

Welcome to 【digital imaging system version】

With the rapid development of image information and technology, Image processing, storage, transmission and management have become a indispensable part for a hospital, Because this work is not only reduce costs, assist diagnose, and improve efficiency, but also get huge economic benefits, solve the problem of image acquisition, filing, and evaluation, achieve information share and communication, such, enchance every hospital efficiency and catch the international practice.

In order to meet the demand of experts of medical field ,doctors and hospital managers, Our enterprise apply contemporary latest computer technology, image processing technology and network technology to development a system for Fundus digital imaging. It can compatible with a variety of medical equipment, such as slit lamp microscope, surgical microscope, AB Scan, Fundus Camera, without doing any modification to the original equipment. Universal mount make digital conversion standardization, enabling the hospital use lowest cost to step into the digital era.

1. 【Fundus digital imaging system】 Structure and paramenters

1.1 figures :

Computer Mainframe	must
display	17-inch Color Display
keyboard	must
Mouse	must
Printer	Color inkjet printer
Go cart	must
Footswitch	must
recorder	optional
Imaging capture card	must

1.2 paramenters

COM PUT ER	Mainframe	MMX Pentium 128M above EMS Memory , 20G above hard disk , compatible with Microsoft Direct Draw image card , 1.44M floppy drive
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	DISPLAY	17" color LED Display, refresh speed above 60Hz Resolution : 1024*768 pixels and above
	Keyboard	PS / 2 connector, the system requirements: DOS or Windows
	mouse	
	Imaging capture card	Capture card which should compatible with Video for Windows Median: RGB 32bit, Resolution: 768 * 576 (adjustable), acquisition rate: 30 frame / s (adjustable)
	printer	720dpi color inject printer
	System	Microsoft Windows XP
Imaging processing software for fundus camera : Shanghai New Eyes all rights reserved		

2. Features of fundus Digital Photography system

Fundus digital Photography system is the supplementary equipment of Fundus camera, it is a post-processing equipment which gathered video image acquisition, image processing, image measurement, storage, report and printing etc functions into a organic whole, easy to learn and to operate, and already ranks top-one in in the worldwide compare with similar products.

Compared with similar products, our software have the following characteristics:

1. Friendly interface with pictures guide gives intuitionistic operation

Our workstations adopt pictures interface, intuitive and easy to learn.

2. Use Button to Operate

Workstations adopt the buttons for operation, doctors no need to select from menu step by step, what he'll do is just click the button to finish the operation.

3. Dynamic Tracking Tips

Our workstation with Dynamic tracking function, if you forget the function of a button, just move the mouse pointer on it, stay about half a second, then the tips will shown below your mouse pointer.

4. Real-time image display

real-time display enable easy teaching, observation and consultation.

5. Dynamic Photo library

the system provides a dynamic picture library, who are able to preserve as many as unlimited captured pictures, besides, picture library can enlarge if new patient added.

6. adjustment of image

The brightness, contrast, saturation, saturation can be adjustment at your optional.

7. A variety of input methods are available

You Can choose a variety of input methods to input the patient's information.

8. Video signal and video pattern are available

you can choose the video signal and pattern.

9. Video format and image size are optional.

10. Freely set up Department of Hospitals, report titles, series No. , locations and clinical diagnosis etc patient information.

11. Association between Department and physician

Association can be established between Department and physician, according to the corresponding relationship.

12. Multi-input Control

The workstations can access a number of video signals, and can convert video source for real time play, multi-use become available

13. Multi-capture methods

Positive, negative images are free for acquisition, flip up and down and turned around are also available, besides, you can also reverse the image at any degree by self-definition.

14. Title format

You are free to set up your own style for Title format while print out.

15. Image size are adjustable in printing.

The image size are adjustable while print.

16. Shortcut characters

The system provides a quick button for entering common words while a doctor writes a report.

17. Quick type Common used words

Doctors can set up common words for quick enter in the future.

