

Operation and Installation Manual

With WI-FI Type



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1. Introduction

1.1. Introduction of products

Dear customers,

Thanks for buying our company's products, this product is a multifunctional teeth bleaching machine, it contains teeth bleaching, intra oral camera and 8inch monitor . It makes the machine more useful and convenient.

1.2. Standard configuration

1. M-86 Teeth Whitening Accelerator	1 piece
2. M-868A (Special for M-86A) LCD	1 piece
3 CF-687 intra oral camera	1 piece
4. Teeth Whitening Accelerator's foot stand	1 piece
5. Teeth Whitening Accelerator's remote control	1 piece
6. camera 8pin cable(1.5M)	1 piece
7. USB flash disk	1 set
8. 12V adaptor(white colour)	1 piece
9. Goggles	2 piece
10.Camera sleeves	50 piece
11. Power supply	1 piece
12. Mouth retractor	1 piece
13. lamp shade	20 piece
14. Assembly Tool	1 piece
15.Camera holder	1 piece
16.AV cable	1 piece
17.Disk(Manual inside)	1 piece
18.USB cable	1 piece
19.VGA cable	1 piece
20. M-888 Remote control	1 piece

1.3. Optional configuration

1	USB flash disk (Optional)	1 pcs
2	Hand piece Holder (Optional)	1 pcs
3	M-99 LCD (Optional)	1 pcs
4	WI-FI device (Optional)	1 pcs
5	M-91C wireless transmitter (Optional)	1 pcs
6	M-97C wireless receiver (Optional)	1 pcs

1.5. Characteristic

1. Combines 8 inch LCD monitor, teeth whitening machine and an intra oral camera. It's a multi-functional all-in-one teeth whitening machine. .
2. High efficiency goose pipe design, adjust angle at random, convenient for use.
3. Combination of 4 pieces High power LED.
4. Tunable bleaching time with microprocessor-controlled timer presets.
5. The Front Five control buttons: freeze, save, previous image, next image, delete, and the reverse side control buttons: freeze and save
- 6 Innovative Design , it can be displayed one images, four small images, and nine small images, two kinds of capture angles, display the clear images
7. Convenient for dentist to make a contrast before and after treatment from the screen.
8. Have USB/Video/VGA output functions
9. Optional WI-FI device can transmit the camera's images to mobile phone, Tablet PC and Windows system PC at the same time.
10. Can be matched with wireless transmitter and wireless receiver.

2. Function

2.1 8 inch LCD monitor Specification:

1. LCD size: 8 inch (Diagonal)
2. Driver element: a-Si TFT active matrix
3. Resolution: 640* 3(RGB) *480
4. Display mode: Normally white. Transmissive
5. Dot pitch: 0.0529(W)*0.1587(H)mm
6. Active area: 101.568(W)* 76.176(H) mm
7. Module size: 117.56(W) * 88.43(H) *5.7(D) mm
8. Surface treatment: Anti-Glare
9. Color arrangement: RGB-stripe
10. Interface: Digital
11. Backlight Power consumption: 1. 2000W (Typ.)
12. Panel Power consumption: 0.193(Typ.)
13. Weight: 175g

2.2 Teeth bleaching Specification:

Broad Spectrum: 420nm~472.5nm (Host lamps)

Light Output power: up to 2000Mw/CM²

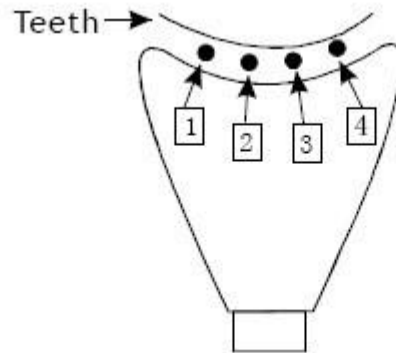
100-240V, 50/60Hz, 1.2 A for global use

Weight: 8 Kg

Max. Working Radius: 50cm

High Uniformity of light output

Distance between teeth and Illuminator(mm)	Uniformity
1mm	Above80%
3mm	Above80%
5mm	Above80%
10mm	Above80%

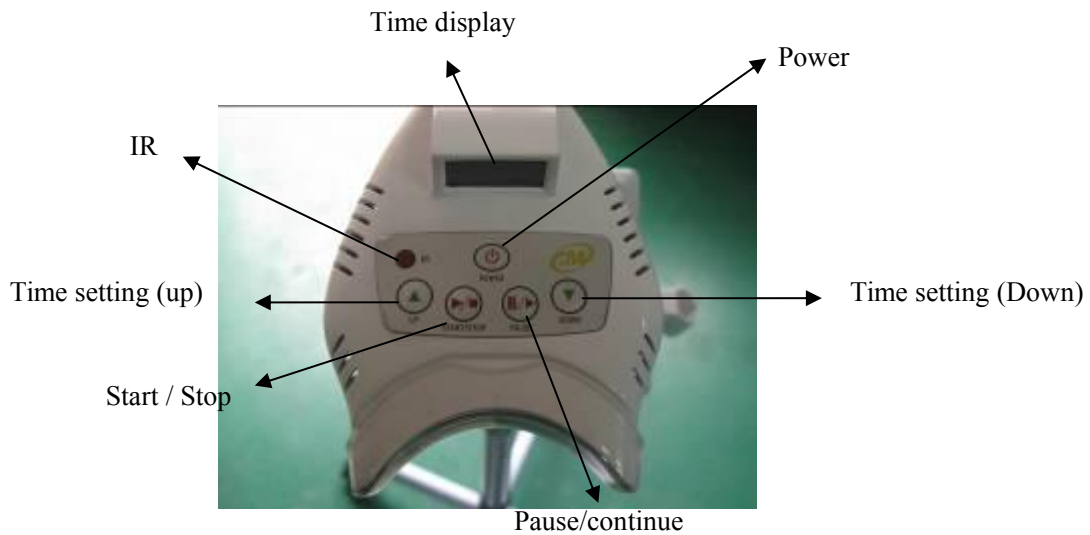


2.3 Intra oral camera Specification:

1. 1/4 SONY CCD high resolution intra oral camera
2. With high resolution, high performance and auto focus.
3. Built-in 6pcs high brightness long-life white LED
4. The Front Five control buttons: freeze, save, previous image, next image, delete, and the reverse side control buttons: freeze and save
- 5., Innovative Design , it can be displayed one images, four small images, and nine small images, two kinds of capture angles, display the clear images
6. Optional 2.5inch LCD screen let dentists take pictures more convenient
7. It can save 9999 pcs pictures in USB flash disk.
8. Have USB/Video/VGA output functions.
9. It can record the video by the remote control, size of memory according the USB flash disk, the picture and the video can be saved to USB flash disk permanent.
10. Suitable for NTSC /PAL
11. Optional WI-FI device can transmit the camera's images to mobile phone, Tablet PC at the same time.

