configuration	Minimum Configuration
Computer Hardware	CPU: Intel Pentium(R) 4 2.6G	CPU：Intel Pentium(R) 4 1.6G
	Memory:2G DDR high–speed memory	Memory:1G DDR high–speed memory

	Hard Disk:500 G high–speed hard disk	Hard Disk:160 G high–speed hard disk
	Monitor:1280 × 1024 liquid crystals	Monitor:1280 × 1024 liquid crystals
	Graphics Card: 64M or above	Graphics Card:32M or above
	Network Card：Network Card	Network Card：Network Card
Other Hardware	USB2.0 port	
Computer Operating System	Windows7，Windows8，Windows10	

3.2   Open–package Check

a）Carefully take out the device and accessories from the package, save the packing materials for future transportation or storage.

b）Check the accessories following the packing list.

c）Check if the water leaks in to the device or immersion by water.

d）Check if the device has any mechanical damage.

e）Check all exposed wires, inserted parts and accessories

If you have any questions, please contact our company's customer service department or agent immediately

3.3   Power Supply Check

Before installing the device, you must check whether the power supply at the installation site meets the requirements of the device. The specific requirements for the power supply are as follows:

Input Voltage：100 V-240 V～   Frequency：50/60 Hz

⚠**Notes：**

Before connecting the device to the power supply, check to ensure that the electrical plugs are connected correctly and reliably.

⚠**Notes：**

Frequent voltage fluctuations will cause serious degradation of the performance and reliability of the device. The user should solve this problem before using, such as installing an AC voltage stabilizer (prepare by users).

⚠**Notes：**

Frequent power outages will cause serious degradation of the performance and reliability of the device. Users should solve this problem before using, such as installing an uninterruptible power supply (UPS) (prepare by users).

⚠**Notes：**

Please keep the air circulating in the room.

3.4 Power–line Connection

Make sure that the power switch on the rear panel of the device is turned off, the power–line should be plugged into the adapter, and the plug of the adapter should be plugged into the

power socket of the host.

⚠️**Notes：**

The power–line should be connected to a specified socket.

3.5   Connect the device to the computer

a）Turn off the device power.

b）Connect the USB cable to the device and the computer

c）Turn on the device, and then run the application on the computer

3.6   Shutdown

a) Exit the software after using it that day.

b) Turn off the device power.

⚠️**Notes：**

If you use the device again, you should turn on the power of the device firstly, and then run the control software on the computer, otherwise the self–check of the device unsuccessfully.

⚠️**Notes：**
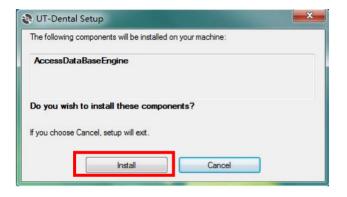
Shutdown mistakenly will easily cause system data loss and cause system operation failure.

3.7　System installation
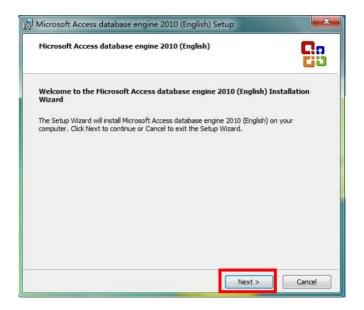
1.Extract the contents of the zip file, open the folder, and click setup.exe, as shown in the figure:

名称	修改日期	类型	大小
AccessDataBaseEngine	2021.1.14 16:16	文件夹	
DotNetFX461	2021.1.14 16:16	文件夹	
setup.exe	2021.1.14 16:15	应用程序	813 KB
UT-Dental.msi	2021.1.14 16:15	Windows Installer ...	62,721 KB
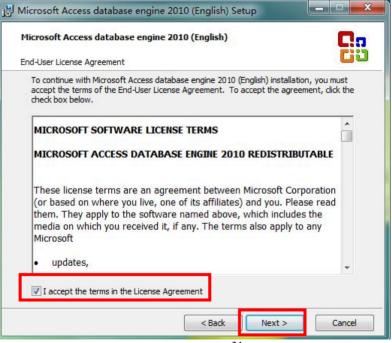
2.Click Install
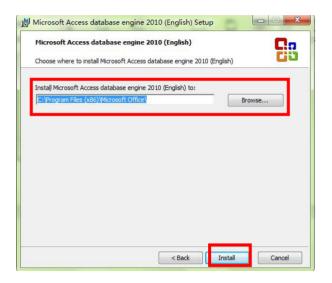
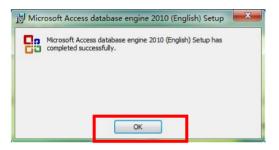3.Automatically install the database, click Next, as shown in the figure:

4. Select Receive and click Next, as shown in the figure:

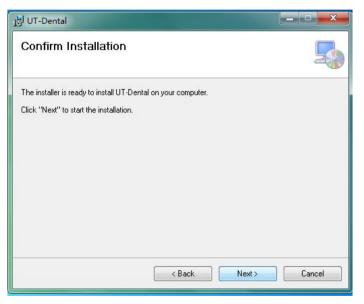5.Select the installation location and click Install.   6.Click OK to next

7.Wait for loading, install the software and click Next, as shown in the figure:
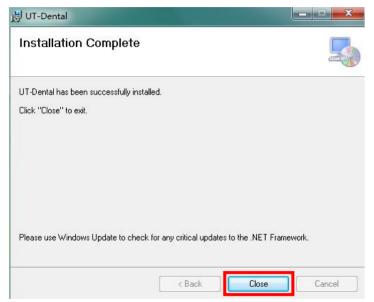
8.Select the installation path and click Next

9.Make sure that the UT–Dental software is installed on your computer, click "Next" , otherwise click "Cancel".

10.The waiting interface of installation process is shown in the figure:

11.The completed interface is shown in the figure,Click "Close" to exit.

CHAPTER Ⅳ   Operation Guidelines of Device

4.1   Image Plate Scanner

4.1.1   User's Quick Guidance

Refer to Section 5.4.5, the device is in the status of reading film, the yellow light is flashing, and the tray is in the push–off status.Place the image plate on the tray with the white side facing up, as shown in the figure below. After placing it, press the touch button on the device panel, and the device will turn the status of scanning images. Wait for a moment for the software to display the image, and the tray will be automatically pushed off. After that and it stabilizes, put the image plate in the storage place, and press the touch button to retract the tray into the device.

4.1.2 Read Image

1. After the device is powered on, click the button **[Start]** in the window, and the image plate slot will move out.
2. Put the image plate to the tray,and touch the black button to read the image.

4.1.3 Standby

Touch the black button, the tray back, and the device turn the standby status.

⚠**Notes：**

1. The device is used to read and erase the image in the image plate. It is connected to

the computer USB.

2. **After the device is connected to the computer and powered on, you need to read the image according to the supporting software.**

3. **Do not pull out the image plate when reading images or when the tray is moving, otherwise the device may be damaged. Please place or remove the image plate when the tray is static.**

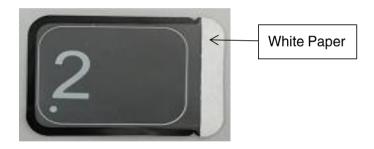## 4.2   Intraoral Image Plate

In order to ensure patient's health, the image plate must be packed in the protecting bag when filming.

Operation Method:

1. Unfold the image plate card, and put the image plate into the card,as shown in the figure.

2. Put the image plate into the protecting bag, and the white side of the image plate faces the black side of the protecting bag.
3. Tear out the white paper on the edge of the protecting bag, and seal the protecting bag. As shown below:

White Paper

4. When using, the black side of the image plate protecting bag is attached to the teeth and aligned with the X–ray machine light outlet.

5. After using, tear out the protecting bag from the cut, and when the host is ready, take the image plate out and place it on the host tray to read the image.