18. Template function

Some diagnostic information which is common and frequent to use, you can set up a template for future use. During next diagnose, just import the description from the templates, just by small edit will finish a comprehensive report, such, improve the efficiency greatly.

19. Schematic diagram function

Physicians are free to draw schematic diagraeme, and the schematic can be

added to the report for printing out. the workstation also provides a comprehensive management system for managing and draw schematic diagram.

20. Review function

When a patient come here for the second diagnosis, you can easily import his previous information and diagnostic report for review and contrast, which improve the efficiency greatly.

21. Diagnostic database

The workstations provide a comprehensive diagnostic database to facilitate the diagnosis.

22. Compatible with network

the images and reports can be transmitted in the network.

23. Dynamic movie playback

The Workstation with a dynamic movie playback function, for important processing of surgery, you can make a video record for file or playback.

2. capture images and write report at the same time

while you write a report, you can also capture images.

25. Full-screen Shown

Observe real-time videos from full-screen.

26. frozen, thaw button

The Workstations equipped with the image frozen, thawed function. Doctor can freeze and thaw the image for special purpose.

27. Magnifying glass

for delicate observation for a small part of the segment. The magnify times and area can be adjusted.

28. Save and copy image to another path

The capture Images can be saved in another path, or directly copied to some other imaging processing software for post processing.

29. Physician's library

Physicians can set up their own's personal library, for save typical images for

future use. our workstation provides a comprehensive library management system for physicians.

30. Visual image processing

with Truly WYSIWYG visual image processing function, and can observe the results without delay, besides, the system will save the results for the selected region automatically .

31. Cancel a processing

If you are not satisfied with your processing, you can click button "undo" to cancel the processing.

32. Image label

Workstation equipped with label function, you can mark the image in the text.

33. Calibration memory

When the methods of measurement are same, Do not need to calibration each time, the programme will memory automatically for next calibration.

34. Convenient and Precise measurement

While make a Measurements, just point the mouse to the region, then precise measurement will be done. no need to make complex fixed-point.

35. Print Preview

Workstation provides a print preview function, you can preview before print. Avoid printer's error and save papers.

36. A variety print mode are optional

Workstation offers a variety of print mode for your selection, DIY Model is also optional.

37. Inquiries of history case and statistics

It is very easy to inquiry and statistic on the previous patients' information, which facilitate evaluation and assessment of annual value.

38. Frame setting

Users can freely set the display area, such as the length, width and margins of a dynamic image.

39. Interception setting

Users can set the acquisition area of dynamic image freely .

40. Print paper size are adjustable

Workstation can use a variety size of printing papers.

41. General storage report

General workstations can only capture a single image, can not store patient' information and diagnosis result, Our workstations can save all the information. while open next time, all the information will automatically load, which facilitates following diagnosis.

42. Print a report

the vivid report illustrated with pictures, quality reaches per photo.

43. Use footswitch to acquisition

Workstation equipped with a footswitch, which enable capture pictures faster and easier.

44. Direct start

The Workstation based on Windows system.

3. Manual of fundus digital imaging system

3.1 pre-boot before starting.

3.1.1 check whether the back three-phase plugs connects well with AC power supply $220V \pm 5\%$, 50HZ.

3.1.2 Check whether the black or red video signal cable(or SVHS input cables) connects well with equipment video signal cables (or SVHS signal).

3.1.3 check whether the gray three-phase power cables which lay at the back LED connects with with AC Power supply. $220V \pm 5\%$, 50HZ.

3.1.4 check whether the signal cable of the gray parallel port, which locates at the back of the host, connects well with the printer's parallel port.

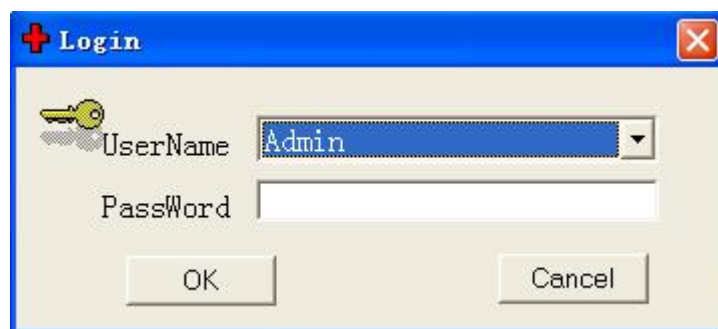
3.1.5 check whether the three-phase power supply cable, which at the back of a printer connects well with AC Power $220V \pm 5\%$, 50HZ.