3. Teeth bleaching operation

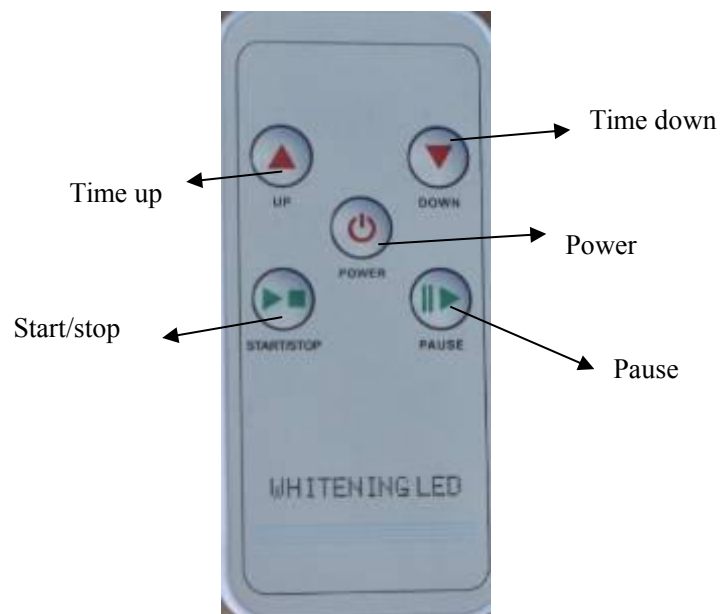
Front



Operating the Teeth whitening Accelerator:

- A) Start/ Stop Button: Turn on /off the light by pressing the “STOP/START “button.
- B) Pause button: Stop the time counting and emitting light by pressing the “Pause” button, the remaining whitening time will sparkle on the digital indicator. Press the “Pause” button again, light will emit and time will count continually.
- C) UP/Down Button: Use “UP” or “Down” button to set whitening time. 5 minute counting with memory , the longest whitening time is 30 minutes each cycle

Remote control



Reverse:



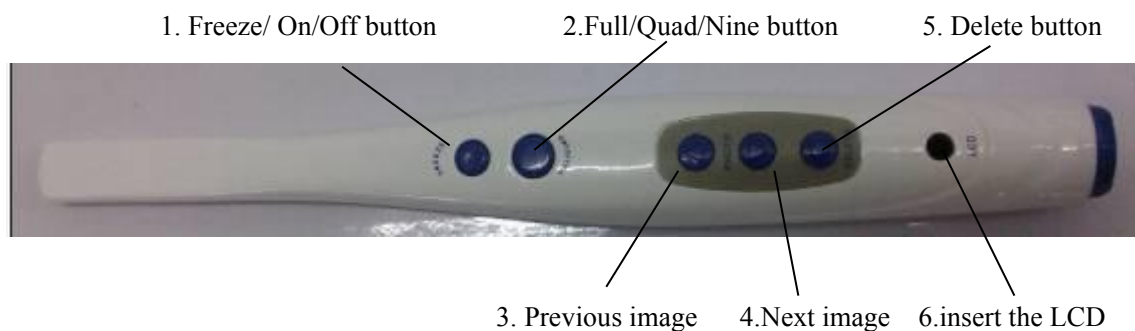
From left to right:

1. **ON/OFF**: power switch
2. **VGA OUT**:VGA output
3. **USB**:USB output WI-FI output (Two sockets can share)
4. **USB OUT**: USB output
5. **VIDEO OUT**:Video output
6. **DC-12V**:power input

Note: If press the rear side”-“ button careless, Screen will show” NO SYNC”, Please press twice”-“continuously, when the screen shows” AV”.that means it is work correctly.

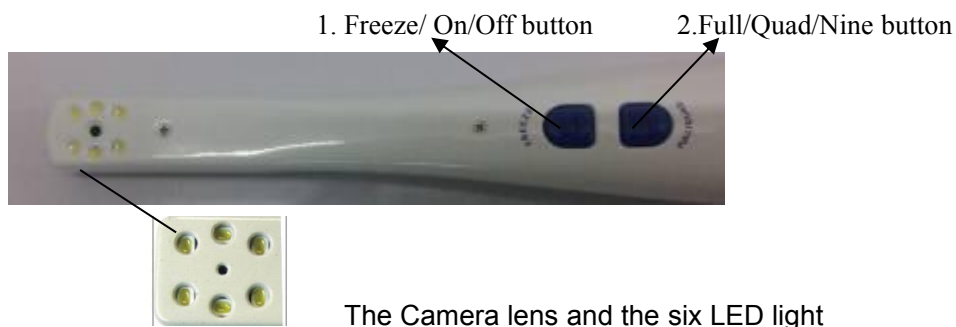
3.2 Intra oral camera’s operation

A. The right side



1. Press option 1 the camera will be powered on, then press it again, the image will be freezed in the monitor, when press option 1 with 2 seconds. The camera will be powered off.
2. Choose to capture image in full screen or capture 4 images (quad) or nine images
3. Press Previous image button can check the previous image
4. Press Next image button can check the next image
5. Press Delete button can delete the images.
6. Insert the M-99 here.

B. The back side

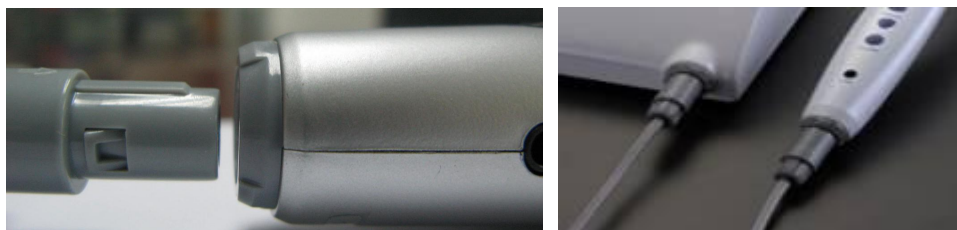


1. Press option 1 the camera will be powered on, then press it again, the image will be freezed in the monitor, when press option 1 with 2 seconds. The camera will be powered off.
2. Choose to capture image in full screen or capture 4 images (quad) or nine images

