WOODPECKER®

i-Scan Imaging Plate Scanner Instruction Manual

Please carefully read this manual before operating.

Guilin Woodpecker Medical Instrument Co., Ltd.

Catalogue

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Preface

Thank you for purchasing the imaging plate scanner produced by Guilin Woodpecker Medical Instrument Co., Ltd. Woodpecker is a high-tech enterprise researching, developing, producing and selling dental products. It owns a sound quality control system. To ensure that you use the equipment correctly and safely, please read the full text of the instruction manual carefully before use.

1 Production introduction

1.1 Product introduction

Features of this device:

a) Ultra-high image resolution can provide doctors with clearer diagnostic images.

b) High-quality user interface makes photographing and reading easier.

c) Large touch HD display.

1.2 Model

i-Scan

1.3 Configuration

Equipment configuration is detailed in packing list.

1.4 Structure and components

This product is mainly composed of main unit, IP imaging plate, power adapter, disposable protective bag of IP imaging plate, protection card, image management software and other components.

1.5 Scope of application

This product is used to scan the latent image information of IP imaging plate to form intraoral dental digital X-ray image, and to browse, process and consult the image.

1.6 Contraindications

Pregnant women and young children should use this device with caution.

1.7 Device safety classification

1.7.1 Type of operation mode: Continuous operation with intermittent loading

1.7.2 Type of protection against electric shock: Class II equipment

1.7.3 Degree of protection against electric shock: No applied part

1.7.4 Degree of protection against harmful ingress of water: Ordinary equipment (IPX0)

1.7.5 Degree of safety application in the presence of a flammable anesthetic

mixture with air, oxygen, or nitrous oxide: Equipment cannot be used in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide.

1.8 Primary technical parameters

1.8.1 Power adapter input: 100-240V 50/60Hz,1.5A

1.8.2 Power adapter output: DC 30V 3A

1.8.3 IP imaging plate model: 0; 1; 2; 3

1.8.4 Threshold contrast: 4 holes of 1.0 mm, 1.5 mm, 2.0 mm and 2.5 mm can all be distinguished.

1.8.5 Image uniformity: <2%

1.8.6 Effective imaging area

Specifications	Maximum dimensions (mm)	
	X-direction	X-direction
0	21	32
1	23	39
2	30	40
3	26	53

1.8.7 Class I laser product, complying with the EN 60825-1:2007 standard and meeting the basic requirements of the Medical Devices Directive 93/42/EEC.

1.8.8 Specifications and dimensions: 138*245.5*290.2mm

1.8.9 Weight: 4.5KG

1.9 Operation environment

1.9.1 Environment temperature: 5℃ ~ 40℃

1.9.2 Relative humidity: 30% ~ 75%

1.9.3 Atmospheric pressure: 70kPa ~ 106kPa

2 Product installation and function description

2.1 Schematic diagram of the whole machine

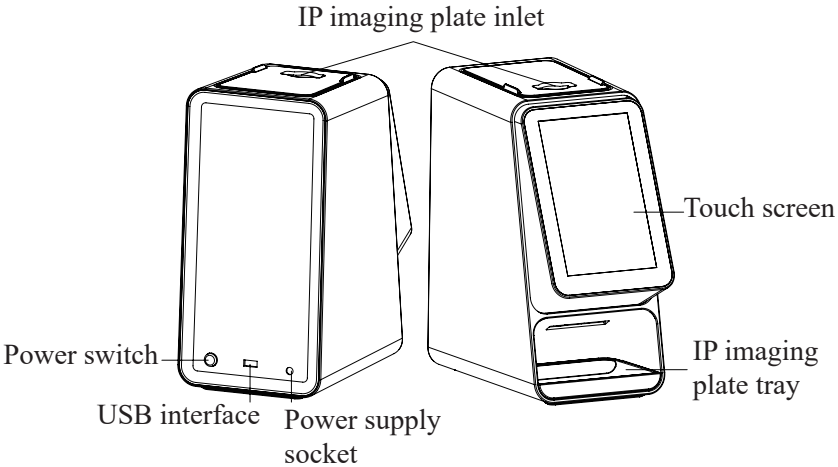


Figure 1 Schematic diagram of imaging plate scanner (Left is the back of the device and right is the front of the device)

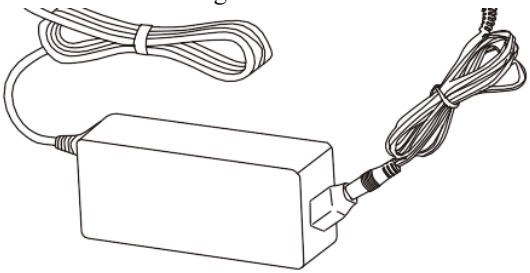
2.2 Accessories installation

2.2.1 Installation area

Take out all the parts from the packing box. Be careful not to drop or damage the equipment.

2.2.2 Power adapter installation

Take out the power adapter and power cord from the packing box and connect them as shown in the figure.



