USB Endoscope Camera, PROCAM (EF-140HCU / EF-140HCUA) USER MANUAL

Easier & better performance

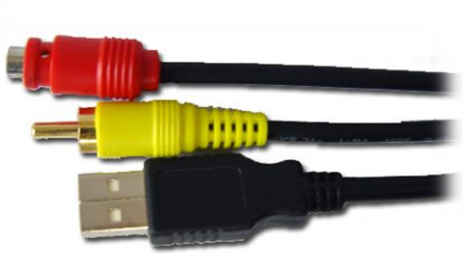
* Design and specifications are subject to change without notice.
* Endoscope is not included
* Manual & Software Update will be continuous.

- Contents -

1. Safety Caution & Specification
2. General Specification
3. Introduction of Software Installation Process
4. Introduction of USB Driver Installation Process
5. Button & Function Description
6. Warranty Regulation

Diagnosis Software

USB Output(Option)



USB & RCA Output(Option)

PROVIX, 4/5F Jipyong B/D, 151-37 Wonmi-dong, Wonmi-gu Bucheon-si, KOREA
www.provix.co.kr / sales@provix.co.kr / (TEL) +82 32 661 8135 / (FAX) +82 32 661 8138
MADE IN KOREA

1. Safety Caution & Specification

Safety Caution
*. In order to obtain optimum performance and ensure patient safety, please read this instruction manual thoroughly.
* Do not use CAMERA if you notice any signs of damage or malfunction and contact PROVIX or its official distributor in your country immediately.
* Do not use in the presence of flammable anesthetics.
* Do not use any other attachments which don't follow the international standard other than the attachments designed by PROVIX exclusively for CAMERA.
* Always be careful when using this device to patient.
* Do not disinfect CAMERA by using steam or autocalve. (the best way is using EO Gas)
* Water Ingress Protection, IPX7—protected against the effects of temporary immersion in water
* This product complies with current required standards for electromagnetic interference and should not present any complications to other equipment or devices. Avoid using this device in close proximity of other equipment.
* Keep out of reach of children. Only to be used by trained personnel.
* Operating Temperature: -10℃ ~ 50℃ * Operating Humidity: 0% ~ 80%
* Storage Temperature: -20℃ ~ 60℃ * Storage Humidity: 0% ~ 90%

2. General Specification

USB Endoscope Camera, PROCAM

* 1/3 SONY CCD
* Pixels: 500,000
* Resolution : 640 x 480p / 25~30 fps
* USB 2.0 Connection Available (Cable Length: 3m)
* Including Free Diagnosis Software (Windows Only)
* Dimension of Camera: 40mm X 40mm X 84mm
* Weight of Camera Head: 120g
* Function: White Balance Button, Capture Button, Recording Function (By Software)
* Output (Option 1 / MODLE – EF140HCU): USB 2.0
* Output (Option 2 / MODEL – EF140HCUA): USB 2.0 & RCA (CVBS / Composite)

Coupler Lens

* C-Mount Coupler Lens
* Focal Length: F=22mm or F=25mm Available.
* Dust Protect Glass

USB Portable LED Lamp, EF-LED

* 3 Watt LED
* Wolf Connector Style
* USB 2.0 Connection Available (Cable Length: 3m)

80W LED LIGHT SOURCE, LL250 SINGLE

* 80 Watt LED Light Source
* Brightness Control Available
* Stroz / Wolf Connector Available
* Fiber Optic Cable (Wolf / Storz) Available

3. Introduction of Software Installation Process

Introduction of Software Installation Process

Before installing Software, Please check the Basic System Requirement as below

* Windows XP, Windows Vista, Windows 7

* USB 2.0 port

* Minimum Specification of Computer
- CPU: Intel Pentium Dual Core B950 / 2.1Ghz, Cash: 2MB
- MEMORY: More than 2GB
- Graphic Card: G-Force GT, more than 2 GB
- O/S: Windows XP or later O/S

Please close all windows & save all data.

*** Caution ***

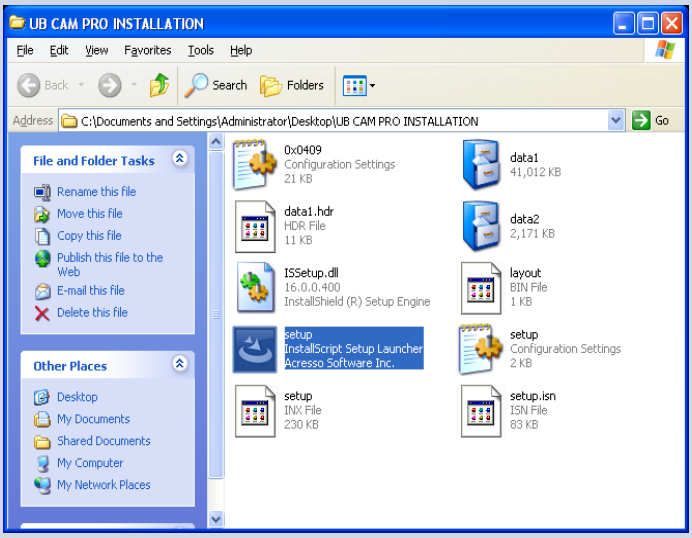
Because this installation software is designed for medical purpose specially, users or doctors have to **follow the directions in this manual completely due to the Video Codec Installation.**

If you don't follow the direction and just click "next", "next". The software will not operate properly.

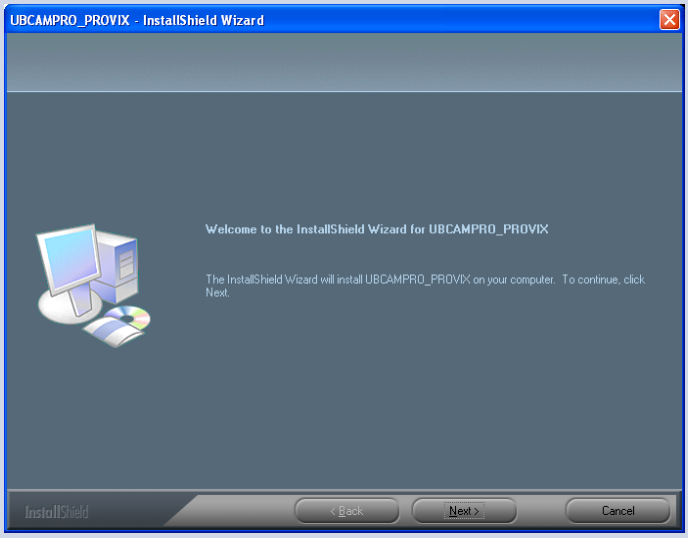
Introduction of Software Installation Process

1. Please insert the CD provided by PROVIX

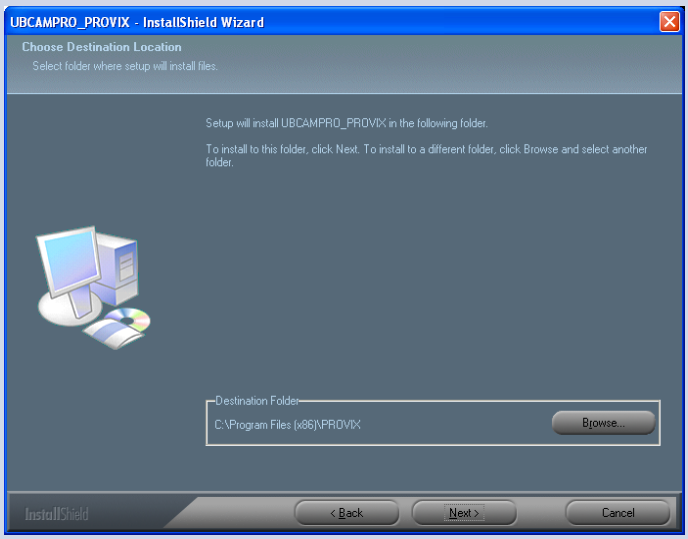
2. Double Click CD-Driver, or open the files in CD.