Wired operation sketch map





Wired operation sketch map

A. Let the cable connect with camera



Remote control



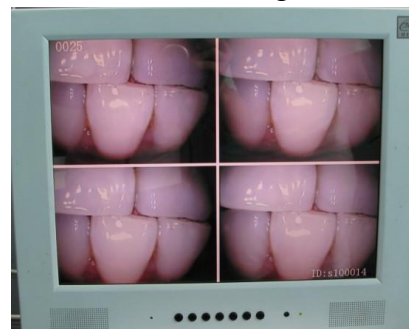
- 1) **Freeze** :Freeze button,press one time, the images will be freezed, press again, the images will be saved.
- 2) **Quad** : can switch the images to one piece image, four piece images and nine piece images
- 3) **Menu/ok**
- 4) **Delete** : Delete the single image
- 5) **REC**: Video recording
- 6) **Format** : delete all the images
- 7)  : Up
- 8)  :Down
- 9)  : Left
- 10)  :Right

Power on the camera and begin to capture images

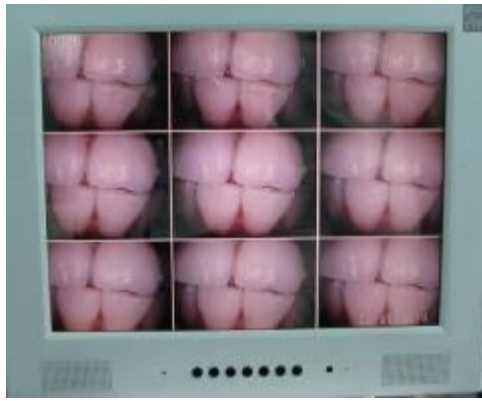
Full image



Quad image



Nine images



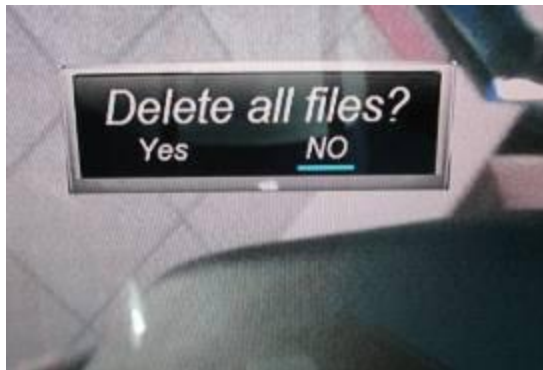
- D. video operation (**video recording only in full image mode**)
Use the docking station's button to make video recording

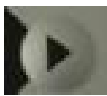



When finishes, the interface will be :



If delete the images or recording files, please press “ Format”



Use Remote control's   to choose YES or NO to decide if need delete all the files
And then press MENU/OK, the interface will show:



Default Selection is “WI-FI transmitter”.please note
WI-FI receiver is an optional device for WI-FI camera

3.3 Wireless transmitter and wireless receiver's operation (Optional)

Wireless transmitter

power indicator shows green

for high power

And red for low power

Wireless Channel display



Plug this end into camera

DC power input

Used to charge the battery

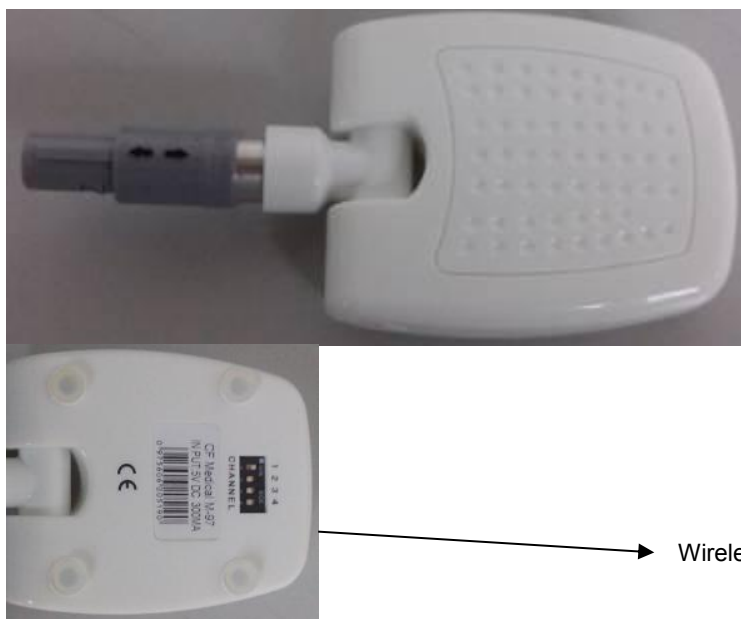
channel selector

Power switch on and of

As to the transmitter battery, we use lithium battery instead, the lithium battery contains light weight, it has great capacity and it is easy to take, a piece of battery can be used about 40 minutes, for charge time, we suggest that customers need to spend 6 hours to charge up the battery at the first time, when the indicator light becomes green that means the working is finished, if the indicator light becomes yellow that means users need to charge up the battery.

when connecting the receiver and docking station, adjust the channel of receiver according to the transmitter, keep their channel the same frequency, for example, channel one according to ch

Wireless receiver



Wireless Channel display

Note: Wirelss transimtter's channel must be the same as wireless receiver, for exsample: when transmitter's channel is 1, please adjust receiver's channel to 1, if there has signal interference,please switch to 2 or 3 or 4.

Wireless mode Operation sketch map



3.4 M-99 2.5inch LCD

Insert the M-99 small LCD monitor into the camera



M-99 Parameter:

1. Display screen: 2.5" TFT-LCD
2. Light source: LED
3. Resolution: 960(H) × 240(V)
4. Visual range: (15/30/45/45)
5. Brightness: >250LUX
6. System standard: PAL/NTSC
7. Mirror image function: left/right/up/down reverse control
8. Video input: 1.0Vp-p 75 ohm
9. Power input: DC 12V ±10% 80±10mA
10. LCD display dimension (mm): 49.92(H) × 37.44(V)
11. LCD appearance dimension (mm) : 55.46 (W) × 47.21 (H) × 2.55(D)
12. PCB board physical dimension: 58 (W) × 48(H) × 6.2(D)
13. Working temperature: -20~60°C
14. Storage temperature: -25°C ~ +70°C