[Note] Only the power adapter and power cord provided with the equipment can be used.

2.2.3 Installation of entrance cover plate and tray

2.3 Installation

2.3.1 PC configuration requirements

It is a must to first ensure that the computer and its peripheral devices do not cause any restrictions that may harm personal safety when an imaging

plate scanner is in use. The computer system must also meet the following configuration requirements:

Windows®:	Recommended configuration
Operating system	Windows® 7 , Windows® 8 , Windows® 10 .
Processor	Intel® Core 2
Memory	2 GB or above
Hard disk	320 GB or above
USB port	4 high-speed USB 2.0 ports
Display board	Nvidia chip graphics card or ATI discrete graphics card with 512MB memory, can be compatible with DirectX9
USB chip	Intel or NEC® /RENESAS®
WIFI	The computer needs a WIFI module (if the computer does not have a built-in WIFI module, an external WIFI module needs to be inserted)
Display resolution	1280 x 1024 or above

2.3.2 Dental X-ray generator compatibility

The imaging plate scanner is compatible with dental X-ray generators that comply with regulatory standards on the current market.

2.3.3 Software installation

a) Double-click the installation program, as shown in Figure 2:

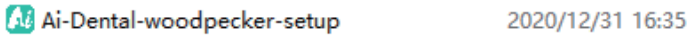


Figure 2

b) Select setup language, as shown in Figure 3:

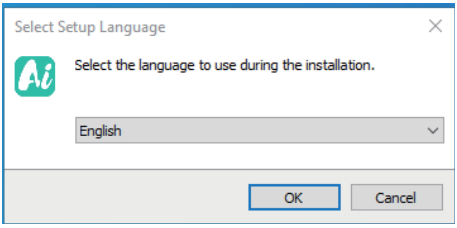


Figure 3

c) After the installation program is started, click the “Browse” button to select the installation path. After the path is selected, click the “Next” button, as shown in Figure 4:

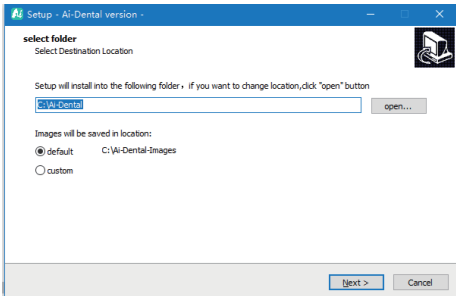


Figure 4

d) Read the license agreement. The user chooses whether to agree to this agreement, if the user agrees, click the "Next" button, do not agree, cancel the installation, as shown in Figure 5:

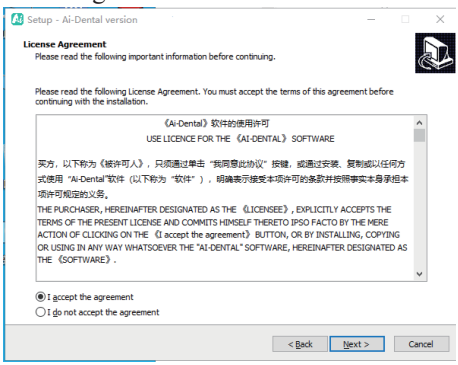


Figure 5

e) Select components. The user selects the corresponding component as needed, and then click the “Next” button, as shown in Figure 6:

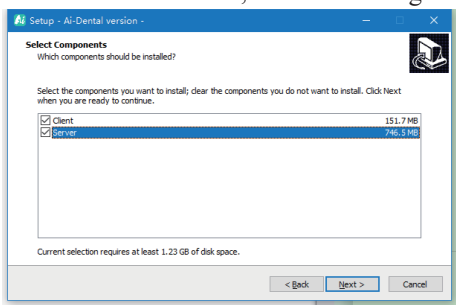


Figure 6

f) Set whether to create a desktop shortcut and server auto start, click the “Next” button after completion, as shown in Figure 7:

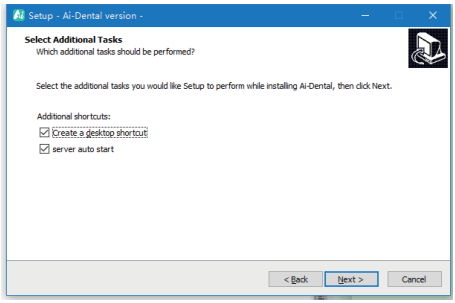


Figure 7

g) Click the “Install” button to start the installation, as shown in Figure 8:

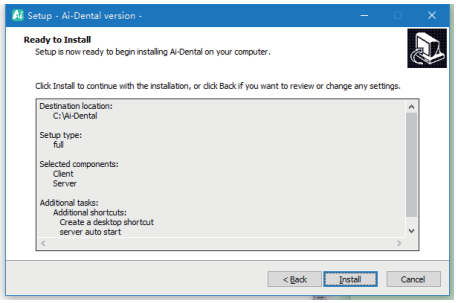


Figure 8

h) After the “Install” button is clicked, the program starts to install. The user just waits for the completion of installation, as shown in Figure 9:

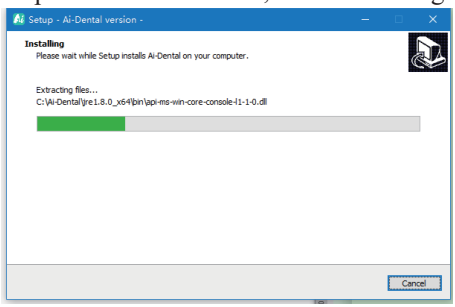


Figure 9

i) After the software is installed, click the “Finish” button, as shown in Figure 10:

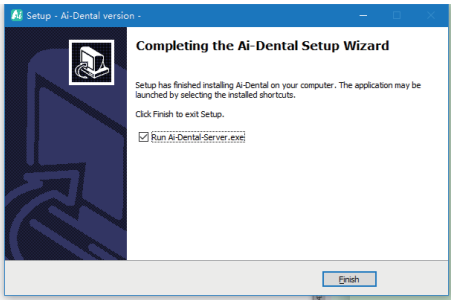
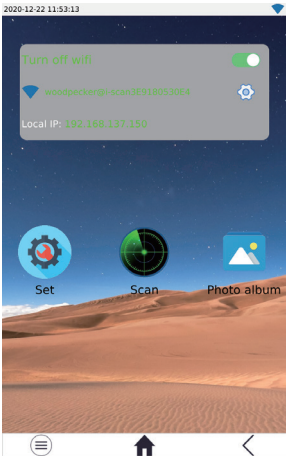


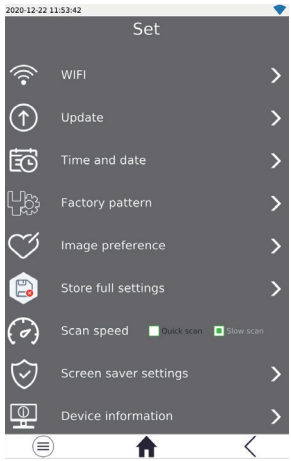
Figure 10

2.3.4 WIFI connection

a) Click "Settings" on the home screen

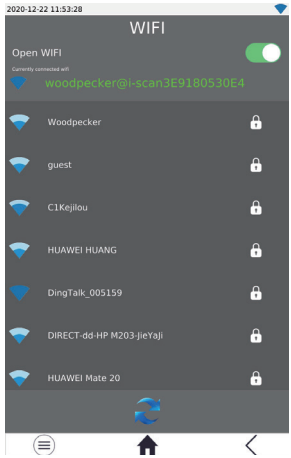


b) Click“WIFI”

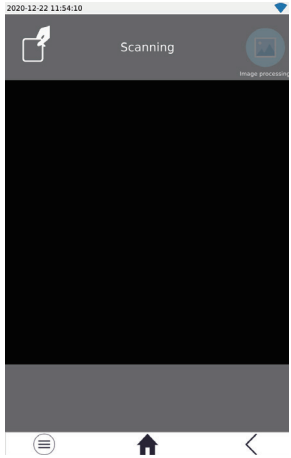


c) Click"Open WIFI"

d) Click the WIFI to connect



e) Open the software, click the Acquisition button, and select the I-SCAN device type. After connecting the device, the IP address will be displayed below the device type. Click open, and the device will enter the acquisition state, and images can be collected.



3 Operation instructions

3.1 Preparation before X-ray photographing

3.1.1 Start the image management software on the image workstation and create a new patient file or open an existing patient file.

3.1.2 Take out the IP imaging plate of the required size from the storage box.

Note: Natural X-rays and/or X-rays scattered by the X-ray generator may cause the imaging phosphor to be exposed before normal use.

Warning: There is a risk of cross infection. Make sure that you always pay attention to take necessary hygiene precautions when handling the IP imaging plate, protection card and the disposable protective cover of IP imaging plate to avoid the risk of cross-infection.

3.1.3 Insert the IP imaging plate into the hard protection card in the disposable protective bag. The black side of the IP imaging plate with the logo must correspond to the white side of the hard protection card with the logo. More importantly, the blue side of the IP imaging plate must correspond to the black side of the protective bag.

3.1.4 Tear off the covering paper strip on the sealing tape, and fully press the adhesive tape with your thumb and index finger to ensure that the disposable protective bag of IP imaging plate is completely sealed.

3.2 Acquire X-ray images

Notes:

① Before putting it into the patient's mouth, disinfect the disposable protective bag of IP imaging plate with a sterile towel or a lint-free cloth

sprayed with disinfectant.

② Wear protective gloves when placing the disposable protective bag of IP imaging plate into the patient's mouth.

3.2.1 Place the sealed protective bag with the IP imaging plate in the patient's mouth, parallel to the longitudinal axis of the teeth. The back (black side) of the protective bag must face the X-ray generator.