⚠️**Notes：**

After the image plate is placed in the tray, it need to press the touch button immediately to start scanning the image.

The image plate is not compatible with lower specification generators.

Generally, the image plate is compatible with all generators that meet the relevant standards. Either high–frequency or gen   ge within 55 kV –100 kV.

Since the image plate needs to be used multiple times, the photosensitive surface needs to be protected. During the filming process, hands should avoid direct contact with the image plate surface, and avoid hard objects rubbing the photosensitive surface.

4.3   Computer and Monitor

Place the computer and monitor in or near the operating area to ensure that the doctor is within his sight when sitting in the chair. Arranging patients within a visually accessible range is beneficial to enhance communication. This way the system can always be available without

reducing the ergonomics of operating on the chair.

For the visualization of images, a display with current technology display characteristics is selected. Select and set up the monitor according to the process described in the image plate installation guide. Avoid placing the monitor in direct or reflective locations, otherwise it may hinder to reading clinical information.
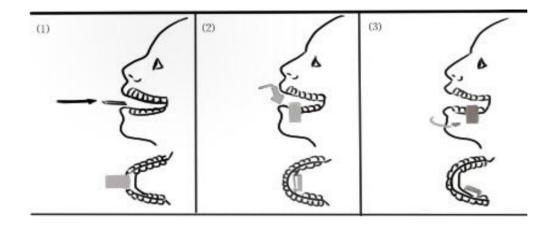
⚠**Notes：**

Adjusted irrelevantly or poor-quality monitor will cause diagnostic errors because the device is not capable of displaying images correctly.

4.4   location

In order to ensure health, the image plate must be packed in an image plate protecting bag when filming.

Put the image plate in the mouth, as shown in the figure:

4.4.1 Underjaw Image Plate

Position the imaging plate and capture underjaw images, please follow the steps as follow:
1. Let the patient to retract the tongue to the back of the mouth, insert the imaging plate and keep it level.

2. Then the image plate will be rotated downward and placed in a vertical position.
3. Slide the image plate in the distal direction so that its center corresponds to the teeth to be irradiated, and let the patient to press the tongue against the back of the image plate. In order to properly enclose the apical area, do not hesitate to compress the oral mucosa. The patient can relax the tongue at this time, and the tongue will naturally fit the image plate.

    For premolars and incisors, it is suggested to move the image plate toward the middle of the oral cavity by compressing the tongue when the oral cavity is close to relaxing the muscles.

4.4.2   Upperjaw Image Plate

Position the imaging plate and capture upperjaw images, please follow the steps as follow:
1. Let the patient to retract the tongue to the back of the mouth, insert the imaging plate and keep it level.
2. Then the image plate will be rotated upward so that it is vertical or parallel to the long axis of the target tooth.
3. Slide the image plate in the distal direction so that its center corresponds to the teeth to be irradiated.Don't worry about using the arc of the palatal arch and placing the image plate in the middle of the oral cavity.

CHAPTER V Operation Guidelines of Software

5.1 Login

5.1.1 User Login

After the software starts successfully, enter the login interface, as shown in Figure 3–1, enter the user name and password, and click 【Login】 to enter the software. If you want to exit the software in the current interface, click the 【Cancel】 (default user name : admin password: 123).

Figure 3–1 User Login

5.1.2 System Interface

After the user logging in, then enter the interface where various functions can be executed. The interface is shown in Figure 3–2.

Figure 3–2 Mian Interface

There is a menu on the main interface, corresponding to the Appointment interface, Patient interface and Statistics interface. Click can be switched quickly–.

5.2 Appointment interface

Click the button on the menu ⬚ 【**Appointment**】 to enter the appointment interface，as shown in Figure 4–1.

Figure 4–1 Setup

This interface can register the patient's appointment information. The settings mainly include finding appointment information, adding new patient, changing patient information and appointment status.

