Infrared

Mammary

Diagnostic

Machine

User Manual

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The first chapter System Installation

First, open the package

1: Unpacking

Note that when the body can not upside down out of the box, remove the host and accessories, keep the packing material, used to prepare for repair.

2: Check the console and accessories

According to the packing list provided by the manufacturer, console accessories are consistent with the case whether the breakage.

Second, the system environment

1: Environmental Requirements

Indoor temperature :0-40C; Humidity: 30% -60%, and keep the room clean. Avoid vibration, noise, strong power and other sources of interference, be sure to avoid direct sunlight.

2: All work must turn off the power plug

3: Power Requirements

AC220-230V, the system ground.

4: The system supports environmental requirements

(1) Hardware: Intel Pentium MMX 1G or more CPU; 128M or more RAM; 64MB or more video memory; 60GB or more hard disk; CD-ROM; Windows keyboard; double or triple bonds mouse.

(2) System Software: Windows XP.

Third, the software installation brief

1: The hard disk partition, format

Recommendation of four hard disk partition, at least C:, D: two partitions. For the network server should be divided G: drive.

2: Install the operating system

Strongly recommended to use Windows XP operating system. Using a typical installation.

3: Install the video card, printer drivers, etc.

Do not use the operating system comes with video card drivers, especially ATI Rage graphics card, you must use the card that comes with the drive.

4: Install the capture card driver

Strongly recommended first install Windows, after inserting grabbers. Found new hardware, the designated driver position, follow the prompts to install the driver.

OK grabber, but also re-run oksetup.exe install Dynamic Link Library.

5: Install the dongle driver

Dongle version should run before you insert the dongle dongle drive Setup to install, insert the dongle to the final.

6: Install additional support modules

Database Interbase,, NIC driver, DirectX9.0.

7: Video compression plugin

Please install the CD-ROM "Tools" folder under the video compression MPEG4 plugin (DivX5) after the point where MS MPG4 right-click "Install."

Then set the compression format, do not set the huge video data compression format, will soon fill the hard drive.

Select DivX MPEG-4 Video Codec, click the Configure button to compression ratio, drag the slider to the right, adjust video effect is the best. Click ok button to save the result. Click the OK button to complete the settings. After completion of the above operations can record it.

8: Install and run the application: the prompts to install.

9: Parameter Settings

After the system is installed and running, according to the scene to necessary settings of certain parameters, such as: video channels, video format, cutting parameters, etc.

10: System Backup

After all the work is complete, do a backup cbackup, to prepare for the future system recovery purposes when destroyed.

Chapter II system starts

First, boot and start the software

The first step in the boot sequence, first open the peripherals such as printers and monitors the power, then turn on the console. Double-click the shortcut desktop after power button, the screen will display the software splash click on the picture to enter the name of the software interface, th system settings, it may be delayed for a few seconds, or enter the splash screen does not display the name of the software interface.

Second, create new cases

Many buttons on the control panel text is gray, indicating that it is not operational. Click "New cases> button, pop new cases dialog box, click the name of the text box, press and hold the key on the keyboard <Ctrl> press <space> key (also possible according <Shift> key), then release together into input mode, enter the name of the patient. Then click the other text boxes, enter here the other patient information.

Single-line text box directly enter the combination of the text box to select the option (click on the triangle tip, pull the scroll bar, click the desired text. You can click the name to its left, and then pull the scroll bar, left-click the selected text it will tick the box side), check number is automatically incremented by one, do not need to enter the date.

In addition to "check the numbers", the ultrasound number (pathology number,

smears number, CT number, etc.) and hospital number, number of beds, etc., due to the need to enter a letter, or need to keep in front of "0", so the use of character, so these numbers, in order to correctly query, the same kind of numbers anywhere in the input after all require the same number of bits, bits 0 insufficient Please fill in the front.

If the number of hospitalization using four characters, enter the form similar to: 0005,00 b5, if the number of beds to use five characters, enter the form similar to: 00005,000 b5. Similarly, "date", "time" and other projects (such as "doctor time") must be similar to the input format "2008-08-02" form, fill insufficient digits 0, for example, in August of "08."