3.2.2 Select the appropriate exposure value on the dental X-ray generator.

3.2.3 Move the dental X-ray generator towards the patient's mouth. Ensure that the light cone of the generator is perpendicular to the position of the IP imaging plate.

3.2.4 After the image is acquired, the sealed protective bag containing the IP imaging plate is removed from the patient's mouth.

Note: There is a risk of infection. Wear protective gloves when removing the protective bag from the patient's mouth.

Warning: There is a risk of infection. Clean and disinfect the protective bag before opening it. Clean and disinfect the protective bag with a sterile towel or a lint-free cloth sprayed with disinfectant. Then take off the protective gloves. Disinfect and wash hands.

3.2.5 Remove the adhesive tape and open the disposable protective bag of IP imaging plate.

3.2.6 Remove the hard protection card containing the IP imaging plate from the protective bag.

3.2.7 Keep the IP imaging plate in the hard protection card until it is ready to be inserted into the scanning device, being especially careful not to touch the IP imaging plate or expose it to ambient light sources.

Note: The disposable protective bag and protection card of IP imaging plate are disposable consumables and must not be reused. The repeated use of disposable medical consumables will cause the risk of iatrogenic infection of pathogenic microorganisms and accidents related to the safety supervision of medical devices.

3.3 Read IP imaging plate

3.3.1 Operate the scanner screen or computer. When the projection interface appears on the screen, place the IP imaging plate with a hard protection card near the door of the cabin.

3.3.2 After the IP imaging plate inlet cover is opened, put in the IP imaging plate.

3.3.3 After scanning, the image will be displayed on the scanner screen and computer. Take out the IP imaging plate.

3.3.4 After scanning, take out the IP imaging plate from the tray and put it into the storage box.

3.4 Erase IP imaging plate

After reading, the image data of IP imaging plate will be automatically erased before the plate falls into the tray of imaging plate scanner. However, if the IP imaging plate is used for the first time, or it has been stored for more than 24 hours, or it has been stored in a dark room, or the image data of imaging plate scanner is not erased, it is necessary to conduct erasing.

3.5 Software operation instructions

3.5.1 Login module

Double-click “Ai-Dental-Server” to start the server. After the server is started successfully (as shown in Figure 11), double-click “Ai-Dental-Client” to start the software and enter the software login interface (as shown in Figure 12). Enter the user name and position, and click the “Login” button to log in to the main interface, as shown in Figure 13.

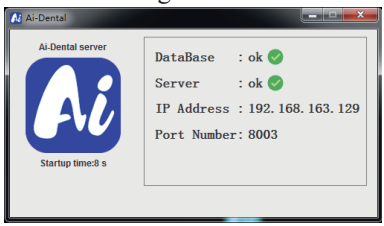


Figure 11

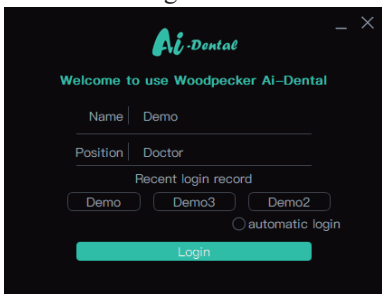


Figure 12

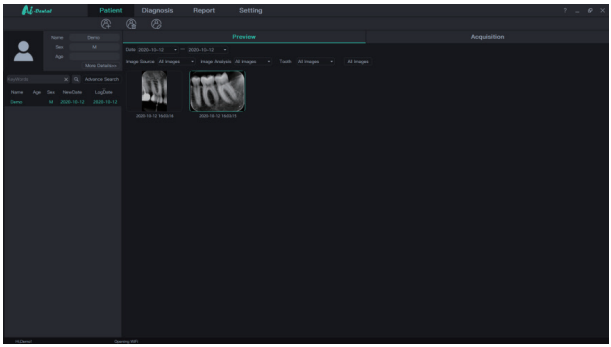


Figure 13

3.5.2 Patient module

Click the “Patient” button to enter the patient module.

a) Add, modify and delete patients

Click the “Add Patient” button to enter the information, click “OK” and a patient can be added. If you need to modify the patient information, click the “Modify Patient” button to modify the patient information, click “OK” and the modification can be successful. If you need to delete a patient, click the “Delete Patient” button and click “OK”. As is shown in Figure 14:

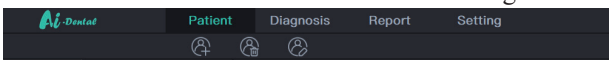


Figure 14

b) Image acquisition

After entering the software interface, the WIFI name will be displayed in the software status bar. Click the “Acquisition” button, connect the i-Scan device to WIFI, and select the i-Scan device type. When the device is connected, the IP address will be displayed under the device type. Click “Open”, the device will enter the acquisition state, and start to acquire images. As is shown in Figure 15:

