

**MICROTEK**

# **MiPAX***Xray*

## **Reference Manual**



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To obtain optimal results from the Microtek scanning software and user's manual, you should be familiar with such Windows concepts as pointing, clicking, dragging, and selecting from menus and dialog boxes. If these things are new to you, refer to your Microsoft Windows User's Guide.

I49-004491 B

June 2015

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# **CE 0120 Compliant Device**

**0120**

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Comply with the requirements of the international standard ISO 9001:2008 and ISO 13485:2003.

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# Introduction

MiPAX-Xray is an omnipotent management software developed exclusively for Microtek medical solution. MiPAX-Xray has a state of the art user interface that users will find productive and easy to use. It is specifically designed for the medical professionals who focus on medical examinations and treatments.

- Supports two image display modes - Based on different needs, users can examine scanned films in two display modes: normal, and compare.
- Built-in reporting module - With a built-in and predefined medical lexicon and reporting module, users can create reports with full text and picture descriptions in seconds.
- Includes CD burning tools - The MiPAX-Xray supports CD burning in DICOMDIR format and a built-in and portable CD viewer, allowing users to view DICOM files in a computer with a normal OS system conveniently.
- Allows users to upload files directly to PACS/RIS servers.
- Supports DICOM printers.
- Supports the backup and restore of the database, guaranteeing the safety of secure medical information.

## System Requirements

- Windows XP Professional SP3 (32-bit)
- Intel-Pentium-D 2.80GHz/Intel-Core-2 Duo E7400 2.80GHz/Intel-Core-2 Duo E7500 2.93GHz/Intel-Core-2 Duo E8400 3.00GHz/Intel-Core-2 Quad Q6600 2.40GHz (recommended)
- 2GB DDR2 800 MHz RAM
- 250GB hard disk or more
- DVD-RW drive
- Display resolution: 1280 x 1024 pixels or higher; Aspect ratio: 4:3
- Microtek digitizers that support MiPAX-Xray



## Launching MiPAX-Xray

MiPAX-Xray can be launched in the following way:

Double-click the *MiPAX-Xray* icon on the desktop, or choose *Start, Programs, MiPAX-Xray*, and then *MiPAX-Xray*.



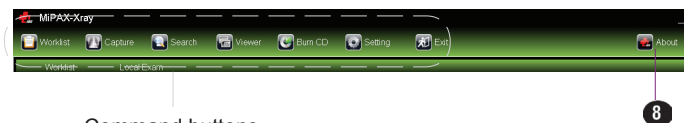
## Exiting MiPAX-Xray

To exit MiPAX-Xray, click on the Exit button on the Capture interface.

# The Quick Tour to Different User Interfaces

The MiPAX-Xray is an all-in-one scanning software program with several user interfaces. These interfaces can be activated switched around by pressing the command buttons at the top of each interface. With different functions offered by these interfaces, users can create a new medical history, scan X-Ray films, burn CDs and create a report in a short time. This section will picture you a rough and quick introduction about each interface in the MiPAX-Xray software program.

There are seven command buttons at the top of each user interface.

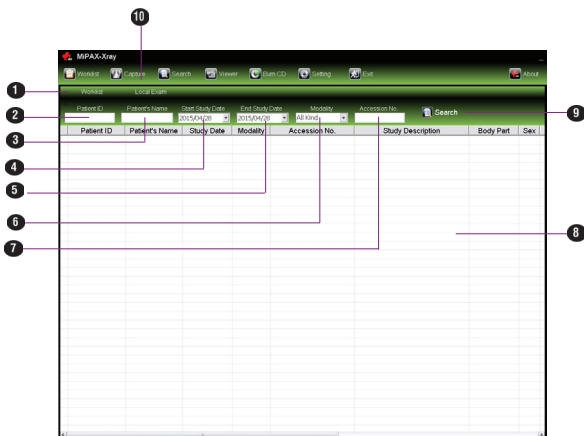


1. Worklist button - Press to extend Worklist interface.
2. Capture button - Presses to extend Capture interface.
3. Search button - Press to extend Search interface.
4. Viewer button - Press to extend Viewer interface.
5. Burn CD button - Press to extend CD Burn interface.
6. Setting button - Press to extend and to adjust setting options for the MiPAX-Xray software program.
7. Exit button - Press to close MiPAX-Xray.
8. About button - Press to display the software information.



## Worklist Interface

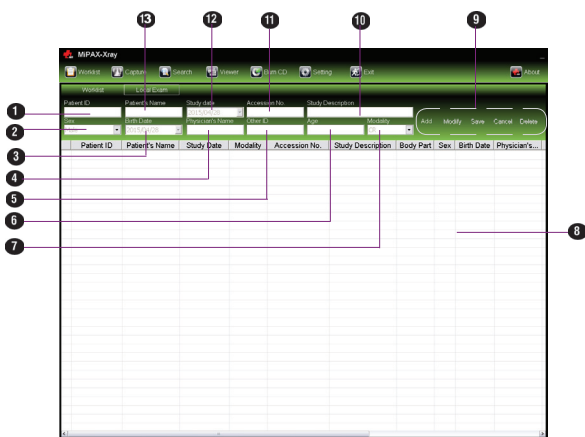
The Worklist interface lets you retrieve lists of patients who will have examinations during a certain period of time from the worklist server by different searching conditions. It is also the default interface every time when you launch the MiPAX-Xray software program. Also, you can build up a list of records for patients who will have examinations in your local data storage space. Refer to the later section "How to Create a New Examination Record in the Local Data Storage Space" for the details about how to use the Local Exam button on the Worklist interface.



Interface by pressing the Worklist button

1. Worklist Button - Press to retrieve data from the worklist server. The functions on this interface work only when you connect with a server; otherwise, skip the introduction about this interface.
2. Patient ID - Key in an assigned and unique ID number for each patient.
3. Patient's Name - Key in a patient's name.

4. Start Study Date - Choose or key in a starting date for retrieving data from the workload.
5. End Study Date - Choose or key in a terminating date for retrieving data from the workload.
6. Modality - Choose a medical device in use.
7. Accession No. - Key in an assigned and unique number for each patient.
8. Displaying area - Display the lists of searching results.
9. Search - Press to perform a searching process in the workload server.
10. Local Exam Button - Press to extend an interface where you can key in a list of records for patients who will have exam and then save these records in your local data storage space.



Interface by pressing the Local Exam button

1. Patient ID - Key in an assigned and unique ID number for each patient.

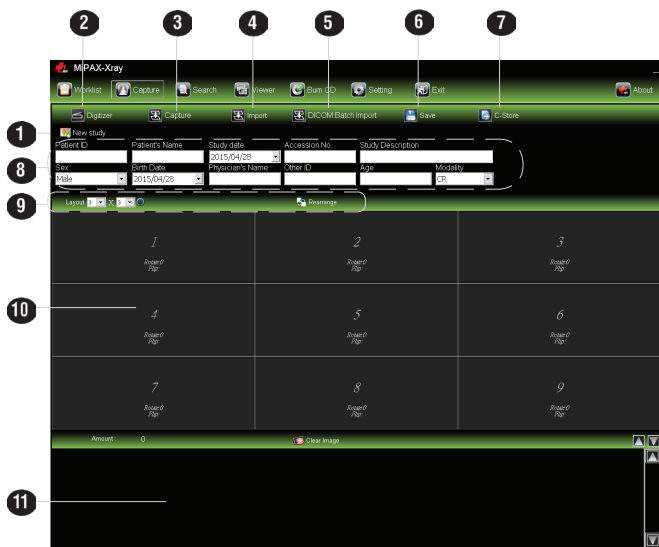
2. Sex - Choose a patient's gender from a drop-down menu.
3. Birth Date - Choose a patient's date of birth.
4. Physician's Name - Key in a doctor's name.
5. Other ID - Key in other identification numbers if users have.
6. Age - Key in a patient's age.
7. Modality - Choose a medical device in use from a drop-down menu.
8. Displaying area - Display the lists of entered results.
9. Action buttons - Click to add, modify, delete or save a record in/from the local data storage space.
10. Study Description - Keys in an examination result of a patient.
11. Accession Number - Key in an assigned and unique number for each patient.
12. Study Date - Choose or key in a date for an examination saved in the local data storage space.
13. Patient's Name - Key in the patient's name whom you want to search.





## Capture Interface

The Capture interface lets you build up a new examination record for a patient. Also, it allows you to key in several information about a patient. In this interface, you can use your digitizer to scan examination images and apply built-in template modules with the examined patients. Refer to the later section "How to Create a New Examination Record" for the details about how to use the Capture interface.



1. New Study button - Press to start a new examination record.
2. Digitizer button - Press to extend and to adjust setting options for a scanning job.

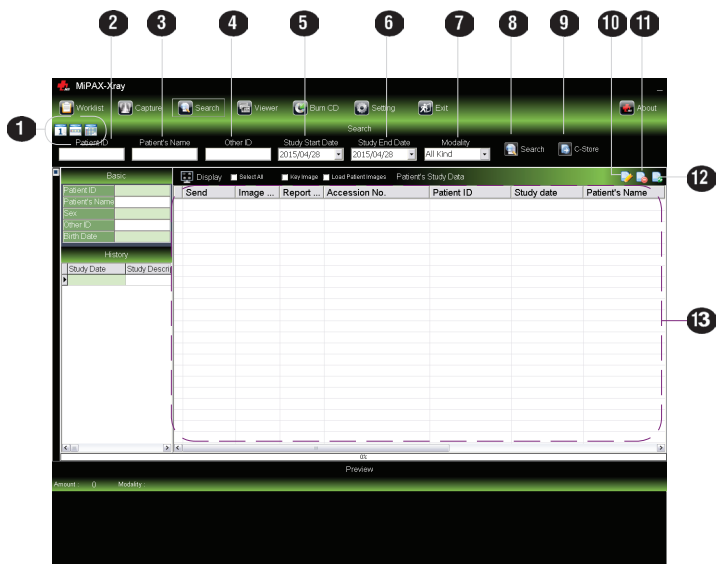
3. Capture button - Press to extend and to adjust setting options for a connected image capturing device (eg. web cam) for a scanning job.
4. Import button - Press to import files into the MiPAX-Xray software for the furthering use.
5. DICOM Batch Import button - Press to import files with DICOM info into the MiPAX-Xray software for the furthering use.
6. Save button - Press to save a finished examination record.
7. C-Store button - Press to upload a saved examination record to a server. It works only when you connect with a PACS server.
8. Key-in Columns of Patient Information - Allows you to key in or choose some basic information for a patient taking an examination and then use them to build up a medical history.
  - A. Patient ID - Key in an assigned and unique ID number for each patient.
  - B. Sex - Choose a patient's gender.
  - C. Patient's Name - Key in a patient's name.
  - D. Birth Date - Choose a patient's date of birth.
  - E. Study Date - Choose or key in an examination date.
  - F. Physician's Name - Key in a doctor's name.
  - G. Accession Number - Key in an assigned and unique number for each patient.