Click <details> button dialog box will display more detailed information such as the patient's phone number, address, occupation, units, etc. This information will be stored in case the database for future reference. Click <Back> to enter the main interface collected, including video windows, control panel and the window. Moving picture video window displays the video preview window displays a thumbnail image acquisition operation panel to perform various operations. So far, the software starts normally, and has created a new case.

Third, modify patient data

If the patient information input errors found, you can click on the panel <name _ Sex _ Age _ check number> button (this button displays real-name, gender, age, number of specific values   check) Operation dialog pop mod amendments click <Back> can.

If the current record is opened from the case library, you can use <another New> referral to create another record, both identical information data, saving the time to re-enter patient data.

Four, need to be properly adjusted according to the brightness, contrast,

Were pulling brightness, contrast slider rod on the (first mouse to move and then hold down the left mouse button to move, the same below), you can adjust the brightness, contrast, brightness generally down, contrast up.

VFW capture card software, you need to click <Video Adjust> Video Tuning dialog box pops up, and finally click <OK> to exit the Video Adjust dialog box.

Chapter III image acquisition and processing

<u>First, image acquisition</u>

1: Dynamic observation and freeze observation

Click <Freeze observation> button, the video window will remain in the original image does not change, so that the doctor carefully observed, and the button becomes "Dynamic observation> click <dynamic observation> button to return to dynamic video window. When using the recording function of this button changes to "Dynamic video>.

2: image acquisition

Click <to capture images> button to capture real-time images of the video window down and display the thumbnail images in the preview window.

Each capture a picture, click the picture thumbnail preview window, click the combo box directly enter the name of the picture, or click the triangle tip of the combo box, click to select a name for a line of text, so after a period of time confusingly similar picture. For other image, such as bronchoscopy very similar products is particularly important.

3: Read the preview window in the picture

Drag the preview window slider (the first mouse to move on it, and then hold down the left mouse button to move, the same below) can browse all the images in the preview window, user-friendly choice.

4: Remove and restore images

Right-click on the preview window to any one image can delete it, right-click again to restore.

<u>Second, the image processing</u>

1: Go to image processing interface

If you need to compare the image, click <Image Processing> button to enter the

four display interface, drag and drop the four want to compare images from the preview window, then right-click into the image processing in which a main interface.

Otherwise, the acquisition interface directly from the preview window and drop want the picture to be processed video window.

2: The end of the operation, the results canceled

Image processing, the end of all the steps are by right-clicking on any point to complete the picture. If they believe it is not satisfied, and drop again from the preview window with a picture (blue border) to the image window.

3: Replace the picture

If you need to compare the image, click <four display> button to enter the four display interface, the contrast, right-click the other one back to the image processing interface. Otherwise, drag another picture directly from the preview window to the image window.

4: image processing tool bar (menu)

It integrates image processing menu, slide the mouse when it pops up on the sub-menu. The lower part of the status bar displays the basic information of cases currently being processed images, grayscale value represents the color component of the current mouse point.

5: area selection (ROT)

The starting point of the mouse over the image region of interest, hold down the left mouse button and drag to the end point of release, get a rectangle dashed box, only for the selected image processing areas, such as the processing area did not choose, will handle the entire pieces of the picture.

6: The pseudo-color processing

Move the mouse pointer to the <pseudo-color> button underneath the pop pseudo-color filter menu. If you want to change the color of the then drag the slider pseudo pseudo-color processing, or directly click the above pseudo-color bar can be. Click the red, green, and blue color filters can filter out the other colors of the picture.

7: brightness, contrast adjustment

Move the mouse pointer to <regulator> button, eject its brightness, contrast, menu, drag it on the slider to adjust the picture's brightness and contrast. Does not affect the brightness and contrast of the video window.

8: Enhanced filtering

The same method enhanced filtering menu pops up, click on the button corresponding to the image processing, where "linear", "index" and "Crochet" requires further processing graph, click on the right to select the calculated curve to determine the treatment effect . Click "Cancel" to give up this operation.

9: image transformation

Click <magnifying glass> button, move the mouse on the image, a square area appears on the picture, follow the mouse pointer movement and zoom, then click the mouse to copy and paste the enlarged image, right-click to exit.