3.2 boot

3.2.1 Turn on the computer.

3.2.2 turn on the printer (please refer to the printer manual)

3.2.3 Double Click the software for the following interface



Initial User name: Admin, No password. Click "OK " to enter the system

3.4 familiar with the various functional buttons

This button is for "new history" button for new record

This button is for add a new patient

This button is for save the new patient's information

This button is for delete a patient

This button is for printing out a report

This button is for retrieval the information of hospital case.

This button is for display images, for contrast purpose, and display up to 4 pieces.

This button is for image processing, such magnify, pictures remark, print out, digital subtraction, negative photos.

This button is for refresh system.

This button to organize the new image.

This button is for the fundus photography merge, allow the operator to merge several images to create a composite view of a wide-angle, can up to 100 degree field, for diagnose the most delicate disease.

Turn to this Button for help, click to connect this manual.



This button is for capturing images, used to capture single images.

This button is for video recording, used to record dynamic video at MPG format.

This button is for high-quality image capture, used to acquire high resolution pictures.

This button is a PTP protocol transmit specially for NIKON digital camera. For importing the images from digital camera to the software directly without any delay.

This button is for importing images from your computer (Disk)to the software.

This button is for showing all the patients' history case and print out.

This button is for deletion images.

This is a diagnose template, to assist doctors diagnose the illness

4. Instruction of fundus digital imaging system

4.1 click button "add" to add a new patient, type in the correlative information, then click "save". This step is very important for document retrieval. You can increase, amend, and delete the "censorship Doctor," "inspect Doctor", "items", and "clinical diagnosis". for example, click "Check item" in the following picture, in Edit menu, click add and type the content, then click " OK " to finish the add.

Note: while type the Patient's information, if the frame with drop-down arrow box, just click the arrow and choose the affiliated item, then type in the information, if their is no drop-down arrow, click the type-frame first, then will appeal a vertical bar, then you can add the information.

4.2 delete a patient

choose the Patient which you'd like to delete, then click "del patient" , note: it can not recover after delete.

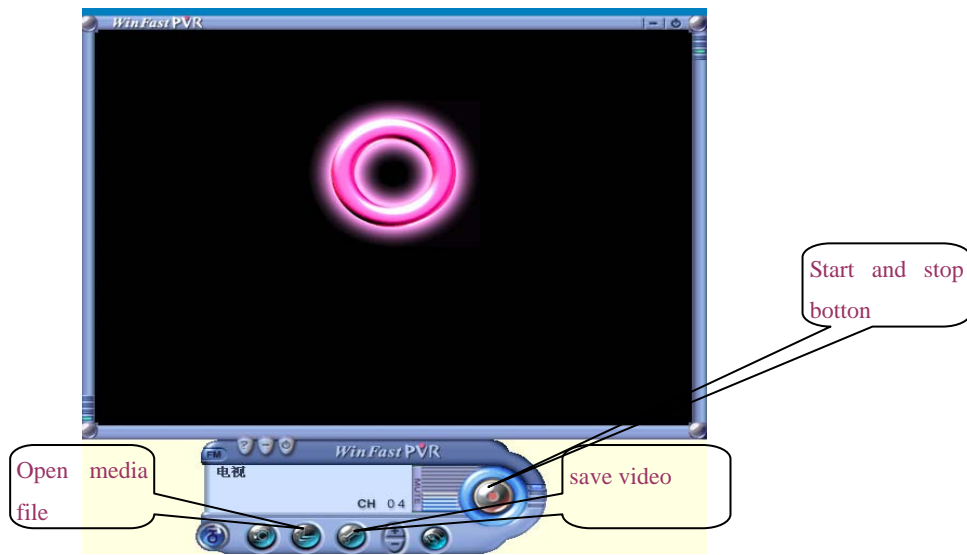
4.3 Video recording

you can make a recording after adding a new patient. Make a record or not as per doctor's request.

