

# **USBCAM DIGITAL IMAGING SYSTEM INTRA-ORAL CAMERA**

## **USER MANUAL**

**Before attempting to connect or operate this product, please read these instructions completely**



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## Operation for USBCam Digital Imaging System

The most advanced digital radiography and computer technology are developed in digital imaging system. Flexible design, beautiful shape, plug and play, portable and simple operation to get true to life images. Compared with traditional intraoral camera, there is no capture card required to reduce your cost. Just connect it to computer by USB cable directly no docking station or extra power required. Image will be saved in the software automatically, easy to install and maintain.

### Check USBCam before Using It

Before each usage, check the outer surface of the USBCam for any signs of physical damage or defect. The surface of the USBCam should have a smooth finish, with no evidence of chipping or damage to either the handpiece housing or the lens section.

To help ensure proper hygiene and to protect against infectious disease, refer to the "Protective Measures" section of this document and observe all device cleaning and patient protection recommendations specified there.

### Avoid Excessive Temperatures when Using USBCam

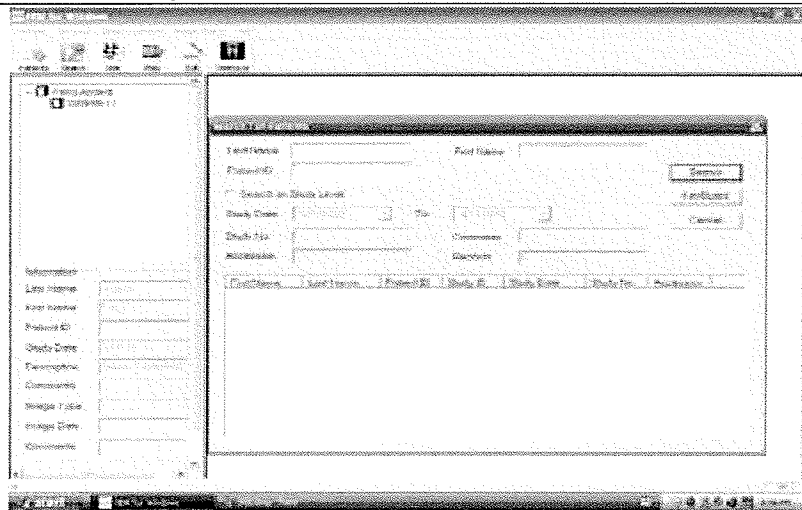
When in use, the LEDs in the USBCam may generate surface temperatures in excess of 106° F. (41° C). To avoid the potential risk of burn, do not use the USBCam in a single hand-held position for a prolonged period. The camera can be turned ON/OFF by simply pressing the ON/OFF button on the handpiece.



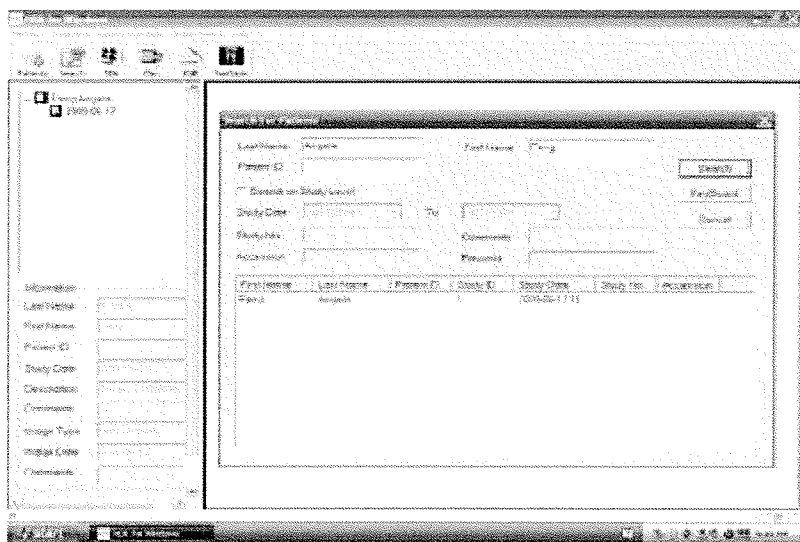
This equipment is warranted to be free from defects in materials and workmanship from the date of shipping for a period of 1 year (12 months).

In the event the equipment is returned by the dealer or end-user and the warranty has expired, our factory reserves the right to collect a reasonable fee for service manually agreed upon.

This warranty does not apply to damage due to shipping, misuse or careless handling.



Input the patient you want to search, then it shows:








### Operate the USBCam as Directed :

Always use the USBCam in accordance with the directions and recommendations contained in this User Guide. Do not attempt to modify the USBCam or use it in system configurations not specified in this document.

### Explanation of Symbols on the USBCam

Some of the symbols on the USBCam identify it as having met the requirements for sale within the United States and for export internationally. The "CE" symbols are examples of these types of marks. The remaining symbols, shown below, provide either technical or directive information.

	Caution , refer to accompanying documentation
	Type B applied part Note: B = Body
<b>SN</b>	Manufacture's serial number
	Authorized representative in the European community
	Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE Directive) after over the valid term within 10 years, the machine should be treated on local law or regulation requirement. To avoid hurt users and pollute environment.
	The Computer-control integral dental equipment bears CE mark CE indicating its conformity with the provision of Council Directive 93/42/EEC concerning medical devices, and fulfills the essential requirement of Annex I of this directive.

	<b>FRAGILE</b> Contents of the transport package are fragile therefore it shall be handled with care.
	<b>THIS WAY UP</b> Indicates correct upright position of the transport package.
	<b>KEEP AWAY FROM RAIN</b> Transport package shall be kept away from rain.
Symbol	Description
	Indicates that the USBCam is Type BF equipment.
	Indicates an attention to users to consult accompanying documents (this User Guide) for more information on the USBCam.

## 1. Technical Parameters

- work distance 5mm~35mm (another model: Focus cam: 1mm~∞)
- luminous ≥500Lux
- resolution 640\*480~1280\*1024
- field angle 90°±5%

## 2. Requirements

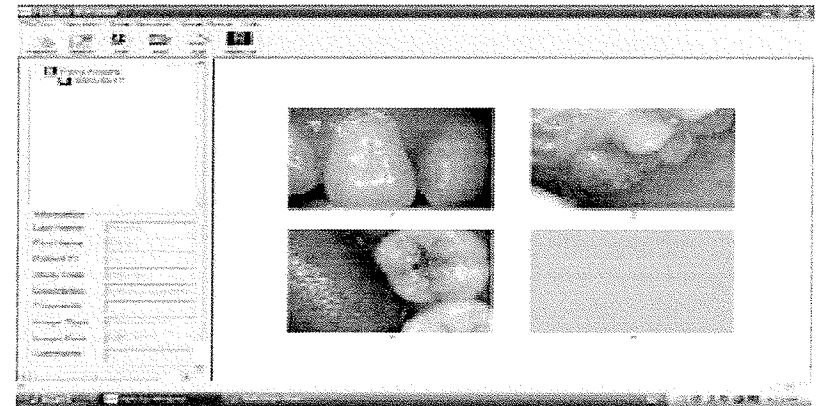
### (a) Using requirements


- Temperature: 5°~68°C
- Humidity: ≤80 %
- Power&Voltage: 5VDC
- Air pressure: 86kpa~106kpa
- Geographic Height: <4000 meters

