M2030
User Manual

Software version: V4.6.7.08221 and above

Index

Safety Warnings

1. To avoid overheating, damage or possible fire use only the power supply adaptor provided.

2. Do not operate or touch the unit with wet hands.

3. In the unlikely event of smoke switch off and unplug the unit immediately.

4. Should the inside of the unit get wet, switch off, unplug and dry in a well-ventilated area.

5. Take care not to damage the electrical or video cables.

6. Under no circumstances leave the unit near an open flame.

Chapter 1. Introduction

1.1 Summary

M2030 book scanner with its robust algorithm can rapidly digitize both bound and unbound books and documents. It is capable of scanning two pages in 1 second and under normal conditions, an operator can scan between 60 and 80 pages per minute. With it's user-friendly interface it may be operated for long periods of time without discomfort.

The BookChanger intelligent software can automatically handle such tasks as distortion correction, page extraction, background purification, etc. Using this scanner, all you need to do is turn the book pages, leaving everything else to the scanner and it's software.

1.2 Appearance and dimensions
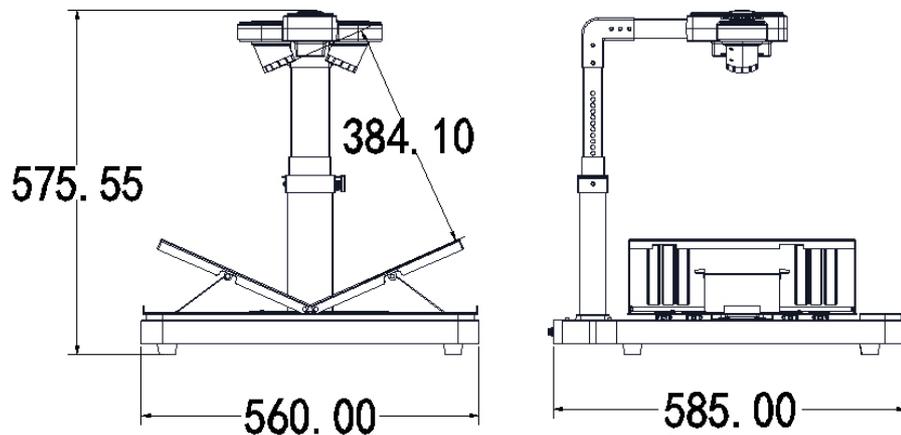
1.3 Assembly instructions

1.3.1 Scanner head components

1. Gantry extension
2. Camera head & 90 degree bracket
3. Extension adjusting button
4. Cover plate
5. Cable feed slot
6. LED light FPC plug (2pin)
7. Main light FPC plug (10pin)
8. Nut and screw tool packet
9. hexagon Allen key
10. M3.5mm Allen screw (8 pieces)
11. M5 Hex nut (6 pieces)
12. 5.5mm Hexagon nut driver
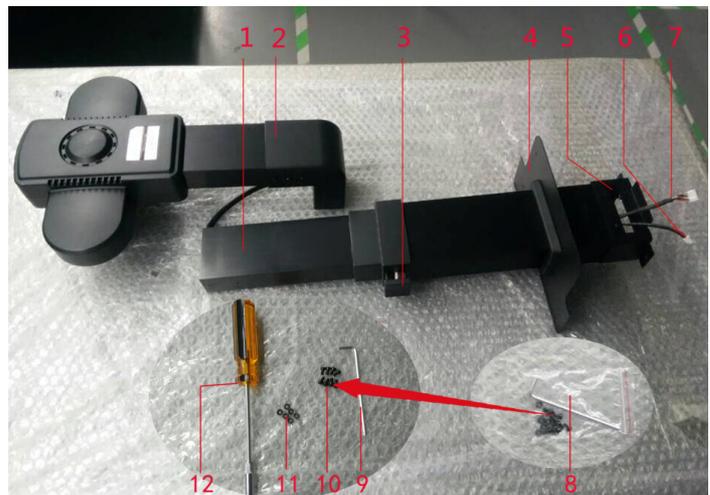
Figure 1

1.3.2   Installation

1. Thread the LED FPC cables through the gantry extension and out through the cable feed slot at the base of the gantry. (Figure 2)
2. Attach the 90° bracket to the gantry extension and secure using 4 x M3.5 Allen screws (Figures 3).
3. Slide the cover plate up the gantry then attach the gantry to the scanner base by affixing it onto the 6 protruding screw threads. Screw on the 6 x M5 nuts and tighten down using the hexagon nut driver (Figure 4).
4. Plug the 2pin and 10pin FPC cable plugs into the appropriate sockets provided in the scanner base (Figure 5).
5. Slide the cover plate back down the gantry and attach it to the base of the scanner using the 4 remaining M3.5 screws, tighten using the Allen key (Figure 6)
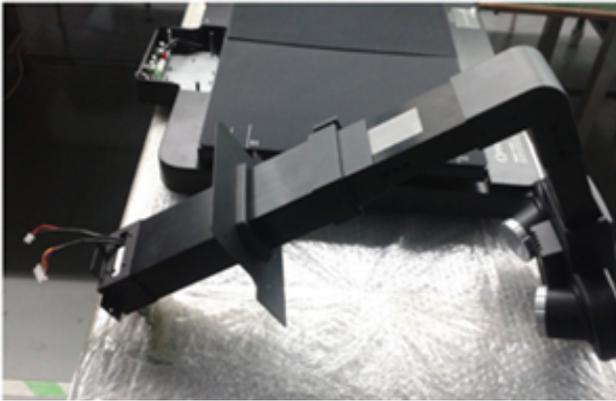
Figure 2