- H. Other ID - Key in other identification numbers if users have.
  - I. Study Description - Keys in an examination result of a patient.
  - J. Age - Keys in a patient's age.
  - K. Modality - Choose a medical device in use from a drop-down menu.
9. Options for image displayed layouts
- A. Layout - Press to assign horizontal and vertical numbers of the displayed images
  - B. Rearrange - Press to clear and remove displayed image from the image displaying area of template modules back to the image displaying area of scanned images .
10. The displaying area of selected images - Displays the selected images from the image displaying area of scanned images.
11. The image displaying area of scanned images - Displays scanned images generated by an assigned digitizer.



## Search Interface

The Search interface lets you search saved examination records of patients. It offers you several ways to search these records. Refer to the later section "How to Search a Saved Examinations Record" for the details about how to use the Search interface.



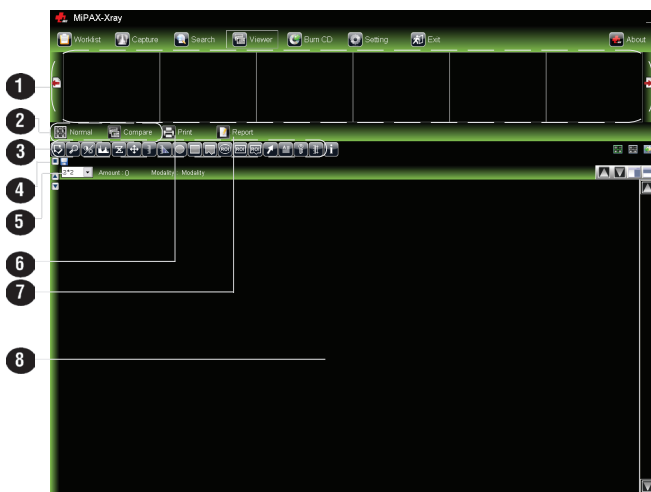
1. Time buttons - Press to start a search by an assigned period of time. You can use a day, a week or a month to start a search immediately.
2. Patient ID - Key in an ID number which you like to use to search a list of patients.
3. Patient's Name - Key in the patient's name whom you want to search.
4. Other ID - Key in other identification numbers if users have.

5. Start Study Date - Choose or key in a starting date for retrieving data from the local database.
6. End Study Date - Choose or key in a terminating date for retrieving data from the local database.
7. Modality - Choose a medical device in use.
8. Search button - Press to perform a searching process in the database.
9. C-Store button - Press to upload a saved examination record to a server. It works only when you connect with a PACS server.
10. Modify the patient data button - Press to change or update the information of a selected patient.
11. Delete the patient data button - Press to delete the record of a selected patient.
12. Restore the patient data button - Press to restore the record of a deleted patient.
13. Displaying area - Display the lists of searching results.



## Viewer Interface

The Viewer interface lets you view and check saved images of patients. It offers you different displaying modes based on your reference. Also, it provides you some measurement and adjustment tools to modify the saved images. At last, you can print out a medical report with texts and pictures by using a built-in reporting module. Refer to the later section "How to Use the Viewer" for the details about how to use the Viewer interface.



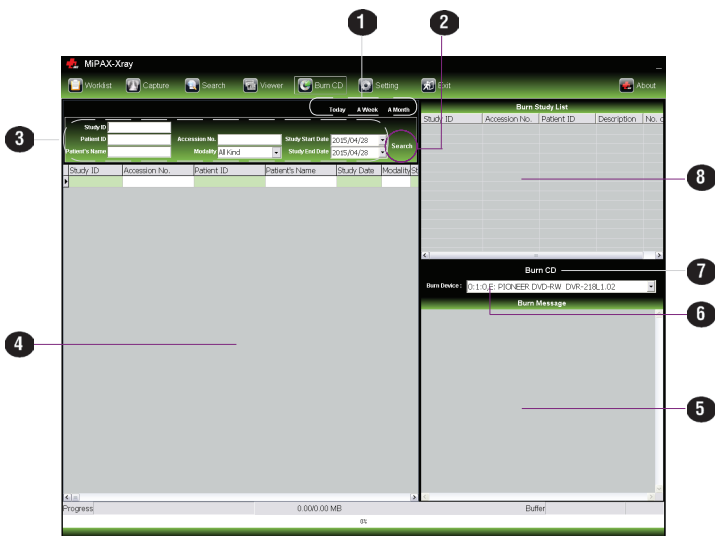
1. Preview area - Area to display the first preview image of selected patient.
2. Displaying mode button - Press to switch to two displaying modes: Normal or Compare.
3. Editing tools - Used to modify the images of patients.

4. Save button - Press to save series image data in a local database.
5. Numbers of displayed images - Press to choose how many numbers of images are displayed in rows and columns.
6. Print button - Press to print out displayed images.
7. Report button - Press to recall a reporting module to make reports with texts and pictures.
8. Displaying area - Area to display images of a selected patient.



## Burn CD Interface

The Burn CD interface lets you burn images and information of patients in CDs. It allows you to burn one data or a batch of data at one time based on your reference. Refer to the later section "How to Burn a CD" for the details about how to use the Burn CD interface.



1. Time button - Press to start a search by an assigned period of time. You can use a day, a week or a month to start a search immediately.
2. Press to perform a searching process in the database.
3. Key-in Columns of Patient Information - Allow you to key in or choose some basic information for a patient and use one of them to start a searching process.
- 4.
- 5.
- 6.
- 7.
- 8.



- A. Study ID - An unique number assigned by the software system.
  - B. Patient ID - Key in an assigned and unique ID number for each patient.
  - C. Patient's Name - Key in a patient's name.
  - D. Accession No. - Key in an assigned and unique number for each patient.
  - E. Modality - Choose a medical device in use.
  - F. Start Study Date - Choose or key in a starting date for retrieving data from the local database.
  - G. End Study Date - Choose or key in a terminating date for retrieving data from the local database.
- 4. Displaying area - Display the lists of searching results.
  - 5. Displaying area of CD burning information - Display the related information about the CD burner in user, the status of a CD burning process and so on.
  - 6. CD device - Click to choose a CD burning device.
  - 7. Burn CD button - Press to start CD burning.
  - 8. Displaying area of study lists - Display the related information about the selected data which will be burned inside a CD.



## Setting Interface

The Setting interface lets you set up some options for the digitizer in use, data compression, the worklist server, the PACS server, importing report modules, assigning data saving paths, multiple viewing screens, days to delete images saved in local and assigning saving paths for cutting images.

### The Information of the Machine in Use

Let you key in some information about the digitizer in use.

### The Data Compression

Set up if you want to compress your scanned images. Three compression levels are selectable: No compression, JPEG 2K lossless and JPEG 2K loss.

## The Setup for the PACS Server

Let you set up the name and IP address of the server in use.

Title: Used to name the setting in use.

Local AE Title: Used to name the local database.

Server AE Title: Used to name the PACS database.

Server IP: Set up the IP address for the PACS server.

Server Port: Set up the IP port for the PACS server.

Use: Check to assign the created PACS server in use.

Echo: Press to check whether the internet connection is successful.

Save: Press to save the setting.

Cancel: Press to exit the Setting interface.

## The Setup for the Worklist Server

Let you set up the name and IP address of the worklist server in use.

Title: Used to name the setting in use.

Local AE Title: Used to name the local database.

Worklist AE Title: Used to name the HIS database.

Worklist IP: Set up the IP address for the HIS server.

Worklist Port: Set up the IP port for the HIS server.

Use: Check to assign the created HIS server in use.

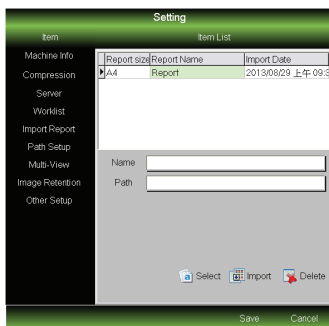
Echo: Press to check whether the internet connection is successful.

Save: Press to save the setting.

Cancel: Press to exit the Setting interface

## Importing Report Modules

Let you import reporting modules into the software program. If you do not import the reporting module into the software program, some functions in the report may not work well as you expect.



**Name:** Name a report module imported.

**Path:** Assign the location of a report module imported.

**Select:** Press to choose report modules which you want to use for your report.

**Import:** Press to select the assigned report module and import it to the program.

**Delete:** Press to delete the selected report module from the Item List window.

**Save:** Press to save the setting.

**Cancel:** Press to exit the Setting interface

## Assigning Data Saving Paths

Let you specify the directories for the scanned images and local backup files.



### Directory for saved image files

You can assign the location where a scanned image is saved in the Image device path column. The default folder "hd1" is assigned automatically by your system when the MiPAX-Xray is installed for the first time.