Click <negative image> Pictures photographic negative effects will occur. Click <down mirroring> and <about mirroring> button to make the picture up and down, left and right reversed. Click <clockwise rotation> and <counterclockwise rotation> button to make the picture clockwise and counter-clockwise 90 degrees. Click <subtraction>, after <OK>, drag and drop another one for the subtraction of the background to the upper left corner from the preview window, if the background is a bright background (close to white), click <Convert> Make its former tick, click <start> begin subtraction. Click <superimposed> can be the same manner as the effect of adding the two images.

Third, the image contrast

Click <image contrast> interface into the image contrast. This image can be captured with the typical images are compared, and can describe the appropriate text in the text of the standard library into the report, saving the doctor's time, reduce the intensity of the work.

1: The image contrast

"+", Click System standard library will open its pre-selected directory under a title

to open a picture for comparison.

2: Export Description

Open the image description text box to display the same picture of the descriptive text, click <Export description> button to import all the text in the text box on the left, the text in the text box will be automatically populated diagnostic report. You can also use the following methods to select parts of descriptive text: Select the text with the mouse (move your mouse over the initial text, hold down the left mouse button, move the text to the end of the release, the same below), and then drag the selected text can be placed to the left of the text box (the mouse over any selected text, hold down the left mouse button, move to target local release, the same below).

3: Replace the contrast of the picture

Click on the small triangle tip below the screen can be recycled to replace the picture. You can also click <Preview Window> Browse button to open a window to select the picture (ie drag the picture), click <preview window> button again will close the preview window.
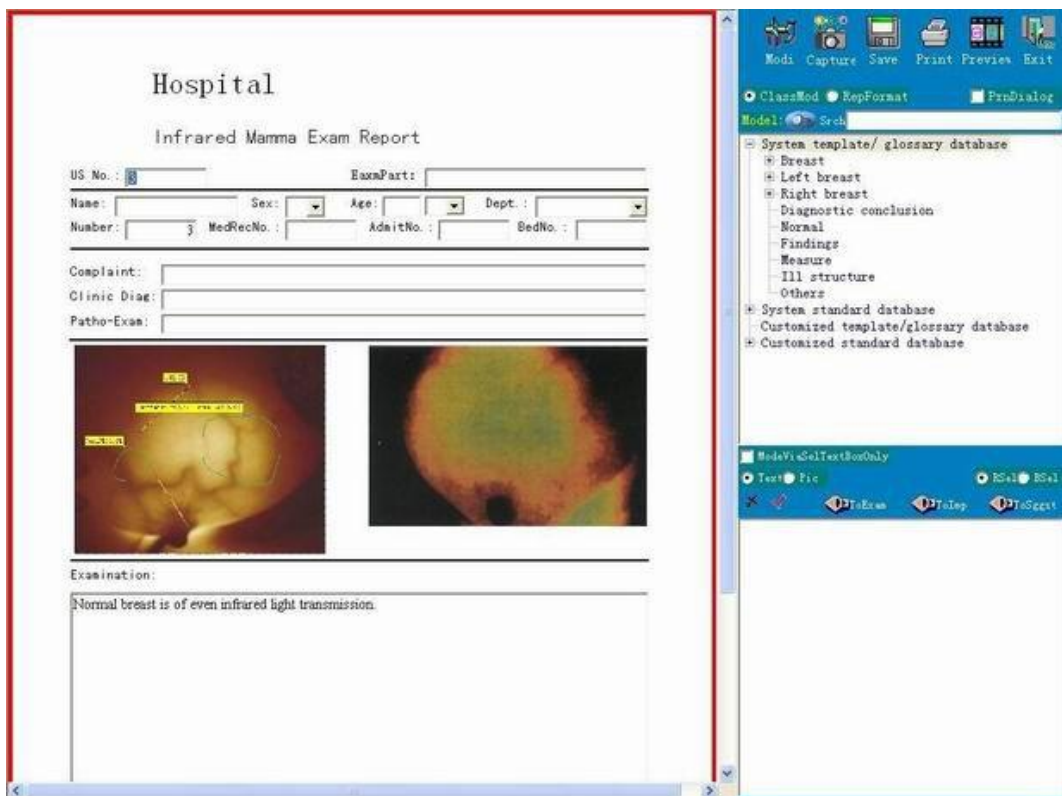
4: Generate reports

Click <generate reports> button to enter the reporting interface, and a description of the choice to the report.