Figure 3
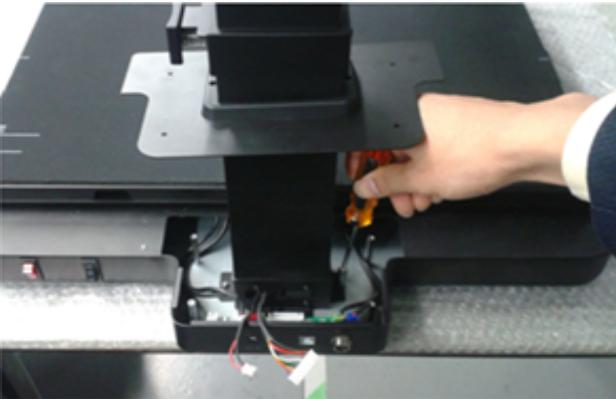
Figure 4

Figure 5

Figure 6

1.4 Index of functions

1. Camera & LED light head; can be adjusted up or down.
2. 2 & 3. Left and Right book cradle plates.
4. Scanning indicator light. Turn page when light off.
5. 90 degree bracket connecting head and gantry.
6. Height adjustable gantry.
7. Gantry adjusting button, push to adjust height.
8. Book cradle plate angle adjuster.
9. Book cradle width adjuster. For adjusting the image in the "preview window" either left or right.
10. Power on-off switch.
11. LED light switch, two models high or low.
12. Power-on light.
13. Interface port for push-button or foot switch.
14. USB port for connection to computer.
15. DC-IN. Input power supply 9.0 Volt.
16. Push-button switch. Press either to begin scanning.
17. Push-button indicator light.
18. LED light.
19. Left and right COMS cameras.
20. Foot switch. The same function as ' Push-button switch'.
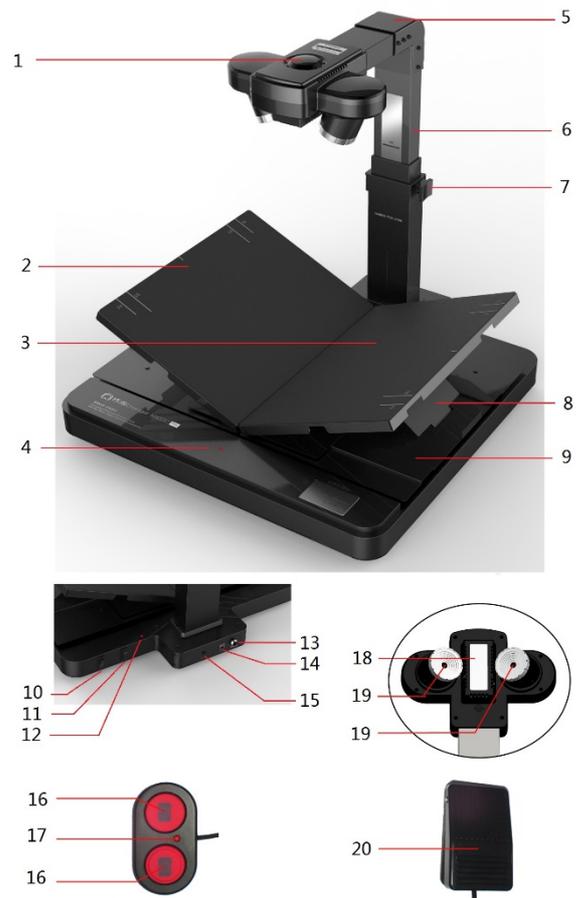
1.5 Parameters

1.5.1 Hardware

Weight	17KG
Format	2 x A4 pages
Light source	Natural light + Auxiliary LED lighting
Scanning speed	Preview scanning with two lens synchronously，80 pages per min(measured)
Focus mode	AF Auto focus
Camera pixel	10M pixel (×2)
Optical resolution	3648*2736 (×2)
Sensor	CMOS
Storage format	JPEG、PDF、TIFF
Interface type	USB2.0
Scan button	Push-button or Foot switch
DPI	Adjustable 96/150/200/300
Pixel	Adjustable 2/3/5/10 million

1.5.2 Software functions

Core algorithm and image processing	Intelligently correct/edge cropping, deformation correction, curve flattening, page extraction, fingerprint erasure, background noise purification, etc.
Image control	Adjust brightness, exposure length, sharpness and color.
Software	Standard with image processing software 【BookChanger V4.6.7.08221】
Secondary development	Support the SDK
Operating system	Windows XP/Vista/Win7/Win8
File Compression	1%-100%
Custom image naming	Yes
Software Updates	Regular prompt

1.6 Package contents

1. M2030-Pro Book scanner.
2. CD-ROM (Serial Number included).
3. 1.5 meter USB2.0 cable.
4. 6 x M5 Hex nuts, 8 x M3.5 Allen head screw, 1 x Hex Allen key, 1 x 5.5mm Hex nut driver.
5. AC/DC Power adapter.
6. 1 x Push-button switch.
7. 1 x Foot switch.