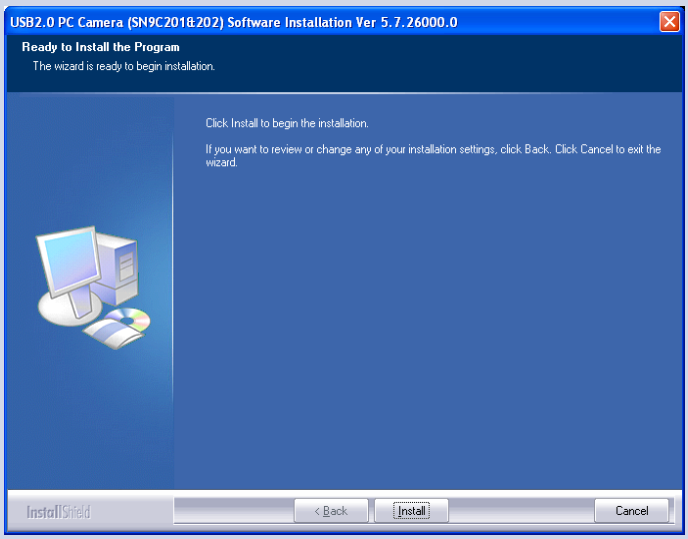
3. Double Click "Setup" file



4. Click "Next" Button

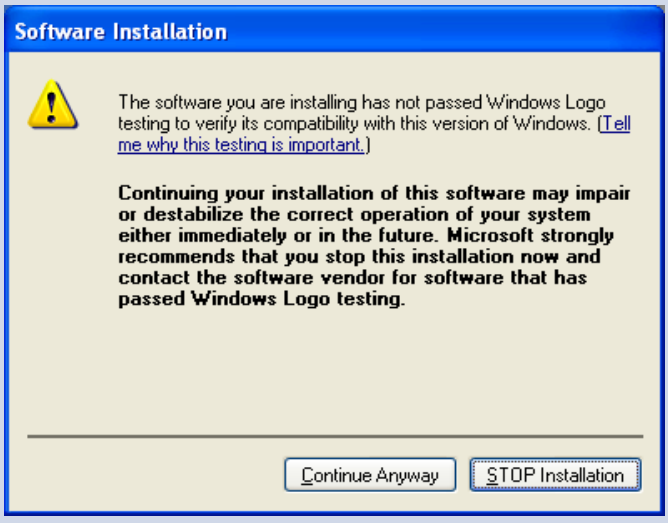


5. After designate the folder, click "Next" button

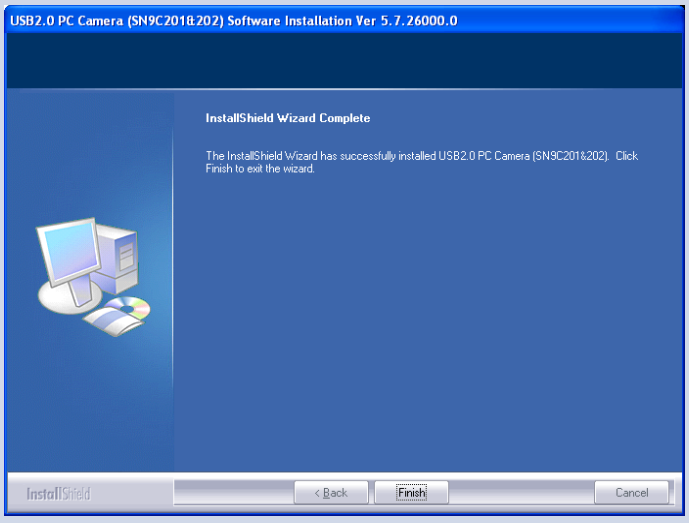


6. Click "Install" Button

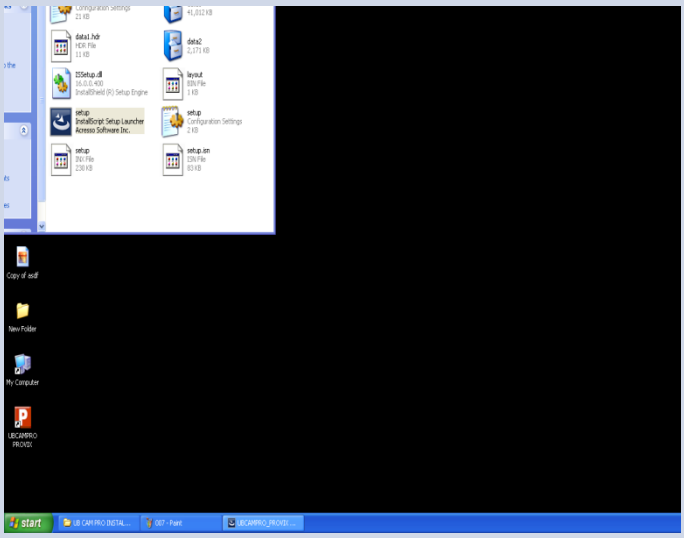
Introduction of Software Installation Process



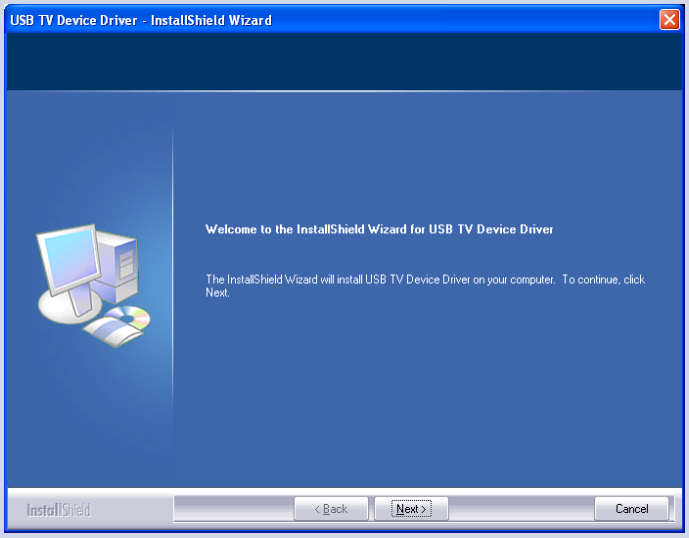
7. Click "Continue Anyway" Button



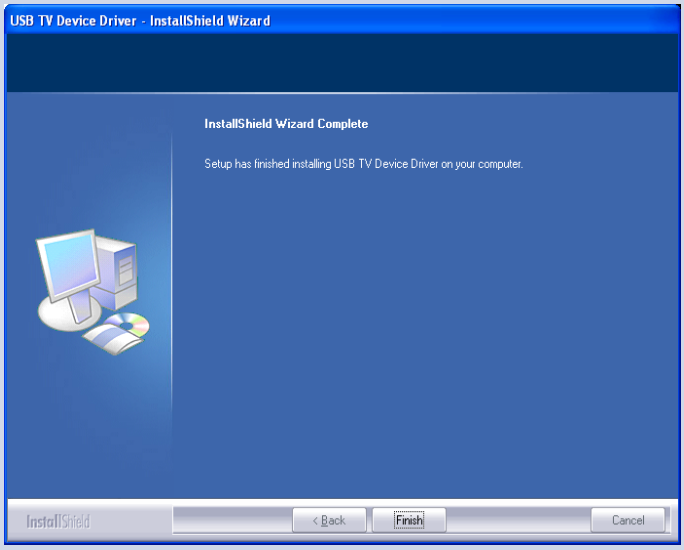
8. Click "Finish" Button



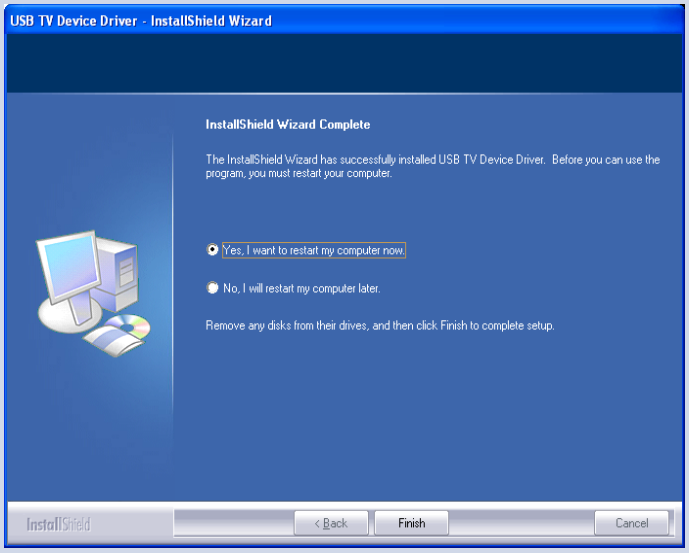
9. Wait for few seconds until Install window shown up