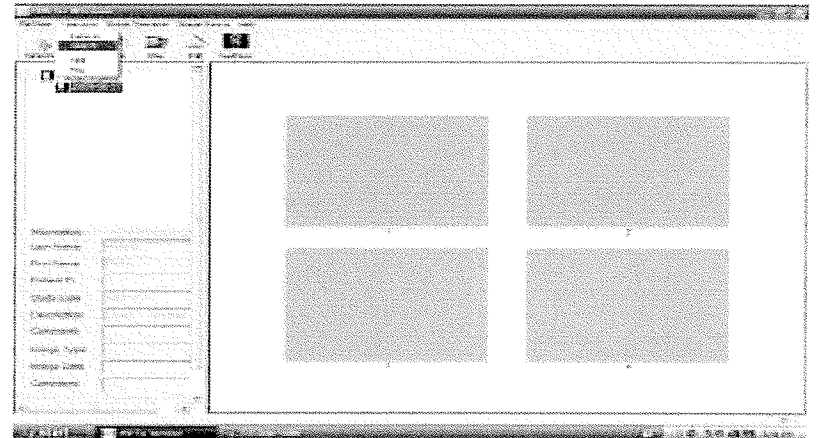
### (b) System Requirements

- CPU Pentium 4, 2 GHz or higher
- Operating System: Windows XP Professional for an Intel 32-bit processor with Service Pack 2 and KB 822603 update or later. DirectX 9 or later

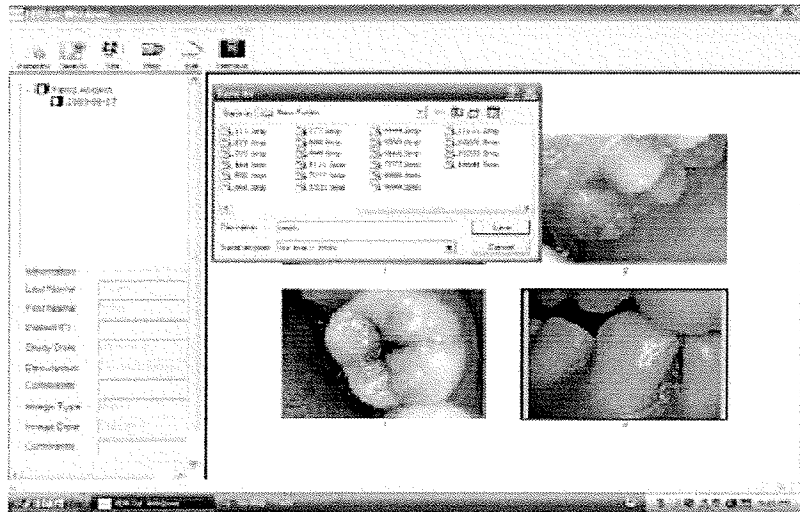
Then click the “delete” in “Image Operation”, then it shows.



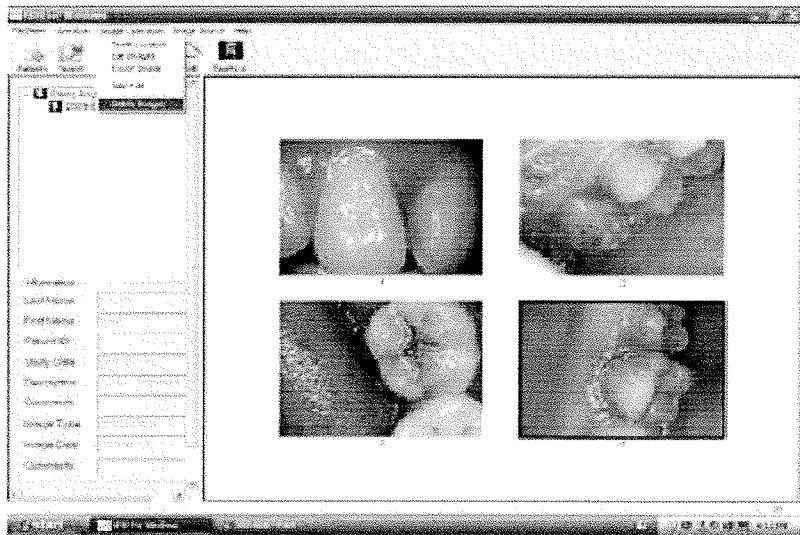
14. To search a patient case, please click the icon  Search, or click the “Search” in “Operation”.



Choose the destination folder.



13.Delete function: Click the picture you want to discard.



- RAM 256 MB
- Windows XP Professional for an Intel 32-bit processor with Service Pack 2 and KB 822603 update or later. DirectX 9 or later
- CD ROM Drive 24X speed
- Monitor SVGA 17", 800 x 600 or higher resolution or higher
- Video Display Adapter 16 MB Video card supporting 800 x 600 pixels with 32-bit color
- Standard keyboard and mouse
- USB Port Must be USB 2.0 high speed, high power port
- Printer Optional

### 3. Specifications

- Imager: 1/4 inch CMOS
- Effective pixel layout: 640\*480~1028 x1024
- Video output: USB2.0 compliant full motion digital
- Focus range: 5mm ~ 30mm
- Illuminate: 6 LED
- USB cable length: 2.5 meters
- External power supply: none
- Handpiece weight: 40g
- Operation system: Windows 2000/XP/VISTA

### 4. USBCam Manual Picture

#### Description

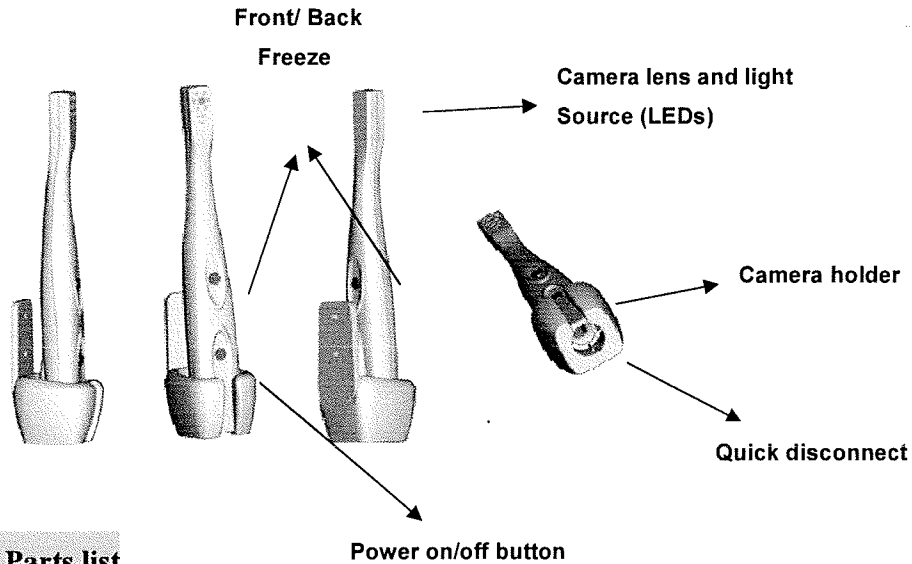
- Front /back freeze button: Freeze (capture) image.
- Camera lens and light source: Professional optical glass lens and 6 high illuminating LEDs.

· Power on/off button: Control LED light. When not using, please turn off.

Avoiding the handpiece too hot to prolong its lifetime.

· Camera holder: For supporting the handpiece

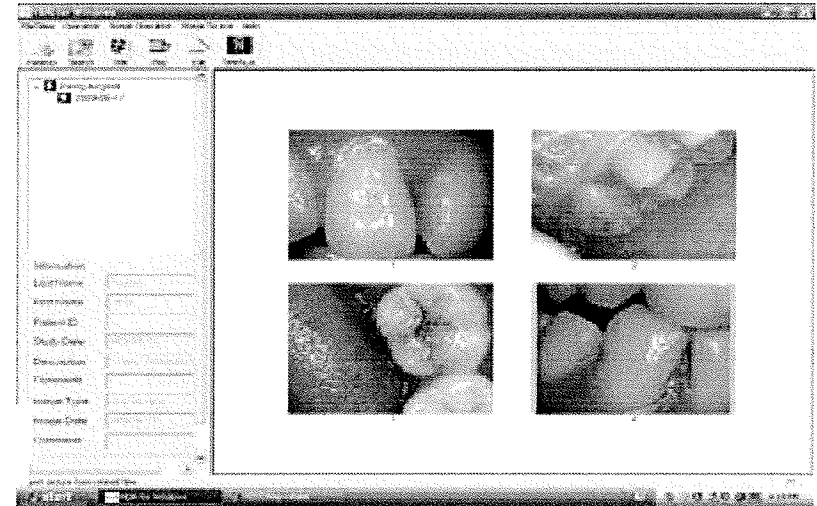
· Quick disconnect: Connected to "B" connector of USB cable .