Chapter 2 System Installation

2.1 Computer specifications

1. Hardware: CPU Pentium 4 and above, 512MB memory and above.
2. System: Win XP, Win 2003, VISTA, Win 7, win 8.

2.2 Software installation

1. Place the installation disc into the CD driver.
2. When the disk opens double click on 'BookChanger_setup_V4.6.7.08221'.
3. Click 'Run'.
4. The 'Welcome Wizard' window will open, click 'next'.
5. Enter the Serial Number (Found on the CD cover or inside the CD)
6. Follow the prompts to install the BookChanger software.
7. When finished you will be prompted to install the 'Coach WDM Device Driver' followed by 'Fotonation (CoachUSB) Image and 'Fotonation (Coach VID) Image.

Note: These last two programs may automatically install themselves.

2.3 Software activation

Before you can use the software, a window will open requesting activation (Figure 7). Click 'activate'; if you don't wish to activate immediately then click 'Keep Trying Out' you will then have 30 days in which to activate.

There are two methods of activation:

1. If connected to the Internet, click 'Online Activation' to finish.
2. If not connected to the Internet, scan the QR code using a mobile phone (Turn on GPS positioning) and enter the Activation code provided in the box marked 'Enter an activation code'. Then click 'Offline activation' (Figure 8)
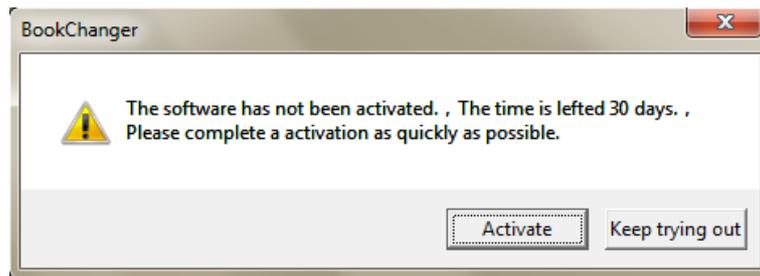
Figure 7
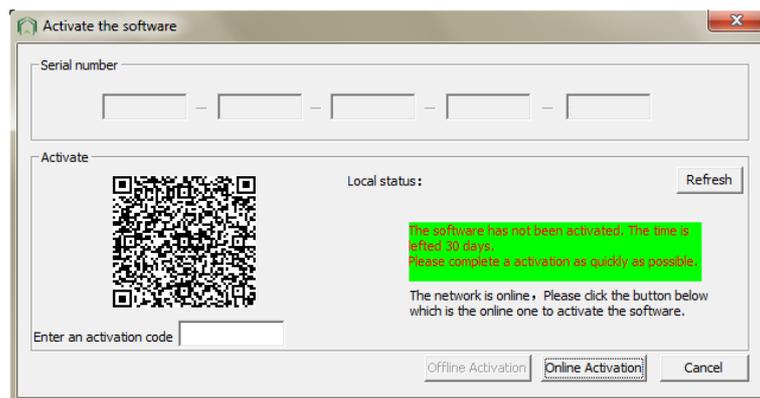
Figure 8

Chapter 3 Operation Instruction

3.1 Basic operation

1. Switch on the scanner and place a book in the cradle.
2. Open the BookChanger software, a window will open requesting 'Set the root directory'. Click browse and select a folder to store the images. Click 'Ok' and enter the default Main Interface Window. Note: The root directory can be changed or a new one created in the Preview window. Click the BookChanger logo in the main interface window and in the dropdown window click 'JPG parameters setting'. In the new window adjust the resolution to suit requirements.
3. Click the 'View Preview' icon to enter the preview window (See 3.2.1 below). Images of the pages will

appear in the window.

4. Move the book to centralize the images, then adjust the camera head up or down until the book appears vertical in the window.

5. Click the Focus icon . Note: Do not move the book or turn page until this action is completed.

6. Click to set the width of the page to be scanned by moving your cursor to the top left of either image. Left click then move to the top right and click again. You will now see two vertical red dotted lines that define the page width (See 3.2.1 below). The width of the page in pixels will appear in the 'Page width (Pixels)' box.

7. Click the Photograph (Scan) icon to begin scanning, if not using the Push-button or Foot switch.

Note 1: At this point you will see the Scanning Indicator light, when it goes out you can turn the page.
Note 2: Books with glossy pages may present a reflection problem; under these circumstances switch the LED lights to the lower setting or to off. Adjust the preview window by selecting the manual exposure to adjust.

8. After scanning close the preview window by clicking the BookChanger logo in the quick start menu. Then click to close the window

9. In the main Interface window, you will see thumbnails of the images you have scanned. These now have to be processed and saved to the desired format. Click on the first thumbnails, it's image will appear in the center panel. (See 3.3.1 below). Then click 'All'.
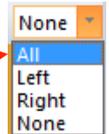
10. To begin processing, click on 'Hand measure' then click the top left of the enlarged image. A red dotted line will appear running down the page. Repeat on the right side of the page, this will define the finished width of the page. The width of the page will appear in the 'Single width' box.

11. Click on 'Hand measuring' then click on the top left of the image and run the cursor to the bottom right of the page and click again. A diagonal solid red line will appear with the size here. This will define the curve correction of the page.
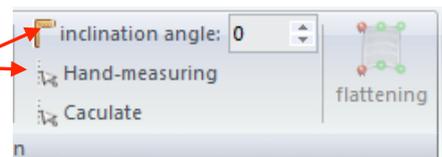
12. Click 'Automatic' in the Flattening operation. Then click 'All pages'. A tip window will appear, click yes. Wait for the processing to complete, all the images should then be ready to be saved to the final format.
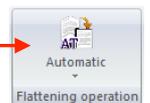
Note: If scanned images are acceptable, you may ignore 9-12 steps.