10. Click "Next" Button

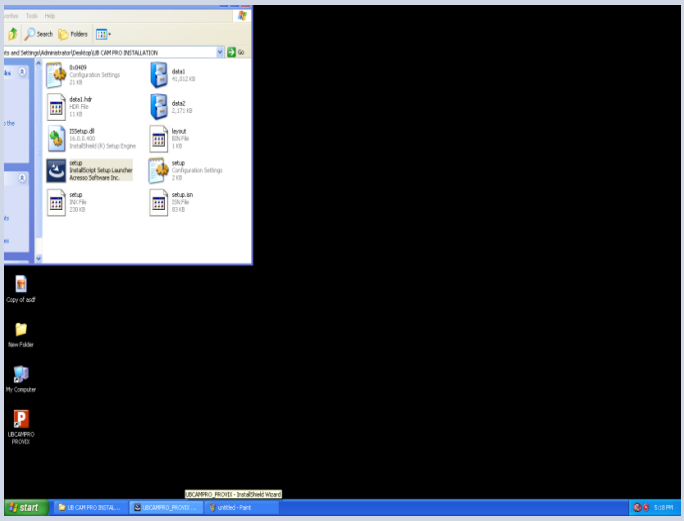


11. Click "Finish" Button

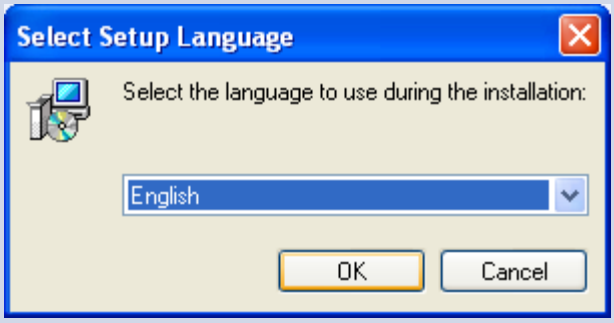


12. Just click Finish (Do not restart the computer)

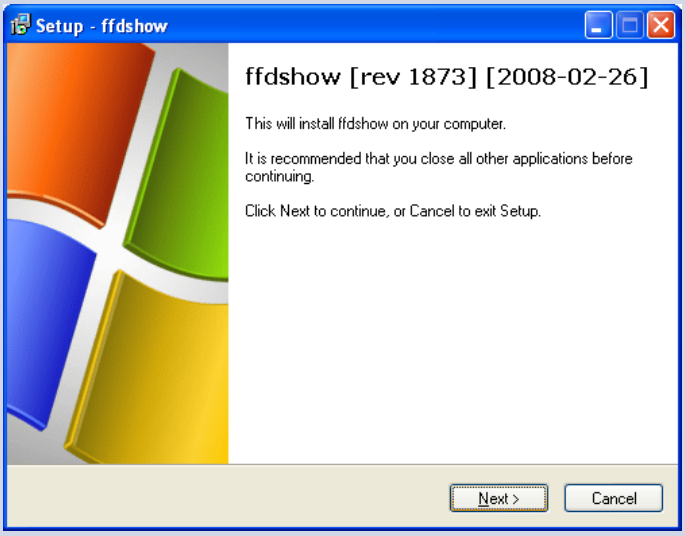
Introduction of Software Installation Process



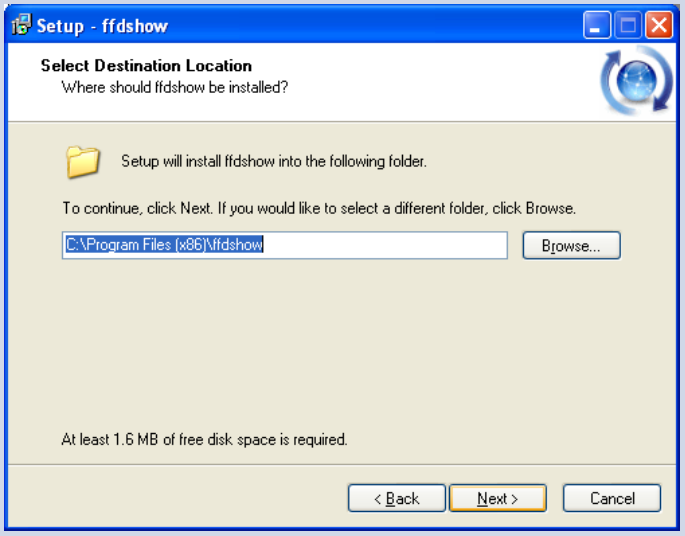
13. Wait for few seconds until Install window shown up



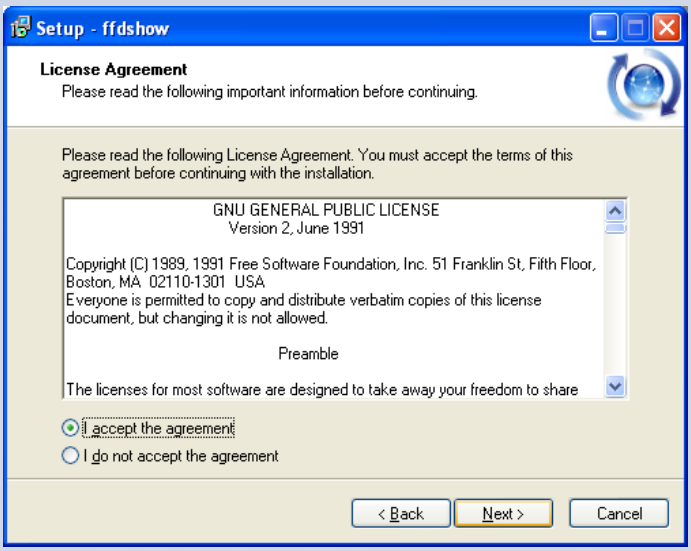
14. Choose the proper language. Then click "OK"