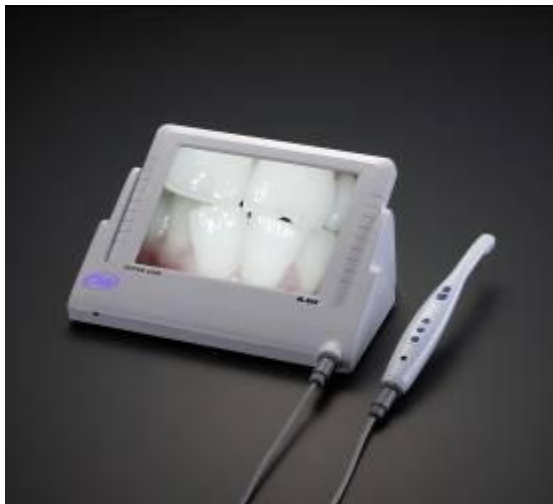
Note: When the detector is turned on insert the small LCD, the power will automatically shut down to protect, to be re-opened after the power detector, the screen immediately displayed on the small screen. (Suggestion: Insert a small LCD before turn on the camera)

3.5 WI-FI operation



Docking station back on the right side has two USB socket. It is for USB flash disk and WI-FI device(these two docketts are commonly used)

Oral camera with dental docking station connection and insert USB and WIFI unit , then open the power of the docking station



When WI-FI device 's indicator light in Flashing status, that mean it is in normal operation condition.(if there is no Flashing please try to open the power again)

And then there is an IP address shows on the panel



When capture the images , the images will be showed on the mobile phone or tablet PC at the same time

Remark: If need connect with other monitor,please power on whitening and camera, and wait for a while, and then power on the monitor,.

3.6 WI-FI device operation

Step one:

Install "MLG" .app to your mobile phone,Tablet PC and Computer system.

- ① (for Android system) ② (for Microsoft computer) ③ (For Iphone system)



(Use iphone or Ipad), direct access to the APP Store, search "MLG" and download then install software

Install the "Photo Room" software install into the android mobile phone, can check the picture.



After installation, the mobile phone will has a logo as

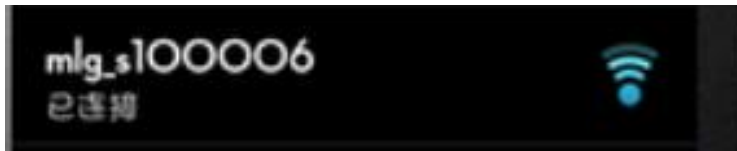


Step two: The installation instruction

1, Android system

Click " Setting" of mobile phone, and set the WI-FI and connect the WI-FI IP number

(Note: the IP address has been set in before they leave the factory, every machine has a dedicated IP code)



Back to mobile phone Menu, and click



Pop-up interface:



Click on Settings, set the IP address to: **192.168.1.1**,

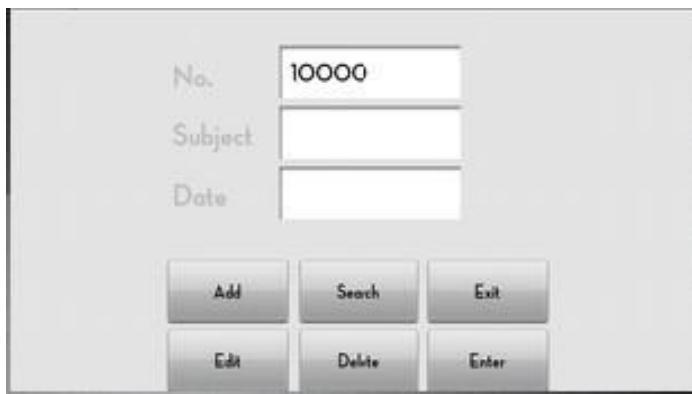
Please follow below setting

1. Default choose "Low"
2. System selection: If your camera is NTSC system, please choose " NTSC", if your camera is " PAL" , please choose" PAL"
3. language selection as your need
4. Default choose: " VGA"

After setting, please click" Save"



Click to Enter, click "Add" Add photo albums, and click "Enter" to Enter



And then click enter

When intra oral camera capture the images, the images will show on the mobile's software at the same time



When you use camera to save the pictures, pictures will also be stored in the PhotoRoom or photo album file folder which install in mobile phone.

If you want to check the images ,please search them from mobile phone's SD card





This machine can support nine different cell phone, tablet and computer for used to sync (pictured below)



Through the WIFI to connect to the tablet and mobile phone can realize 1,4,9 split-screen synchronous display (support Windows, Android, iPhone system)

2, iPhone system

Note: If you want to download the APP from the APP store you must have the APP account!!

- ① Click "Setting" of iPhone or Ipad, and connect the WI-FI
- ② Open The APP store to find the APP of MLG and download.



- ③ After installation, the mobile phone will has a logo as

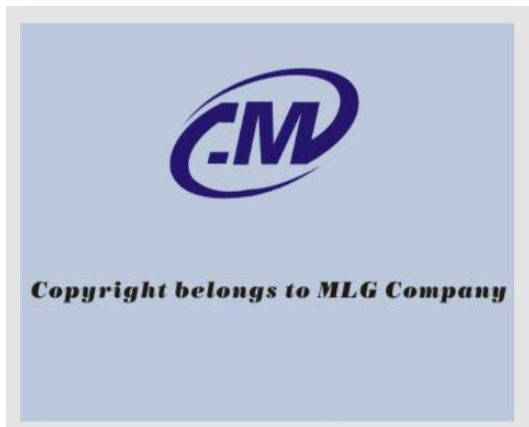
- ④ Click "Setting" of iPhone or Ipad, and set the WI-FI and connect the WI-FI IP number

Just like the picture that connect the mlg-s100008 as follow **(Note: the IP address has been set in before they leave the factory, every machine has a dedicated IP code)**



⑤ After connect the WIFI of mlg-s100008 and Back to mobile phone Menu, and click

Pop-up interface:

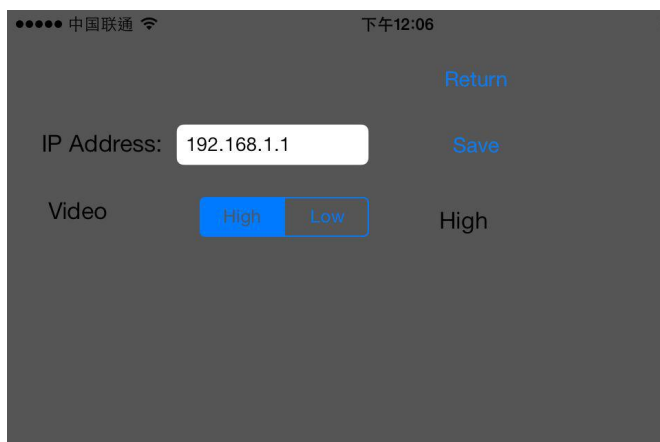


Click on Settings,

Please follow below setting

1. Default choose "High" or "Low"

After setting, please click "Save"



⑥ **Click on Settings, set the IP address to: 192.168.1.1, click "Save", then click the "Return"**



⑦And click **MLG** again will pop-up this interface. **(You can establish a simple medical history sheet.)**



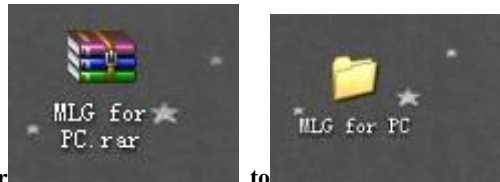
Click the **AddUser** and then click **Enter** buttons, into the image interface.(The images can transmit at the same time.)