5.2.1　Appointment Information Search

Click the appointment status or the appointment time and then click 【Q Search】【**Search**】,it can quickly select the desired patient.Click 【C Reset】【**Reset**】**, i**t can quickly recover to search status.

5.2.2　Add Appointment

Click 【🗋 Add Appointment】【**Add Appointment**】,it can quickly enter the appointment interface,as shown in Figure 4−2,Where you can register a new appointment.

Figure 4−2 Registration of Appointment Information

In this interface, the number is automatically accumulated, or you can manually modify it yourself, and then fill in the patient's basic information, you can set up the appointment time

and communicate with the referring physician, and determine the type of treatment, you can choose to remark.

5.2.3 Edit

Select the patient and then click the 【Edit】，it can modify patient information,and change the wrong information and click Save to update the patient information.

5.3 Register

Register temporary patients information,and click 【Register】,then quickly go to the registration interface, and the specific functions are described in the subsequent chapters.

5.3.1 Status Change

Double−click the patient information can directly change the patient's arrival situation, as shown in Figure 4−3. In the patient interface, you can search about the reached patients, and reasonably arrange the work time and progress, and you can also check the appointment information and notify the referring physician to arrange the time in advance. And then click 【confirm】,it can automatically go to the patient interface for examination.
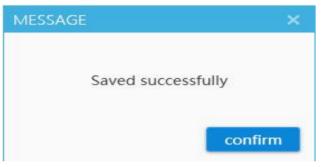
Figure 4–3   Patient status change

5.3.2   Delete

After clicking 🗑 Delete 【Delete】, the selected patient information can be deleted.   .

5.4   Patient Interface

On the menu under the main interface, click the patient, and the center window of the main interface will display the contents of the patient information interface. As shown in Figure 5–1.

Figure 5–1 Patient Interface

In this interface, it is mainly to operate on the patients who have already reached, and quickly carry out the inspection process, so that the examination time is shortened, the operation process is reduced, and it is more suitable for the user's usage habits. There are three small

interface switches on the patient, which is convenient for quick examination of patients in three different situations.

5.4.1   Wait to Exam

In the examination interface,click 【 Edit 】 or double–click the patient information to enter the registration interface. Click 【 Add 】 can enter the registration interface directly.Click 【 Delete 】 can delete patient information who is waiting to exam. Click 【 Exam 】can enter the CliniView of the registered patient ,and check the dental film.

5.4.2   Register

It is mainly used to record basic patient information, as shown in Figure 5–2. Basic patient information and selection of teeth position detection. There are two skip methods to the registration interface. One is to double–click the arrived patient , and the information of the patient's appointment will be automatically filled, just select the teeth position and click 【 Exam 】, it can quickly examination，and then click 【 Confirm 】 to save the modified information.

Figure 5–2 Registration Interface

5.4.3 Examined

The examined interface is mainly used for customers' return visits and printing after examination.Its function is mainly to view the history, the second examination, and the result processing three functions. View the history record, you can quickly find the patient information by the filter at the top. After clicking the patient information, the patient examination record information on the right. If the patient has multiple examinations, you can select the record here.Double–click the record to skip to the examination interface, you can view the selected record easily. The function of the second exam is very convenient. Select the current patient and click New Exam to create a new record. The result processing can be edited, uploaded , imported CD, printed and other basic functions of the patient's information to meet the needs of users and patients. The overall interface is shown in Figure 5–3.

Figure 5–3 Examined Interface

5.4.4 Exam Interface

The interface mainly used for reading and editing dental film.
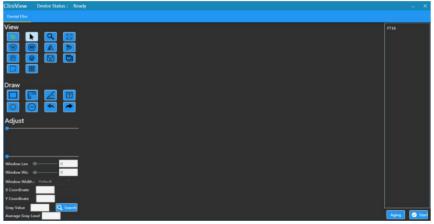
Figure 6−1 Exam Interface

5.4.5   Dental Film Check

After the exam, tear out the protecting bag of the image plate from the cut, and when the system is ready, click ✅ Start   【Start】,and then take out the image plate and place it on the tray to read the image. Please pay attention to the white side of the image plate facing up. At this time, the interface shows that it is reading, as shown in Figure 6–2.