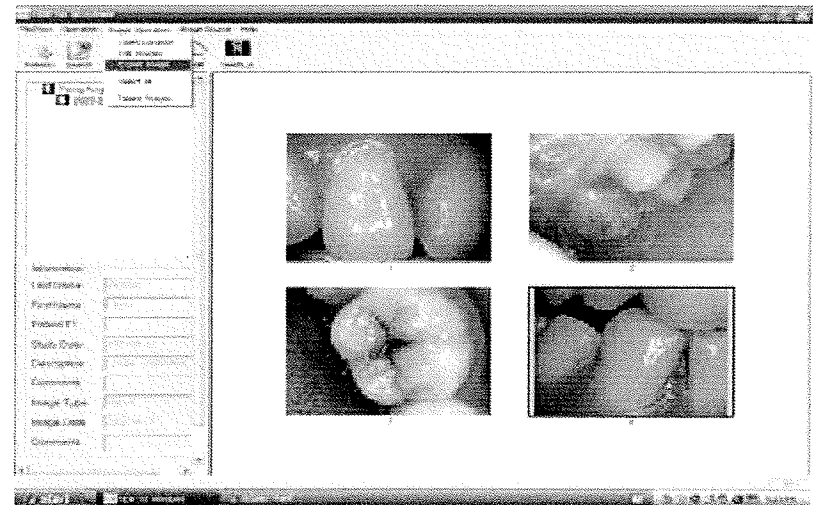
## 5. Parts list

- CD
- Screw
- Handpiece
- USB cable
- Camera holder
- Operation manual
- Disposable sheath

Then one image is imported.

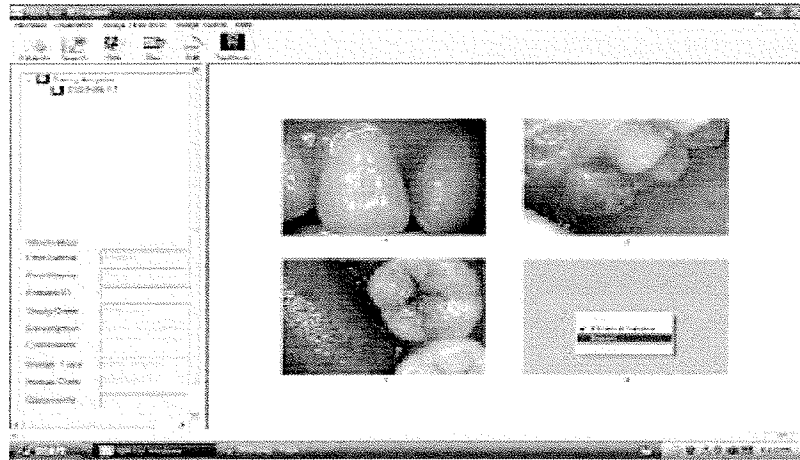


12. The images saved in software can also be export to other folders you prefer. Click "Image operation" in menu bar, then select "export".





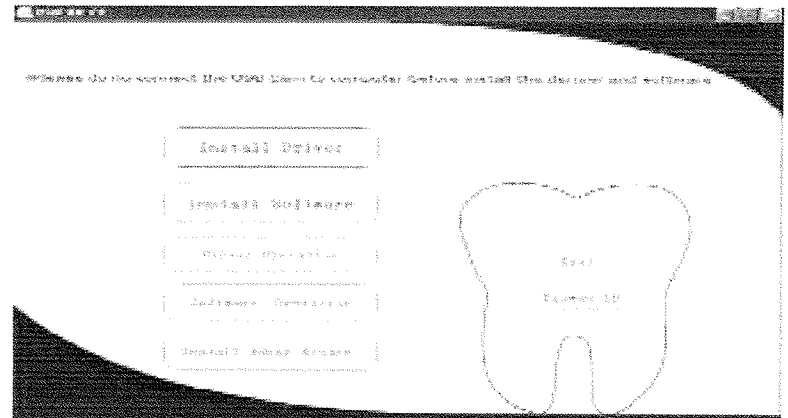
11. Double click the none picture area, we can import another picture into the software.

[illegible]

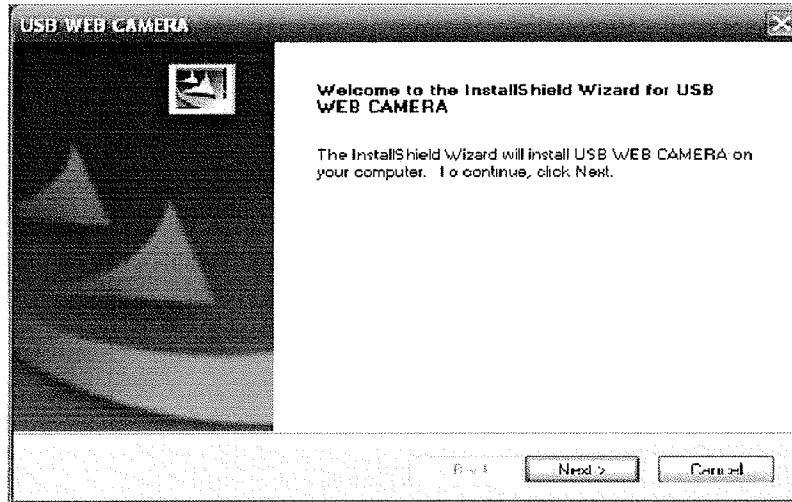
We provide CD together with camera within the package. To begin the installation, insert the CD into your CD-ROM drive. The CD is equipped with an *Autorun* feature and will start on its own.

## DRIVER SETUP

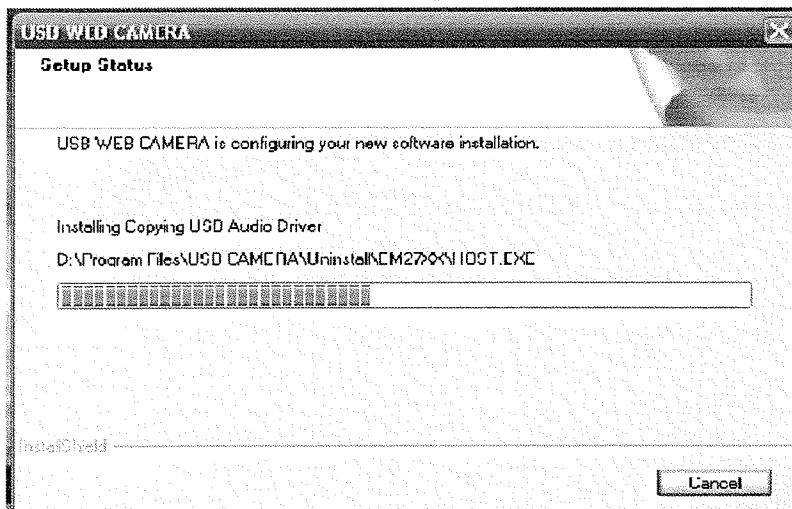
1. Insert the driver CD into CD-ROM or DVD drive, installation screen will appear:



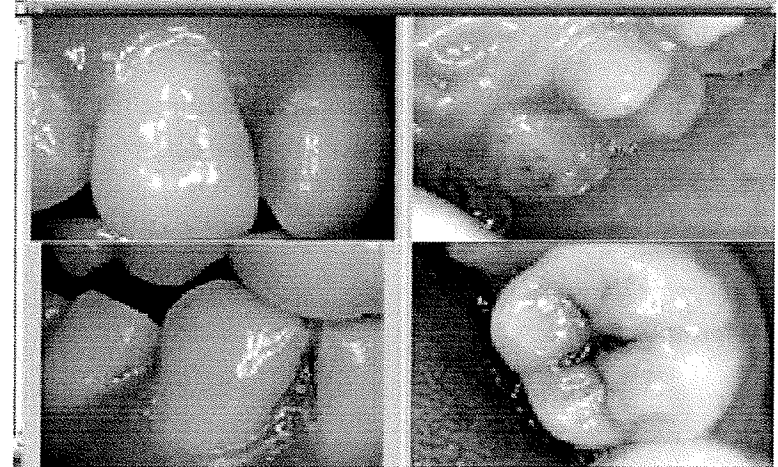
2. Click “Install Driver” to continue.