13. Click the BookChanger logo in the top left of the main interface window and in the menu click 'Make PDF'

In 'Step 1' select the images you wish to convert.
In 'Step 2' leave as is,
In 'step 3' select the output file format & 'After processing', then click 'OUTPUT FILE'
Note: if you wish to merge two pages together, click 'Merge mark' in 'Step 1' and click 'Merge' in 'Step 3'.

Make PDF
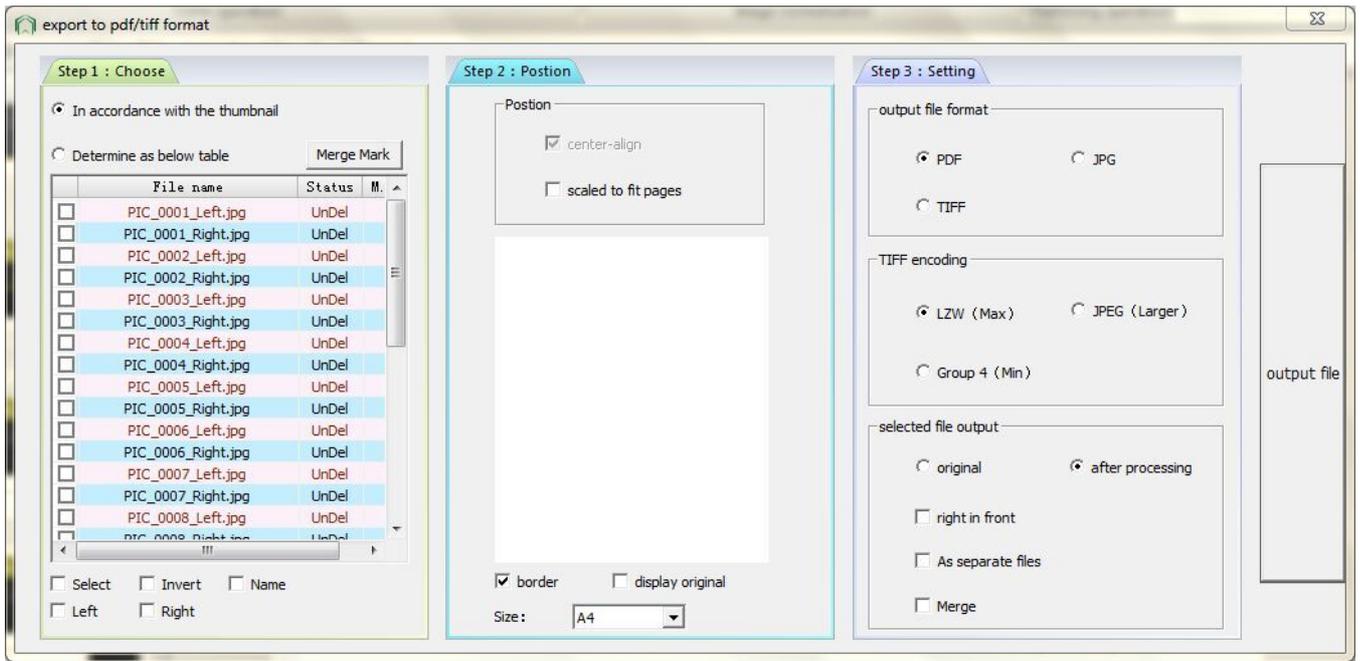
14. In the next window enter 'File name' then click 'Save'. In the 'Tip window' click yes to open the PDF file or no to exit.
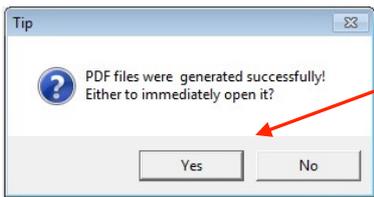
15. Press , to set OCR language and OCR parameters.

Click the images in the thumbnail and click
OCR icon to output format
[RTF/ DOC/ PDF (text only)/ PDF (searchable)].
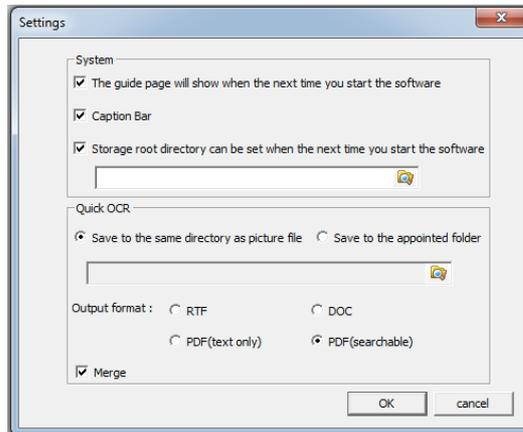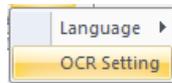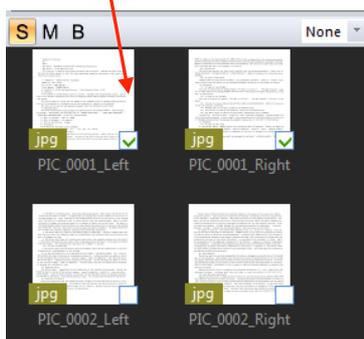
3.2 Preview window

