Digital Colposcope

User Manual

Chapter One: System and Hardware Installation----------3

Chapter Two System Startup and Video Settings----------6

Chapter Three Image Collection and Processing----------10

Chapter Four Image Comparison----------17

Chapter Five Finalize Report----------19

Chapter Six Modify Mode and Image Bank----------24

Chapter Seven Self-defined Report Format----------26

Chapter Eight Case Management----------30

Chapter Nine System Settings----------32

Chapter One: System and Hardware Installation

One. System Installation

1: The requirement for the supporting settings of the workstation system

Hardware:

CPU: Intel PentiumⅣ upwards;

Mainboard: Intel CMOS chip;

Memory: 128M upwards；

Hard disk: 60G upwards.

CD-ROM;

Windows standard keyboard; double-bonded or triple-bonded mouse

System Software: Windows2000 XP

2：Hard disk partition：

Hard disk should be divided into **at least four** partition**: C, D, E and F.** It is recommended that partition **D should be the biggist** in order to save the System Settings files and the Cases data files, so that in case the executable files in district C are damaged, the system settings files and the cases data files could still be kept.

Partition **E** will be used as a temporary disk of CD burning, Partition **F** will be used to backup the system and application files.

3：DirectX9.0：

Microsoft DirectX9.0 must be installed in win2k for the use of DSW software. Under other circumstances, try to use DirectX9.0.

4：Capture card drive installation：

The windows would display a new hardware dialog after inserting the 878 Capture card into one of the PCI sockets. Point to the drive files path in the CD and click "Next", "Next" , etc. , complete the installation following the setup wizard.

After properly installing 878 Capture card drive**,** there will be such words like **"ProVision WDM Audio Capture" / "ProVision WDM Video Capture" / "ProVision WDM Crossbar"** in the "equipment management panel/audio, video and game controller".

5：Drive of encrypt lock USB2：

First fun setup in "lock(dog) usb2" of the software CD, then insert the encrypt lock. Or insert encrypt lock first, when the new hardware is recognized, click "Cancel", then run setup under "lock(dog) usb2". When the lock is properly set up, there will be such words like "RC： UDA WDM Driver" in the "equipment manager/Universal Serial Bus controller".

6: database support files

Enter the fold of "interbase6.5", double-click the "setup.exe", go on

following the setup wizard.

7: Video record compression drive

MpG4 compression drive, setup divx-mpg4 or ms-mpg4(right click the file, click “install” then).

8: Install the application software

Enter the fold of “xxx USB2 DSW”(e.g. Ultrasonic USB2 DSW), double-click the “setup.exe”, go on following the setup wizard.

Important instruction：

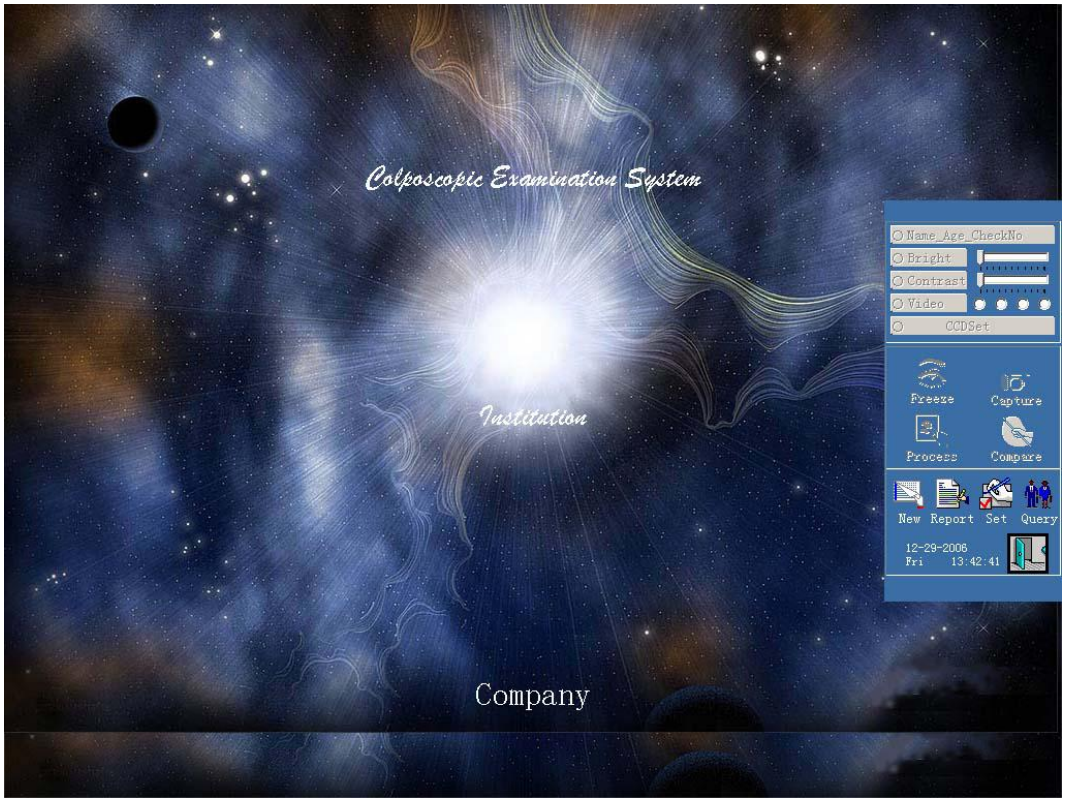
Orginal system paramter password：0

Orginal factory setting password：136

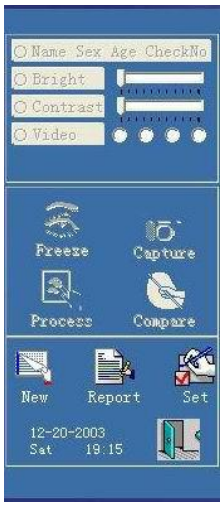
Chapter Two System Startup and Video Settings

One. Software startup

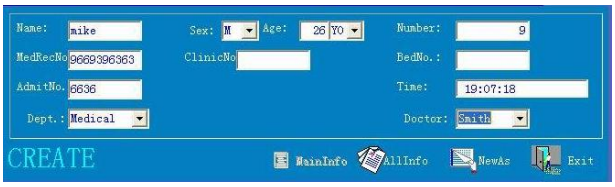
after the above procedures are followed, we can start the software. Click startup button, there'll be an image on the screen, click the image then enter the Startup window as shown in 2-1.