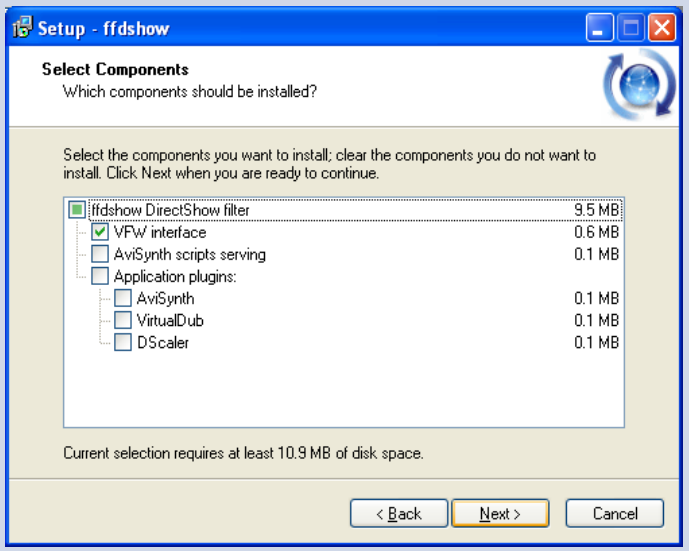
15. Click "Next" Button



16. Select location. Then Click "Next" Button

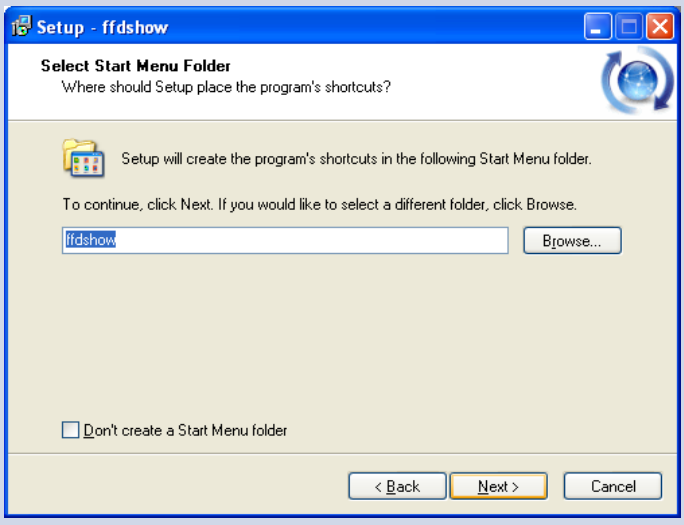


17. Click "I accept..." option, then Click "Next" Button

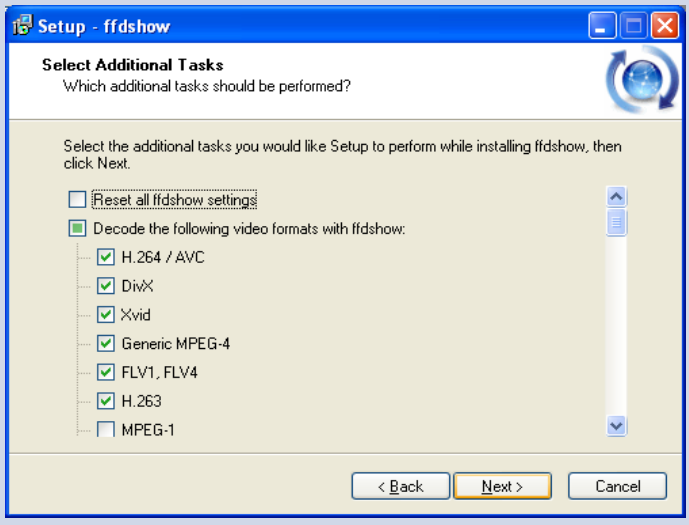


18. Click "Next" Button

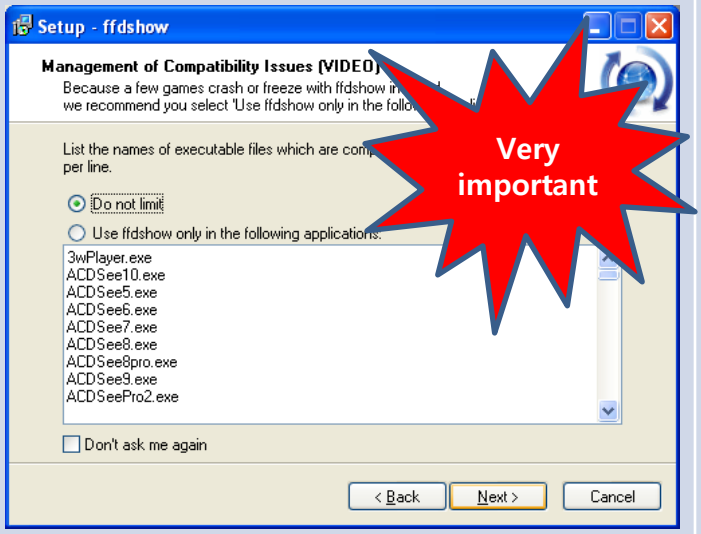
Introduction of Software Installation Process



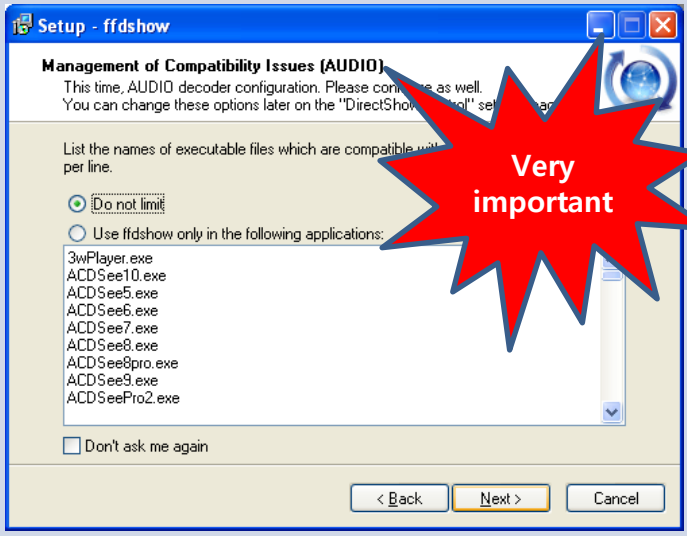
19. Click "Next" Button



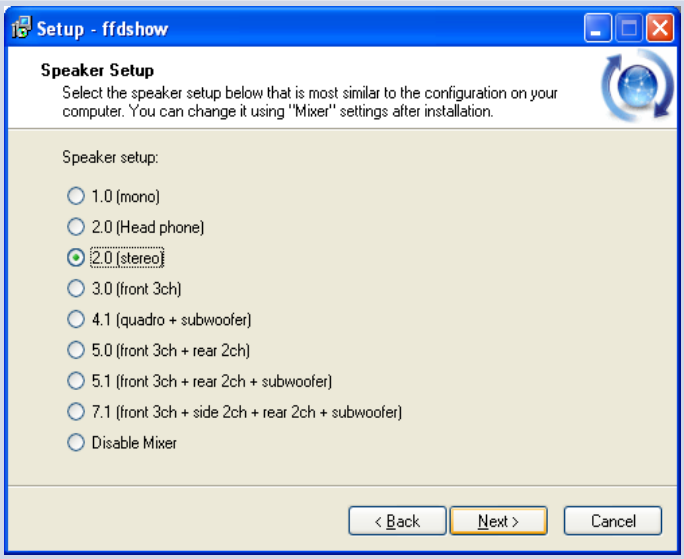
20. Click "Next" Button



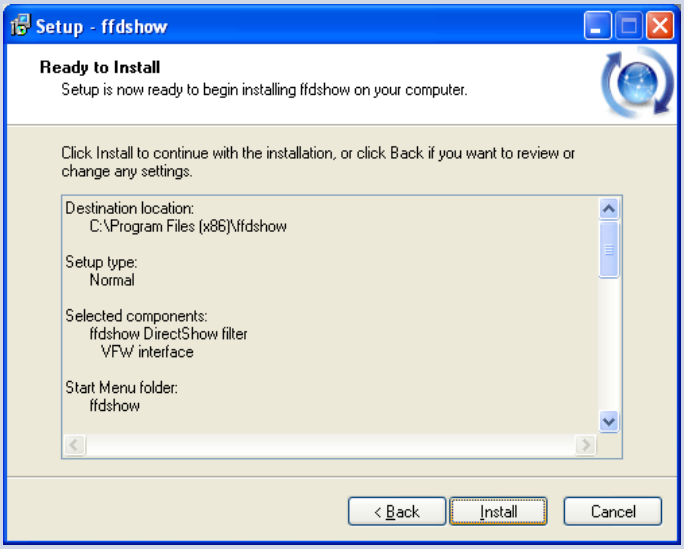
21. Choose "Do not limit" option. Then Click "Next"