⑧When you use camera to save the pictures, pictures will also be stored in the **照片** photo album file folder which install in mobile phone or Ipad.

3, Microsoft computer

Note: You need to close the computer wire connection and connect the WI-FI.



① First you need to unpack the folder to

② There are 4 applications in the folder like the picture as follow.

(Note: The applications can not be working when out of the folder)




③ Click the application will pop-up the interface as follow.

④ You can establish a simple medical history sheet. click "Add" Add photo albums, and click "Enter" to Enter



Note: The interface need to click then can take the images.

⑤ When you use camera to save the pictures, pictures will also be stored in one new folder of

the  .(Picture below)



Note: The new folder's name is the same with the No. of you establish the medical history sheet. Please check the steps ④.

3.7 Assembly Instruction illustration

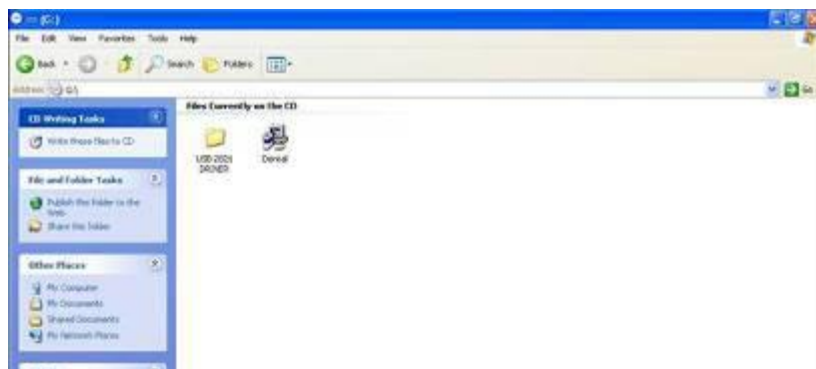


Warning: When this screw is loose, the spring will come out!

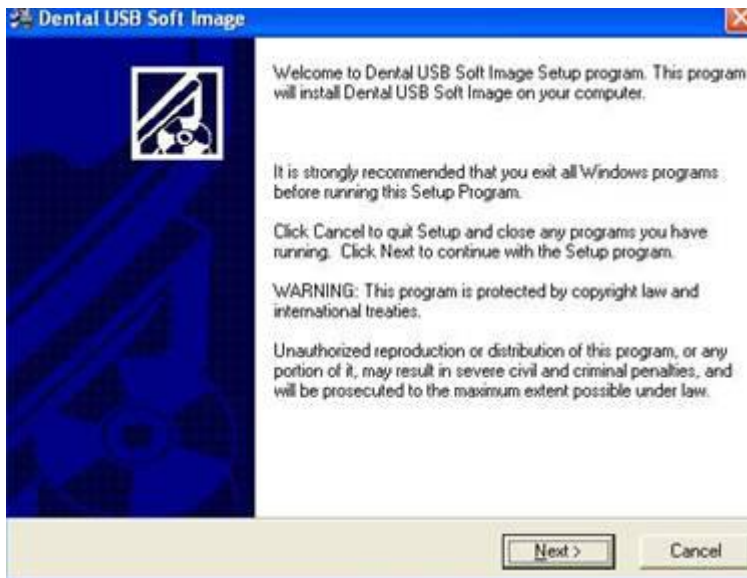


4. Manage Software Setup

A. Insert the disk. Setup should start automatically. If it doesn't, **click Start, Run**, and then enter **d:\setup\setup** at the command line (if your CD drive is a Letter other than "d", use that letter instead), please copy all the files from CD to your any hard disk. Please click "Dental".