3.2.1 View preview window
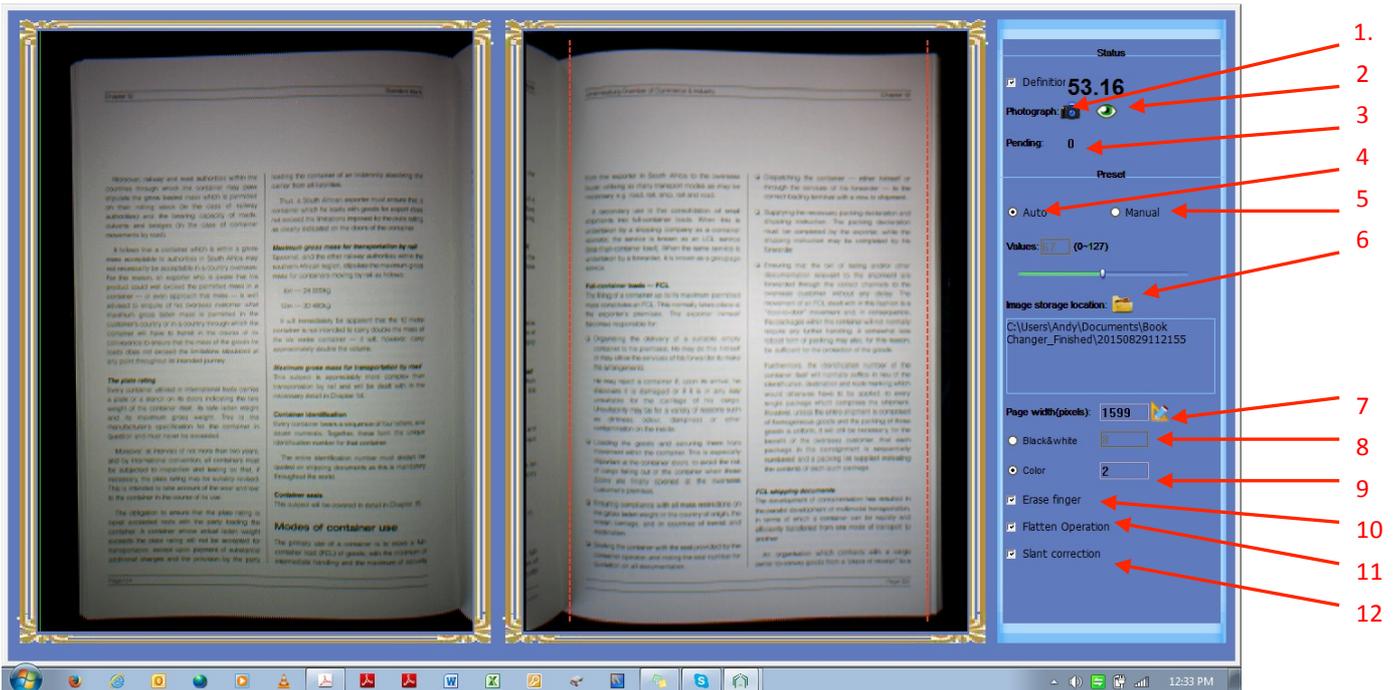
3.2.2 Preview window functions

1. Click [camera icon] to scan if not using the push-button or foot switch.

2. Click [eye icon] to focus - set each time the power is switched on.

3. Pending - Indicates how many images are still being processed. Only close the preview window on '0'.

4. Auto - The camera will automatically set the exposure according to the environment.

5. Manual - The exposure can be set from 0 to 127 by moving the slide along the bar to the right. The exposure setting will appear in the 'Values' box.

5. Image storage location - Click [folder icon] to select or create a folder for storing the scanned pages. This folder will then become the default location unless changed.