To change the saving directory, toggle through the drop-down menu of directory folders and then highlight the directory folder preferred. When done, press the Confirm button to modify the saving directory.

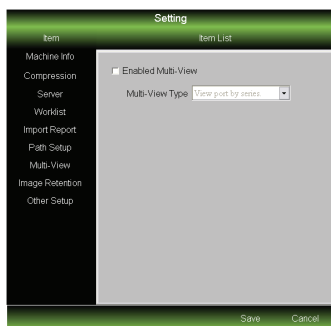
### Directory for local backup files

You can assign the location where local backup files are saved in the Backup data path column. The default folder "MiPAXXrayBackup" is assigned automatically by your system when the MiPAX-Xray DataBackup is installed for the first time.

To change the saving directory, toggle through the drop-down menu of directory folders and then highlight the directory folder preferred. When done, press the Confirm button to modify the saving directory.

## Assigning Multiple Screen to View Images

Let you decide if you want to view images on more than one screen.

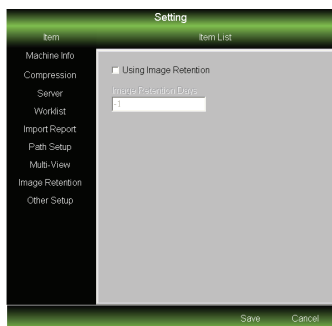


Enable Multi-View option: If this option is checked, you are able view scanned images on multiple screens.

Multi-View Type: When "Enable Multi-View" option is checked, this drop-down menu will be activated. You can choose to view images on multiple screens by series or by pieces of images.

## The Setup for Days to Delete Saved Images in Local

Let you set up when to start to delete the saved image from the local data storage space.



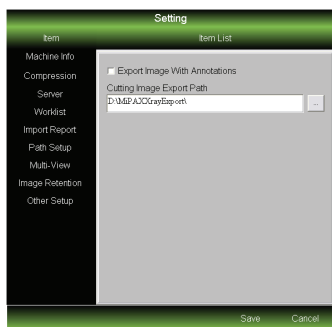
Using Image Retention option: If this option is checked, you are able to delete the image from your local data storage space at the assigned day.

Image Retention Days: When "Using Image Retention" option is checked, this column will be activated and you are allowed to key in the day when you want to delete the image from your local data storage space. Please note that the day keyed in here should be presented by minus value.



## Other Setup Options

Let you decide if you want to export images with annotations and the saving paths for cutting images.

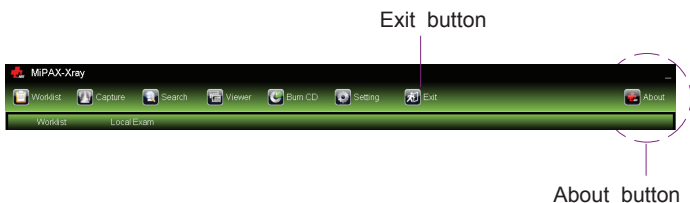
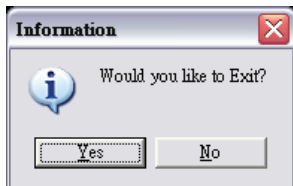


Export Image With Annotations option: If this option is checked, you are allowed to export the saved images with annotations.

Cutting Image Export Path column: Key in the saving path for the cutting image; Or, press the button next to the column to toggle through paths and select one which you want to use for saving the cutting image.

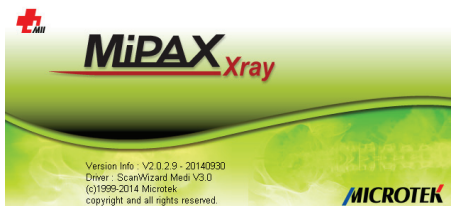
## Exit Button

When you want to exit the MiPAX-Xray software program, press the Exit button at the top of the interface. A confirming message pops up on the screen. Press "Yes" to execute the program; press "No" to return to the interface in use.



## About Button

If you like to know the basic information, such as the software version, press About at the right corner of the interface. When done, press the Cancel button to close the information window.



# Use Different Interfaces Step by Step

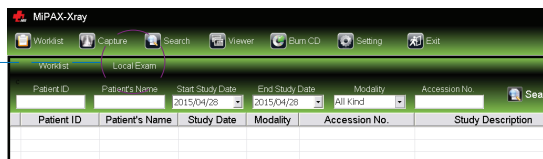
## How to Create a New Examination Record in Advance

1. Launch *MiPAX-Xray* (either as a stand-alone by clicking on the program icon, or by using the File-Import or Scan command from an application program).
2. Enable the Worklist interface by clicking the Worklist button at the top of the interface.



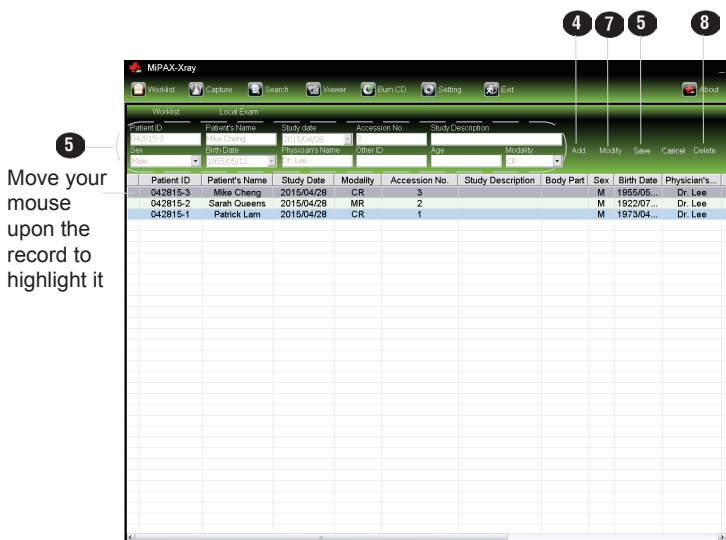
3. Click the Local Exam button switch to the Local Exam interface from the Worklist interface.

Press the Local Exam button to open the Local Exam interface



4. Click the Add button to create a new record which you can start to key in information.
5. Take turns to key in patients' information in the Key-in Columns of Patient Information. Take note that the columns of Patient ID, Patient's Name and Accession No. cannot be null. When done, press the Save button to save the result.
6. The entered and saved information of the patient will be displayed in the displaying area.

7. To modify an entered record, move your mouse upon the record and click to highlight it. Then, press the Modify button. You will see the Columns of Patient Information are activated and can be changed.
8. To delete an entered record, move your mouse upon the record and click to highlight it. Then, press the Delete button. A window will pop up on the screen for the final confirmation. Click the Yes button to remove the selected record from the displaying area.
9. Repeat step 4 to step 8 until finish entering of all records in necessary.



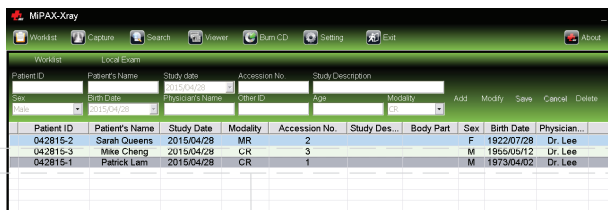
*Note: The records saved in the Local Exam interface will not be saved in the local storage space unless you save them in the Capture interface. They are just designed for saving your data-keying time and improve your work efficiencies.*

# How to Create and Save a New Examination Record

MiPAX-Xray offers you two ways to create a new examination record and save it in your local or PACS storage space. One is mentioned in the "How to Create a New Examination Record in Advance" section. The other way is from the Capture interface.

## Creating and Saving a New Examination Record from the Local Exam Interface

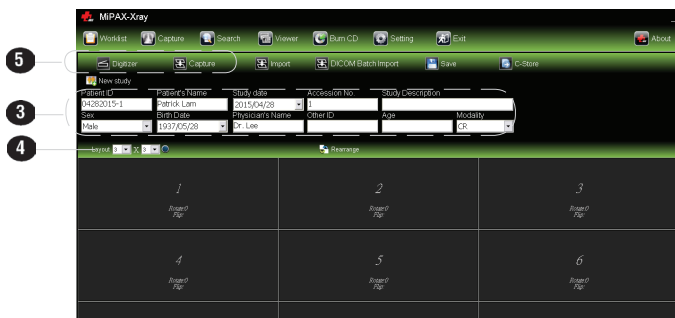
1. Follow the instructions mentioned in the previous section "How to Create a New Examination Record in Advance" to build up the records in need.
2. Move your mouse upon the record which you want to save it. Then, double click the left button of the mouse upon the selected record. Immediately, the Capture interface will be expanded on the screen to replace the Local Exam interface.



The selected record will be highlighted

3. In the Key-in Columns of Patient Information at the top of the Capture interface, you can see that patient's information entered in the Local Exam interface is displayed in details.

4. If necessary, click the drop-down menu of the Layout to modify the displaying numbers of images suitable to your needs.
5. In order to catch the image you need, MiPAX-Xray offers you two ways: from a digitizer or from an image capturing device (e.g. a web cam).



- A. To get images from a digitizer, put the films you like to scan into your digitizer device and then click the Digitizer button to enable the scan setting window.

If necessary, adjust the values of image quality by using the image correction tools. When done, you can start scanning process in two different ways.

- a. If the scanned film contains only one image (ex. CT), click the Scan button and your digitize start scanning immediately. The scanned results will be displayed in the window. However, for some digitizer models, such as Medi-6000 and Medi-7000, you will not see any preview images.