4.3.1 Dynamic Image Recording and playback

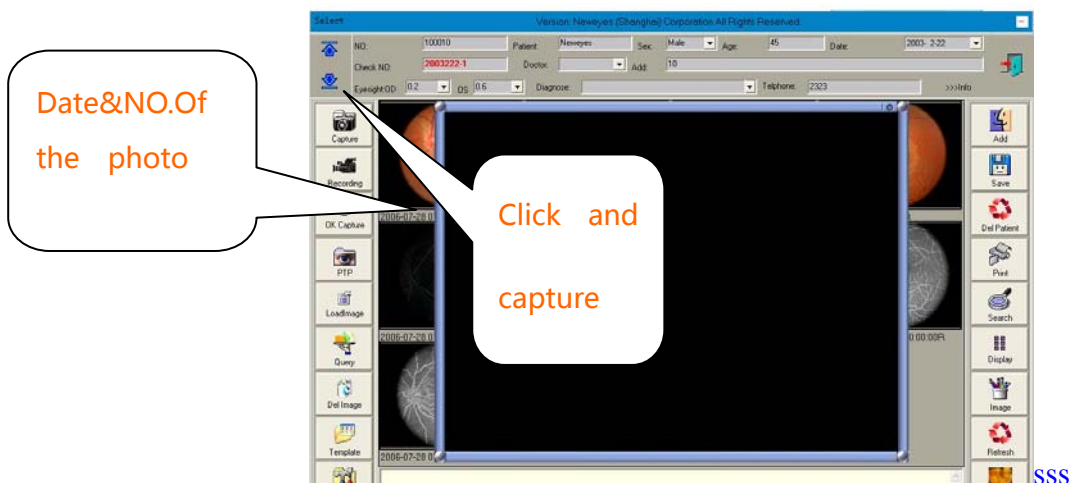
Record: click the button "recording", the system will record the real time dynamics image automatically;
click button "stop" to stop the recording. Video is stored in the dynamic area name, name after the recording time.

Playback: If you want to playback the recorded video, find the video from the dynamic folder, click "open a media file" and select the file you want to play, click button "Open" to view



4.4 Video screenshot

As show in the picture, output the patient information first,Click the left mouse button to the four corner or click the space bar.Each left click or click the space bar would capture a photo.Each group can collect 8 photos. There is 10 groups in all. It can save 80 photos for each patient.(the capture setting is not shown in this picture)



4.4. 1The processing to the capturing image

left click to the capturing image can magnify it. Left click again,Image size reduction.

4.4.2 image processing

When one image need be processed, left click the photo single click“image processing ”button。 “Image processing ”left side is Command buttons,and the property adjust buttons on the right side.

Command list :

1、 “Zoom”has click、 rectangle、 move function button。 Click any place of the photo Can magnify it , Enlarging the picture can help a doctor better diagnosis condition ; If you want the picture has a certain enlarge, single click"rectangle" ; drag the photo along to move a rectangle,the photo will be magnified after Released .

2、 Selection and measure shown as in the picture , Select the measure way with the “selection” button such as circle , single click“circle” , single click the area or girth , it shows on the diagram.

3、 insert object , the line,rectangle,circle,image,text,ruler,angle can be inserted on the Diagnosis report. Click the photo which need be insert ,then labels on the picture.

Operating instructions : the function of measure Toolbar , It can measure the "distance","length "and "girth"of some certain place of one photo. Save& back to the menu while quit if not satisfied.

4.5 import photo

Make the import setting equiped , click "import photo" button, (160 photos for each patient) refer to the picture.