2-1



2-2



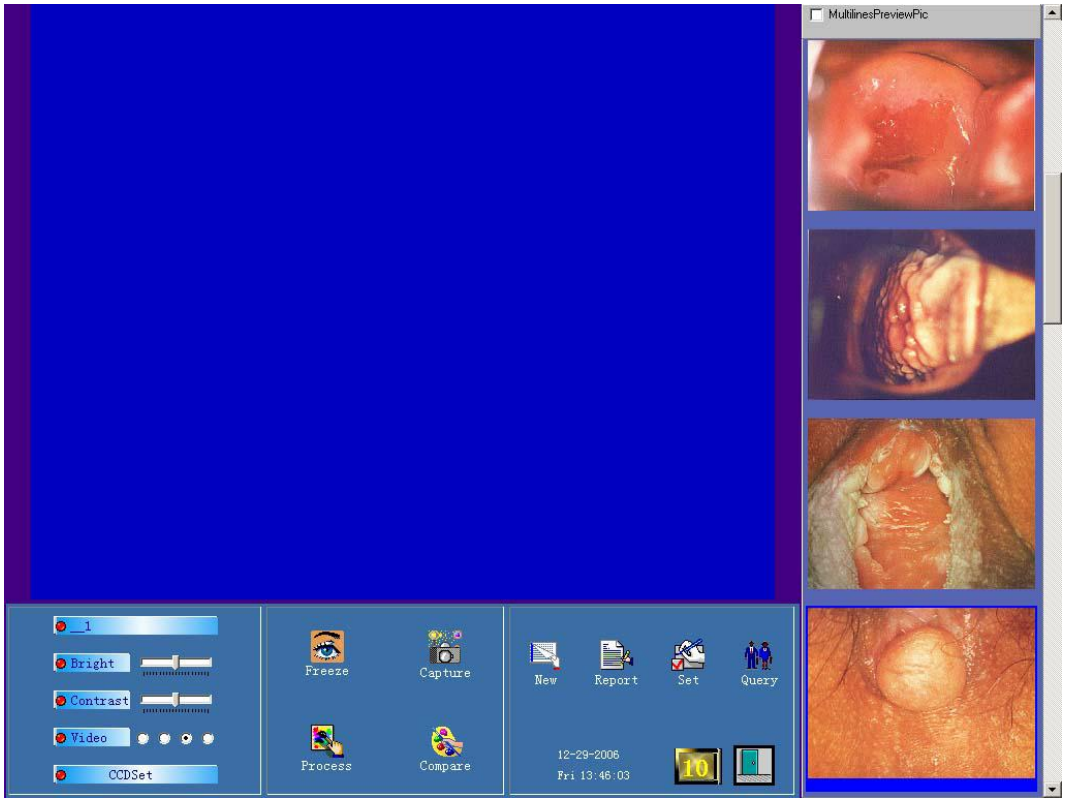
2-3

Among which the operation panel is magnified as shown in 2-2, those gray buttons indicate that they're not operational. Click New button, a dialog box as in 2-3 appears, input patients' information here, click All info button the dialog box will show more specific information about the patient such as telephone number, address, occupation etc, all these information will be saved in the case database for reference.

There're pre-added texts in those textboxes with a triangle in the dialog box, which could be amended according to the need. Click the textbox need amendment, the amendment dialog box

2-4

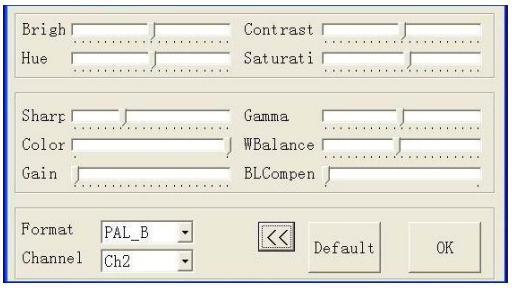
as in 2-4 appears, click amend, then revise or delete texts, then click Ok to save it. Click Back will return to the collection and diagnosis window as shown in 2-5, including video window, operation panel and preview window. Video window shows the dynamic picture from Colposcope, preview window shows the images already collected, on the operation panel are the executable operation panels. So far, the software is properly started and a new case is established and ready for diagnosis.



2-5

Two. Video adjustment and settings

1. For video adjustment click video on the panel, a video adjustment dialog box as shown in 2-6 appears, drag the glide square to adjust brightness, contrast, color saturation to your satisfaction. If the video mode needs to be changed, please select the corresponding video mode.



2-6

Chapter Three Image Collection and Processing

One. Image collection

1、Modify case information

If there's an input error in the patient information, click the uppermost button on the panel

to open the case modification dialog box, after revision, click back to return.

2、Real-time observation and freeze observation

Click freeze button

，video window will keep the current picture for the doctor's clearer observation mean while the button is transformed into real-time, click real-time

to return to the dynamic video window.

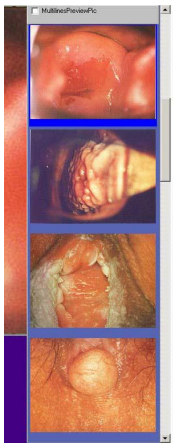
3、Image collection

Click capture

could capture the image in real-time video window and save it temporarily in the preview window.

4、Browse pictures in preview window

Drag the glide square, you could browse all the pictures in the preview window, when mouse passes by the pictures, they'll be magnified for reference.