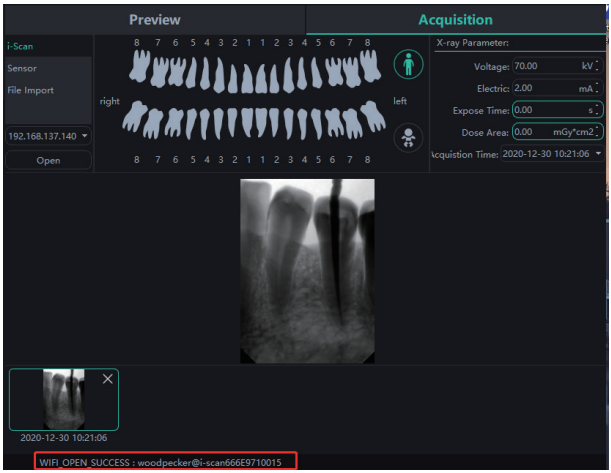


Figure 15

c) Image preview

Click the “Preview” button to view acquired images. Select an image, right-click and select “Export” to export the image to the local. Select “Information” to view the information of the image. Select “Delete” to delete the image. Double-click the image to enter the diagnosis interface. As is shown in Figure 16:

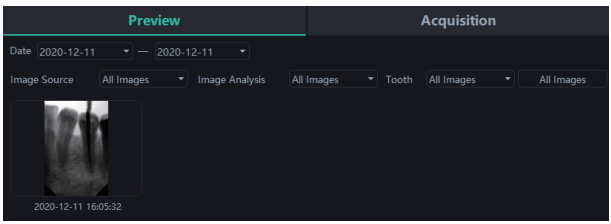


Figure 16

3.5.3 Diagnostic module

Click the “Diagnosis” button to enter the diagnosis module.

Click the image on the left to select an image to be processed. There are image processing tools on the right side of the diagnosis interface, such as Display, Image Correction, Measuring, View, Enhance, Sharpening, Histogram, Annotation, etc. Select the image processing tool and adjust the image quality to a satisfactory level. In the Enhance, click the “HD” button and the image will be enhanced. Click the “HD” button again to cancel the enhancement.

Use image processing tools to adjust image quality. Click the “Add

Temporary State” button to save the image quality at this time. Select the temporary state in the drop-down box to reproduce the image.

There are delete, export, and image information functions above the processed image. These functions are similar to the corresponding functions of the patient module. When multiple images are selected for processing, click the “Clear” button to close them all.

Move the mouse wheel up and down to zoom in and out of the image. Hold down the right button and move the mouse up to increase contrast, move down to decrease contrast, move left to decrease brightness, and move right to increase brightness.

Select an image, and click the linear measurement icon (or angle measurement icon) in the Measuring. Click the left mouse button to form the starting point and move the mouse. Click the left mouse button again to form the end point and right-click the end point to end the measurement. The measurement line will be displayed on the image, and meanwhile the corresponding annotation of the measurement line will be displayed in the Annotation.

As is shown in Figure 17:

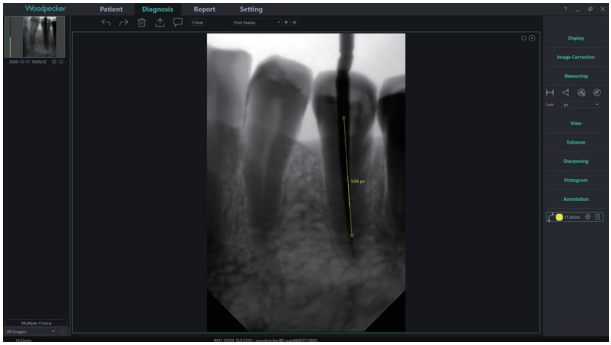


Figure 17

3.5.4 Report module

Click the “Report” button to enter the report module. Click the “New Report” button to create a new report template. Drag an image from the left to the image box, and enter the diagnosis result in the text box, etc. If you need more pages, click “Add Page”, and a page will be added to the report. After writing the report, click the “Save to Server” button to save the report to the server. When you want to view the report, click “Open Report”, select the report you want, and click “Open” to view. Click the “Export to PDF” button to export the report to the local. As is shown in Figure 18:

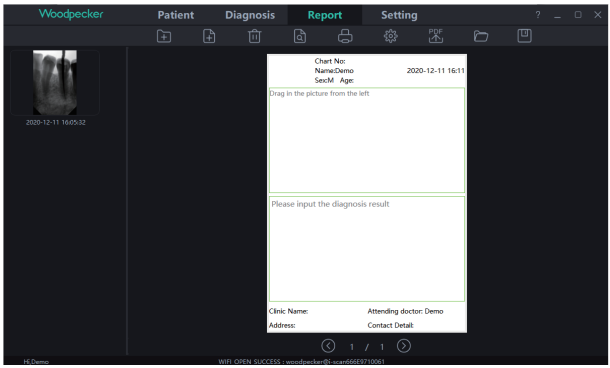


Figure 18

3.5.5 Setting module

Click the “Setting” button to enter the setting module.

a) Basic setting

Click the “Basic Setting” button to enter the basic setting page. Click the “Sign Out” button to return to the login interface. Click the language drop-down box to select the software language. Click the tooth profile drop-down box and select the tooth profile number. As is shown in Figure 19:

Figure 19

b) Clinic management

Click the “Clinic Management” to enter the clinic management interface and enter the clinic information, as shown in Figure 20:

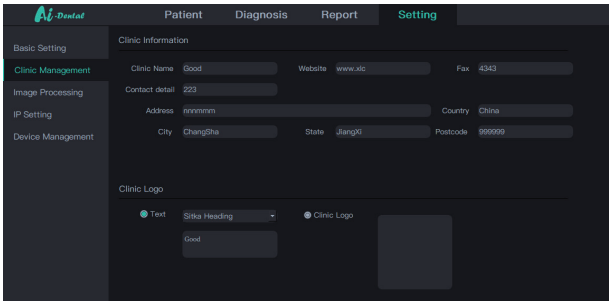


Figure 20

c) Image processing

Click the “Image Processing” button to enter the image processing interface. Select the HD checkbox, select “HD”, and the acquired image will be initialized and HD processed automatically. Select “Ultra HD”, and the acquired image will be initialized and Ultra HD processed automatically. As is shown in Figure 21:

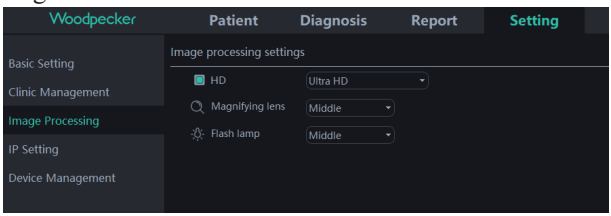


Figure 21

d) IP setting

Click the “IP Setting” button to enter the IP setting interface. Enter the IP address and port number. Click “Test Connection” to view the test result. Click “Modify” to switch the connected server, and the software needs restarting at this time. As is shown in Figure 22:

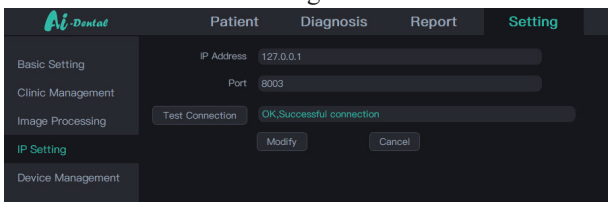


Figure 22

3.5.6 Software upgrade

The software has the function of automatic upgrade. If the computer is installed with the AI-Dental server and the software can be upgraded, a pop-up window “Upgrade or not” will appear on the computer. Click “Yes” and all

clients connected to the server will receive a reminder of 10s countdown to upgrade. After 10 seconds, the software will automatically close and then start to upgrade. Click “No” and the software will not be upgraded temporarily.

4 Notes

4.1 The imaging plate scanner shall never be used in the presence of flammable anesthetic gas, pure oxygen or nitrogen oxide to avoid any risk of explosion.

4.2 The imaging plate scanner is a Class I laser product and turns to Class 3B after the cover is removed. Make sure to avoid exposure to laser rays to prevent the risk of injury to eyes.

4.3 The imaging plate scanner and its accessories, especially the IP imaging plate, protection card and protective bag, have been designed and developed to ensure the highest safety and performance. The use of accessories not provided by the original manufacturer may cause risks to patients, users or the equipment itself. Do not use IP imaging plates, protection cards and protective bags provided by other manufacturers to avoid any risk of contamination or malfunction of imaging plate scanner.

4.4 In the handling of IP imaging plate, protection card and protective bag, necessary health protection measures must be taken to avoid the risk of cross infection.

4.5 The imaging plate scanner complies with the IEC 60601-1 standard. Only peripheral equipment conforming to IEC 60950-1 can be connected to the imaging plate scanner to avoid any risk of failure of the scanner.

4.6 Our company is specialized in the production of medical devices. We are responsible for the safety of the device only when the maintenance, repair and modification of the machine are carried out by our company or by our authorized dealers, and the replacement parts are our Woodpecker accessories and operated according to the operating instructions.

4.7 Other safety information can be found in each chapter of this instruction manual. Please read the whole manual carefully.

4.8 In order to ensure safe and correct operation and the use of the imaging plate scanner, it is very important to use the power cord provided by the scanner. The power cord of the imaging plate scanner system must only be replaced by the same type of cord.

4.9 Due to the electromagnetic compatibility of imaging plate scanner, other equipment nearby may be affected during the use. There is a risk of malfunction of nearby equipment.

4.10 Due to electromagnetic compatibility, the use of other equipment may interfere with the imaging plate scanner.

4.11 When the image quality is affected by excessive use or artificial damage of IP imaging plate, the device needs to be replaced in time.

5. Troubleshooting

Fault	Possible cause	Solution
The software interface shows the connection timeout.	WIFI driver is not installed.	1. Reinstall the WIFI driver 2. Contact the local distributor
Environment light intensity alarms	The environment light is too strong to operate the equipment.	1. Reinstall the entrance cover plate 2. Avoid direct strong light on the device

If the above methods can not eliminate the fault, please contact the distributor to return the device to the manufacturer for handling. Do not try to open the casing of this device and repair it yourself.