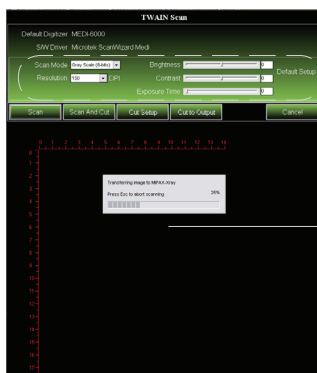
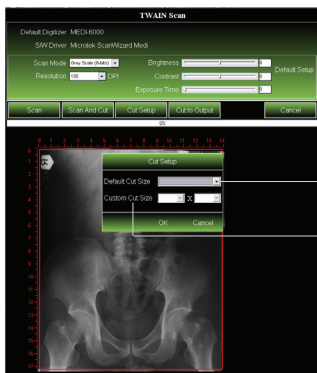


Image correction tools

The window contains scanned images

- b. If the scanned film contains many images (ex. X-ray film of brain) and you like to use these images individually, click the Scan and Cut button to start scanning.

After done, a Cut Setup window pops up. You can use it to adjust the numbers of cutting areas. When finished, press the OK button to close the Cut Setup window.

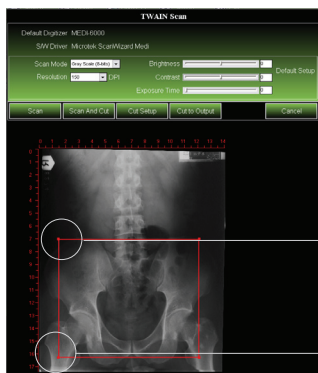


Press to choose the cutting size from a drop-down menu

When select "Customize" as your cutting size, you are able to define the preferred cutting size

Drag on the red spots of two X and Y axes to adjust the size of cutting areas. If you want to reassign the numbers of cutting areas, press the Cut Setup button at the bottom of the window to enable the Cut Setup window and then adjust the numbers there.

When done, press the Cut to Output button to load the scanned and cut images into the displaying area of scanned images.



The red spot of Y axis

The red spot of X axis

- B. To get images from an image capturing device, connect the device with your computer. When it is detected by the system, click the Capture button to enable the image capturing window.



A capturing window



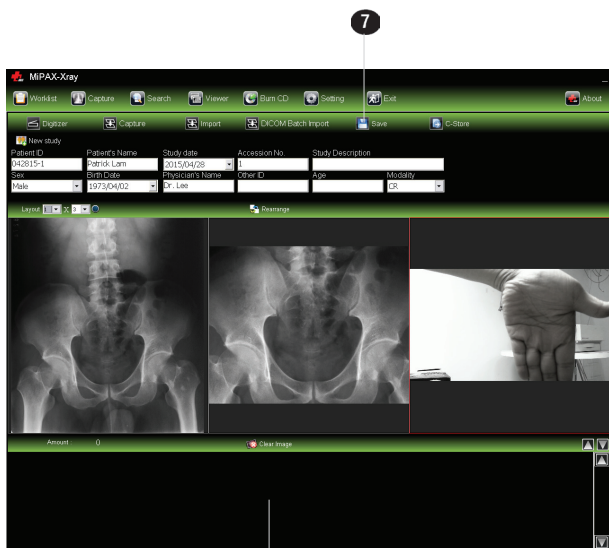
- a. If necessary, press the Setup button at bottom to enable the Video Setup window to adjust the image quality, such as output format, brightness, contrast and so on. When done, press the Save button and then press the Exit button to close the Video Setup window and return to the image capturing window.
- b. To capture image with the settings, press the Capture button in the image capturing window. Immediately, the captured image will be shown in the displaying area of scanned images in the Capture interface.

When finishing all capturing jobs, press the Exit button to go back to the previous Capture interface.



6. The all scanned and capturing images will be displayed in the displaying area of scanned images. Click and draw the image you want on/to the displaying area of template modules. Repeat the step until you finish all images.
7. When done, press the Save button to save the record in the local database.

8. Repeat step 2 to step 7 until you finish saving all records as your needs.



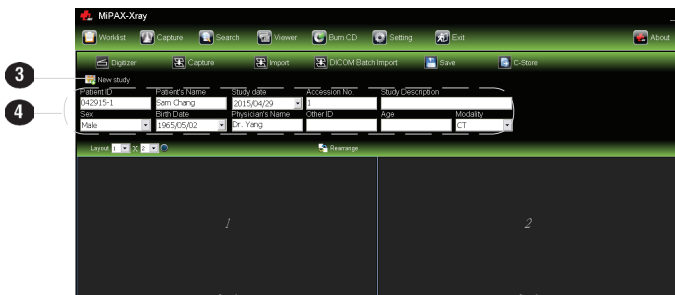
The displaying area of scanned images

## Creating and Saving a New Examination Record from the Capture Interface

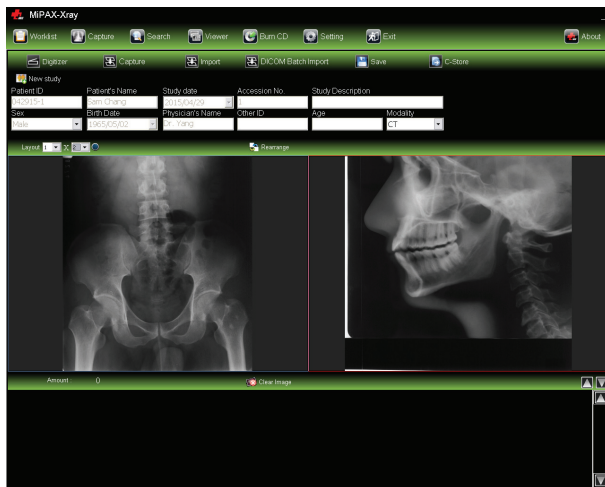
1. Launch MiPAX-Xray (either as a stand-alone by clicking on the program icon, or by using the File-Import or Scan command from an application program).
2. Enable the Capture interface by clicking the Capture button at the top of the interface.
3. Click the New Study button to create a new record to key in.

*Note: If you use the Capture interface for the first time, a new record is ready for you to key in. If you have finished creating a record, you need to create the New Study button in order to restart a new record for you to key in.*

4. Take turns to key in patients' information in the Key-in Columns of Patient Information. Take note that the columns of Patient ID and Patient's Name cannot be null.



5. Follow the step 4 to step 6 in the "Creating and Saving a New Examination Record from the Local Exam Interface" section to get images for your created new record.
6. Follow the step 7 to step 8 in the "Creating and Saving a New Examination Record from the Local Exam Interface" section to save your created new record.
7. Repeat step 3 to step 6 until you finish creating and saving all records as your needs



# How to Search a Saved Examination Record

After building up and saving lists of examination records, you can start using the Search interface to get the record you want.

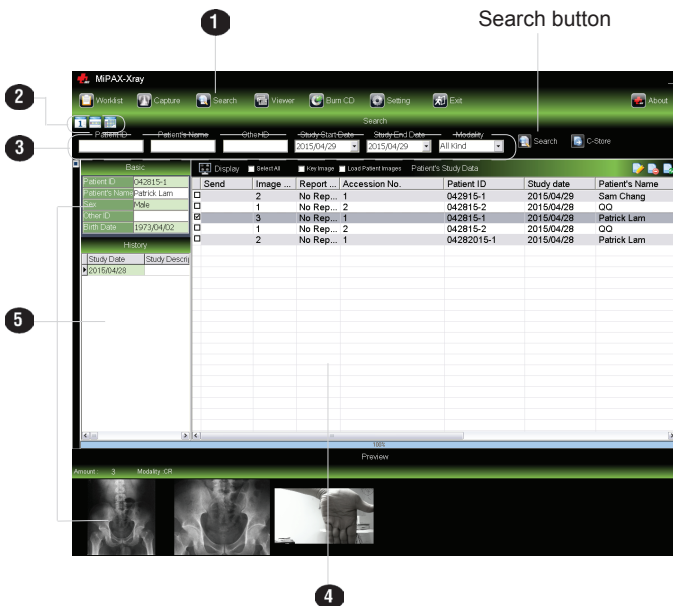
1. Enable the Search interface by clicking the Search button at the top of the interface.
2. To start a quick search process, click either one of the Time buttons. You can search records by a day, a week, or a month.
3. Or you can use patients' information to start a search process. Key in a patient's ID, name, other ID, start study date, end study date or modality which you wish use as a search condition. When done, click the Search button.
4. The results of step 2 or step 3 will be displayed in the area at the middle of the interface.
5. When click on one list of records, some information related to the specified record will be shown at left and the bottom of the interface.

The Basic table shows the patient's information selected.

The History table lists all records created related to the selected patient.

The image displaying area displays the scanned images in the selected patient's record.

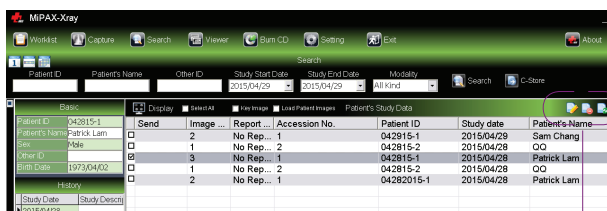
6. After finishing a searching process of patients, you are ready to use the Viewer layer to further manipulate the scanned images of each patient. Refer to the next section for the details.



## Modifying, Deleting or Restoring a Saved Examination Record in Search Interface

The MiPAX-Xray allows you to modify, delete or restore an existing patient's information directly in the Search Interface, providing an intuitive and convenient way to manage lists of patients' information.

1. Enable the Search interface by clicking the Search button at the top of the interface.
2. To modify, delete or restore the information of a specific patient, check the box in front of the patient in the searching list. Then, locate three tool buttons at the top panel of the Search Interface.



Tool buttons



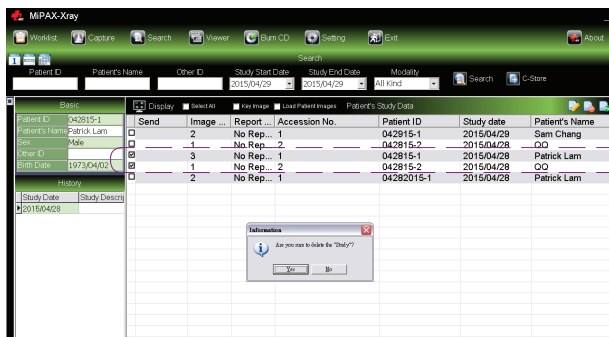
### Modify button

When pressing the Modify the patient data button, a window pops up and then you can modify or update some information of the selected patient there. Take note that the Patient ID is unique and is not allowed to be changed.