3. Choose “Next >”, installation progress shows in the screen.

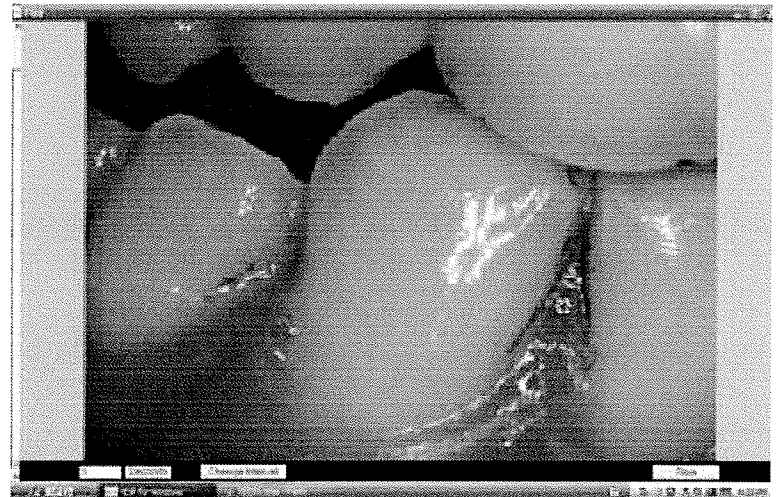


4. When it shows.



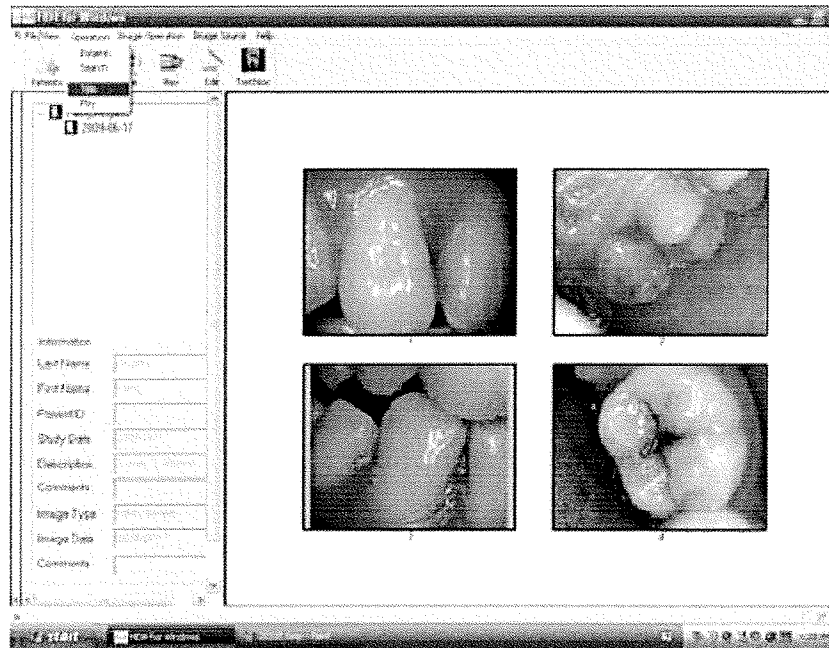
Dentists could compare the tooth of previous and after cured.


10. The photoed images could also be played one by one, click the icon  Play on the tool bar or choose “play” in “Operation”

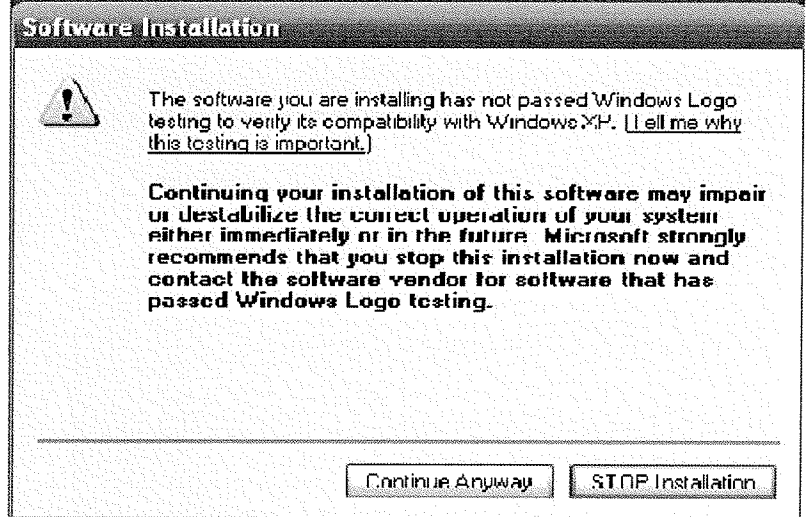


⚠ of images photoed doesn't exceed 5, click this two buttons , there will be no response.

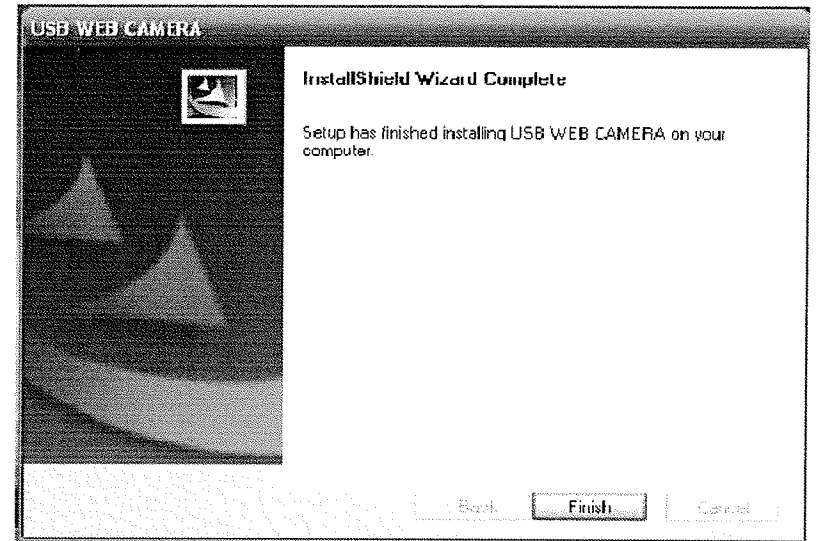
9. The maximum No. of images we can view at the same time is 4.




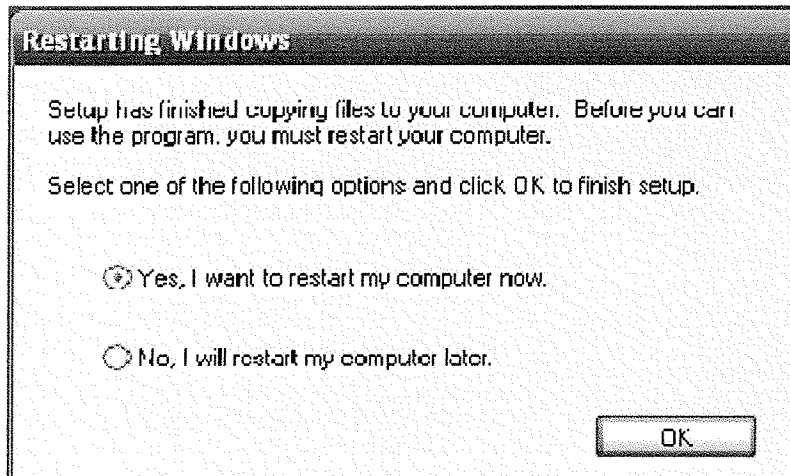
click the icon  or the "title" in "Operation" , the follow windows will show.