4.6 delete picture

If you are not satisfied with the image you've captured, delete it. Select the image you are going to delete, then click button "del picture" . Be careful with this process, because the image can not recover once deleted.

4.7 Diagnosis Template

With the diagnosis template, doctors can save a lot of time of typing duplicated

diagnose report every time. You can choose disease category from database, and then choose disease name, click the name, description will imported and show in the lower frame, slight modifications as per doctor, very easy to complete a case report.

You can also type in the diagnostic report yourself, save in database as a template, for future use.

How to make a diagnose template:

click "Edit", Select the category and type the disease name, then type the description of the disease. Do not forget to "save" the processing, otherwise what you've done will become unavailing.

4.8 Print template

Print template is designed for report print. Doctors can design the template as per request. How to design a template? Double click the template and edit, do remember to save the template before exit.

4.9 Print the report

After finish designed the template, you can print the report of your style. First, select the picture you are going to print, you can choose up to 12 pieces, the pictures can be capture one or imported one.

4.10 All patients

Here is a database for all the patients. You'll see all the information of each patient on the left side, Click display image to preview patient's pictures on the right side. Click "X" to exit.

If their is a small database, you can search patients by use "up", and "down", and a large database, you can turn to Function "search" for help, you can both use fuzzy search and accurate search. Click button "query" and type the relevant information, and search, then the eligible report will list below. you can also print the history case report just click "print"

4.11 Query

find a search information of a patient, just click button "Search". Type in the information and click search. You can use blur search or accurate search, the eligible results will list below. Double click the patient, or select the patient then click button "Select" to select the patient.

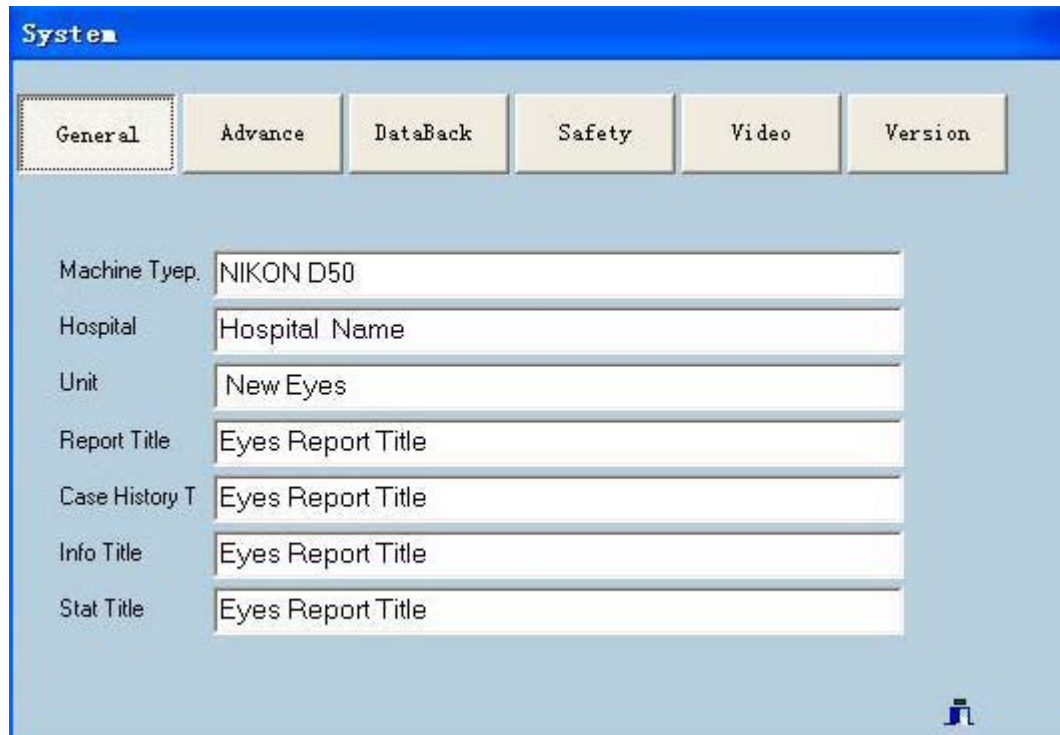
4.12 System Settings

1, general property:

Edit equipment's brand and Model, hospital names, manufacturers, title of report , title

of disease, description of pictures etc. headlines, statistics title, hospital name.