6 Cleaning, disinfection and sterilization

Before the first use of this equipment, a complete disinfection procedure must be followed. The imaging plate scanner should be thoroughly disinfected before use after each repair or maintenance.

6.1 Cleaning and disinfection of imaging plate scanner and its detachable parts.

a) The imaging plate scanner and its detachable parts (entrance cover plate and tray) can be cleaned with a non-abrasive cloth dipped in a detergent. The recommended detergents are cold water, warm water, soapy water, and medical ethanol. Ensure that the parts are completely dried before installed on the clean imaging plate scanner.

b) The imaging plate scanner and its detachable parts (entrance cover plate and tray) can be disinfected with a wipe dipped in a disinfectant solution. Aldehyde-free disinfectant is recommended. Ensure that the parts are completely dried before installed on the clean dental imaging plate scanner.

6.2 Cleaning and disinfection of IP imaging plate

a) Clean the IP imaging plate with the included, soft, lint-free and dry microfiber cloth.

b) Wipe the IP imaging plate with disposable cleaning and disinfection wipes.

c) Dry the IP imaging plate with the included, soft, lint-free and dry microfiber cloth.

6.3 Cleaning, disinfection and sterilization of storage box of IP imaging plate

a) The storage box of IP imaging plate can be cleaned with a non-abrasive cloth dipped in a detergent. The recommended detergents are cold water, warm water, soapy water, and medical ethanol. Make sure the parts are completely dried before use.

b) The storage box of IP imaging plate can be disinfected with a wipe dipped in a disinfectant. Aldehyde-free disinfectant is recommended. Make sure the parts are completely dried before use.

c) The silicone part of the storage box of IP imaging plate can be autoclaved at 134°C 2bars (200 kPa) for 18 minutes.

Notes:

Following disinfection methods are prohibited:

a) Do not use organic solvents or corrosive cleaning products to clean the imaging plate scanner and IP imaging plate.

b) Do not spray detergent directly on the imaging plate scanner.

c) Do not use organic solvents or corrosive cleaning products to disinfect the imaging plate scanner and IP imaging plate.

d) Do not spray disinfectant directly on the imaging plate scanner.

7 Storage, maintenance and transportation

7.1 Storage /maintenance

7.1.1 This device should be handled with care and away from the source of the earthquake. Ensure it is installed or stored in a cool, dry and ventilated place.

7.1.2 Do not mix it with toxic, corrosive, flammable and explosive materials during storage.

7.1.3 When the device is not used for a long time, the power switch should be turned off, the power plug should be pulled out, and the IP imaging plate should be put into the storage box.

7.1.4 The product should be stored in an environment with a relative humidity of 10%-93%, an atmospheric pressure of 70kPa ～ 106kP, and a temperature of -20℃ ～ +55℃.

7.2 Transportation

7.2.1 During transportation, excessive shock and vibration should be prevented. Handle it with care and avoid inversion.

7.2.2 It should not be mixed with dangerous goods during transportation.

7.2.3 Avoid sunlight or rain and snow during transportation.

8 Environment protection

This device cannot be disposed of as household waste. Therefore, this equipment should be placed in a special recycling place for waste electronic medical and electrical equipment. For more detailed information about equipment disposal and recycling, please contact the dental equipment dealer.

9 After-sales service

Since the date of sale, if the device fails to work normally due to quality problems, our company will be responsible for the maintenance with the warranty card. Please refer to the warranty card for the warranty period and scope. This product does not contain self-maintained parts, and the maintenance of this device should be carried out by designated professionals or special repair shops.

10 Electromagnetic compatibility

For this device, special precautions regarding electromagnetic compatibility (EMC) must be taken. The installation and use must be in accordance with the electromagnetic compatibility information specified in this manual. Portable and mobile radio frequency communication equipment may affect this device.

The following cables must be used to meet electromagnetic emission and anti-interference requirements:

Name	Cable length	Shielded or not?	Remark
Power adapter cable	2m	No	/
DC cable	1.5m	No	/

In addition to cables (transducers) sold as spare parts of internal components, the use of accessories and cables (transducers) other than those specified may result in increased emission or reduced immunity of the equipment or system. The equipment or system should not be used close to or stacked with other equipment. If must be used in this way, it should be observed to verify that it can operate normally under the configuration used.

Basic performance: With electromagnetic interference, the product can read images, and the screen has stripes, which can be recovered itself. Occasionally, the self-test fails after booting and becomes normal after rebooting.