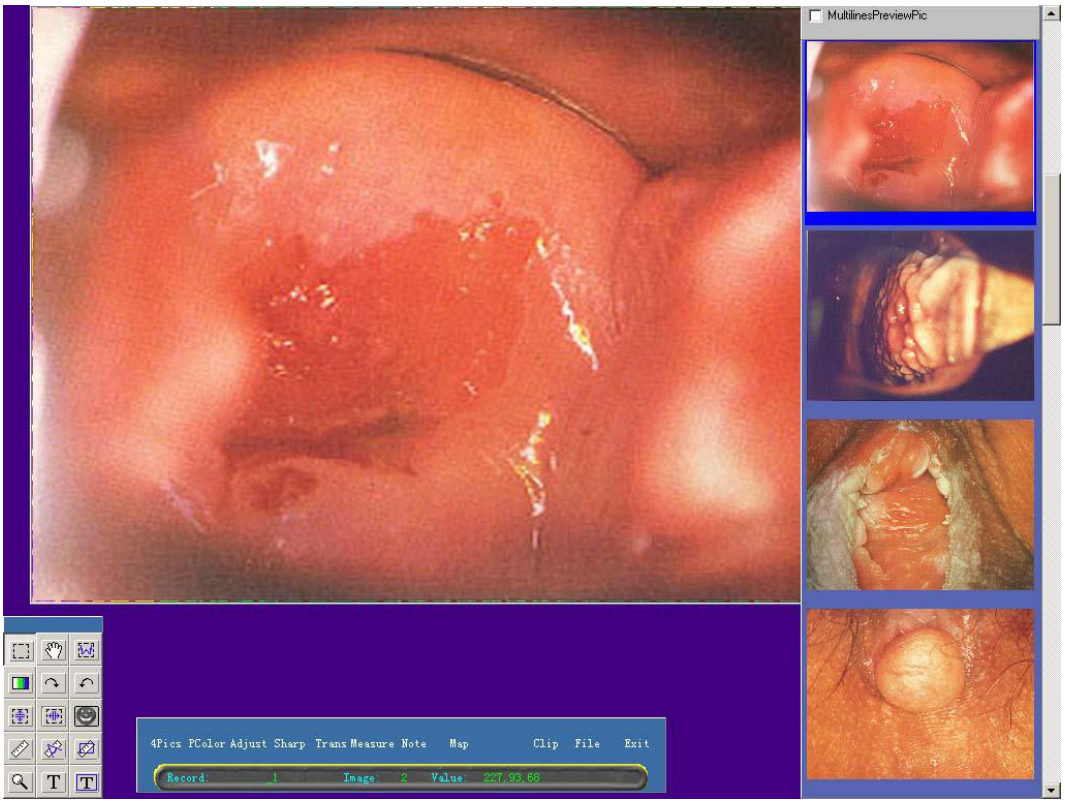
3-1

5、Delete and restore image

Click right key of the mouse on any image, it will be deleted, right-click it again, it'll be restored. As shown in 3-1.

6、Shortcut key

Press keyboard F3 under this window, you can shift between real-time and freeze observation, press F4 a picture is captured. Also the function of feet panel capture is provided.



3-2

Two. Image processing

1. Enter the image process window

Click process

to enter image process, first four images are shown, right-click one to enter the main window of image processing as shown in the following. Drag a picture from the preview window and drop it above will serve the same purpose.

2、Replacing picture

Drag and drop another picture to the processing area will do.

3、Image processing panel

The upper part of the main image process window is the operation panel as in 3-3, which incorporates many image processing buttons. The grayness figure in the lower condition strip indicates the color of mouse's current position.

3-3

4、Four-picture display

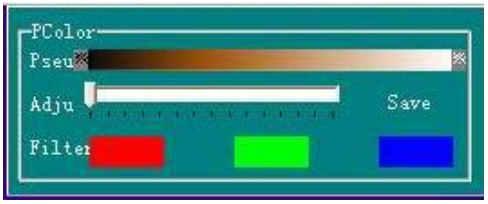
Click 4pic to show four pictures on screen, right-click one to put it back to the image processing window.

5、Area selection

Click mouse in a point on the picture, drag on to another point to get a rectangular broken-line box, then process only the targeted area. If there's no area selected, the whole image will be processed.

6、False color process

Move the mouse to Pcolor button, a false color filter panel appears as shown in 3-4

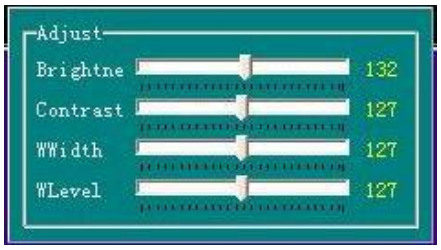


3-4

Drage the glide square to process the selected image. Click red, green, blue color filter, the other colors will be filtered out.

7、Brightness, contrast adjustment

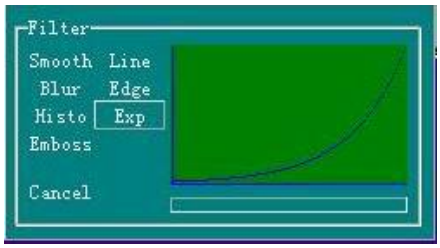
Move mouse to Adjust，the adjustment panel of brightness, contrast appears below, drag the glide square to adjust brightness and contrast. This adjustment won't effect the brightness and contrast of the video window.



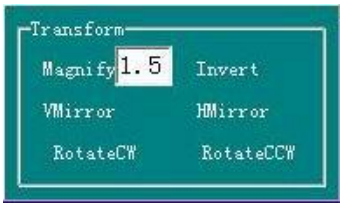
3-5

8、Flite

Same way to get the Flite panel in 3-6, click the button to Flite process the image, click application to change the image click cancel to give up the operation.



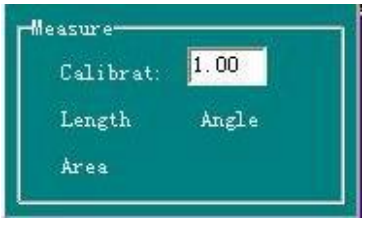
3-6



3-7

9、Transform

3-7 is Transform panel. Click magnify a square area appear on the picture which follow the

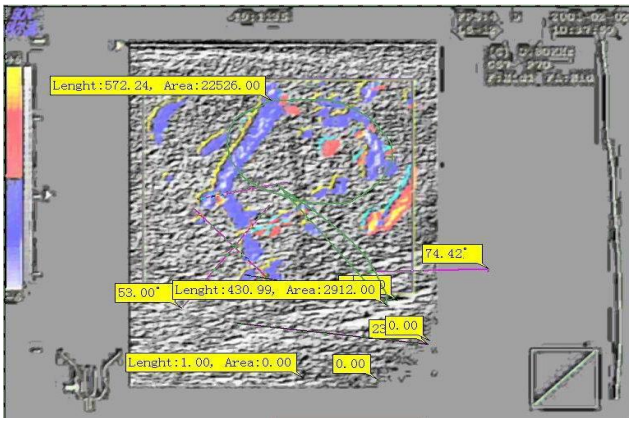


3-8

mouse's movement and cover below contents, click to improve the magnifying multiples, right-click to exit. Click invert, the picture will be transformed into a film. Vmirror and Hmirror will turn the image upside down or swap it。

10、Measure

3-8 is Measure panel, before measuring, the scale should be set first. Input the actual distance in a scale dialog box beforehand, system will record the fixed scale.