22. Choose "Do not limit" option. Then Click "Next"



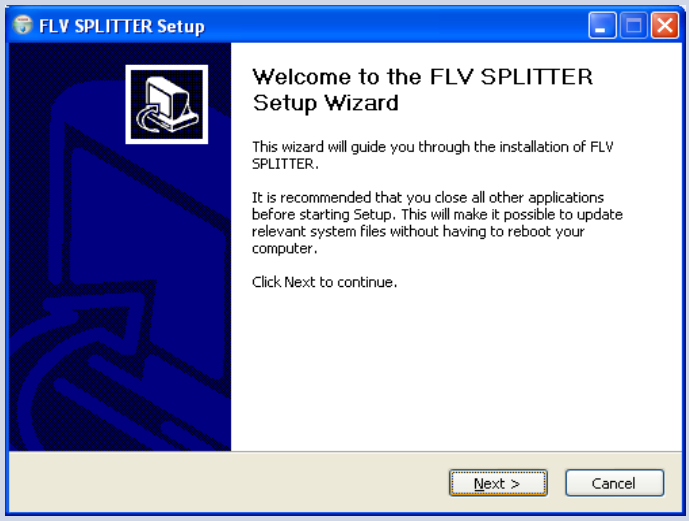
23. Click "Next" Button



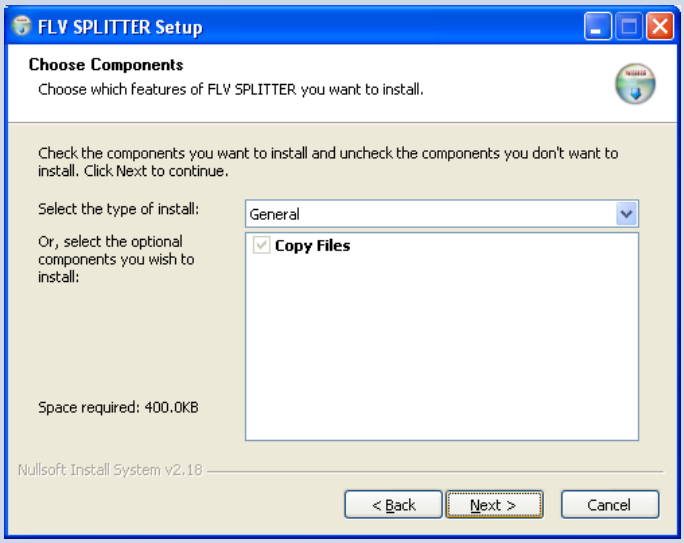
24. Click "Install" Button

Introduction of Software Installation Process

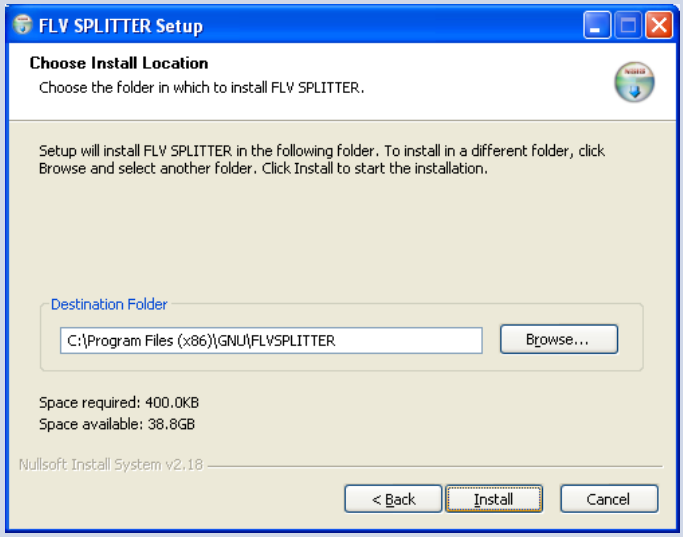
25. Click "Finish" Button



26. Click "Next" Button

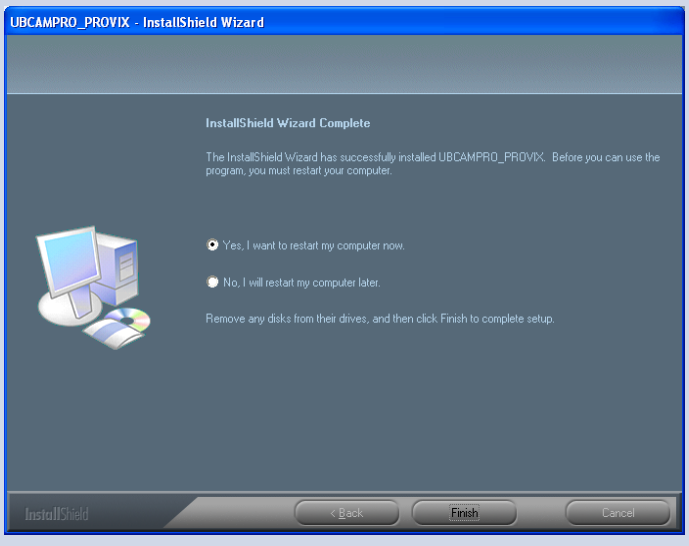


27. Click "Next" Button



28. Click "Install" Button

29. Click "Finish" Button



30. Click "Yes I want to restart...". Then, Click "Finish" Button

Introduction of Software Installation Process

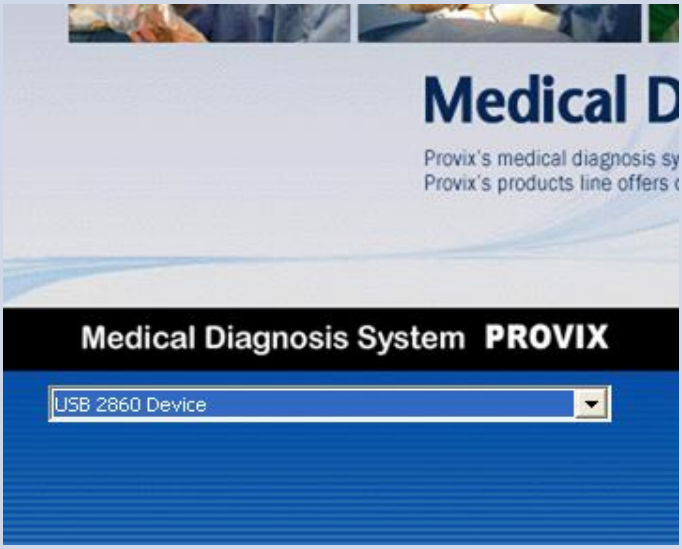
31. After restarting, Please plug in USB Cable

32. Found New Hardware will be shown up

33. few seconds later, "ready to use "will be shown up

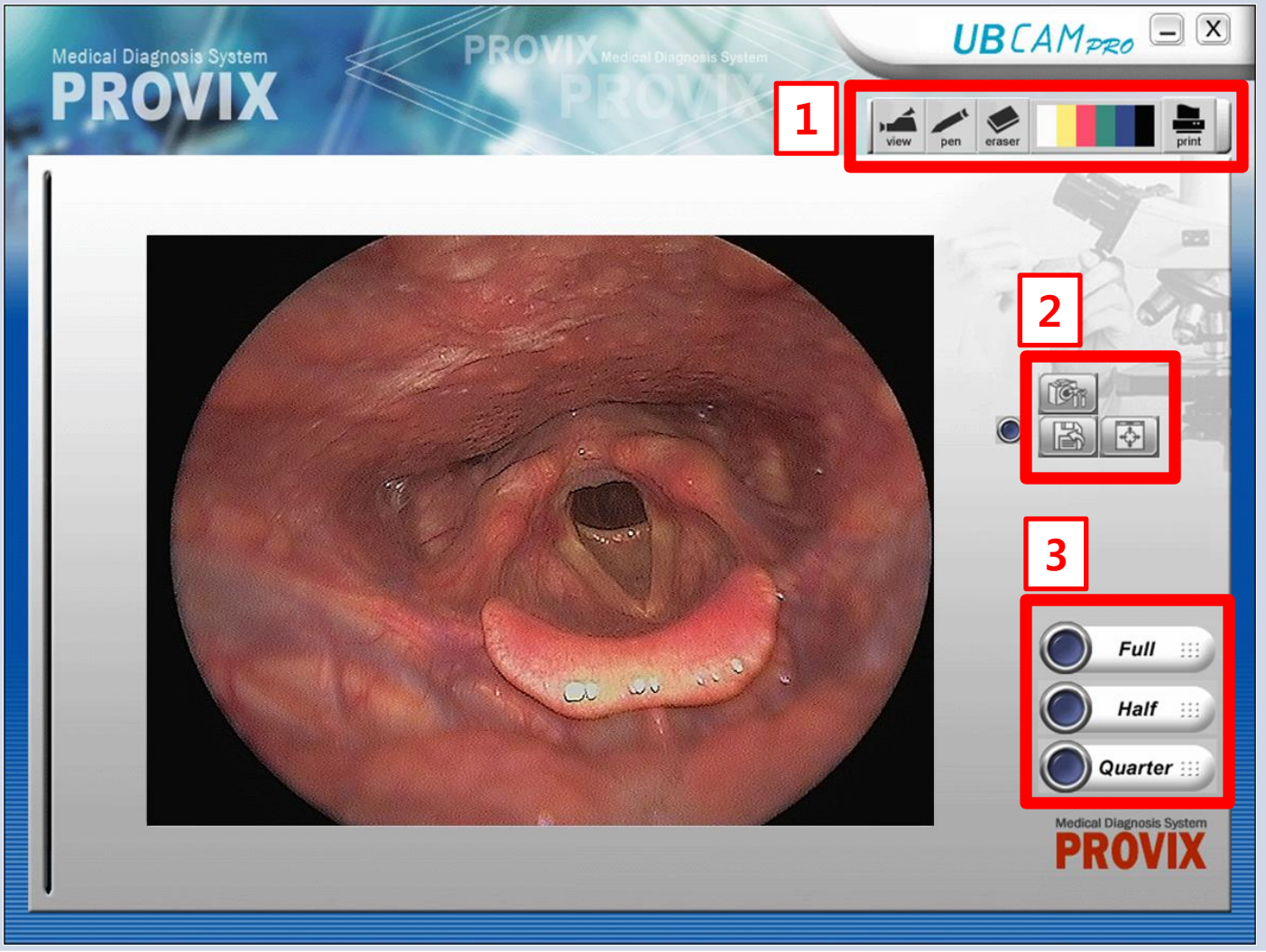
34. Double-click the UBCAMPRO PROVIX icon