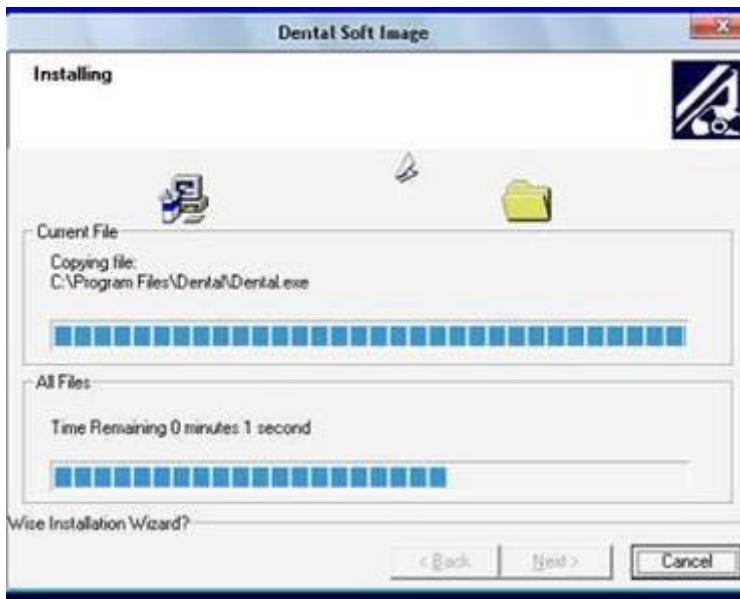


Then wait a while



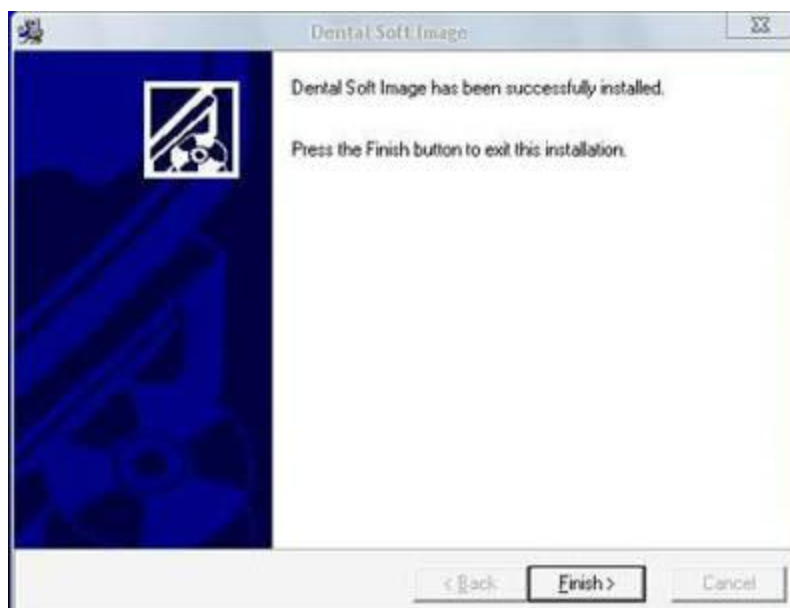
Click Next.





When the new video series is installed, click

Finish



5. USB 2.0 device setup

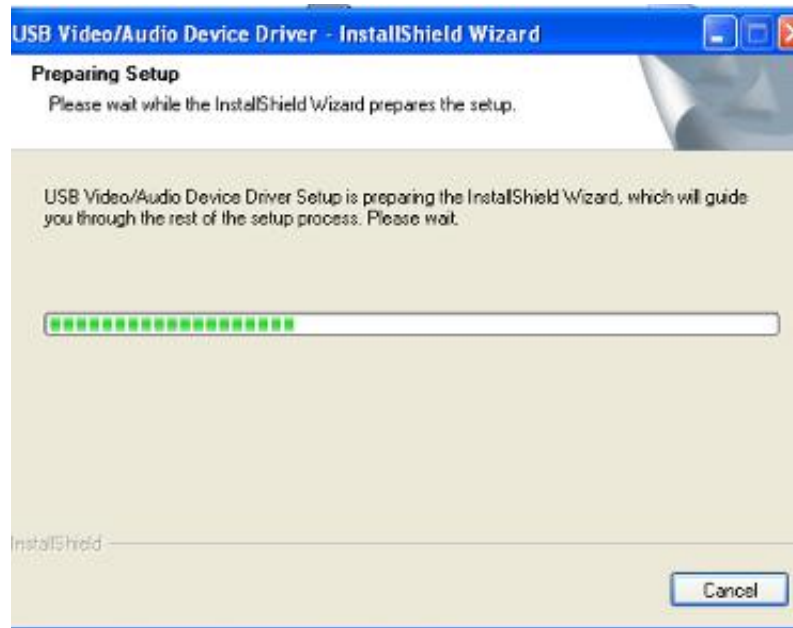
PLEASE NOTE: When you connect the camera to your computer, Windows will automatically detect this new device. **Please copy all the files from CD to your any hard disk.**

Step 1

Back to the disk. Double click file, then click as below:

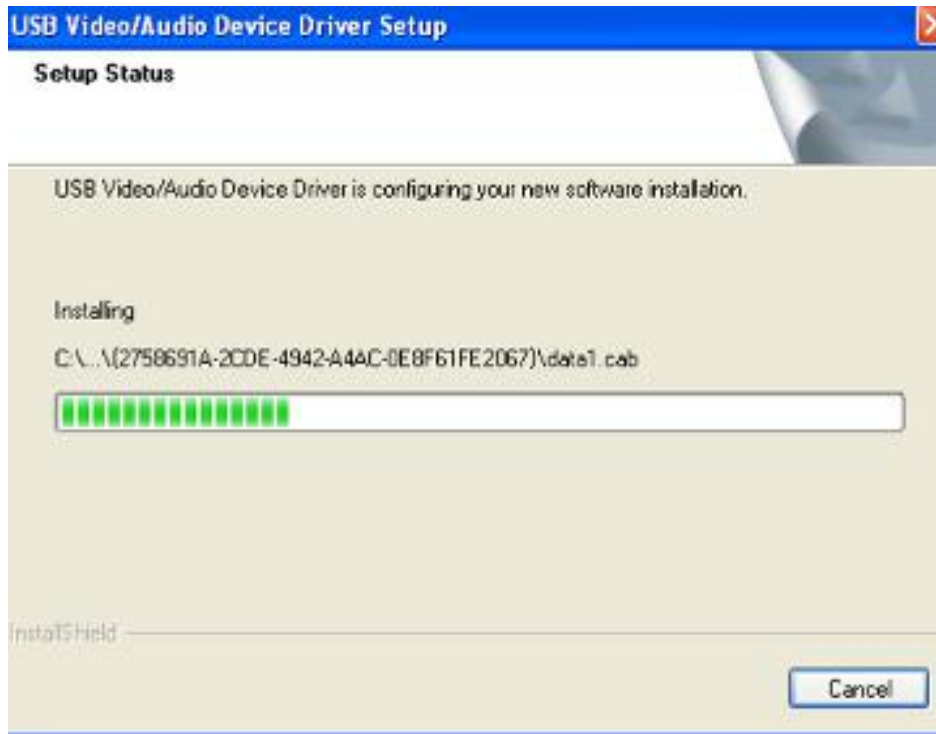


Then wait a while



Click Next.





Then Click Finish





Remark: customers can choose YES or No either, there is no influence at all.

Step 2

Connect the camera to your computer.
When you do, you will receive a
Momentary message saying that Windows
has detected new hardware

①.



②



6 How to use application

After installation of Driver and USB device, please back to the desktop, click Dental Soft Image to begin the software



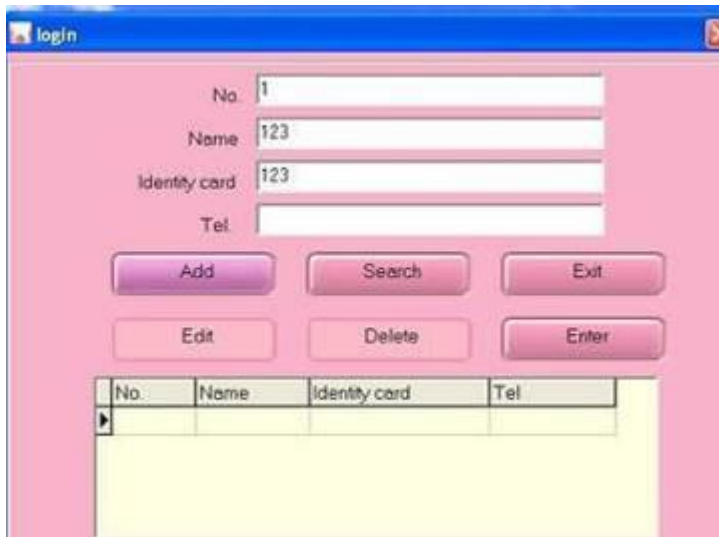
Double click Dental Soft Image . Select language