5. Click "Continue Anyway".

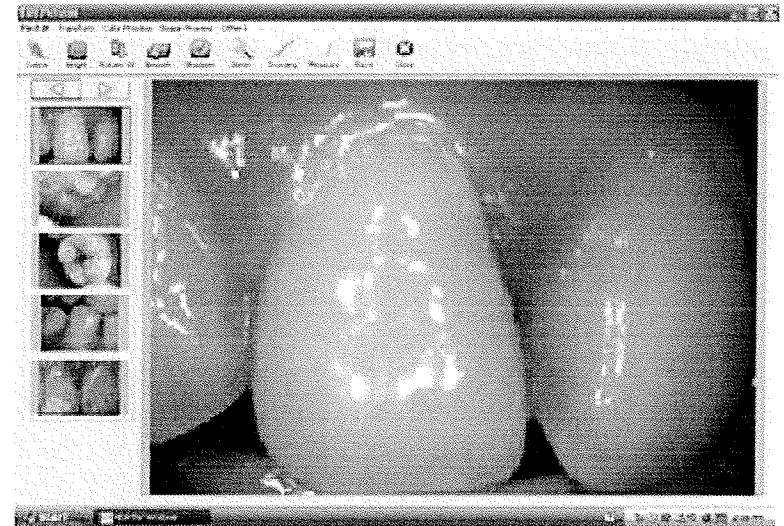



6. Click “”, following notice shows in computer .

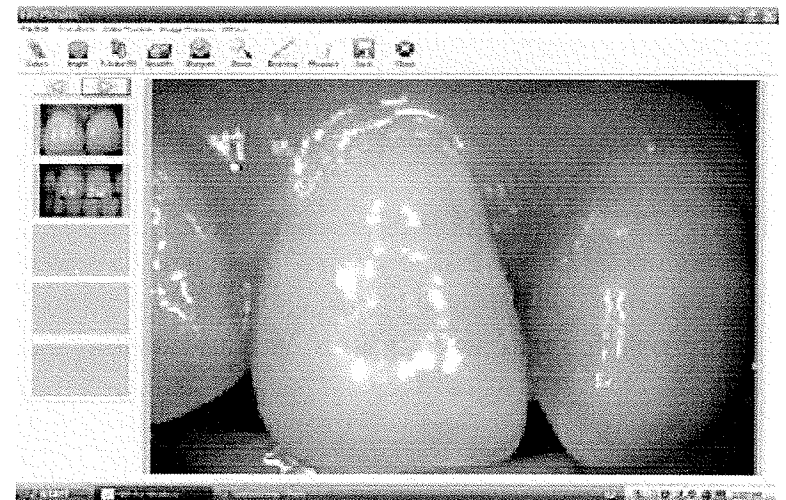



7. Choose “ Yes, I want to restart my computer now.”, and click “” to restart computer, then the installation of driver have been finished.

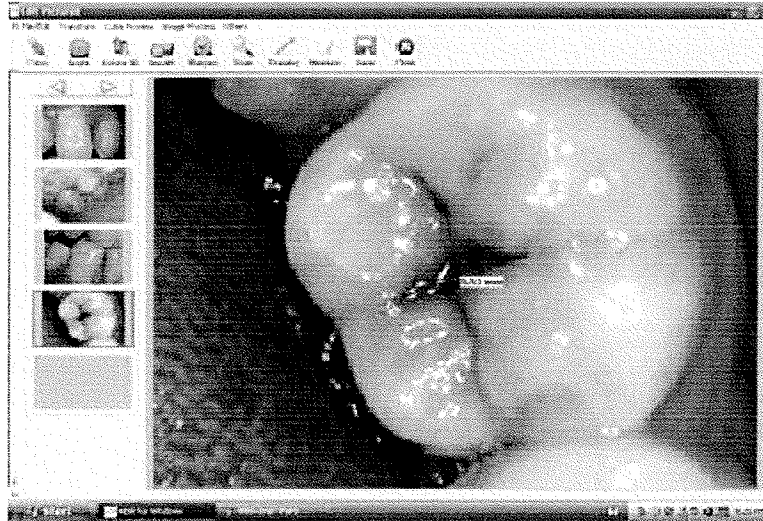
8. There will be a icon in desktop , and a icon in taskbar .




For behind please click .



7. For acquiring the size of tooth, please click the icon  **Measure** , then Keep right click and move the mouse from starting point to the end. Then relax the right click, a red line will be showed on the tooth and measure result will also appear.

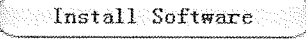



8. The two buttons   are set for turning the images,

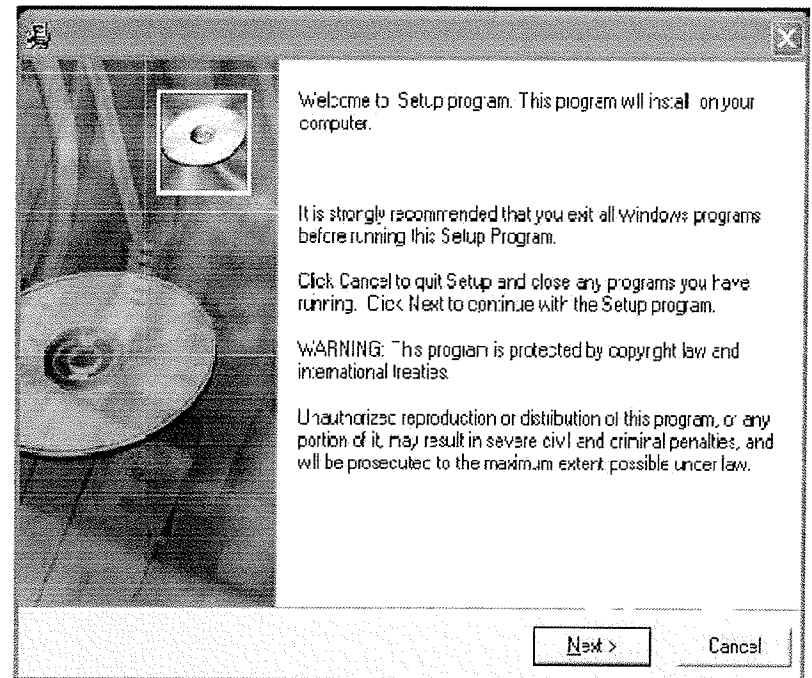
Viewing the previous images please click the button .