Figure 6–2 Reading Interface

After reading completely, the image is displayed, as shown in Figure 6–3.

Figure 6–3 Dental Image

59

5.4.6 Image Edit

There is a menu on the left side of the image, corresponding to open DCM, move, enlarge, adaptive size, and measure distance respectively. On the right, there are rotating images, histograms, gray values, window level and window height processing, and image information. Among them, adjusting the window level and window height can make the image clearer. The toolbar functions are as follows:

	Open DCM		Mouse		Zoom in or zoom out the image, press 【Ctrl】on the keyboard and wheel mouse at the same time.
	Restore.(restore the original size of the image)		Rotate image to the left.(click this key to rotate the image to the left)		Rotate image to the right.(click this key to rotate the image to the right)

▲◭	Flip image to the left or right.(click this key to flip image to the left or right)	▷	Flip image up or down.(click this key to flip image up or down)	▤	Image information
🖶	Print	🖫	Save	🖫	Save as
◳	Display average gray area	⠿	Layout(click this menu to pop up the layout box, move the mouse to the lower right corner, after the selected layout box is highlighted, click the left button of mouse to complete the layout)		
▭	Draw rectangular frames	📏	Measure distance between two points	∠°	Measure angle
T	Add text	◯	Circle	⊖	Delete label
←	Cancel	→	Recover	Q Search	Search

61

5.5 Statistics Interface

The statistics interface will automatically count the contents of the database and graphically analyse the contents. To view information conveniently and intuitively, click the statistics in the menu to switch to the statistics interface, as shown in Figure 7−1.

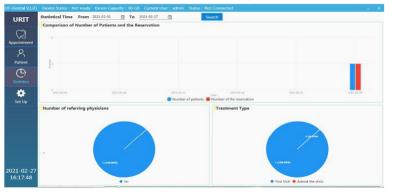

Figure 7−1 Statistics Interface

The default statistical data is the data of the most recent month, which can be modified by the

statistical time at the top. At the same time, you can check the recent development by viewing the number of appointments for each month, and also statistics on the referring physicians and the type of consultation, which is convenient to the department management.

CHAPTER Ⅵ Cleaning and Maintenance

6.1 Cleaning

The device does not need to be specially cleaned, just simply wipe the housing of the device with clean water or absolute alcohol, please pay attention to the following:

⚠️**Warnings：**

1. **Please comply with applicable safety precaution regulations.**
2. **Please carefully read the material safety data sheet of each cleaners.**
3. **Please carefully read the operation and maintenance instructions of all sterilizing equipment.**
4. **Avoid spilling liquid on the device when cleaning.**
5. **Do not put the image plate in the autoclave, otherwise the image plate will be damaged.**
6. **Do not expose the image plate to liquid and strong light sources.**
7. **The image plate is not allowed to be wiped and sterilized with alcohol or corrosive chemicals.**

⚠ **Notes：**

1. The device is cleaned as needed before first use. Please refer to this chapter for cleaning methods.
2. In order to prevent device damage, if there is any problem with the cleaners, please refer to the data provided by the manufacturer.
3. Do not use organic, halogenated or petroleum–based solvents, glass cleaners, acetone or other harsh cleaners.
4. Do not use abrasive cleaners (such as steel wool, silver polish or cleaners).
5. All liquids should be placed away from electronic components.
6. Do not let liquid into the shell of the device.
7. The cleaners pH must be between 7.0 and 10.5.
8. Please turn off the power before cleaning.

6.2 Maintenance

The user should be familiar with all the operating methods, please read the manual carefully, and do not use the device before understanding the entire operating process.

The device only requires simple maintenance during operation, but only correct operation can ensure the long–term stable operation. So you must fully comply with the notes and maintenance items provided by the manufacturer.