35. Diagnosis System will be operated as above

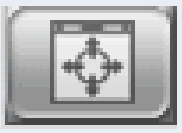


36. Please check "USB2860 Device" is shown up

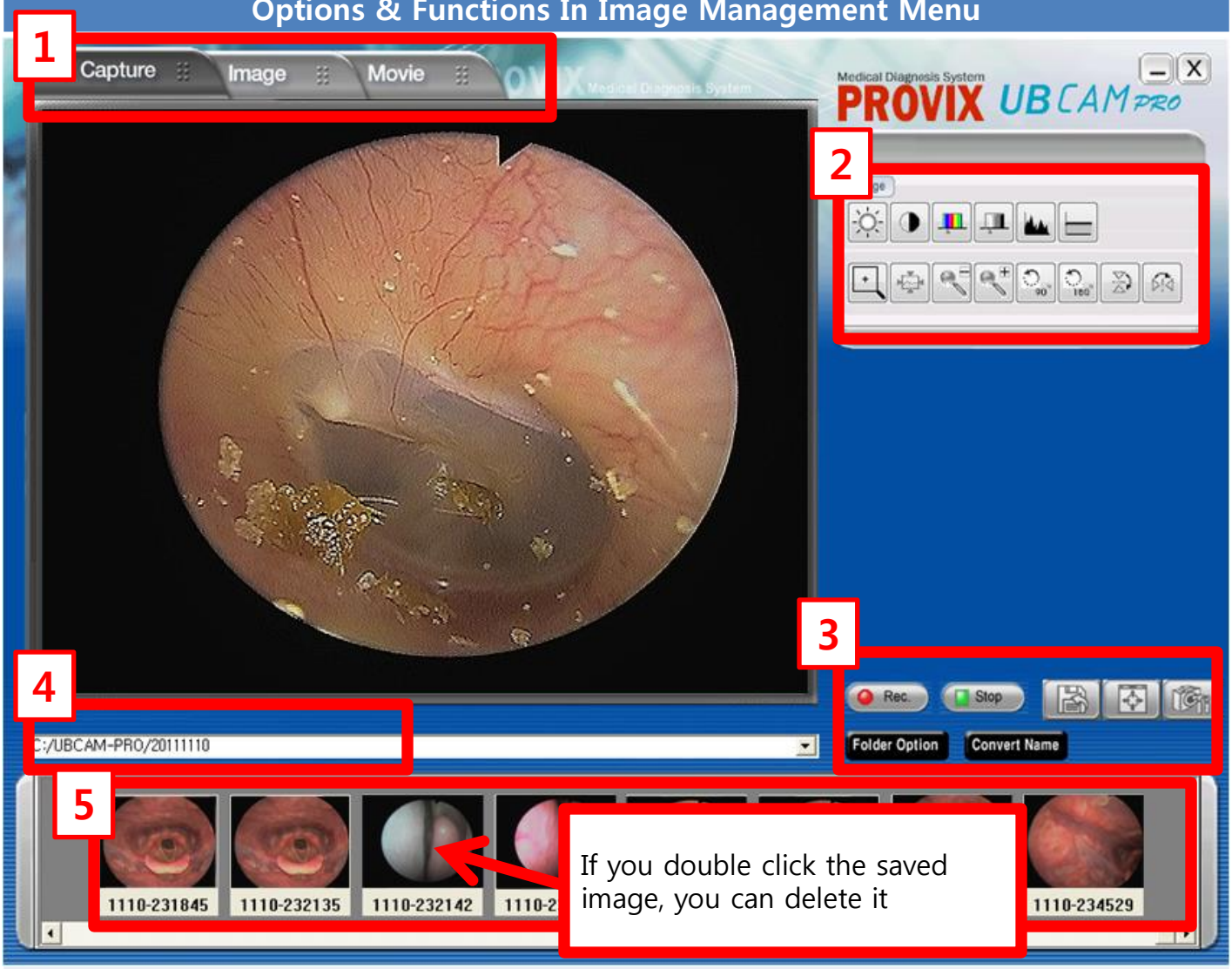
Options & Functions In Image View Menu



If you click Image View button, you'll have this kind of Viewing Screen.
There are 3 red rectangles with numbers.
If you take a look at the next page, you can have detail descriptions about these functions

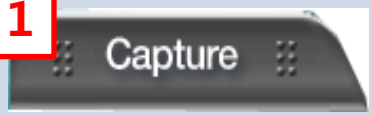
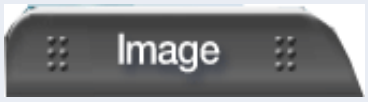
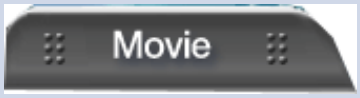
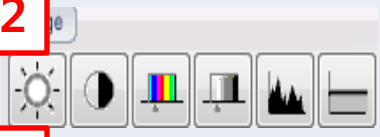
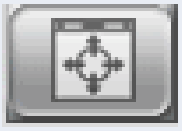
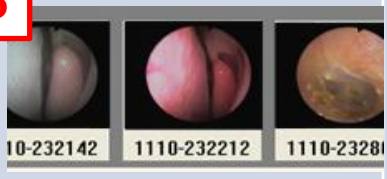
Options & Functions In Image View Menu	
1	* **View Icon:** If you click this icon, you can have the live image.
	* **Pen Icon:** After pressing Freeze Button, if you click this icon and draw lines on the captured image, you can draw lines on the captured image
	* **Eraser Icon:** If you click this icon, you can erase what you drew.
	* **Pen Color Icon:** You can choose the pen color with this
	* **Print Icon:** Print the current captured image
2	* **Image Control Icon:** If you click this icon, you can control the Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, Backlight Comp.
	* **Save Icon:** If you click this icon, you can save the current image(s) and designate the folder & file name.
	* **Full Screen Icon:** If you click this icon, the screen will be exchanged to the full screen mode.
3	* **Full Mode:** If you click this icon, a single screen will be appeared.
	* **Half Mode:** If you click this icon, dual screens will be appeared.
	* **Quarter Mode:** If you click this icon, quarter screens will be appeared.

Options & Functions In Image Management Menu

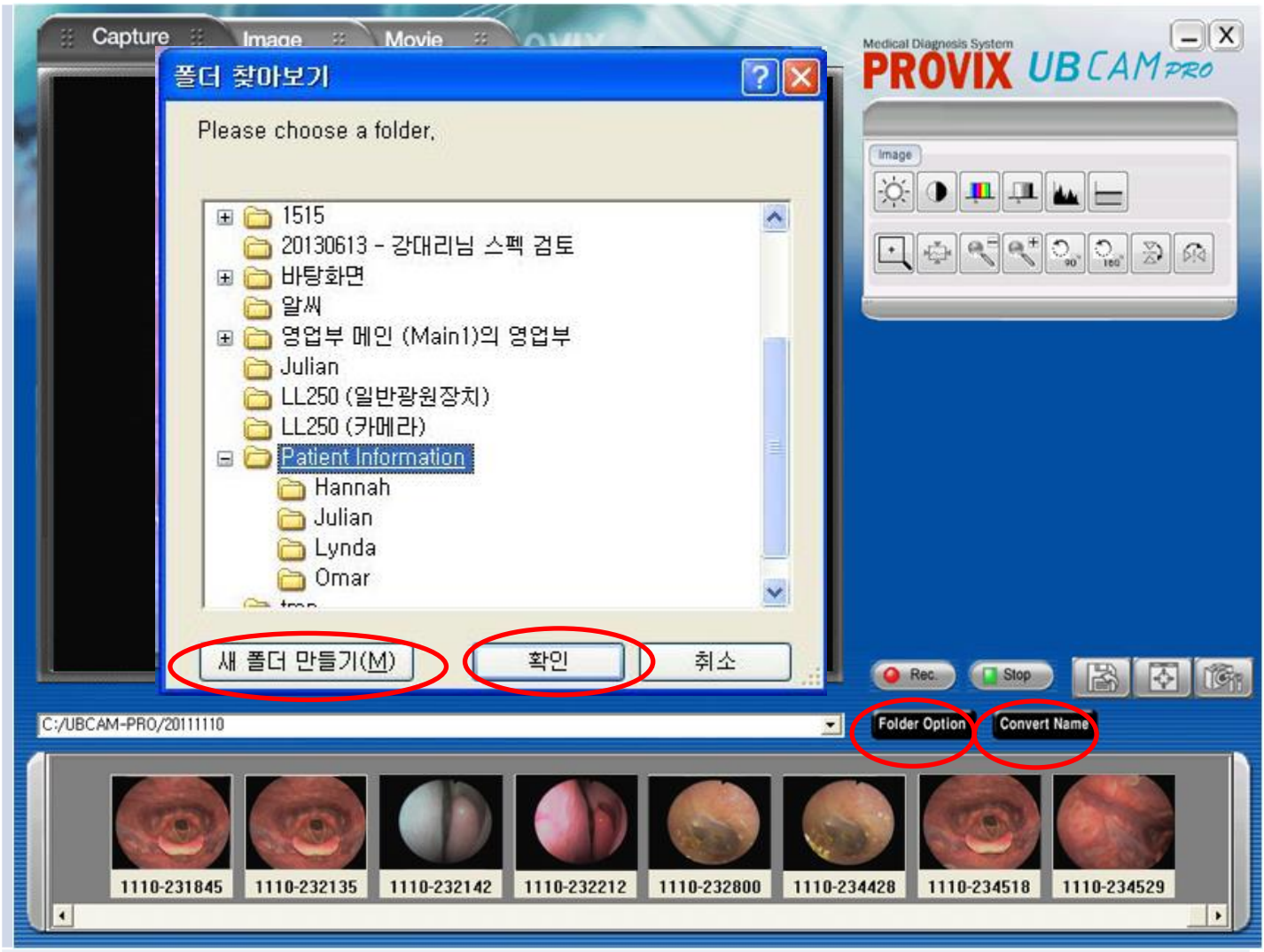


If you click Image Management button, you'll have this kind of Viewing Screen. There are 5 red rectangles with numbers.
If you take a look at the next page, you can have detail descriptions about these functions

Options & Functions In Image Management Menu

1 	* **Capture Tap:** In this tap, you can capture the image(s) or record the video(s). Captured images will be saved automatically & shown to the below screen (#5).
	* **Image Tap:** In this tap, you can edit image(s).
	* **MovieTap:** In this tap, you can open & play the movie(s).
2 	* **Image tools:** Automatically saved pictures can be edited by these tools in Image tap.
3	* **Recording Icon:** You can record & save the video through this icon.
	* **Stop Recording Icon:** If you click this icon, recording video will be stopped & saved.
	* **Save Icon:** If you click this icon, you can save the current image(s) and designate the folder & file name.
	* **Full Screen Icon:** If you click this icon, the screen will be exchanged to the full screen mode.
	* **Image Control Icon:** If you click this icon, you can control the Brightness, Contrast, Hue, Saturation, Sharpness, Gamma, Backlight Comp.
4	* **The folder for auto-saving images:** If you capture image(s) in Image Management Menu, the captured images will be saved this folder automatically.
5 	* **Pre-view Tap:** This tap shows the image(s) that you captured. If you click, you can edit the image. Or if you double-click the image, you can delete the image.