3-9

Length measure: click Length, click at the starting point and drag on, drop it at the ending point.

Girth and square measure: Click Area button, then click mouse to draw a line surrounding the targeted area to get the girth and acreage of the area as in 3-9.

11 、Note

Click Text Button on Note panel, input the remark texts in the dialog box then click where the note meant to be.

12、Map

Map shows the color change in a intuitionistic way, distribution of the grayness figure reflects the diversification of the three original color red, green, blue and the grayness of a line, histogram reflects the grayness distribution of a certain area, in another word, whether there're more lighter point or more darker points.

13、File

The restore button of the file panel could eliminate the processing to the current image.

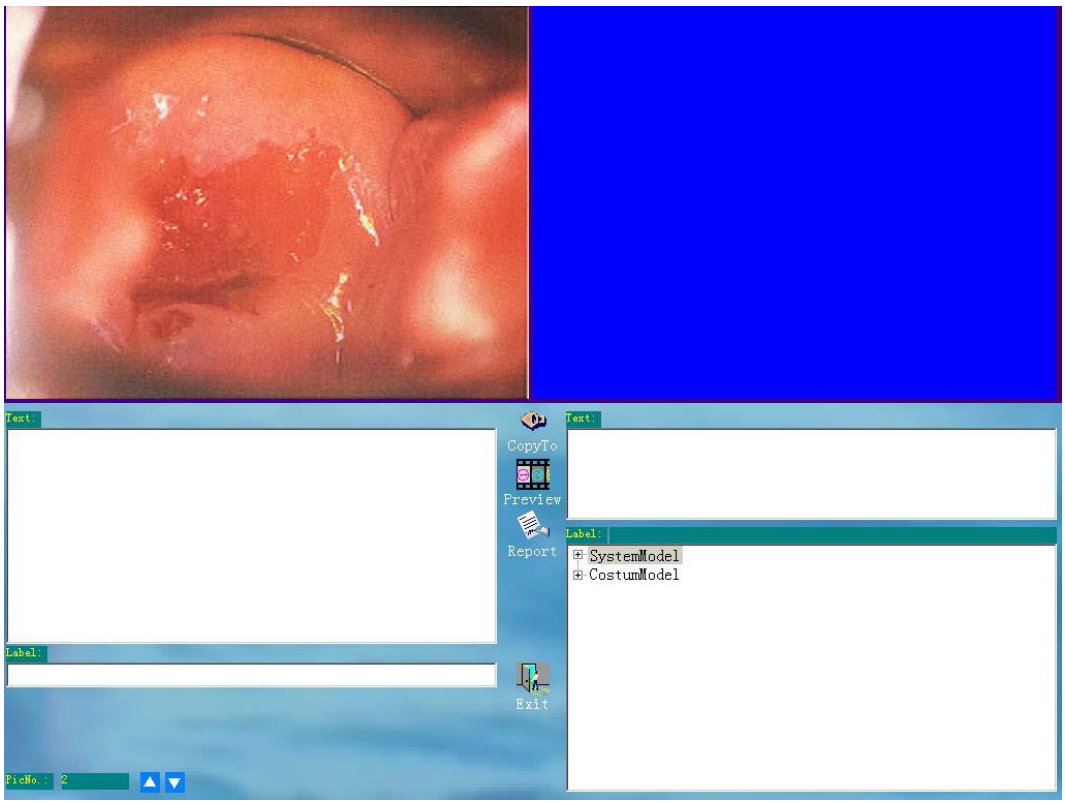
14 、Exit

Click Exit to return to image capture window.

15 、Right-click anywhere on the picture, you can exit the function you've chosen.

Chapter Four Image Comparison

Click Image Comparison button to enter the main image comparison window as in 4-1



4-1

Image comparison function provide the user a typical image bank, to which the captured image could be compared with. Also a standard description text bank is provided, the appropriate texts could be educed into the report to save doctor's time and improve work efficiency.

1. Image comparison

Click “+” in front of the standard bank of the system to open the catalogue, select a topic to open a picture for comparison.

2、Description eduction

The symptom description in shown in the description text box when the image is opened, click Copy to Button, all the texts will be educed into the text box in the left, which will be automatically brought to the diagnosis report of the patient. You can also choose part of the description text this way: choose the selected texts with the mouse, click it and drag it into the text box in the left.

3. Replace the comparison image

Click the small triangle at the bottom of the screen, the pictures will be cycled and replaced. Or click Preview to open the preview window to choose a picture(also dragging), click Preview again to close the Preview window.