7. Page width in pixels - Appear in this box click [1500] Click [icon] to set page width for scanning.

8. Black & White - Select to scan pages in monochrome.

9. Color - Select to scan pages in color.

10. Erase finger - Select to remove finger marks from scanned images.

11. Flatten operation - Select to flatten curved scanned pages.

12. Slant correction - Select to correct and straighten slanted pages.

3.3 Main Interface

3.3.1 Main interface window
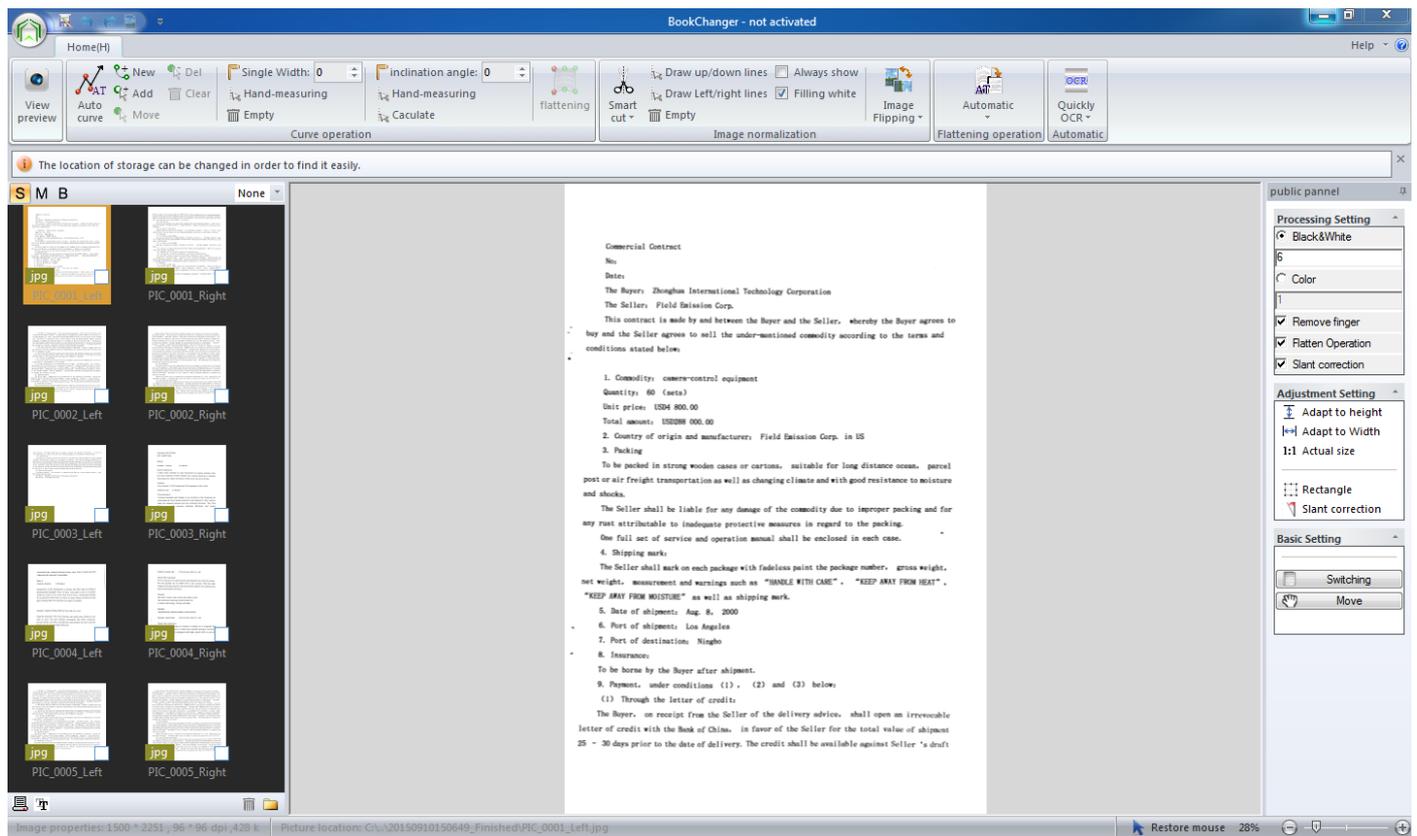
3.3.2 Preview window functions
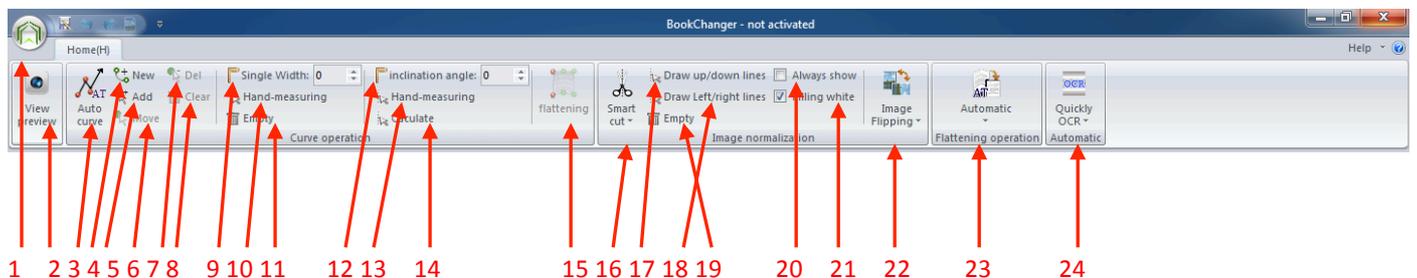
1. Menu - Click to open, save, save as, JPG parameters setting, make PDF, undo, redo and restore the original image.
2. View preview - Click to access preview/scan window.
3. Auto curve - Automatically generates curves to flatten a scanned image (Curve correction).
4. New - Click to add new points along the page left to right and top to bottom. Click to set 'inflection points' then click 'Flattening'.
5. Add - Add an additional point anywhere along the curve line to enhance the correction process.
6. Move - Move any of the points to aid correction.
7. Delete - Delete added points.
8. Clear - Clear points.
9. Single width - Set the page width manually.
10. Hand measuring - Click the left and right of a scanned page to measure the width. The size will appear in 8

above.