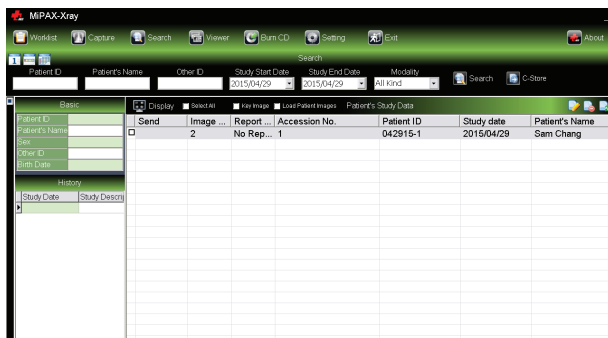
### Delete button

To delete a specific patient, check the box in front of the patient in the searching list. A pop-up window appears on the screen to ask for the confirmation. Press the Yes button to start deleting.



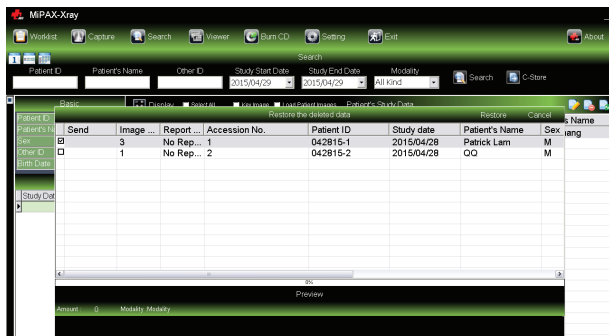


The selected patient disappears from the searching list immediately. Take note that when performing deleting action, only the patients whose information is created today will be left and shown in the searching list. Others will be removed and not shown in the searching list.

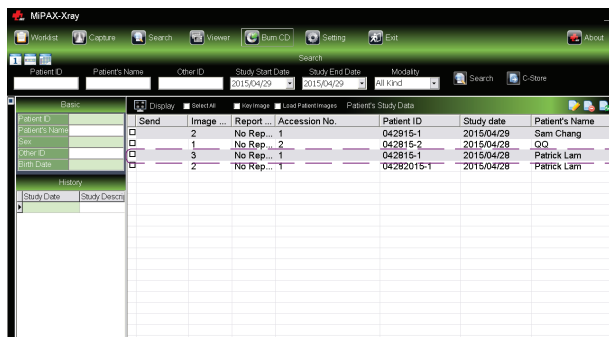


### Restore button

When pressing the Restore the patient data button, a pop-up windows containing the records of patients which have been deleted appears on the screen. Check the boxes in front of the records you want to restore back and then press the Restore button. A pop-up window appears on the screen to ask for the confirmation. Press the Yes button to start restoring.



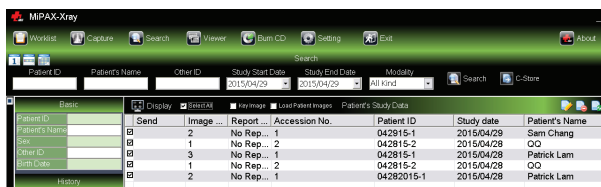
When done, next time when you start a search of records of patients, you will see the restored records appearing in the searching list again.



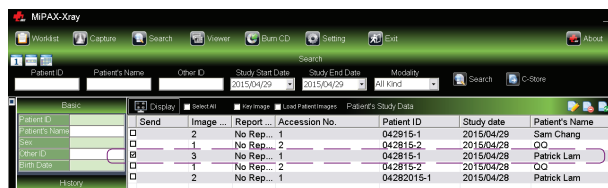
Take note that you need to perform the restoring action before terminating the software. If not, when you terminate the software and reopen it later, you will find that the deleted records will not appear in the searching list.

# How to Use the Viewer

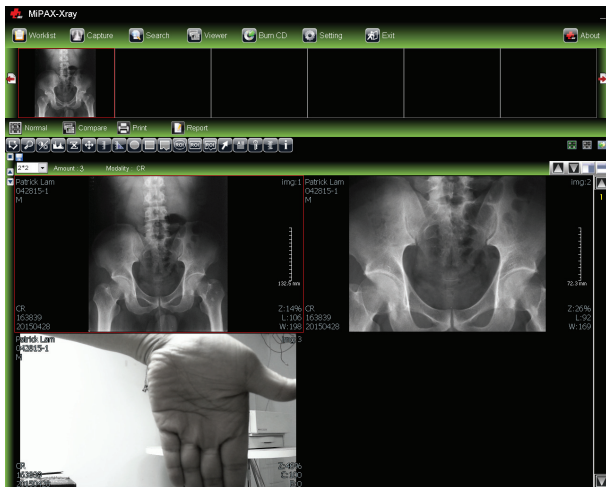
1. If you want to see the images of all patients in the searching list, check the Select All option and then click the Display button. The Viewer Interface shows immediately.



To view the images of a specific patient, check the box in front of the patient in the searching list and then click the Display button. The Viewer Interface shows immediately.

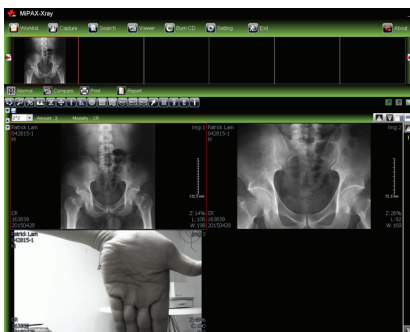


2. When the Viewer layer is extended, to see the images of a specific patient, click the image shown in the Preview area, the images and information of the selected patient will be displayed in the displaying area at the bottom of the interface.



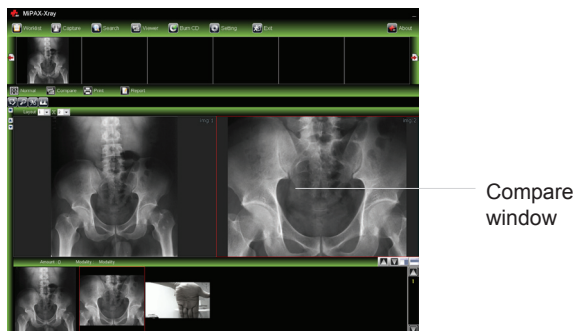
3. MiPAX-Xray provides you two displaying modes for you to choose when viewing the scanned images. These modes are Normal and Compare modes. To switch among two modes, press the Displaying Mode buttons in the Viewer interface.

### Normal Mode



## Compare Mode

To draw an image into the compare window, click the image at the bottom window and draw it into the compare window. You are allowed to compare two images at one time.



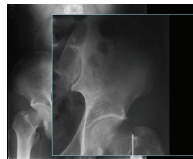
4. If necessary, use the measurement and adjustment tools to manipulate the images in the displaying area at the bottom of the interface.

To do so, click either button of the measurement and adjustment tools, point your cursor directly on the selected image and then click the image twice. You can see an enlarged picture shown on the screen and then you can use the cursor to apply the selected measurement and adjustment effect on the selected image.



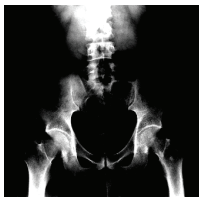
- A. Normal: [Click to](#) increase or decrease the displaying size of the image.

- B. Magnify: Used to enlarge the displaying size of the area pointed by the cursor.



Magnified area

- C. W/L: Used to adjust the brightness and the contrast of the image. To use it, click the W/L button, point the cursor onto the image and click and hold on the left button of the cursor. Move the cursor right/left to increase/decrease levels of the brightness. Move up/down to increase/decrease levels of the contrast. Or you can directly click the right button of the mouse on the image and move right/left to apply the W/L effect.



Adjusted contrast



Adjusted brightness

- D. Pixel Value: Used to display the pixel value of the area pointed by the cursor.

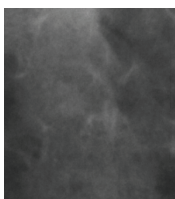


Pixel value

- E. Zoom: Used to increase or decrease the displaying size of the whole image. To use it, click the Zoom button, point the cursor onto the image and click and hold on the left button of the cursor. Move the cursor up/down or right/left to increase/decrease the displaying size of the whole image.



Normal size



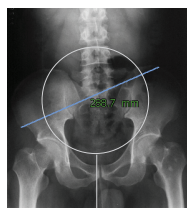
Zoom in effect



Zoom out effect

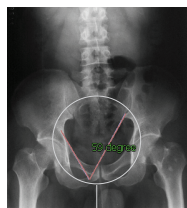
F. Move: Used to move the image around in the displaying area of the window.

G. Line: Used to draw a line with measuring units on the pointed image. To use it, click the Line button, point the cursor onto the image and click the left button of the cursor to start drawing.



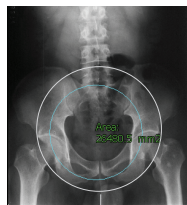
Drawn line

H. Angle: Used to draw an angle with measuring degrees on the pointed image. To use it, click the Angle button, point the cursor onto the image and click the left button of the cursor to start drawing.



Drawn angle

I. Ellipse Area: Used to draw an ellipse with the surface area size on the pointed image. To use it, click the Ellipse Area button, point the cursor onto the image and click the left button of the cursor to start drawing.



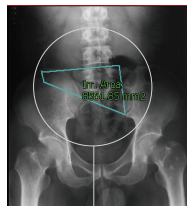
Ellipse area

- J. Rectangle Area: Used to draw a rectangle with the surface area size on the pointed image. To use it, click the Rectangle Area button, point the cursor onto the image and click the left button of the cursor to start drawing.