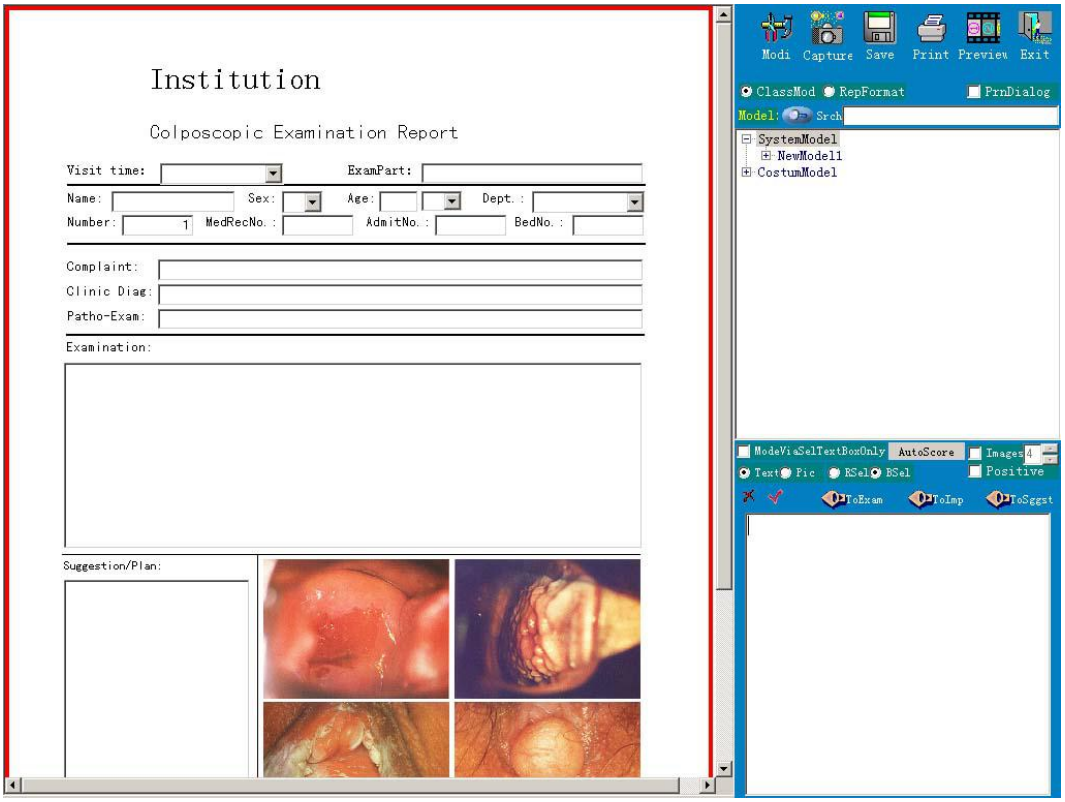
4. finalize report

Click Report to enter report window and bring the selected description into the report panel.

5. Click Back Button to return to the image capturing and collection window.

Chapter Five Finalize Report

Click Report Button to enter report window as in 5-1, it adopts the design style of what you see is what you get for the convenience of the doctors, so that a preview is not needed. It could operate and print in a fixed report format or define a new report format to meet the work requirement.



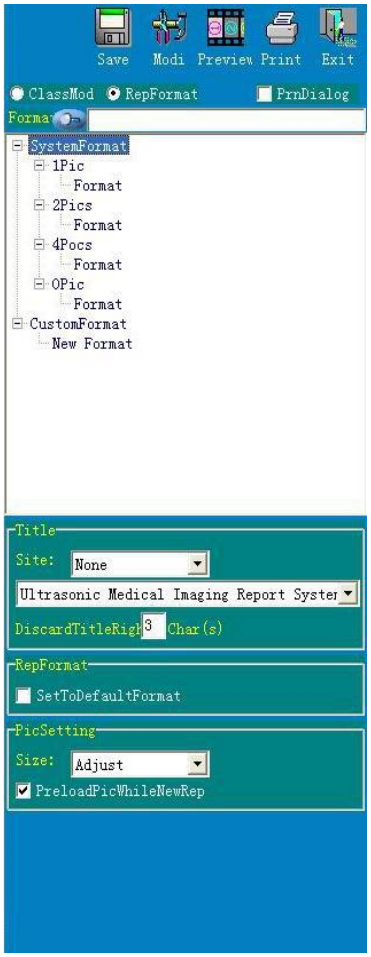
5-1

One. Input texts into report

The patients' information stored when a new case is established could be automatically brought to the diagnosis report, to which amendments and supplement could also be done here. Texts could be input into all the text boxes. Click the inverse triangle in the text boxes, there'll be options for your choice. Press F10, the newly input texts could be led into the options; to delete, press F11.

Two. Add image to the report

Drag the image in the preview window to the image box of the report. Right-click a image box, the other images could be opened.



Three. Mode operation

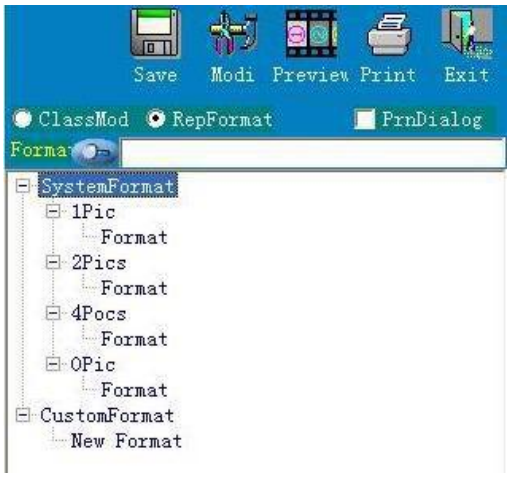
Click Preview Button to shift between preview window, mode and report format, click Mode Button in mode and

report format window to add the description in the mode to the report.

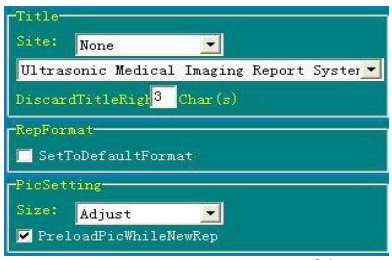
Click + on the right of system mode bank, standard system bank, many titles will appear. Click titles without + on the right, the corresponding description will be shown in the text box below. Click line selection button, text could be selected in lines. Click block selection button, text could be selected in blocks. Click image selection button, the image will be on display. Images dragged into the reported could be printed out together with the report.

Four. Select report format

Click report format selection button to open report format window as in 5-4, click + to open the catalogue, click a certain format to open it. If you are accustomed to a certain format, select this, click default format box, next time you'll have this default format entering into a report.



5-4



5-5

Five. Additional options

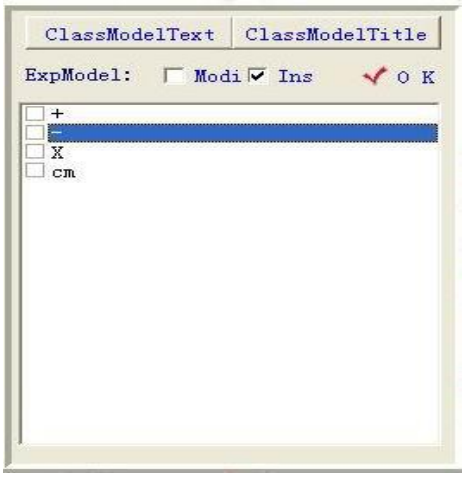
As in 5-5

1、 Position option could adjust the position of the title.