5: Click <Back> Return to capture the main interface.

Chapter IV generate reports

Click <generate reports> button to enter the report editing interface, WYSIWYG report design interface using user-friendly, without additional preview. You can easily set a good job reporting format printing. customize the new reporting format to suit operational needs.

First, add a picture in the

Click <preview window> button, the system between the preview template format window switch, display the preview window, the preview window in the picture directly onto a single report to the picture frame. Right-click on the report card in a picture frame can also import images from elsewhere.

Second, enter text information in the repor

In cases when a new patient information entered will automatically be taken to the report card in the past, you can make changes and additions here.

All text boxes can directly enter text. Where there is a combinatio triangle tip text box, you can click the inverted triangle tip, pop drop-down options are available. Enter the new text will be added to the press the F10 key option, select and press the F11 key to delete the appropriate option. Single-multi-line text box itself can also right-click on the text box pops up templates for quick selection.

Edit multi-line text box similar to windows tablet, scroll the page with <PageUp> key and <PageDown> keys on the keyboard, you can also use the mouse wheel to scroll the page. Characters <Backspace> key and <Delete> before the cursor keys are deleted and after. After selecting a text by <Ctrl> + <C> to copy or cut <Ctrl> + <X> key, and then click another place, according <Ctrl> + <V> keys to paste, you can also use the mouse Drag and drop (equivalent <Ctrl> + <X>), if the drag is the equivalent of pressing the button <Ctrl> <Ctrl> + <C>. Right-click and select a piece of text, you can set this piece of text font, size, style and color, you can highlight the key part. Click the right-click pop-up shortcut template.

<u>Third, fast template</u>

In the report card, right-click any single or multi-line text box, pop-up template, click the selected text box in front of want to make it tick, then add text to the text box, click to remove the hook again, Deleting just added text.

Select it and click "Modify> Make check mark in front into the modified state, you can add or delete the template option, click" Modify> again to <append> make a template that can be added in front of the text (append mode) to continuously check mark when the text box. Click <append> to remove the front hook the replacement text (overwrite mode) in the text box. Click value> Import measurement results. Finally, click <OK> Close Quick Template dialog box.

"Quick Templates" for simple and commonly used text descriptions difficult to enter words and symbols), by tick, tick can not import, delete, append or overwrite mode can be used to import the template contents can be modified at any time In addition it can import title classification template. The report template with a single text box to correspond to each text box has its own shortcut template, which is a great convenience to the operator.

<u>Fourth, the classification template</u>

1: Classification Template window

Click <preview window> button, the system between the preview window and template format window switch in the template and the report format window, click <Classification Templates> Template window then displays classification. The "template" is generally used for a complete description, according to the classification of the lesion site or the "thesaurus" is an independent translation, translation of different combinations to form a complete description of the "standard library" is generally used with a typical image and a description of the

image made. All of these differences is not particularly used in the method.

2: Select the template title

Click the Templates / thesaurus, heading to the left of the standard library, etc. <+> No, you will see many subdirectories, click the plus sign to the right there is no title, the following text selection box will display the corresponding text descriptions can also be a single click the search text box, enter the keyword, click <Search> Find first template containing keywords, continue to click <Search>, then continue to find a template containing keywords.

3: Select the title text in the template while entering report card

If the "template just select the text box to enter the> front no hook, these templates while entering text in a single report. Click <template just select the text box to enter> make check mark in front, they will not enter text in a single report. Generally, at the beginning, so that the text in the same time into a single report, and if not, then select the next template until you are satisfied, then click <template just select the text box to enter> make check mark in front, choose another template , use the following method to drag some text in a single report to supplement, modify.

Sixth, print reports

The report finished editing, click "Save" to save this record can click <Print> button to start printing. If, before this, click <Printer Properties> tick before it will pop up the Print dialog box, click <Properties>, you can adjust the corresponding parameters (content of this dialog box depends on the printer model brand). For details, please read the printed books on Windows operating systems, set the printer to use the printer, please read the user guide, in this little state.

Seven, create a new record, starting the next inspectic

Click <Back> Exit reporting interface, return to the control panel, click "New cases> began the next check. Before construction of the new cases, if you save

the current case of pictures, reports, etc., click <a> to save the current case, otherwise click <NO>, if it is mistakenly clicked the "New cases> click" Cancel "does not Create a new record.