Options & Functions In Image Management Menu

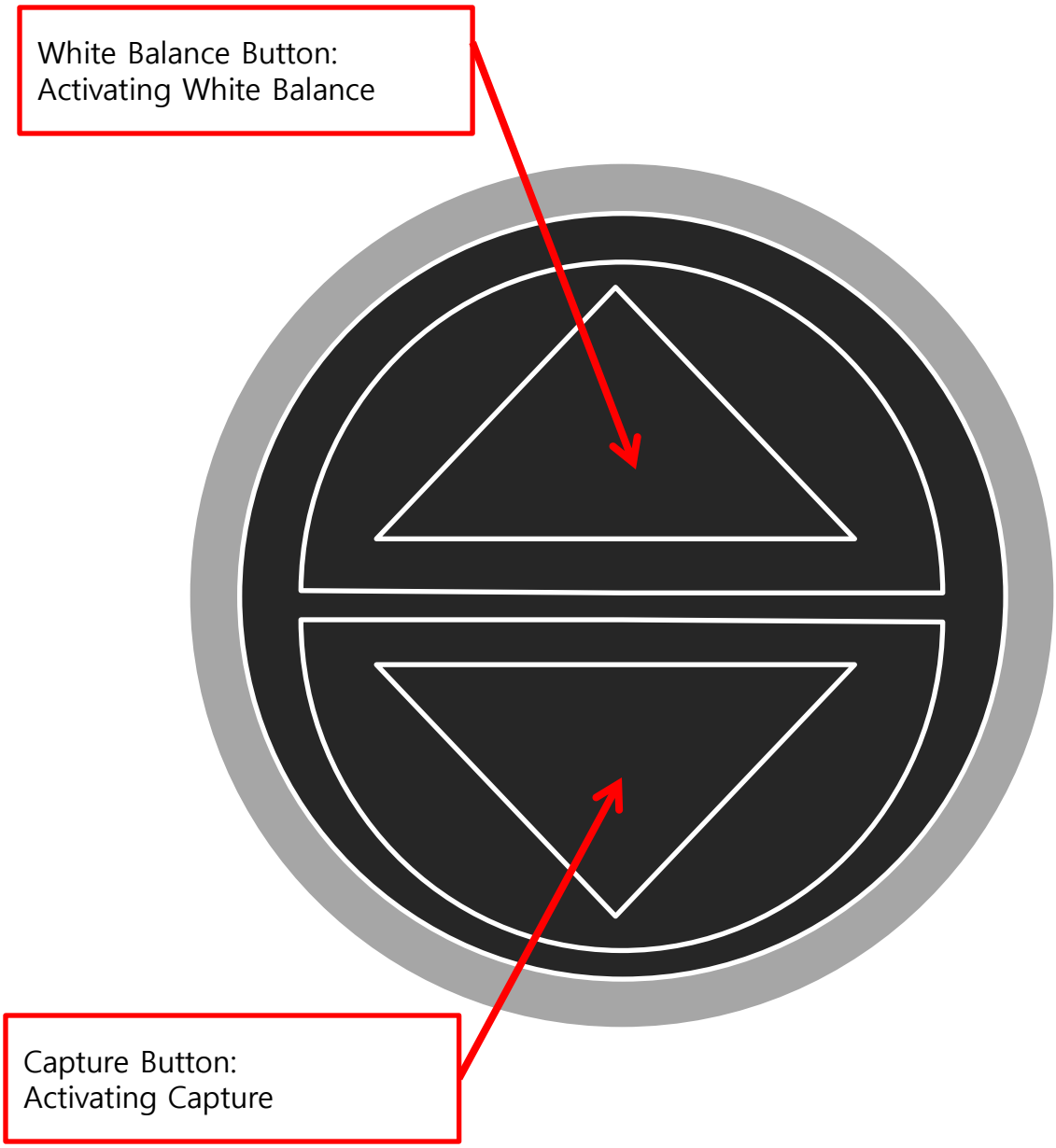


- Patient Information Management Function-

1. Please click the Folder Option Button
2. You can create the folder(s) with the patient name(s) or any other and you can save the data to each folder
3. When you re-load the data, just click Folder Option Button again, then you can find the folder(s), and you can re-load the previous data.
4. If you click Convert Name, you can save the current image as other name.