2、 “Erase characters in front of the report” could remove at most three characters in front of the “report”.

3、 Case image options could adjust the zoom ratio of the image.

Six. Shortcut Mode



5-6

Right-click anywhere in the report where text could be input, the shortcut mode as in 5-6 appears. This mode is corresponding to the text box in the report, every text box has a corresponding shortcut mode, which provides great convenience to the user. Select Modify button, you can add or delete options in the mode, or modify and save for future use. Select superaddition button to add text to the mode continually. If you don’t choose superaddition button, you can replace texts in the text box.

Seven. Print report

Click Print, the print dialog will appear; click content, adjust relevant parameters(contents of this dialog box will be determined by the type and brand of the printer), click Print button to print the report(For details about printing please refer to Microsoft system instructions, for information about printer setting and operation please refer to printer instructions).

Chapter Six Modify Mode and Image Bank

The system has many modes in stock, meanwhile it is an open database of which you could add or delete some contents conveniently. Click Modify Button to enter modify window.

6-1

One. Add mode

Select Define Mode/Word bank, click Add Button to add a title to the self-defined mode/word bank, the newly added title is in blue, and could be renamed. To modify an already named title, click and let mouse stay on it for a while. You can also establish a new title as a catalogue, select it, click add to set up a title under it, and then name the title(the newly built title is always under the selected blue catalogue). Input the relevant text into the text box below, click Start Button to open a text file in the text box, or drag the text from other files into the box. Thus a new mode is built, click save, it'll be save for future use.

Two. Add images.

Click image selection button, the text box is transformed into image box, click open(or right-click image box), you can open any image in the image dialog box, click text button to add corresponding text to it, click save.

3. Delete

Select the title, click Delete Button, it'll be deleted.

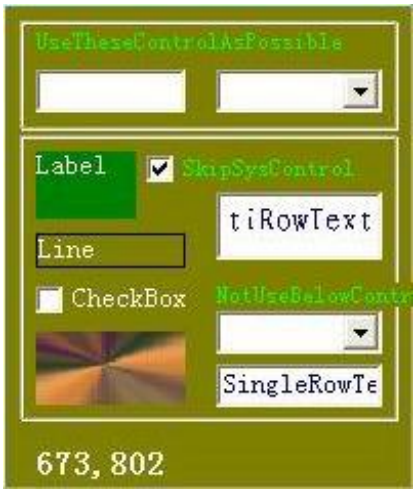
4. Click Modify Button to exit.

Chapter Seven Self-defined Report Format

The system provides many report formats for your choice, but if it still can't meet your work requirements, your can define the report format by yourself. In report window, select report format, click Modify Button to enter modify window, there's a controlling panel at the bottom of the screen in the right, as in 7-1.

1. Control Introduction

Sole line text box: this control could be connected with the field of the database, the field will be lead into the report automatically. Such as name, age, sex could only be input in sole line when establishing a new case.



7-1

Title: this control could add instructions to other controls, for example, you can add a text box of "Name" in front of a sole line text box to indicate the content of the following text box is name. When you exit from the modification status, the content of the title control can't be revised.

Line: a line could be drawn in the report.

Checking mark box: click the checking mark, then it'll be added to the report.

Image box: An image could be added to the report. The first, second image box could only be added in the modification status, other image boxes could be dragged from the preview window in the report status.

Combo box: You can use combo box if you need options(such as sex, diagnosis doctor etc.)

Multiply line text box: multiply lines of text could be input into the report. The sole line text box and combo box in the upper part of the operation panel could be connected with the field of the database.

Two. Add control to report.

Click the control and drag it to the report, keep the mouse stay on the already added control, the name and serial number among similar controls of this added control.

Three. Delete Control

Drag the added control back to the original position on the operation panel, the control will be deleted.

Distance to the uppermost line, the unit is Pels. After operation of this control, you must click Application and exit to return to the control contents panel to go on manipulation, otherwise you can't proceed. Right-click the control you want to operate.

Special Remindings:

It's quite troublesome to establish a new report format, you could click and open an existing report format(REP files with the suffix fmt) and modify it. The following is introductions about the pre-defined control serial number.

One: All the database controls（DBEdit、DBComboBox） should be appointed with the corresponding field. The method is: right-click the control, a dialog box jumps out, click the arrowhead of the combo box, select the right field. Please pay attention to the data type(integer, character types etc.), for the character type heed to the bytes it takes(length). Control bearing the same meaning in different format must use the same name.

Two. None database control, such as titles, images, don't have corresponding field, so they should be recognized by serial number. Thus it's necessary to introduce the controls pre-defined by the system: when using these controls, only those with pre-defined meanings will do, others might be covered by software.

Three, Meaning of the pre-defined titles

Serial number	meaning	serial number	meaning
0	hospital name	5	company telephone
1	appliance name	6	hospital name 2
2	company name	7	hospital name 3
3	hospital telephone	8--21	remarking text
4	appliance type	22--29	spare

Numbers larger than 30 aren't pre-defined.

Four. Pre-defined meaning of multiple line text

Serial number	meaning	serial number	meaning
0	diagnosis	2--5	spare
1	seen in the chickup	after 6	No pre-definition