## SOFTWARE SETUP

### Software installation

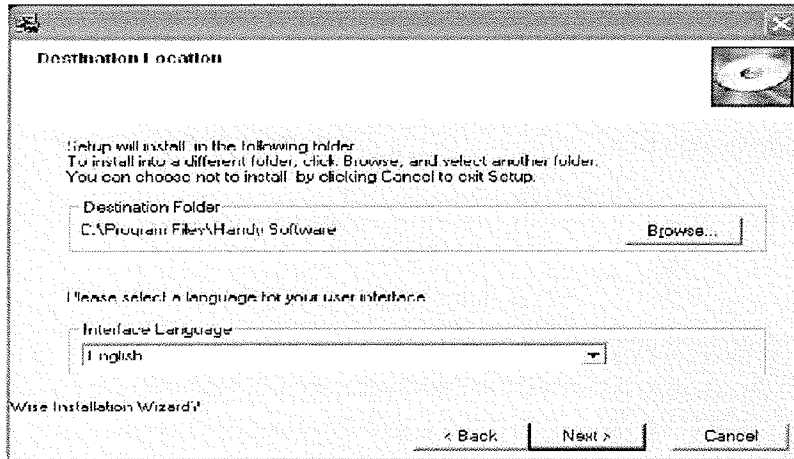
1. Click the button  on the interface of the CD or

click the icon  **WackyInstall.exe** in the CD doubly, then it shows:

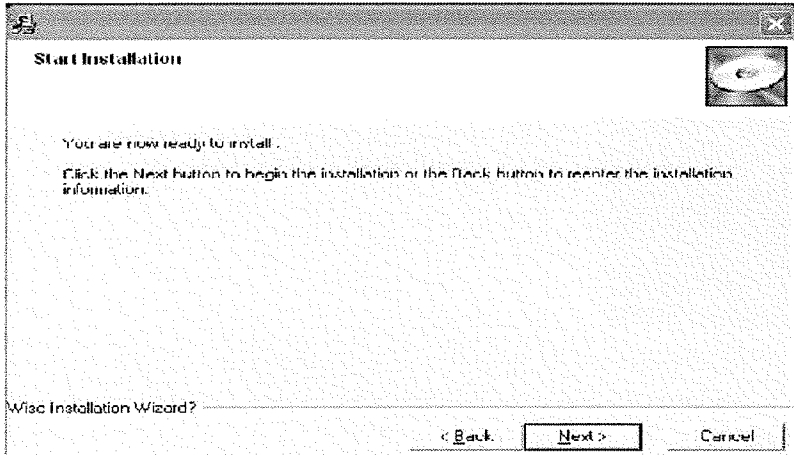


Click "Next".

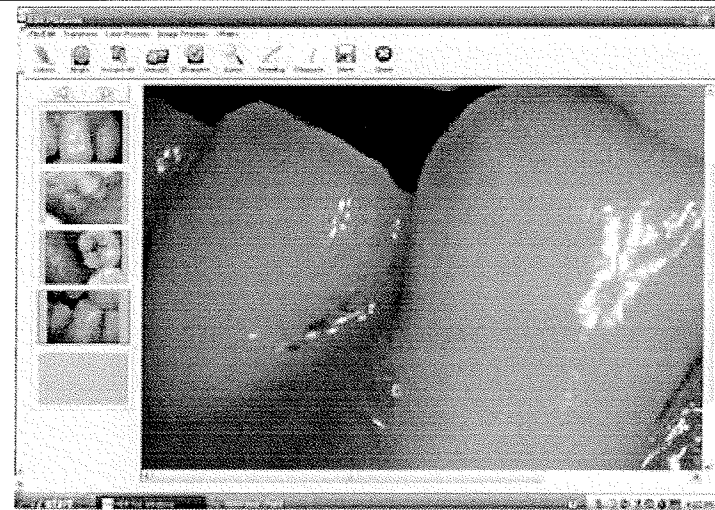





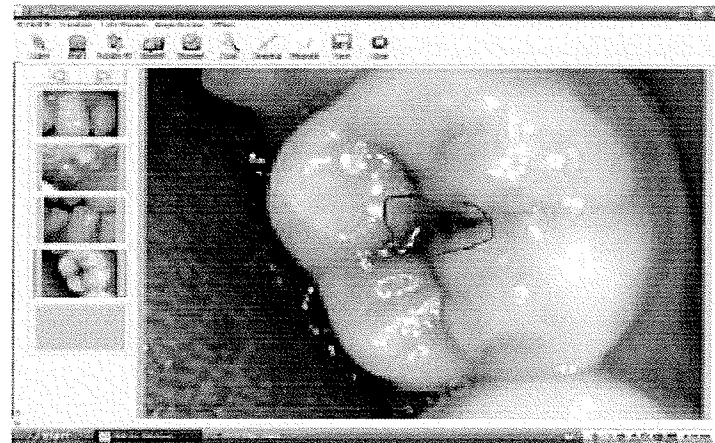
2. Click browse button to Select the destination folder , typically we accept the default folder, which is *C:\Program Files \Handy Software*. After select the interface language, then click "Next".

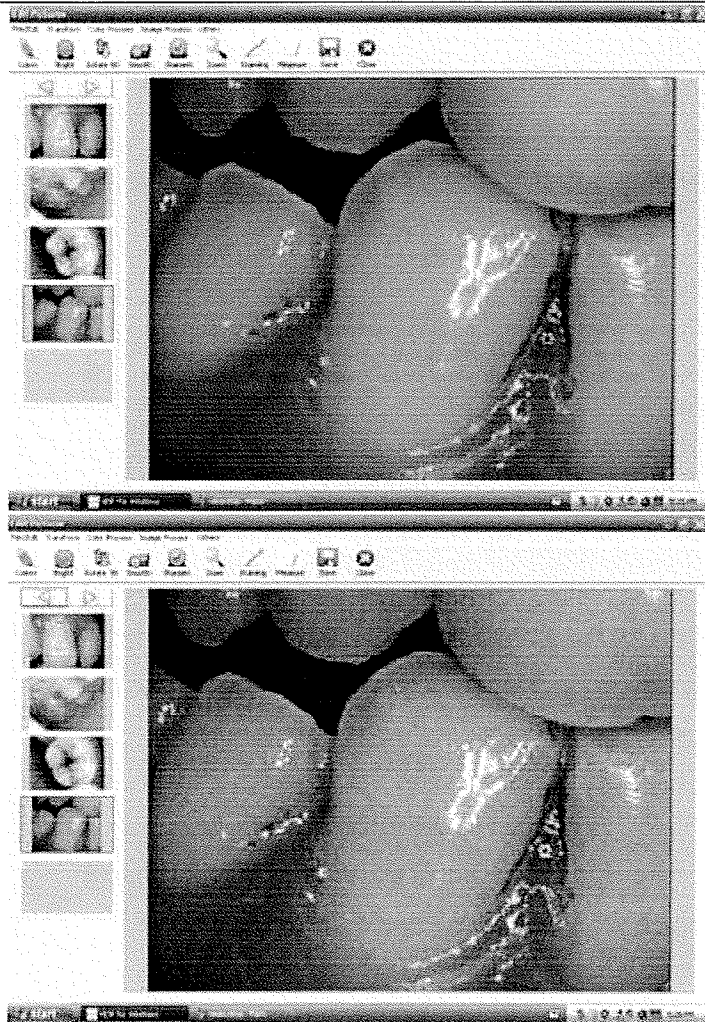



3. Click "Next".

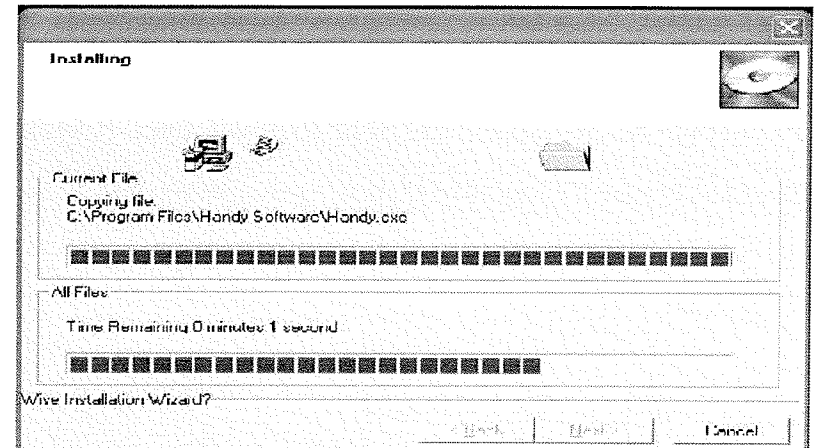


6. Click the icon , then keeping right click and moving the mouse for making a mark on the image where showing disease, like decay, bleeding gums.