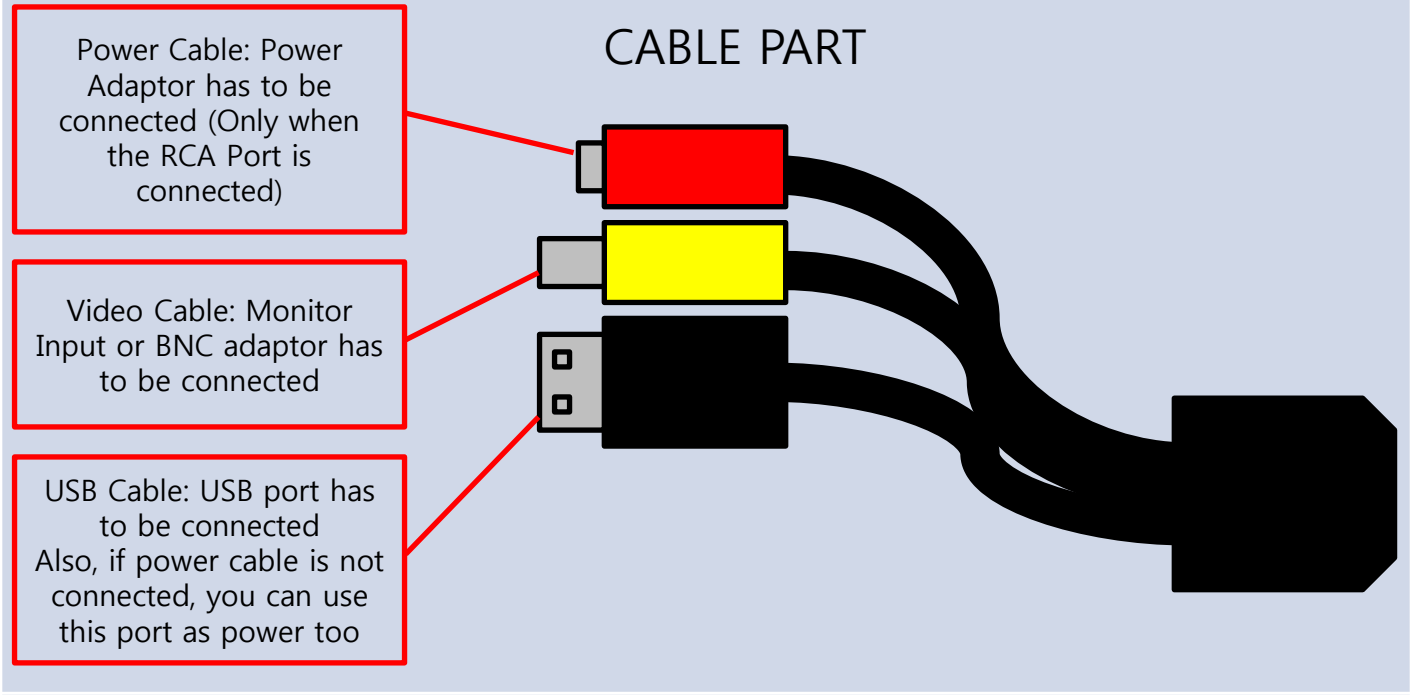
5. Button & Function Description

Button Description & Function



5. Button & Function Description

Button Description & Function



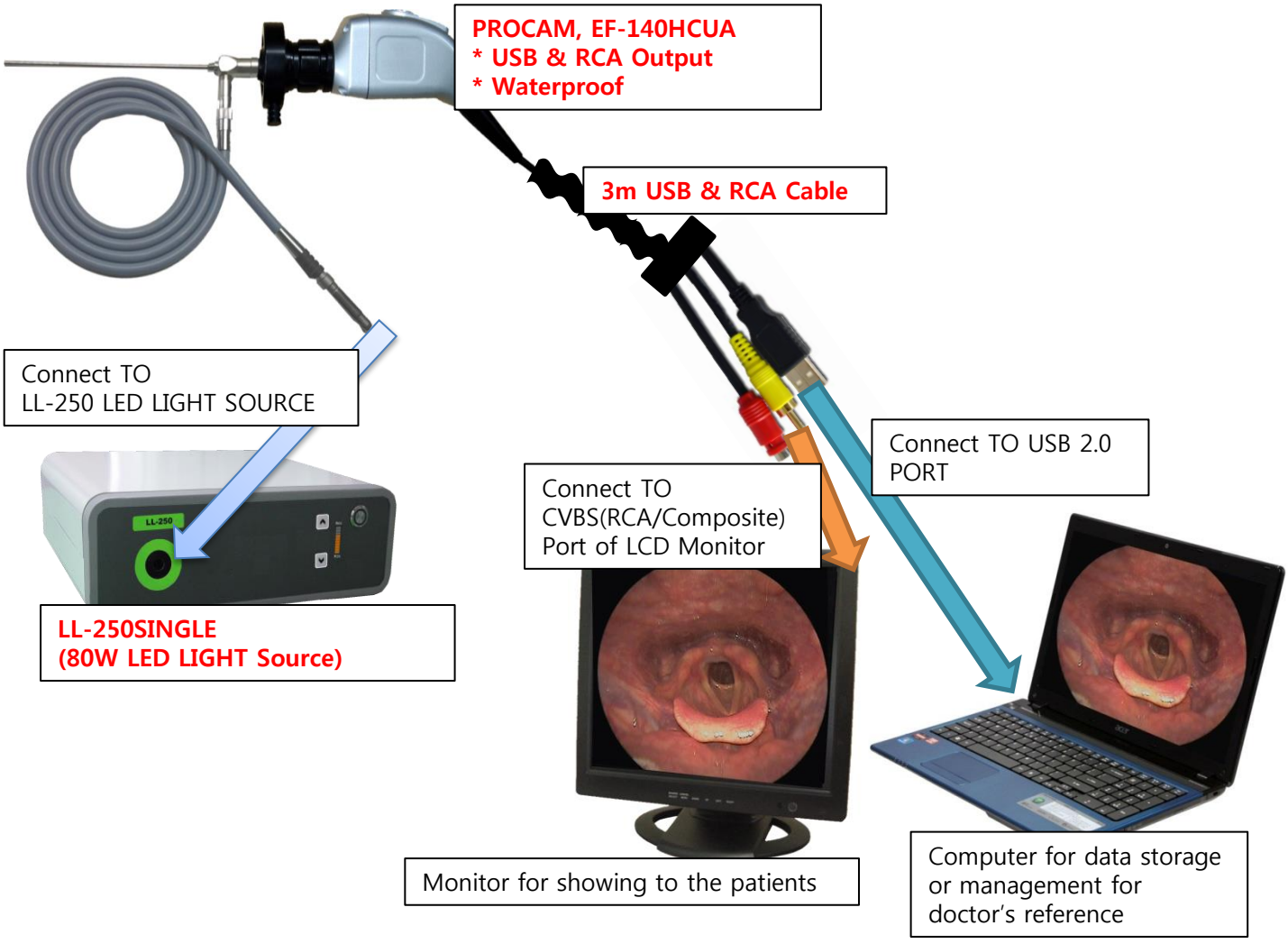
If both USB & RCA Video Cable are connected, it works without D/C Power Adaptor, Because USB Also provides necessary power. It is okay to connect all ports. (Up to user)

5. Button & Function Description

Button Description & Function

1st WAY: If the 80W LED Light Source is required,

* 80W LED Light Source will give enough brightness to all of application such as Laryngoscope, Nasopharyngoscope, Sinuscope, etc..

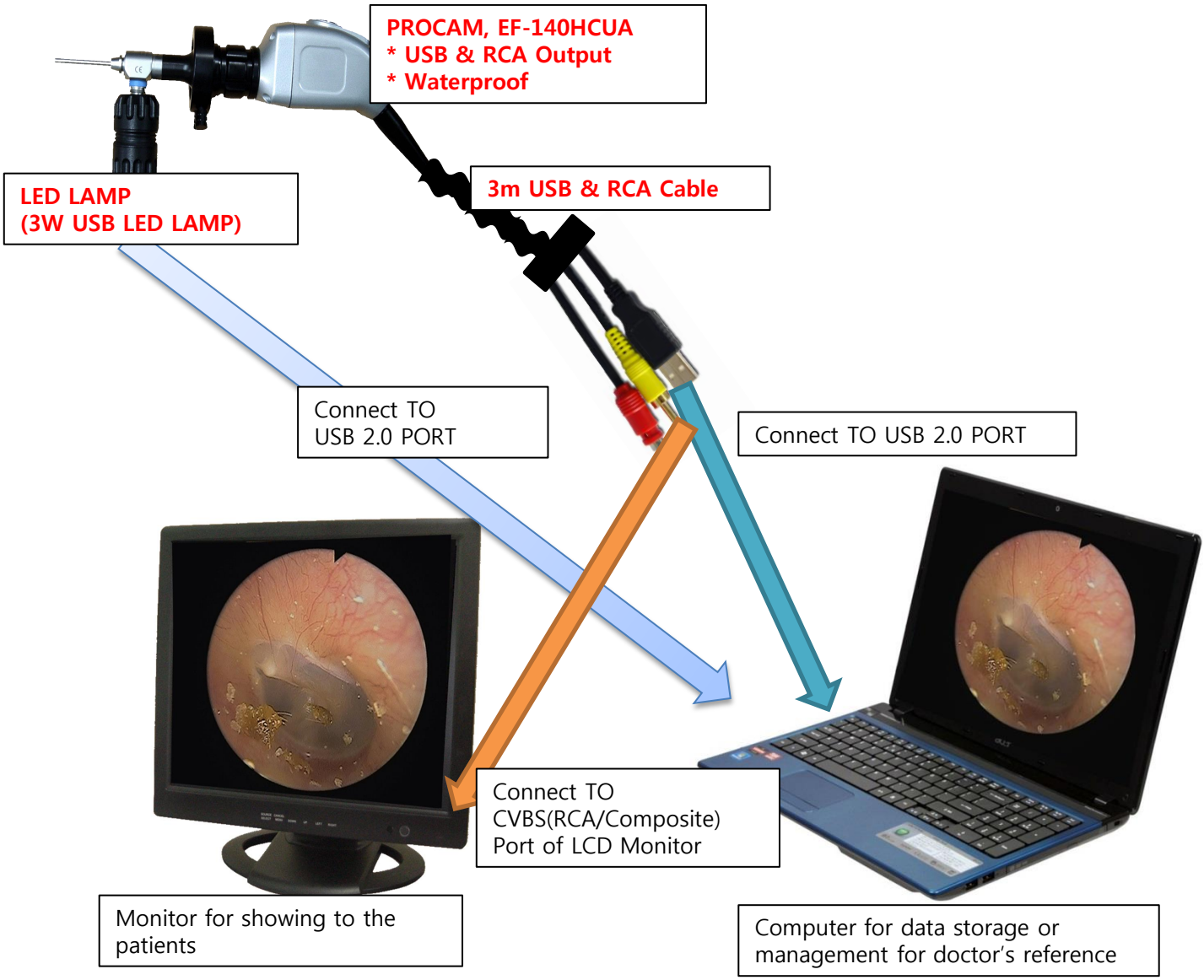


5. Button & Function Description

Button Description & Function

2nd WAY: If the only 3W LED Light Source is required,

* For this application, only you can use 3 LED Light Source. Hence, the brightness is not enough. Only for Otoscope & Sinuscope Applications.



6. Warranty Regulation

Warranty Card

According to the warranty rule, PROVIX provides customers with the warranty service as following

Warranty service is valid until 12 months (1 year) after purchasing

P.S.: In order to get warranty service in other region expect Korea, please contact the official distributor or branch office of PROVIX for better & faster service.

Manufacture	**PROVIX**
Origin	**Republic of Korea**
Product	**USB Endoscope Camera**
Article Number	**EF-140HCU**
Warranty Period	**12 months (1 year)**
Serial Number	
Address of Manufacture	**PROVIX, 4/5F Jipyong B/D, 151-37 Wonmi-dong, Wonmi-gu ,Bucheon-si, KOREA**
Website of Manufacture	**www.provix.co.kr**
Contact Information	**(TEL) +82 32 661 8135** **(FAX) +82 32 661 8138**
Person in Charge	**Mr. Julian Kim**
Email Address	**julian@provix.co.kr**