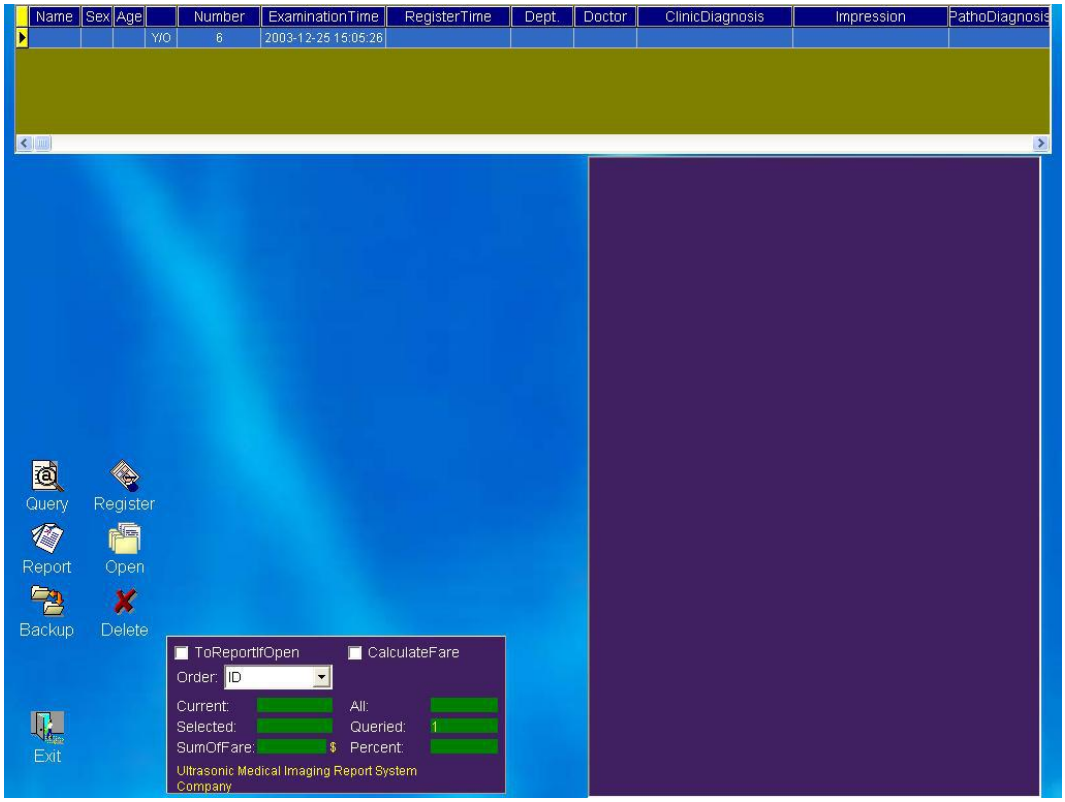
Five. Pre-defined meaning of images:

Serial number	meaning	serial number	meaning
0	hospital icon	4--9	remarked image
1	company icon	10--29	case image
2--3	spare		

10-13(The first four images) When you enter an empty report, the latest precessed or displayed four pictures will be installed. If no pictures have been precessed, the first four images captured will be installed.

No pre-definition for numbers larger than 30.

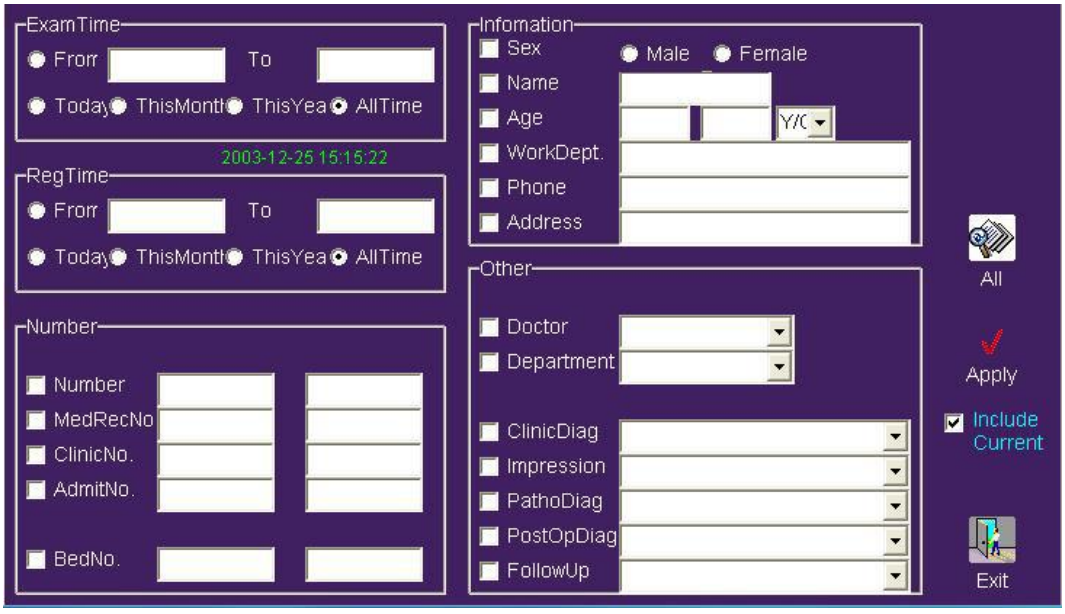
Chapter Eight Case Management



The software provide a forceful and convenient case management function, the input and storage is completed directly by the software. So far, the users have dealt with database, but the software has saved all the information(including images and texts) into the case database it set up automatically. What you need to do now is enquiry and open the cases, the software also provides convenient enquiry tools. Click the Case button on operation panel of the image capture window, you'll see the above window. The upper part is the case list, all cases are listed here, click the case you want to see, the report preview will jump out. Click setup, you can run the case in

the program to check up, modify and print. Double click anywhere on the case list to increase the display size to show more cases, but the preview window will be hided. Double click the report to magnify it, double click it again to deflate it. Click Enquiry Button, the enquiry window will jump out as in

8-2



click the field for enquiry, click the edit-box of name, e.g input “Mike”, then click the button “apply”, the case list will only show Mike’s case. If there’re several cases of the same name, you can choose by hand or input more conditions to enquiry. Select one and then click setup. Click the button “All” to show all the cases.