Rectangle area

- K. Irregular Area: Used to draw a irregular shape with the surface area size on the pointed image. To use it, click the Irregular Area button, point the cursor onto the image and click the left button of the cursor to start drawing. To stop drawing, click the right button of the cursor.



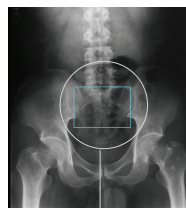
Irregular area

- L. Ellipse ROI: Used to draw an ellipse on the pointed image. To use it, click the Ellipse ROI button, point the cursor onto the image and click the left button of the cursor to start drawing.



Ellipse area

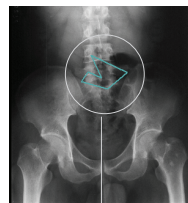
- M. Rectangle ROI: Used to draw a rectangle on the pointed image. To use it, click the Rectangle ROI button, point the cursor onto the image and click the left button of the cursor to start drawing.



Rectangle area

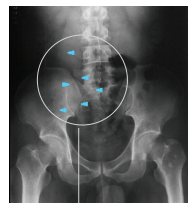


- N. Irregular ROI: Used to draw an irregular area on the pointed image. To use it, click the Irregular ROI button, point the cursor onto the image and click the left button of the cursor to start drawing. To stop drawing, click the right button of the cursor.



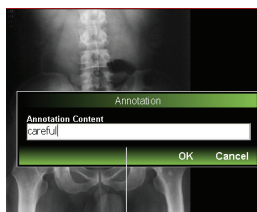
Irregular area

- O. Arrow: Used to draw an arrow on the pointed image. To use it, click the Arrow button, point the cursor onto the image and click the left button of the cursor to start drawing.

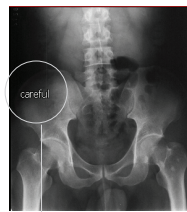


Drawn arrows

- P. Annotation: Used to write notes on the pointed image. To use it, click the Annotation button, point the cursor onto the place where you want to place the notes and click the left button of the cursor. A key-in window pops up on the screen and then you can start writing. When done, click the OK button. Then, you will see the notes appeared on the image.



A pop-up window for keying in notes

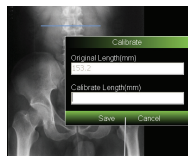


Written notes

Q. Key: Used to assign a selected image as a key image when viewing in the next time. To use it, click the Key button, point the cursor onto the image and click the left button of the cursor to select it as the key image. To cancel the selection, click the left button of the cursor on the image again.



R. Calibrate: Used to calibrate the length of the pointed image. To use it, click the Calibrate button, point the cursor onto the place where you want to calibrate and click the left button of the cursor. A key-in window pops up on the screen and then you can start keying in the measurement values. When done, click the OK button. Click the Cancel terminate and discard the key-in window.



Calibration window for your to key in

S. Information: Used to display or the basic information about the selected image. When the information is displayed, click the Information button to clear the information displayed.



Information is displayed



Information is not displayed

To clear the effects of option G to P, point the cursor onto the image and click the right button of the mouse. A window of options appears on the screen. Choose the Clear Flag option.

To clear the effect of the option C, move the cursor onto the image and click the right button of the mouse. A window of options appears on the screen. Choose the Recovery option.

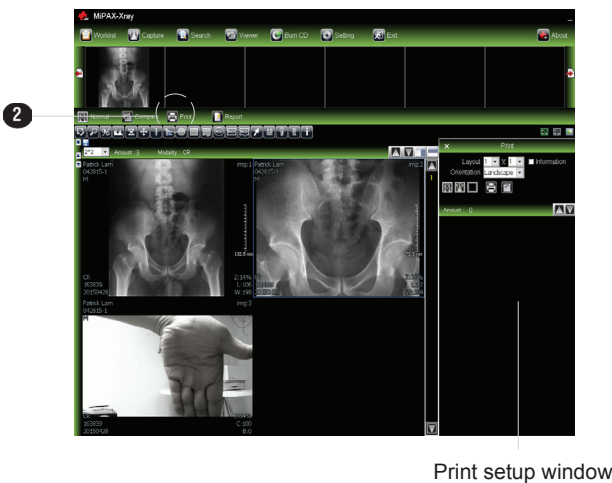


# How to Print out Scanned Images



MiPAX-Xray allows you to print out scanned images through a normal printer or a DICOM printer. To use this function, you need to go into the Viewer interface at first.

## Through a Normal Printer

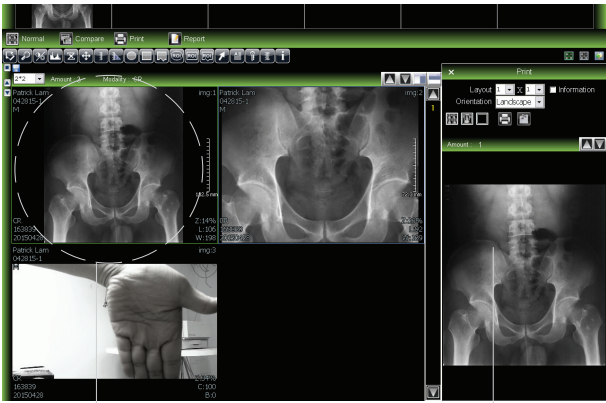
1. To enable a record with images in the Viewer interface, follow the steps mentioned in the "How to Use the Viewer" section.
2. When the Viewer interface is activated, click the Print button to activate the Print setup window.



2. Specify your printing requirements in the Print window.
  - A. Select the printing arrangement in the Layout.

- B. Select the printing direction in the Orientation.
  - Select Landscape to print out images horizontally.
  - Select Portrait to print out images vertically.
- C. If "Information" is selected, the patient's information will be directly printed on images.
- D. Select numbers of images to be printed out by using the tool icons under the Orientation column.
  -  a) Press "Add This Series All Images" icon if you want to print out all scanned images.
  -  b) Press "Add Image by Selection" icon if you want to print out selected images only.

To select and put images into the preview area, click the Ctrl button on the keyboard and then the left button of the mouse upon the images you want to select in the displaying area of the Viewer interface. The selected image is enclosed by green lines. Next, press the "Add Image by Selection" icon and then the selected images appear in the preview area of the Print window immediately. Repeat this step until finishing all selections.



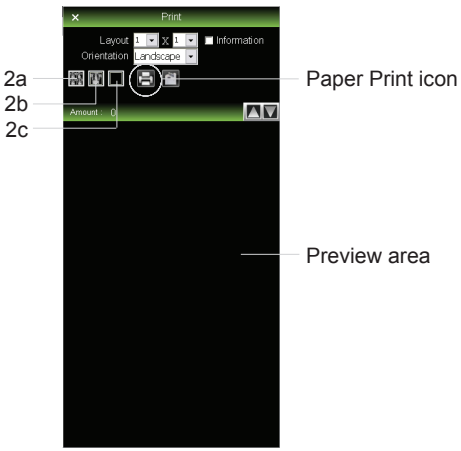
The selected images  
(enclosed by green lines)

Preview area of the Print  
setup window



c) Press "Clear All" icon to delete all images in the preview area.

3. When done, press the Paper Print icon to print out the preferred images.



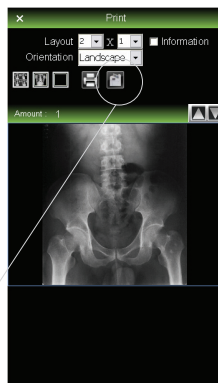
Paper Print icon

Preview area

## Through a DICOM Printer

1. Follow the step 1 and 2 in the “Through a Normal Printer” section to activate the Print setup window and specify your printing requirements in the Print setup window.
2. When done, press the DICOM Print icon to enable the DICOM print window.

DICOM Print icon



3. Specify your printing requirements generated with the DICOM printer.

Select the predefined DICOM printer in the Printer Name. If you do not see the preferred DICOM printer there, press the Setup button beside to activate the printer setup window.

When the window is activated, use the function buttons at the bottom to add, delete, or modify DICOM printers.

### A. To add a new DICOM printer

Press the Insert button. Then, you are allowed to name this new DICOM printer in the Remote AE. Next, assign the IP, IP Port and Local AE for this DICOM printer. When done, press the Save button at the bottom. The newly added DICOM printer appears immediately in the Printer List. Press the Cancel button to cancel the adding action.

B. To modify some settings for an existing DICOM printer

Highlight the printer you want to modify in the Printer List and then press the Modify button. Immediately, you can adjust the values in the IP, IP Port, Local AE, columns in the Printer Setting section and columns in the Density section.

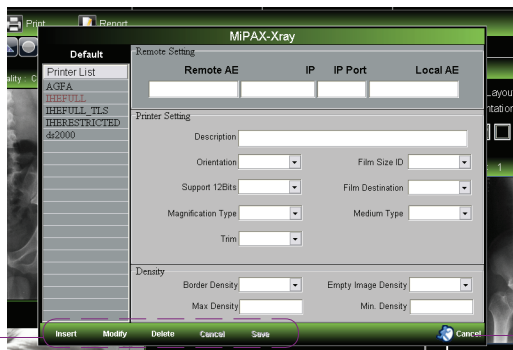
When done, press the Save button at the bottom to carry out the results. Press the Cancel button to cancel the modifications.

Take note that please contact the supplier of your DICOM printer if you want to make modifications for the settings in the Printer Setting section.

C. To delete an existing DICOM printer

Highlight the printer you want to delete in the Printer List and then press the Delete button. A window pops up to confirm the deleting action. Press the Yes button to carry out the deleting action. The selected DICOM printer is removed immediately from the Printer List.

When done, press the Cancel button to return to the DICOM print window.