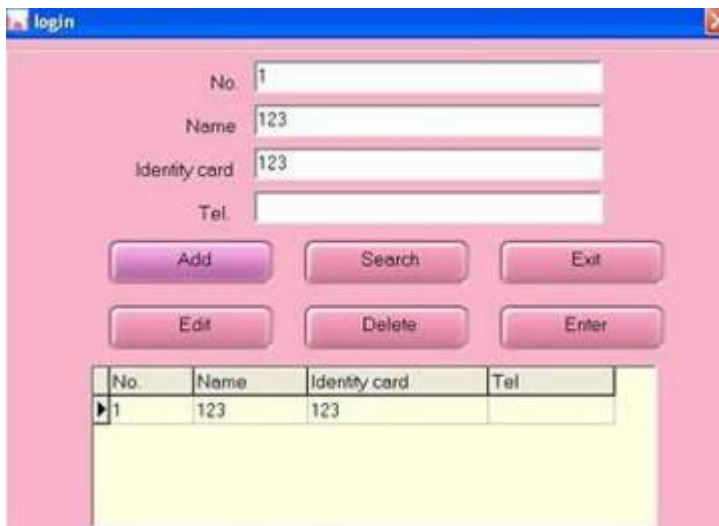
Click Enter, and then double click Dental Soft Image again



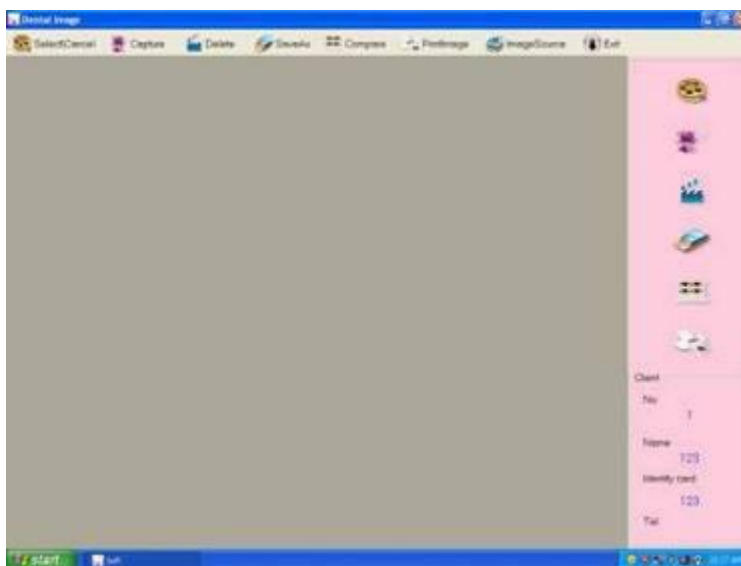
Use your mouse to click the middle picture then enter into the login interface.
As below picture, please write down No, Name, Identity card and TEL of your patients.



Then click Add



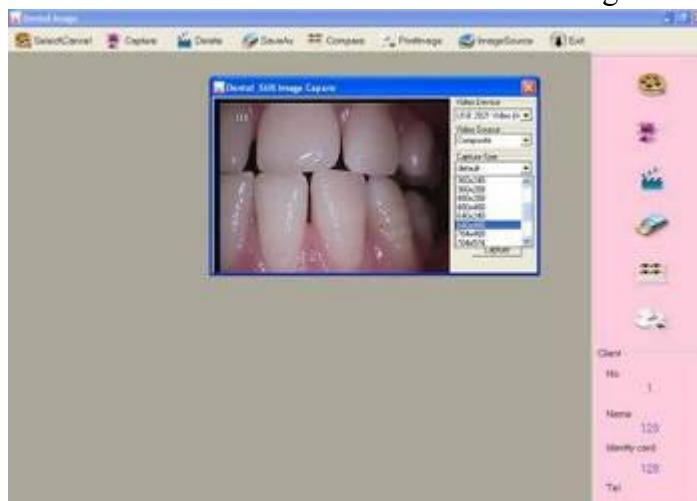
Click Enter in order to enter the Dental Software interface



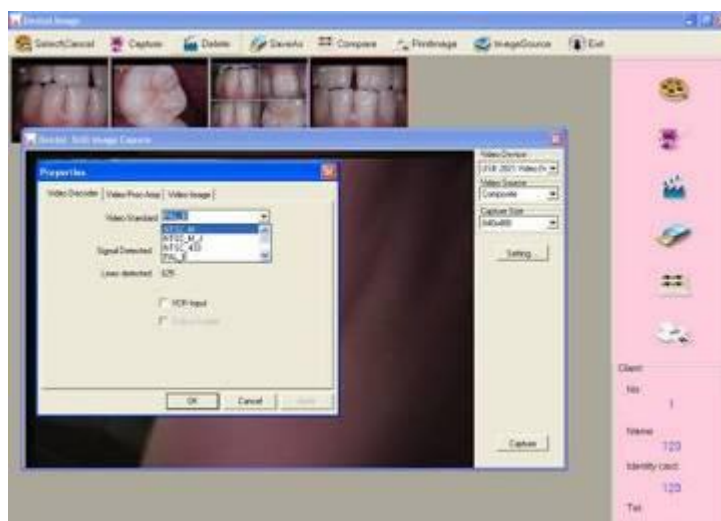
Click Capture to get the images you want.



For the Capture Size, we suggest you to choose 640*480, because it is a standard size for intra oral camera's image

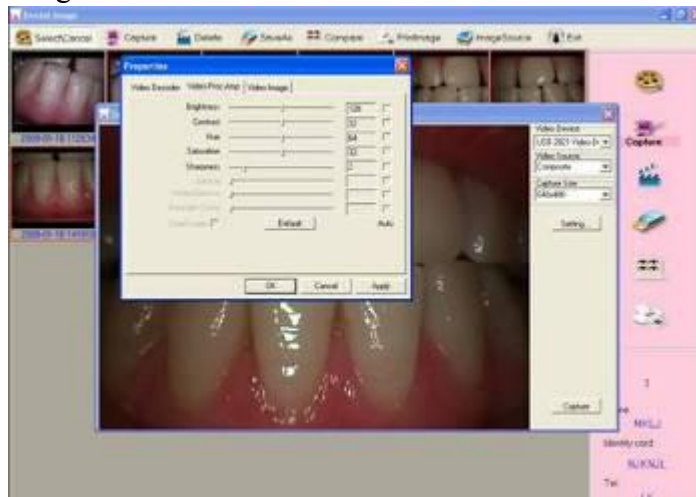


In the Dental Still Image Capture, you can choose Setting to edit the images.