10.1 Guidance and manufacturer’s declaration-electromagnetic emission

Guidance and manufacturer’s declaration-electromagnetic emission

The imaging plate scanner is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment-guidance
RF emission GB 4824	Group 1	The imaging plate scanner uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference to nearby electronic equipment.
RF emission GB 4824	Class B	The imaging plate scanner is suitable for used in all establishments, including domestic establishments and establishments directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emission GB17625.1	Class A	
Voltage fluctuation/ flicker emission GB17625.2	Complies	

10.2 Guidance and manufacturer's declaration-electromagnetic immunity

Guidance and manufacturer's declaration-electromagnetic immunity			
The imaging plate scanner is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.			
Immunity test	Test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge GB/ T 17626.2	±6kV contact ±8kV air	±6kV contact ±8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst GB/T 17626.4	±2kV for power supply lines ±1kV for input/output lines	±2kV for power supply lines N/A	Mains power quality should be that of a typical commercial or hospital environment.

Surge GB/T 17626.5	±1kV line to line ±2kV line to earth	±1kV line to line N/A	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines GB/T 17626.11	<5 % UT (>95% dip in UT.) for 0.5 cycle 40 % UT (60% dip in UT.) for 5 cycles 70 % UT (30% dip in UT.) for 25 cycles <5 % UT (>95% dip in UT.) for 5s	<5 % UT (>95% dip in UT.) for 0.5 cycle 40 % UT (60% dip in UT.) for 5cycles 70 % UT (30% dip in UT.) for 25cycles <5 % UT (>95% dip in UT.) for 5s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the imaging plate scanner requires continued operation during power mains interruptions, it is recommended that the scanner be powered from an uninterruptible power supply or a battery.
Power frequency magnetic field (50Hz) GB/T 17626.8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the AC mains voltage prior to application of the test level.			

10.3 Guidance and manufacturer's declaration-electromagnetic immunity

Guidance and manufacturer's declaration-electromagnetic immunity			
The imaging plate scanner is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.			
Immunity test	Test level	Compliance level	Electromagnetic environment - guidance

Conducted RF GB/ T17626.6 Radiated RF GB/ T17626.	3Vrms 150kHz~ 80MHz 3V/m 80MHz~ 2.5GHz	3Vrms 3V/m	d = 150kHz~80MHz d = 80MHz~800MHz d = 800MHz~2.5GHz Portable and mobile RF communication equipment should be used no closer to any part of the imaging plate scanner, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance d = 150kHz~80MHz d = 80MHz~800MHz d = 800MHz~2.5GHz where “P” is the maximum output rated power of the transmitter provided by the transmitter manufacturer in watts (W) and “d” is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site surveya, should be less than the compliance level in each frequency rangeb. Interference may occurs in the vicinity of equipment marked with the following symbol:
NOTE1: At 80 MHz and 800 MHz, the formula of higher frequency range is applied. NOTE2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by the absorption and emission from buildings, objects and human bodies.			

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 imaging plate scanner is used exceeds the applicable RF compliance level above, the scanner should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the imaging plate scanner.
b. In the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

10.4 Recommended separation distances between portable and mobile RF communications equipment and the imaging plate scanner

Recommended separation distances between portable and mobile RF communications equipment and the imaging plate scanner			
The imaging plate scanner is intended for use in electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the scanner can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the imaging plate scanner as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter /W	Separation distance according to frequency of transmitter/ m		
	150kHz~80MHz d = 1.2/P	80MHz~800MHz d =1.2/P	800MHz~2.5GHz d = 1.2/P
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For the rated maximum output power of transmitters not listed in the above table, the recommended separation distance “d” in meters (m) can be determined by the formula in the corresponding transmitter frequency column. Here “P” is the maximum output rated power of the transmitter in watts (W) provided by the transmitter manufacturer. NOTE1: At 80 MHz and 800 MHz, the formula of higher frequency range is applied. NOTE 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by the absorption and emission from buildings, objects and human bodies.

⚠ Notes:

a) Without the explicit consent of Woodpecker, unauthorized changes or modifications to the equipment may cause electromagnetic compatibility problems of this equipment or other equipment.

11 European authorized representative

EC REP MedNet EC-Rep GmbH
Borkstrasse 10 · 48163 Muenster · Germany

12 Symbol instruction

	Manufacturer	SN	Serial number
	Attention!Access to accompanying files	REF	Item number
	Class II equipment	IPX0	Ordinary equipment
	Avoid sun exposure		Products comply with WEEE directive
134℃	Autoclavable up to the temperature specified		Heat disinfection
	Danger! High voltage		Electrostatic Discharge Sensitive Device (ESDS)
	Laser beam		Non-reusable
	Date of manufacture	CE 0197	CE marked product

	Products comply with WEEE directive
EC REP	Authorized Representative in the EUROPEAN COMMUNITY
93% 10%	Humidity limit for storage: 10% ~ 93%
106kPa 70kPa	Atmospheric pressure for storage: 70kPa ~ 106kPa
+55°C -20°C	Temperature limit for storage: -20℃ ~ +55℃

13 Statement

All rights of modifying the equipment design, product technology or accessories, instruction manual and packaging content at any time are reserved to Woodpecker without further notice.

14 FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

Scan and Login website
for more information

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ZMN-SM-318 V1.0- 20210118