If you want to change the hospital name and the title of the report, please modified these in the system settings.



The screenshot shows a software interface titled "System" with a blue header. Below the header are six tabs: "General", "Advance", "DataBack", "Safety", "Video", and "Version". The "General" tab is selected and highlighted with a dotted border. The main area contains several text input fields with labels on the left:

Machine Tyep.	NIKON D50
Hospital	Hospital Name
Unit	New Eyes
Report Title	Eyes Report Title
Case History T	Eyes Report Title
Info Title	Eyes Report Title
Stat Title	Eyes Report Title

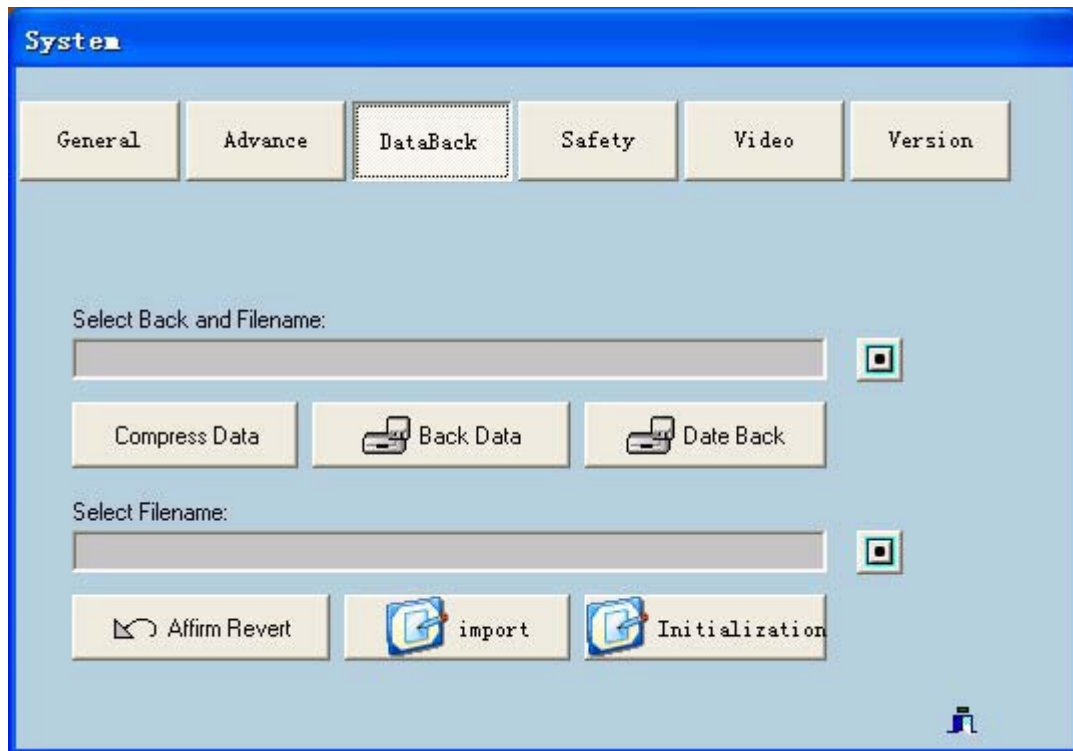
In the bottom right corner of the window, there is a small icon of a person sitting at a desk.

2, advanced property:

The property equip with a control of footswitch, Skins selection, words input method, database path during installation. The interface can be changed by "select skins", different No.refer to different interface.