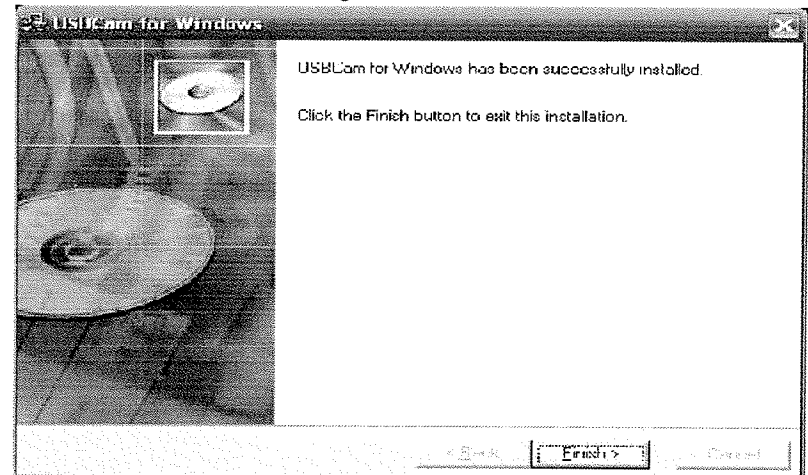





5. The image can be zoom by clicking the icon  in toolbar or selecting "zoom" in "Others".



4. Click "finish" when showing.



5. Then the installation software has been finished. The icon  Will show on the desktop.

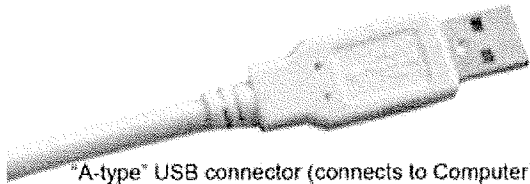
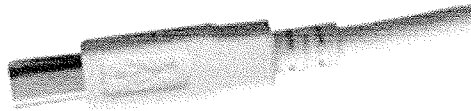


## HARDWARE SETUP

**! IMPORTANT! Do not connect the USB Cam and cable to your computer until after you have installed the driver and software.**

The USB cable used with this camera is a 2.5 meters cable. Please operate as the following figure.

"B-type" USB connector ( connects to Handpiece)

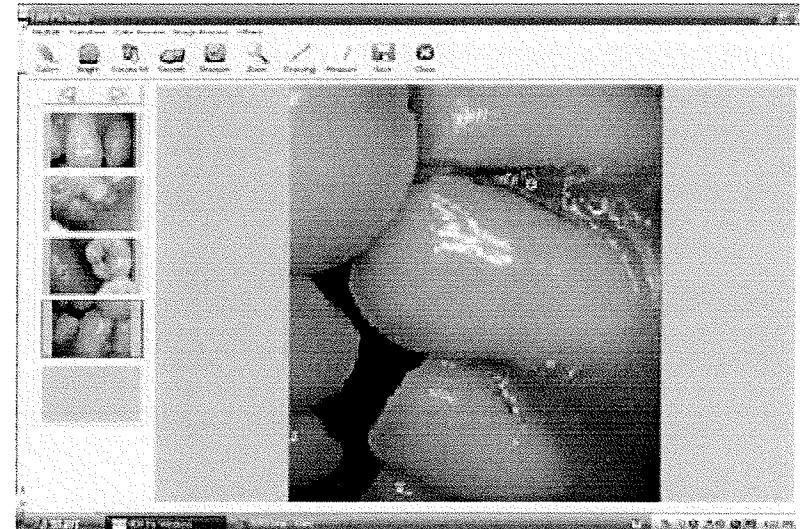


"A-type" USB connector (connects to Computer)

**PLEASE NOTE:** Computer windows will detect this new device automatically when you connect USBCam. We will receive three momentary messages one after another. "USB device, USB composite device, USB video device."



3. The icon of Rotate 90 is set for rotating the image, then the dentist could view the image in different angle. Another way to achieve this function, please click "transform", select the detailed angle you want.




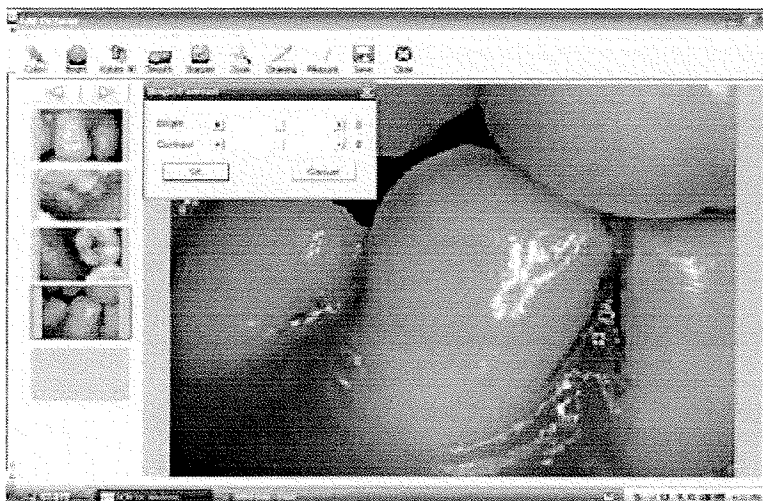
4. The two icons Smooth and Sharpen could reach the functions of smooth and sharpen. Click "image process" in menu bar then select "Smooth " or "Sharpen " also can achieve the relevant functions.



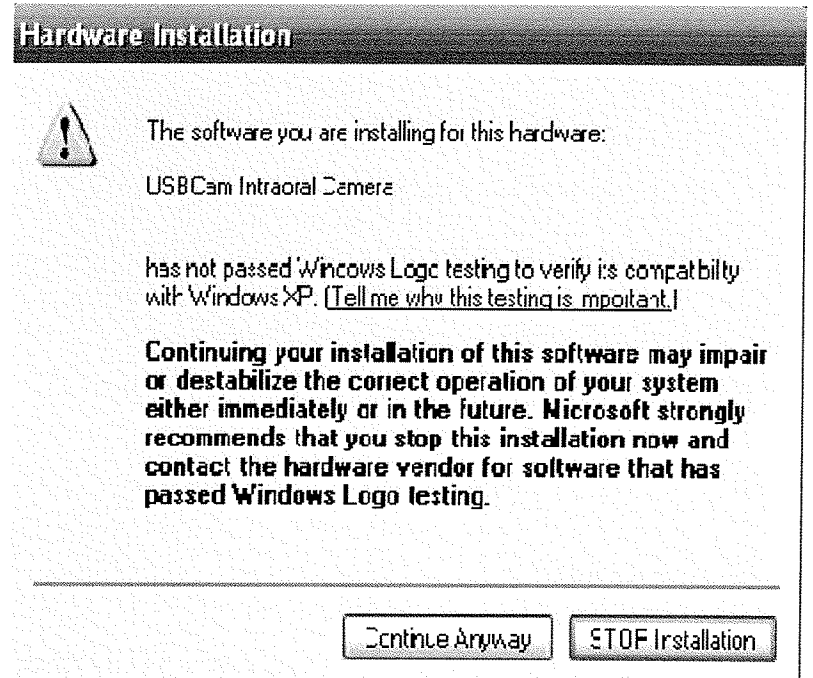
adjust the image color:



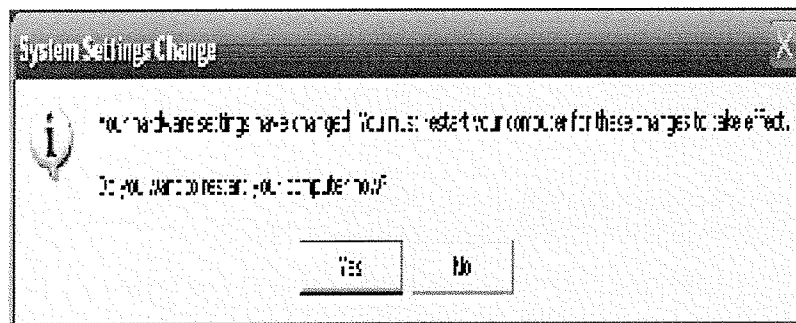
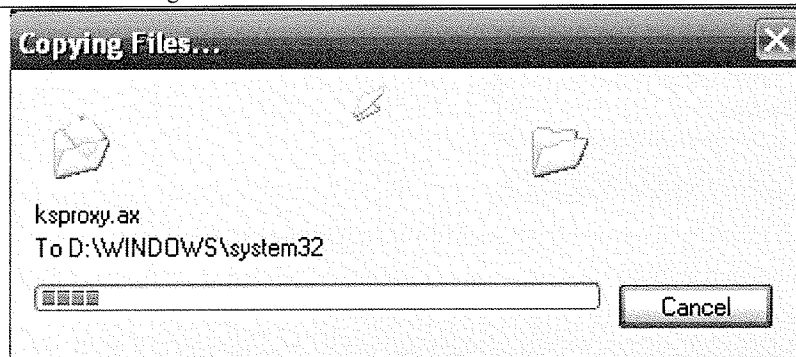
2. For adjusting the brightness and contrast, please click the icon  in toolbar or select “Bright/Contrast” in “color process”.