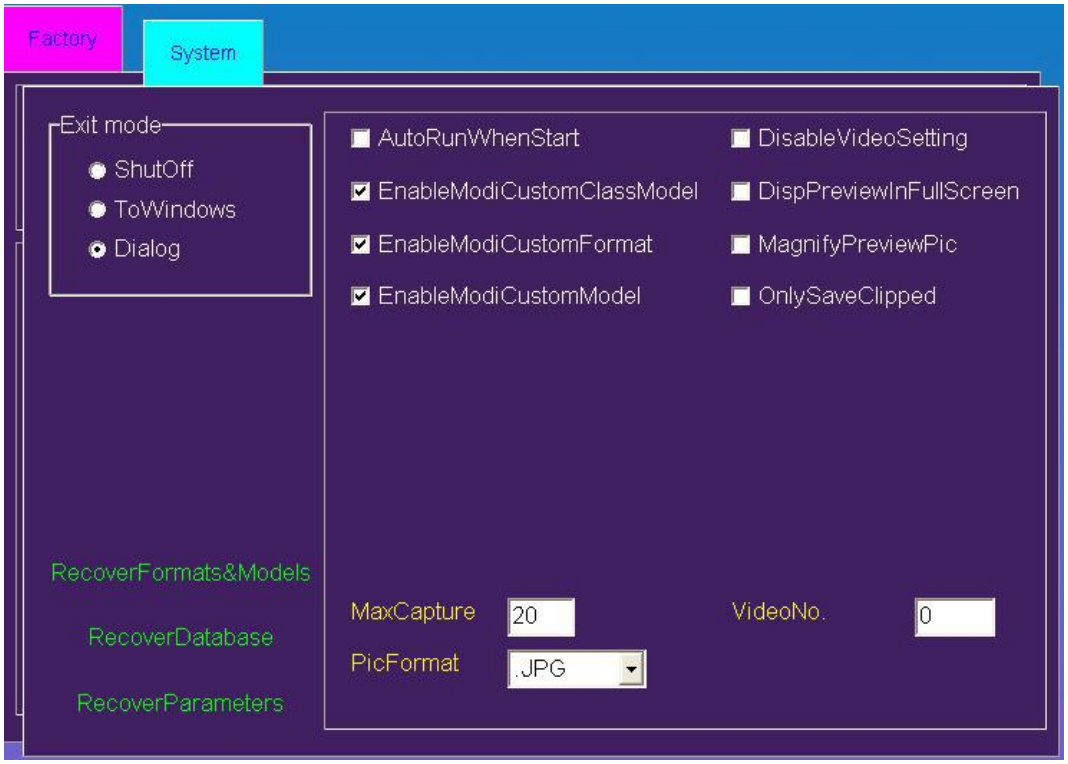
Chapter Nine System Settings

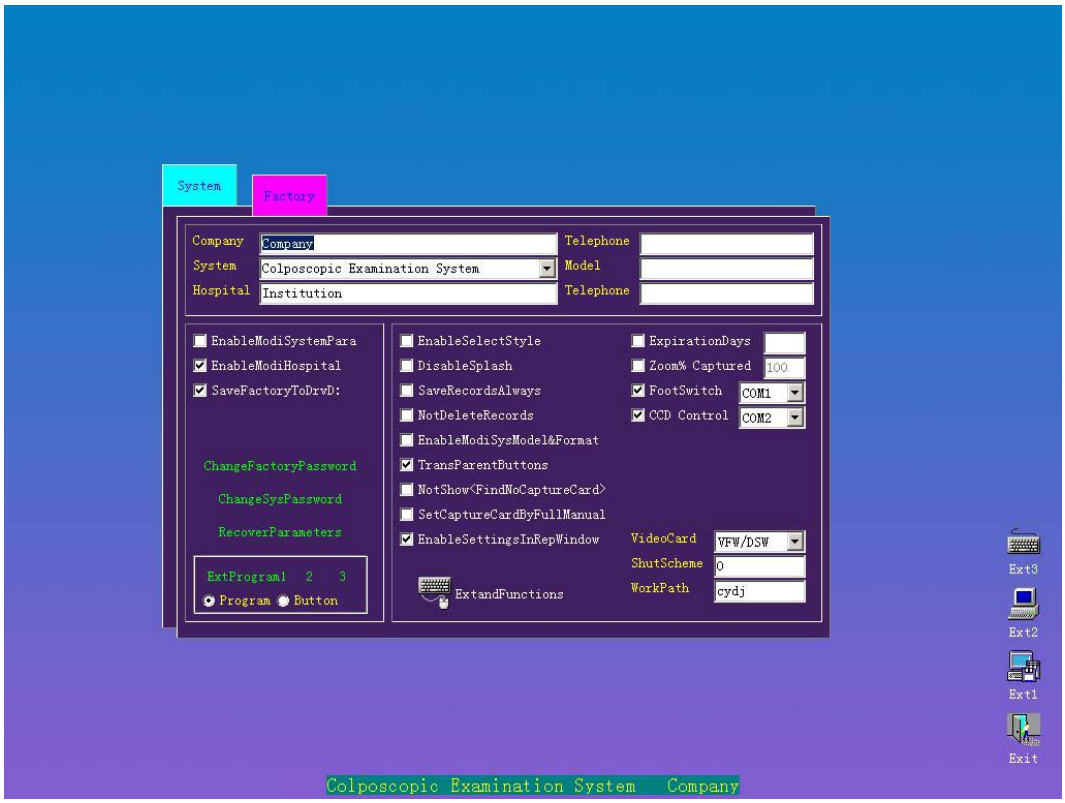
The system parameters are set to defaults when being installed, no changes to perform is recommended.

On some cases, you could enter the "System Settings" interface to edit some parameters by clicking the "Set" button in the main operation panel.

You could edit the title and telephone of the hospital via the button "Hospital" directly.

You could enter the "Factory" dialog also if you want to change the title and telephone of the company. First, input the system password ("0" for default) to the "System" dialog, then input the factory password ("136" for default) to the "Factory" dialog, finally, input the text wanted and click the button "Exit"(the right-down of screen), select "Yes" to save the parameters.


Factory
System
Exit mode
ShutOff
ToWindows
Dialog
AutoRunWhenStart
EnableModiCustomClassModel
EnableModiCustomFormat
EnableModiCustomModel
DisableVideoSetting
DispPreviewInFullScreen
MagnifyPreviewPic
OnlySaveClipped
RecoverFormats&Models
RecoverDatabase
RecoverParameters
MaxCapture
20
VideoNo.
0
PicFormat
.JPG


System
Factory
Company
Company
Telephone
System
Colposcopic Examination System
Model
Hospital
Institution
Telephone
EnableModiSystemPara
EnableModiHospital
SaveFactoryToDrvD:
ChangeFactoryPassword
ChangeSysPassword
RecoverParameters
ExtProgram1 2 3
Program
Button
EnableSelectStyle
DisableSplash
SaveRecordsAlways
NotDeleteRecords
EnableModiSysModel&Format
TransParentButtons
NotShow<FindNoCaptureCard>
SetCaptureCardByFullManual
EnableSettingsInRepWindow
ExtandFunctions
ExpirationDays
Zoom% Captured
100
FootSwitch
COM1
CCD Control
COM2
VideoCard
VFW/DSW
ShutScheme
0
WorkPath
cydj
Ext3
Ext2
Ext1
Exit
Colposcopic Examination System Company