11. Empty - Delete the measured lines.
12. Inclination angle - Set the curve correction angle manually.
13. Hand measuring - Click the page from top left to bottom right to set the line, then click 'Slant correction' in the 'Public panel' to correct the image.
14. Calculate - Reset inclination angle to zero.
15. Flattening - Use in conjunction with '3.New' for curve correction.
16. Smart cut - After setting the horizontal & vertical lines on an image use to trim the page.
17. Draw up/down lines - Draw horizontal lines on a page from trimming.
18. Draw up/down lines - Draw vertical lines on a page for trimming.
19. Empty - Delete drawn lines.
20. Always show - Click, the trimming lines drawn on one page will display on other pages.
21. Filling white - Click, the trimming part will remain white.
22. Image flipping - Rotate or invert the image.
23. Automatic - Automatically corrects curve correction and deskew.
24. Quickly OCR - Convert JPG to searchable PDF or editable Microsoft word.
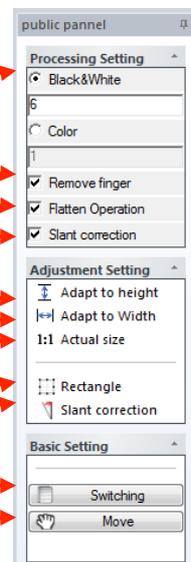
25. Processing Setting - Use to switch between Black & White and Color.
26. Remove finger - Check box then 'Automatic' for finger masking.
27. Flatten operation - Check box then 'Automatic' for curvature correction.
28. Slant correction - Check box then 'Automatic' for deskew correction.
29. Adapt to height - Set the image based on height.
30. Adapt to width - Set the image based on width.
31. Actual size - Display image in actual size.
32. Rectangle - Draw any size rectangle in an image and right click to clear contents.
33. Slant correction - Use in conjunction with '13 Hand measuring'.
34. Switching - Used to switch between 'original' and 'processed' image.
35. Move - Move the current picture.

36. S M B- Display small, medium or big thumbnails.
37. All- Click to display: All, left, right or no image.
38. Thumbnail- Display thumbnails of scanned images.
39. Remove- Remove the thumbnails but don't delete local files.
40. Insert- Insert a set of picture.
41. Re-scan- Re-scan the current set of pictures and replace the originals.
42. Re-name- Re-name the picture prefix.
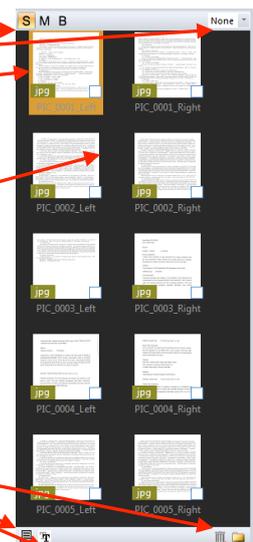
43. Switch- Switch images between 'original' and 'finished'.
44. Remove- Remove all the thumbnails but don't delete local files.

45. File- Open the current picture file.

Chapter 4 Trouble shooting

4.1 Trouble shooting

Preview of the book set up and ready for scanning.