When it informs “your hardware is installed and ready to use” The following step will show.



1. Click “Continue Anyway”.



2. Click “YES” to restart the computer.

## Using disposable sheaths

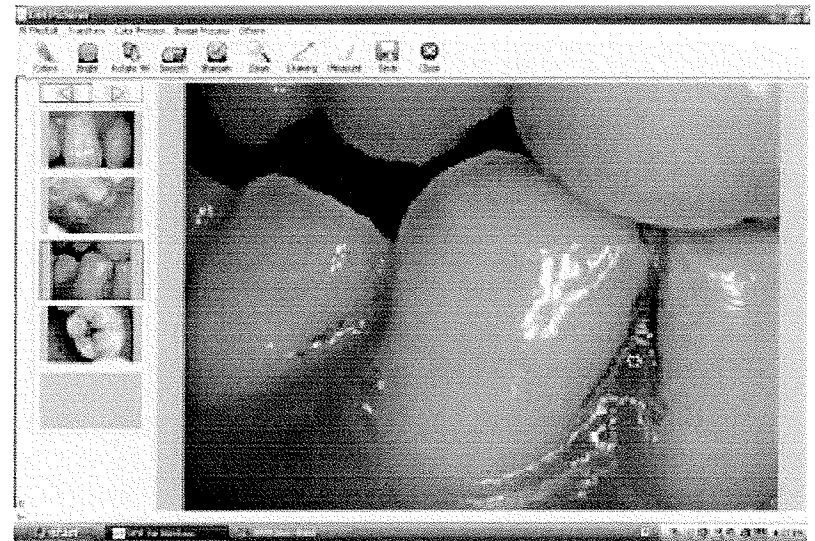
Disposable sheaths are provided with each USB Cam system as a effective measure for ensuring proper hygiene and to protect against infectious disease .Use a new sheath in each intraoral checking, then dispose it properly.


We can capture images continuously with this video capture windows without closing. All the images photoed will be saved in the software automatically.

**PLEASE NOTE:** This USB Cam is a fixed-focus type camera with 5mm to 30mm depth of field. As live video begins to stream, adjust the distance of handpiece to the place of interest until the image is as clear and sharp as possible.

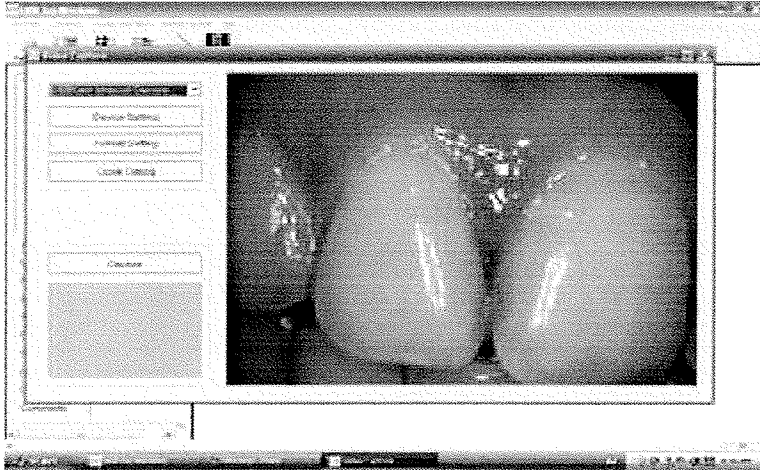
## Edit Image

Double click the captured image, then the following windows will show:

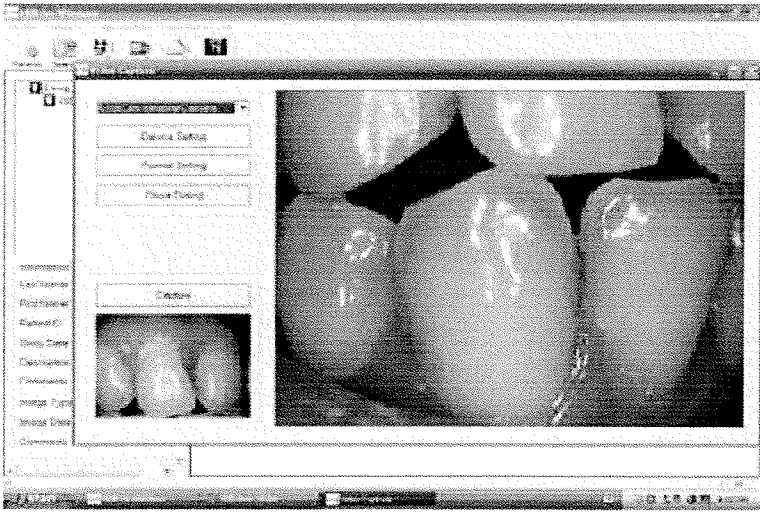


1. Click the icon  in toolbar or select “colors” in “color process “ to

2. Please input register key which is contained in CD then click OK, Video Capture window will show.



3. Press the capture button on the handpiece or click "capture" button on the software, the image is frozen(captured).



## SOFTWARE FUNCTION

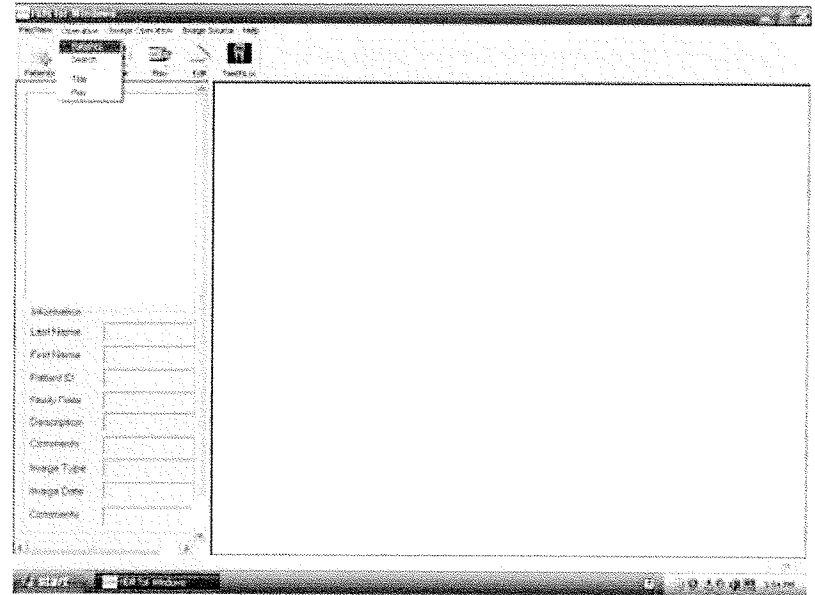


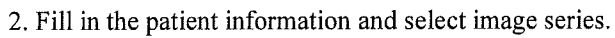
Double click the icon to launch the software

Create a "Patient Case"



1. Click the icon **Patients** in the toolbar or select the "patients" within "Basic Operation" in menu.





## Capture Image

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