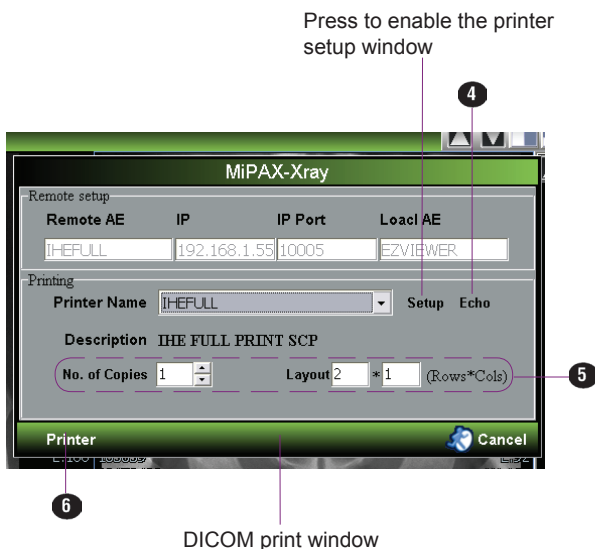


Function  
buttons

Press to  
leave



4. It is strongly recommended that press the Echo button to test if the selected DICOM printer is properly connected.
5. If necessary, adjust the numbers of printing copies and printing arrangements in the No. of Copies and the Layout.
6. When done, press the Printer button to print out images from the selected DICOM printer.



## How to Use a Report Function

MiPAX-Xray allows you to print out a medical report with full texts and picture by using a reporting module provides by the software program. To use this function, you need to go into the Viewer interface at first.

### Creating and Printing Out a Medical Report

1. Follow the step 1 in "How to User the Viewer" to extend the Viewer interface.

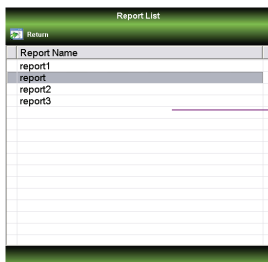
*Note: You can only print out a medical report for one patient only. Therefore, when you extend the Viewer interface from the Search interface, select only one patient from the list and then extend the Viewer interface.*

2. To add images into the report, click the Ctrl button on the keyboard and then the left button of the mouse upon the images you want to select and then click the Report button on the Viewer interface.

*Note: You have to add at least one image into the report. Otherwise, the system will not let you use the Report function.*

3. Immediately, the Report interface will be activated on the screen. The selected images appears at the left column of the interface.
4. To create and print out a medical report, follow the steps bellow:

- A. Click the New Report button at the top of the Report Interface to use pre-entered report modules. When clicking, a window named "Report List" will pop up on the screen. Highlight the report template you want to use, and then double click to select it.



A list of built-in report templates which are set up in the Setting interface

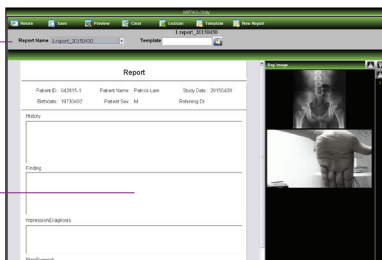
- B. When done, a built-in report form appears on the screen. Key in texts in the columns of History, Finding, Impression/Diagnosis and Plan/Suggest.

To add images into the report, double click on the image you want at the Report interface. The selected image will show at the bottom of the report. Repeat the action until finish selecting of all images needed.

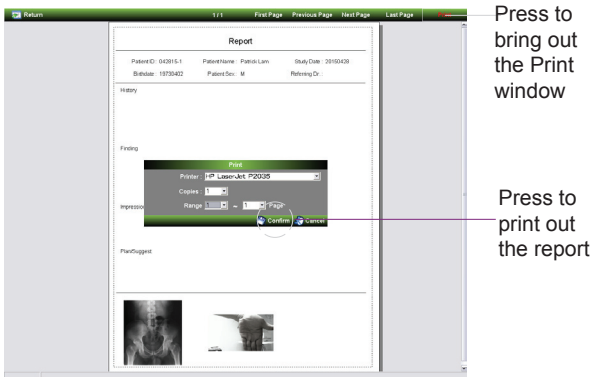
- C. When done, press the Save button at the Report interface. The created report will be saved and appear in the Report Name column.

The name for the saved report will be displayed here.

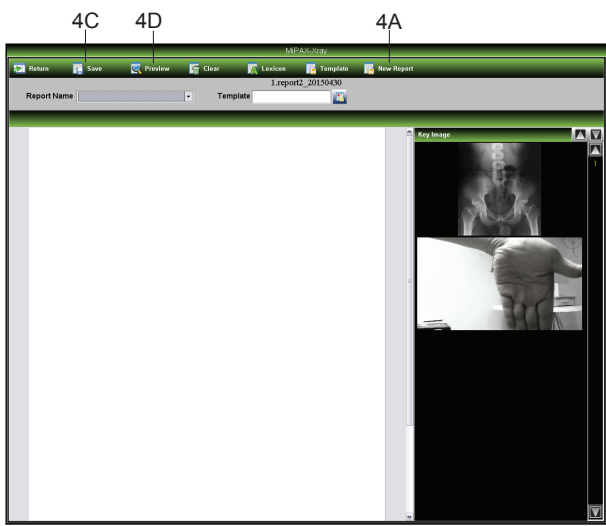
4B



- D. Next, press the Preview button at the Report interface to overview the built-in report. If ready, press the Print button to bring out the Print window. Press the Confirm button to print out the report. When done, press the Return button to go back to the Report interface.



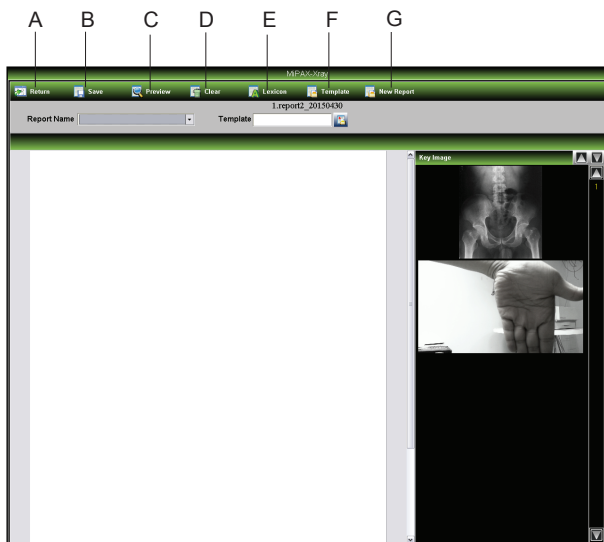
The Preview window



The Report Interface

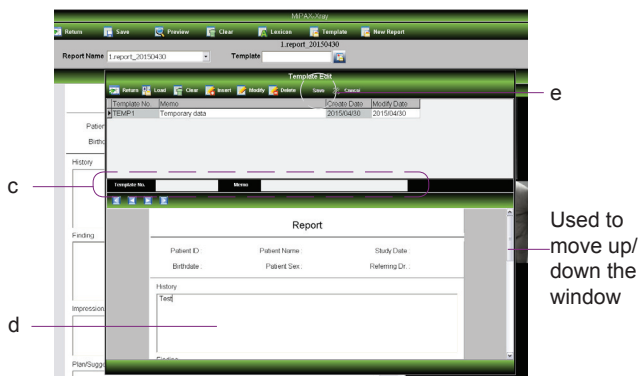
## Function Buttons in the Report Interface

How to use the function buttons at the top of the Report interface are detailed below.



- A. Return: Press to leave the built-in report form and return to the Viewer interface.
- B. Save: Press to save the created report form in the local database.
- C. Preview: Press to have a preliminary view of the report before printing it out.
- D. Clear: Press to clear the report data in use.

- E. Lexicon: Press to use a predefined medical dictionary to help building up a report. This function only works when the version of your MiPAX-Xray is in Traditional or Simplified Chinese.
- F. Template: Press to bring out a window where you can key in more information there and then add it to the report. Follow the steps bellow to use this function:
  - a. Press the Template button at the top of the Report interface to open the Template Edit window.
  - b. When the Template Edit window is opened, press the Insert button at top.
  - c. When done, key in the name you want to give to the template in the Template No. If necessary, key in more information in the Meno column.
  - d. Take turns to key in information you want to add in the History, Finding, Impression/Diagnosis and Plan/Suggest columns.
  - e. When done, press the Save button and then the saved template with the name given will appear at the top of the Template Edit window.



- f. Press the Return button to go back to the Report interface. You will see what added in the History, Finding, Impression/Diagnosis and Plan/Suggest columns appear in your current report.

The information added in the Template Edit window

The screenshot shows the 'Report' window in the MiPAX-Xray software. The window has a green header bar with buttons: Return, Save, Preview, Clear, Locks, Template, and New Report. Below the header, there are fields for Report Name (I.report\_20150420) and Template (I.report\_20150420). The main area is titled 'Report' and contains a form with fields for Patient ID (042815-1), Patient Name (Patrick Lam), Study Date (20150420), Birthdate (19780402), Patient Sex (M), and Referring Dr. Below these are sections for History, Text, Finding, Impression/Diagnosis, and Plan/Suggest. A 'Key Image' panel on the right shows a chest X-ray.