The RED lines are horizontal
The lengths of the four red arrows are approximately the same.
The two BLUE lines are vertical.
The length from the center of the book to the center of the preview
Box is the same (The width of the two YELLOW rectangles).
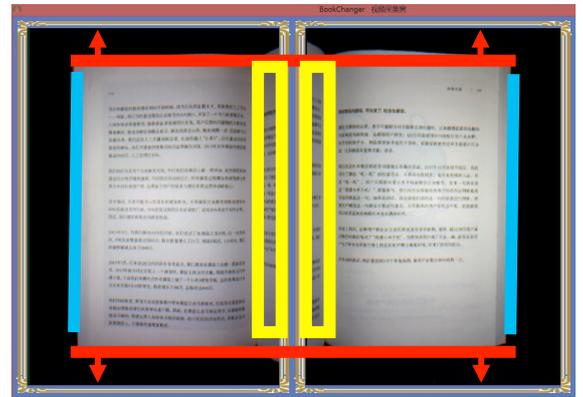
1. Problem: The book spine is not visible in either of the preview boxes.
   Answer: Adjust the book cradle plates to centralize the spine.
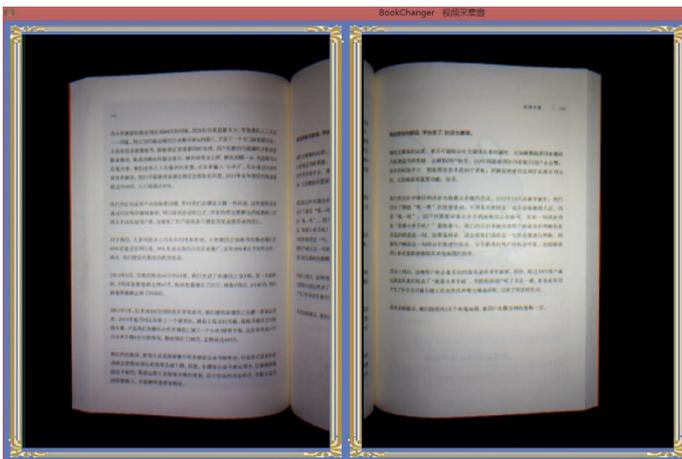
2. Problem: The page is large or smaller than the frame of the preview box.
   Answer: Adjust the gantry up or down.
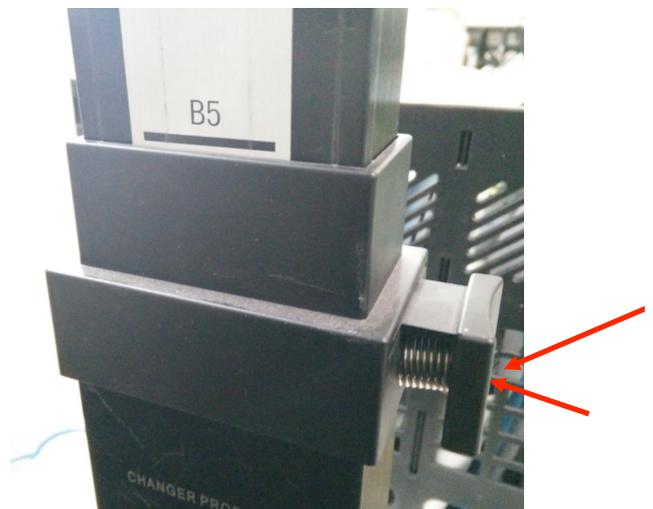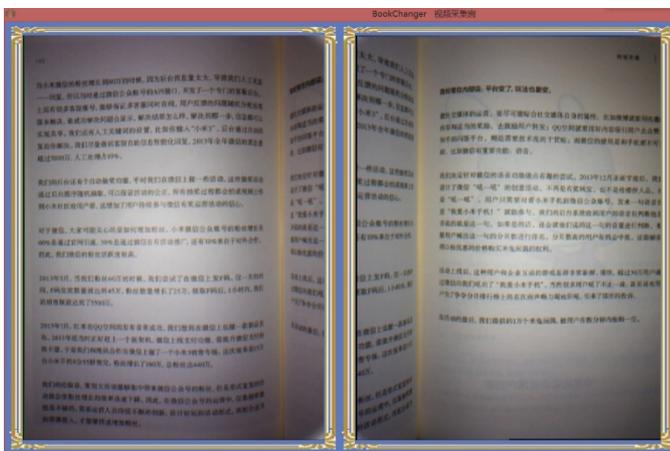
3. Problem: The top and bottom of the book are not parallel with the preview window.
   Answer: Move the book cradle plate angle adjusters or hold down the pages with your fingers.
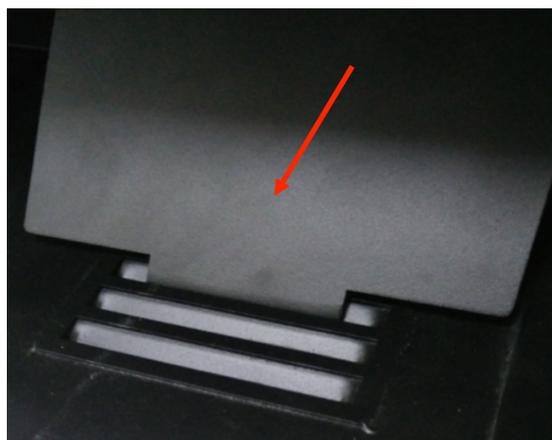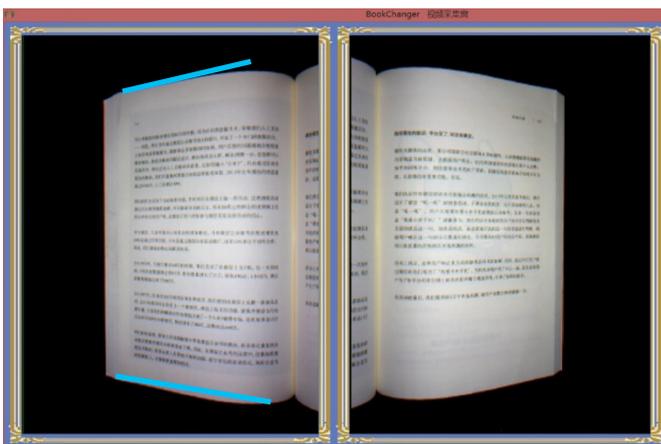
4. Problem: The sides of the book are not vertical.
   Answer: Adjust the camera head up or down.
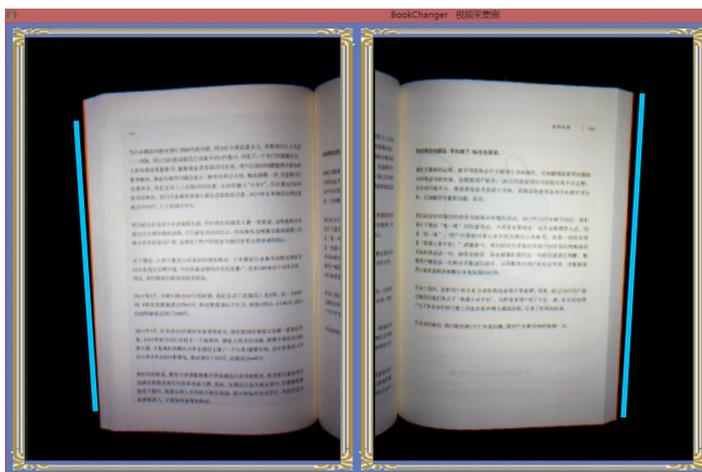
Chapter 5 Warranty and Service

5.1 Warranty

1. This product is warranted against defects in materials and workmanship for a period of one year from the date of purchase.
2. Under this warranty the manufacturer undertakes to repair or replace any parts found to be defective, provided this product is returned to one of our authorized service centers.
3. This warranty is only valid if this product has been used in accordance with the instructions, and provided that it has not been modified, repaired or interfered with by any unauthorized person or damaged trough misuse.
4. This warranty does not cover wear and tear, nor breakables such as lamps etc.
5. This warranty does not affect your statutory rights, nor any legal rights you may have as a consumer under applicable national legislation governing the purchase of goods.
6. If this product fails to operate and needs to be returned, pack it carefully in it's original packing, enclosing your name and address and the reason for return. Note: confirm with reseller or factory before return.
7. If within the warranty period, please also provide the warranty card and proof of purchase.
8. The owner is responsible for any transportation and insurance costs if this product has to be returned for repair.

5.2 Contact

For technical support or assistance contact:

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Tel：+86-755-23974826
E-mail：service@changer.hk
Web：www.czurtek.com