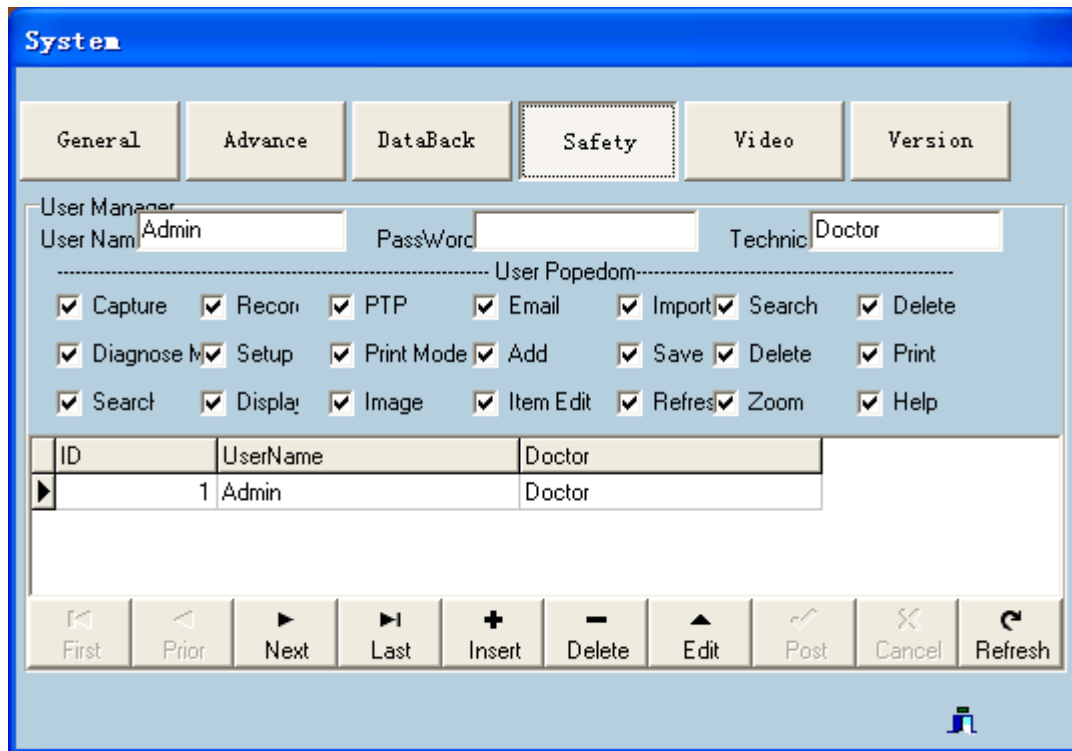
3, data processing

To ensure security data, you are able to backup database from time to time. Refer to the below pictures, select backup path, click "Databack" to start backup. If in the future, you need to restore database, click "Select back and Filename" to select the documentation ,and click button "Affirm revert" , the previous data will recover immediately.



4, security settings

You can Increase and decrease operator for this system. click the "Insert" button and input the user name, password, and Position, click button "confirm" to save before confirmation. Make sure remember your user name and password, or else you'll be refused to enter the system. To delete an operator, what you'll do is, select the data, then click button "delete", note: the information can not restore after deleted.

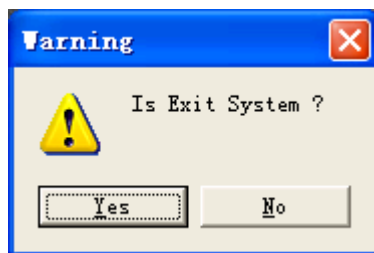


Different user with different rights According to their duties. The administrators with all rights to the software, the others' are according to their duties which determined by administrators.

5, version information

Endoscopic imaging system workstations base on XP version 7.3, video compression format based on high compress MPG, for getting a high resolution photography.

4.13 Shutdown



click "Exit" button which on the right corner to exit the System. While appear the above interface, click "yes" to exit and "No" to remain stay.

Post prologue

Dear user, the specification and the photos are based on the latest products at time of publication. due to improvements or other changes, the system may slightly different with the manual. For technical support, please feel free to contact the manufacturer. The instructions can be copied, reproduced. However, without my our written permission, to quote any part of this specification are not allowed.