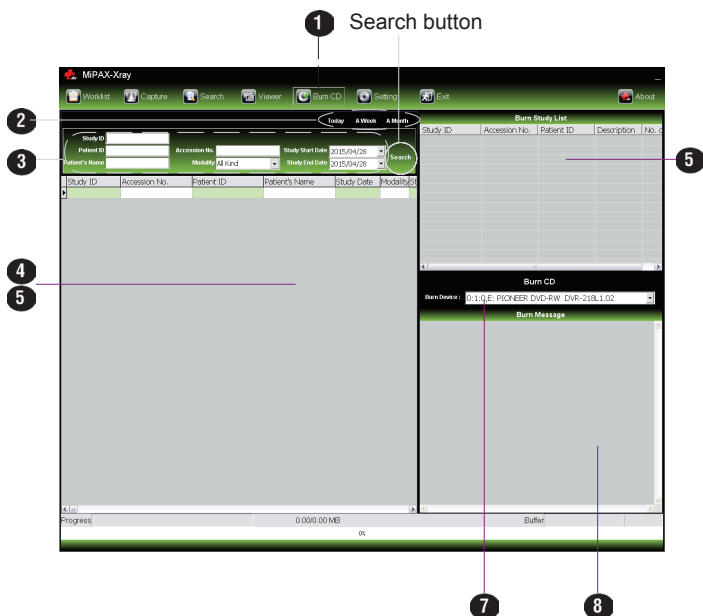
- .g. If you want to delete the information entered in the Template Edit window, press the Clear button in the Template Edit window. A window will pop up on the screen to ask for the final confirmation. Press the Yes button to carry out the action. Then, when you press the Return button to go back to the Report interface, you will find that the information entered in the Template Edit window has been removed.
- G. New Report: Press to bring out the Report interface. You can create, edit and print out a medical report there.

## How to Burn Data into a CD

MiPAX-Xray includes a CD burning module inside the software program. It allows you to burn CD directly in DICOM format in the same software.

1. Enable the Burn CD interface by clicking the Burn CD button at the top of the interface.
2. To start a quick search process, click either one of the Time buttons. You can search records by a day, a week, or a month.
3. Or you can use patients' information to start a search process. Key in a patient's ID, name, other ID, start study date, end study date or modality which you wish use as a search condition. When done, click the Search button.
4. The results of step 2 or step 3 will be displayed in the area at the left column of the interface.
5. To select the data to be burned, double click the data in the area at the left column of the interface. The selected data will appear in the Burn Study List table.
6. Repeat step 5 until you finish all selections.
7. If necessary, select the desired burning device in the drop-down menu of CD Device.
8. When done, press the Burn CD button to start a CD burning process. The whole burning process will be displayed in the area of Burn message.





## Back up Saved Data Periodically

After building up and saving lists of patients' information, you may find that it is necessary to back up the precious information in case if you lose them some day. MiPAX-Xray offers you a quick and easy-to-use backup solution, named MiPAX-Xray DataBackup and bundled with your software package, saving you lots of time and money on searching for a suitable backup software utility program.



### Launching MiPAX-Xray DataBackup

To launch MiPAX-Xray DataBackup: Double-click the *MiPAX-Xray DataBackup* icon on the desktop, or choose *Start, Programs, MiPAX-Xray*, and then *MiPAX-Xray DataBackup*.

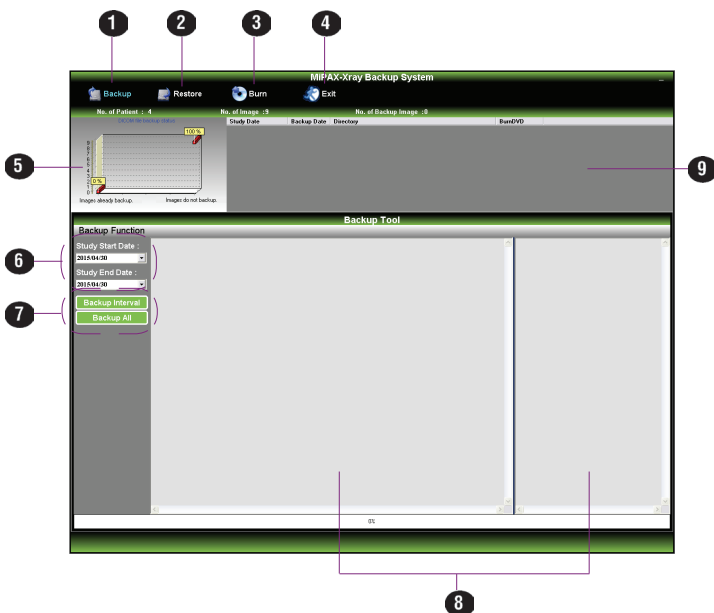


### Exiting MiPAX-Xray DataBackup

To exit MiPAX-Xray DataBackup, click on the Exit button on the main interface of the MiPAX-Xray DataBackup program .

# Using MiPAX-Xray DataBackup

When the MiPAX-Xray DataBackup utility program is launched, an interface shown as below appears on the screen. Major functions or demands in the interface will be introduced in the following sections.

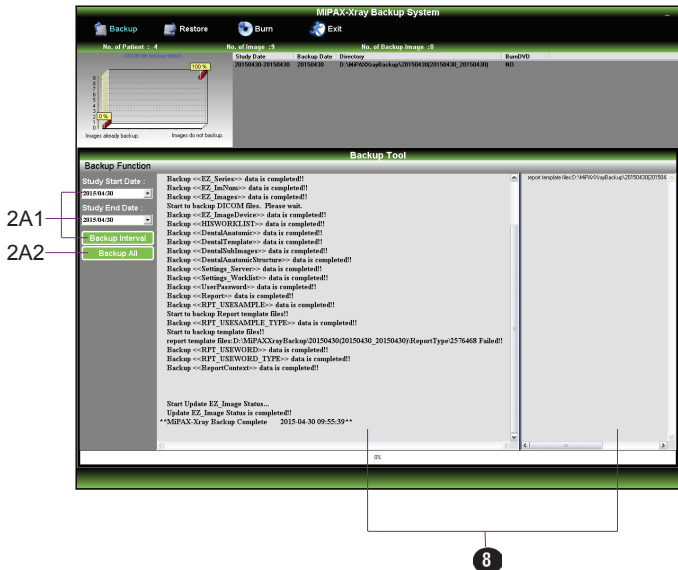


1. Backup button - Press to return to the main interface of the MiPAX-Xray DataBackup program.
2. Restore button - Press to access the Restore interface to reestablish the backed-up data into the local database system.
3. Burn button - Press to access the Burn interface to perform a job of burning data into DVDs.

4. Exit button - Press to terminate the program and leave.
5. Backup status window - Area to display how much percentage of files which has been or has not been backed up.
6. Time intervals - Press to choose a date for starting and ending a backup job.
7. Backup buttons - Press to start a backup process. You can choose to back up your data by different time intervals.
8. Backup Processing window - Areas to display the status of files which are under the backup processing.
9. Displaying are - Area to display the information of files which have been backed up.

## How to Back up Your Data

1. Launch *MiPAX-Xray DataBackup* by clicking on the program icon on the desktop, or choosing *Start, Programs, MiPAX-Xray*, and then *MiPAX-Xray DataBackup*.
2. You can choose to back up your data by using different time intervals:
  - A. To back up your data based on an assigned date:
    1. Choose a starting and ending date to perform a backup job by clicking the option menu of Time intervals.
    2. Press the Backup Interval button to start processing a backup job.
  - B. Press the Backup All button to start backing up all data before the date when you are using the program.
3. You can check the status of files which are under the backup processing in the Backup Processing window.
4. After done, you can see a saved Access file in your local hard disk. The backed up files include both texts and pictures.

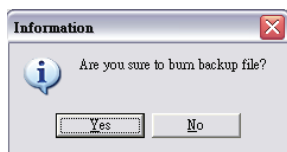


## How to Burn Backup Data onto DVDs

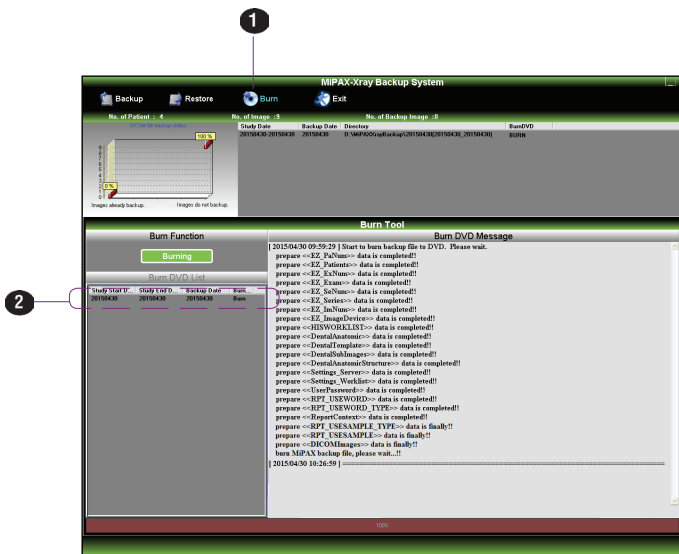
After backing up the data into your local disk drive, you can also to burn it out onto a DVD.

1. Click the Burn button at the top of the interface to enable the Burn interface.
2. The data which has been backed up will be displayed in the Burned DVD List. Click on to highlight the data which you want to burn.
3. After selecting all data which you want to burn, click the Burn button to start a burning process.

A pop-up window appears to reconfirm if you really want to perform a burning job to the selected data. Press the Yes button to start a burning process.



4. After done, the selected and burned data will be marked as "Burn" as a reminder for your convenience to manage the backup data.





## Restore the Backup Data back to Your Local Database

An useful function offered by the MiPAX-Xray DataBackup program is that it allows you to retrieve the backup data and restore it back to your local database. This function ensures the safety of your precious data.

1. Follow the step 1 in the section "How to Back up Your Data" to launch the MiPAX-Xray DataBackup program.
2. Click the Restore button at the top of the interface to enable the Restore interface.
3. In the Restore Function window:

- A. Select the data which you want to restore either from the local backup record or from the DVD.

The selectable data will be displayed in the next window. Click on the data which you want to use as a restoring source directly.

- B. Choose "Restore DB" to restore all data, including texts and pictures. Choose "Restore File" to restore texts only.
4. After done, press the Start Restore button to start a restoring process.
  5. The steps of a restoring process will be displayed in the window at the right side of the Burn interface.