6.2.1   Maintenance

The device should be placed in a dry and well–ventilated environment, and avoid dust and moisture. The air–duct cooling system should be well ventilated.

6.2.2   Hygiene

In order to ensure hygiene, the image plate must be packed in an protecting bag when filming. After filming, tear out the protecting bag from the cut, and after the host is ready, take out the image plate and insert it into the host to read the image.

⚠**Notes：**

1. **The image plates and protecting bags we provide are not sterilized**
2. **Sterilize the image plate and keep proper hygienic, please refer to the following**

guidelines:

- **The image plate is recommended to use the dental digital image plate that has been registered or filed with the National Medical Product Administration.**
- **You must always use the protecting bag when using the image plate. It is recommended to use the dental digital image plate protecting bag that has been registered or filed with the National Medical Product Administration. The biological evaluation of the image plate protecting bag meets the requirements of GB/T 16886.1–2011, and replace each patient with a new protecting bag.**
- **To protect the environment, please recycle or dispose of the used image plate protecting bag in accordance with the requirements of relevant laws and regulations.**

6.2.3 Storage

After daily use,ensure that put the image plate in the protecting bag and storage box to avoid contact with strong light sources and liquids.

6.2.4　Maintenance of Image Plate

⚠**Warnings：**

　　1.　Refer to the following guidelines to prevent damage to the image plate:

　　2.　To maintain the service life of the image plate, please follow the instructions below：

- Do not put the image plate in a sterilizer or autoclave
- Do not ask the patients to bite the image plate.
- Do not apply force, bend, or pull on the image plate.
- Do not expose the image plate to liquid.
- Do not expose the image plate to highlight.

⚠**Notes：**

　　Please refer to the manual of the image plate for the usage frequency ,other usage and precautions of the image plate.

CHAPTER Ⅶ Accessories List

⚠**Warnings：**

1．Please use the accessories provided by the manufacturer, otherwise the performance will not be guaranteed

2．If use accessories that are not approved by the manufacturer, the company will not be responsible for serious consequences.

Table 1 Accessories List

Accessories	Pcs
USB cable	1
USB flash drive(software of installation)	1
Intraoral image plate(2#)	1
Power adaptor	1
Power−line	1
Protecting bag(2#)	200

The device and its accessories for can be purchased from the manufacturer or local distributor.

Note:The accessories list is subject to the random packing list.

CHAPTER　Ⅷ　Environmental Protection

Name	Harmful substances or elements					
	Pb	Hg	Cd	Cr（Ⅵ）	PBB	PBDE
Valve Assembly	O	O	O	O	O	O
Optical Circuit Assembly	O	O	O	O	O	O
Cabinet	O	O	O	O	O	O
Circuit Board	O	O	O	O	O	O
Sheet Metal	O	O	O	X	O	O
Switch	O	O	O	O	O	O
Wires	O	O	O	O	O	O

Name	Harmful substances or elements					
	Pb	Hg	Cd	Cr（Ⅵ）	PBB	PBDE
Motor	O	O	O	O	O	O

The table is compiled in accordance with the provisions of SJ/T 11364.

O：It means that the content of this hazardous substance in all homogeneous materials of this part is below the limit requirement of GB/T 26572.

X：It It means that the content of the hazardous substance in at least one of the homogeneous materials of the part exceeds the limit requirement of GB/T 26572.

（This product complies with the requirements of EU RoHS environmental protection: currently there is no mature technology in the world that can replace or reduce the lead content in electronic ceramics, optical glass, steel and copper alloys）

In accordance with Administrative Measures on the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products, Regulations on the Management of the Recycling and Disposal of Waste Electrical and Electronic Products and related standards, please observe the safety and use precautions of the product, and recycling or disposal of this product please apply appropriate measures in accordance with local laws and regulations after the product is used.

Manufacturer Information

Product Name：Image Plate Scanner
Model：EQ–600

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For more information, please scan

and log in to the official website

Version No.: 07/2020

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Date of manufacture: refer to the
product label

Use by date: refer to the product label