When you exit the reporting interface, the system automatically generates a single file final report rep.jpg, using a standard JPG file format does not require any special viewing software you can simply double-click on "My Computer" opens. As a result of the compression format to facilitate online communication, the IE browser to open.

Eight, check quits or

If the check is finished, click <Shutdown> Exit or off. And turn off the monitor, printer and other peripherals power. Lunch break, the afternoon off work are sure to shut down.

Chapter V case management

First, enter the case management interface

Software system provides a powerful and convenient case management function, the input, storage is done directly by the software, has been operating until now, users have no access to the database concept of cases, but the software has all the information including images, text exists in its self-built database of cases, you now need to do is check the previous case and open it, the software also provides a very convenient query tool.

Click Action <Case> button on the control panel to enter the case management interface. Its upper part is a list of cases, all of the query results are listed here. Double-click on any location list, a list of cases to increase the display area in order to simultaneously display more cases, but this will hide the report preview window, double-click again to restore to their original form.

When the system enters, only the date of the new record. When you need to find cases, make a query.

Second, the query

1: Query dialog box

Click <Query> Query dialog box pops up where you can enter case characteristics (query) need to find, click <Applications> Software based on these conditions to find in the database, will comply with the conditions of all records listed. These records are called query results.

2: Enter the search criteria and application

Click on the text box fields to query, enter the lower limit or <Applications> query. For example, click the text box on the left to check number, enter "5", click the right text box, enter "10", and then click the name of the text box, enter "Candice" and finally click <application>, the list of cases in the lists "all the time to seek treatment, all the time reservations, check number between 5-10 of Candice and contains the name of the word" all cases.

Third, the observation and print report card, open cases

If you only need to look at the report card, or print the report modifying a single, you do not need to open the case.

1: Observation: Click to view the case, the case becomes selected cases. Th lower right corner of this case report will pop up preview (if this record has been generated over the report card). Double-click the report card allows the enlarged display, double-click again to zoom out.

2: Print: Click <Print> <NO> to print the report of a single case.

3: Open: If you need to adopt maps, edit the report card, etc., such as referral or by appointment after diagnosis, you need to open the case, making it the current case. Click the <Open> click <a> or <NO> (save or not to save the current case), the case can be transferred to the program to view, modify, print.

If you click to open the case before the <After opening into the report> before it tick, then directly into the reporting interface, otherwise enter the interface. Acquisition interface, click <name _ Sex _ Age _ check number> button (this button displays real-name, gender, age, check the number of specific values) pop-up dialog box to modify cases, case after opening can click <another New > Create another referral records, both identical information material to patient information to save time.

If the record has been backed up and emptied, see Article VIII "dials Backup" 4 strips "Backup and emptied after the open."

Fourth, delete

Click <Delete>, then be careful, see the prompt, click <a> then delete all query results, click <NO> only delete the selected cases.

Empty the deleted under the equivalent of a backup list + delete information.

Fifth, print

Click <Print> click <a> then print all the query results, click <NO> selected cases. If a record previously generated reports, where information readable, not print.

Sixth, the report

Click <statements> to select the fields you want to print, the report title, report, MD, click <OK>, then the query results (list of all records of cases) are listed in the form of statements and execute print preview, if satisfied click <Print> (printer icon) to start printing. Finally, click Finish <Close>.

Chapter VI of the safety requirements and warranty

First, the company implemented a one-year warranty from the date of the sale of the product purchase.

Second, after the end of the instrument commissioning and acceptance please

Third, the following situations are not covered by the warranty

1: Because no damage caused by use in accordance with operating instructions;
2: damage due to improper connection of other equipment;
3: As the accident damage;
4: without our permission, disassemble, modify or use the damage does not meet the technical requirements of parts caused;
5: Due to damage caused by a virus infection.

Fourth, security requirements

1: Do not let the host and the lens from moisture, syrup should be used to avoid contamination, in order to avoid failure.

2: Avoid the host or the lens is placed at a temperature exceeding 60 ℃.

3: The instrument is a non-contact inspection equipment, should be used to avoid contact with sick people.

4: The hospital must provide a standard three-wire grounded plug to prevent life threatening when used.