Please check your intra oral camera's video Standard, if it is PAL, please choose PAL_B to match.

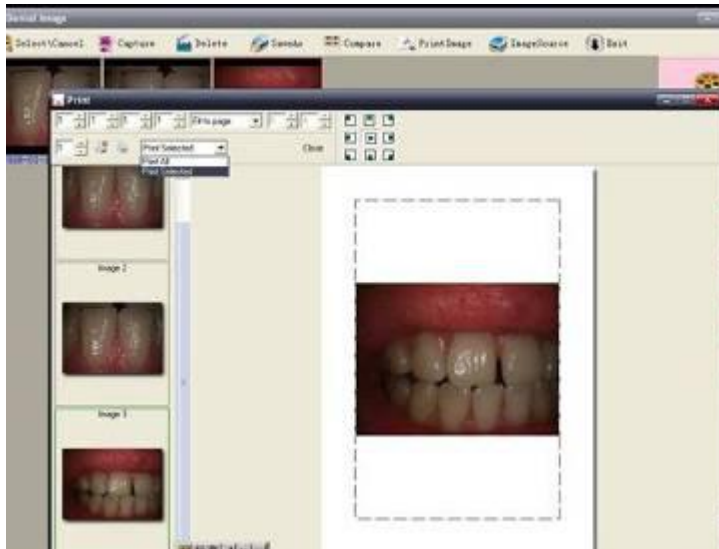
In the Video Proc Amp, you can update the brightness, contrast, hue and sharpness of images



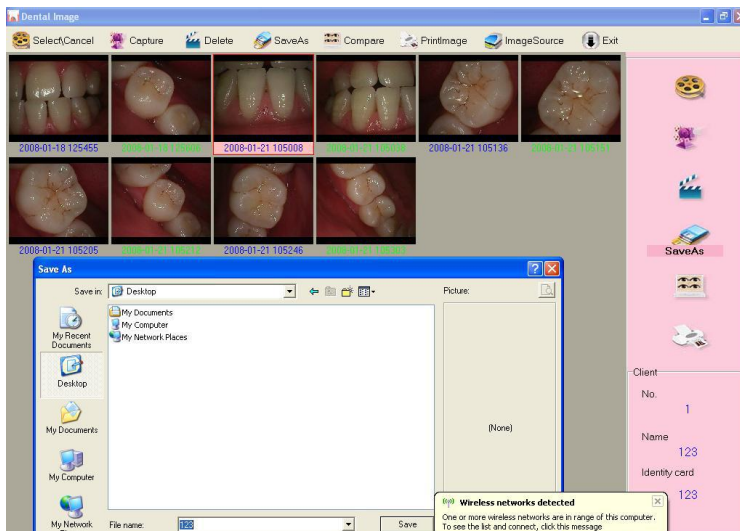
After Setting, please press **Freeze** of intra oral camera to capture the image, the images will be displayed on the interface of dental software.



Click Select/Cancel, you can edit any pictures on the screen, when the outline border becomes red, it means the images can be saved, compared printed and deleted.



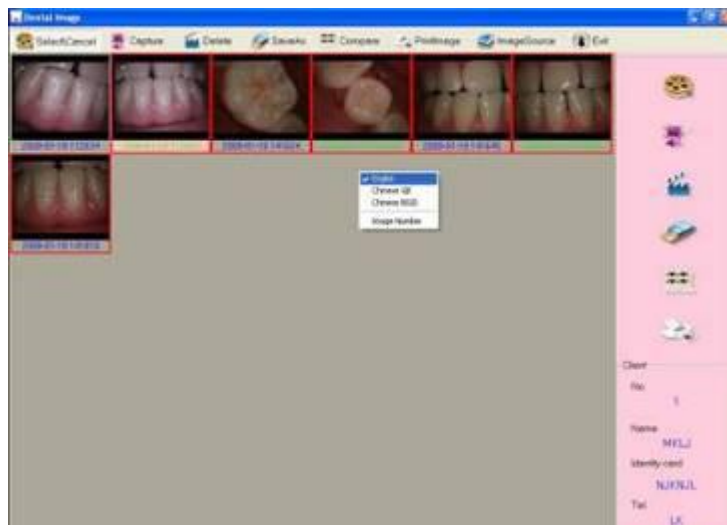
After selecting images, you can click “Save as” to save the images in any location of computer



If you want to compare some images, click “Compare” then the pictures as below



If you want to change the language of software, click right key of mouse as below



7. How to solve troubles

If there are some troubles of products, Please see below special case firstly. If still can't be solved, please contact your local dealer.

Item	trouble states	resolve methods
1	the products can't be startup when open (ON/OFF)switch)	1.check the power socket if it is ok 2.check the cable if it is connected
2	computer or TV can't reveal images	1.check the connection between products and computer or TV if it is correct 2.check the Driver Setup if it is finished,
3	in the process of use, the image will be a little blurry	If you use it in the first time, it belongs to natural reaction. It will be better later on
4	freezing images then appears dithering	the hand shakes when uses camera to capture image, when users are skillful for use products, the phenomena can be changed
5	the images of computer or TV have spots	1.check the screen if it has spot 2.check the lens if it has spot 3.if the spot can't be cleaned, please contact the local dealer

8. Notice

Prior to installation and start-up of the unit, carefully read the instructions provided herein. As with all technical devices, the proper function and safe operation of this unit depend on the users compliance with the safety recommendations presented in these operating instructions.

- A) **CAUTION:** It is important to observe the following precautions:
Do not shine the light directly onto or toward unprotected gingival or skin.

- B) **CAUTION:** Persons with a history of photosensitivity or who are using photosensitizing drugs should not be exposed to light from this unit.

- C) **CAUTION:** This equipment is not suitable for use in presence of flammable anesthetic mixtures with air or nitrous oxide.

- D) **CAUTION:** Please do not look into emitted light by the machine when it is in use or it will hurt your eyes. Please be sure to wear goggles.

- E) **CAUTION:** For the bend angle, please do not exceed 90 degree, or easily broken elbow, it may cause noise in the future.