Image Access

Bookeye® 4

V1A Professional

V1A-C35

Operation Manual

File: ArbVers_BE4-V1A-C35_OperationManual_2015-KW45.docx
Art.-Nr.: BE4-V1-C35-MAN-EN

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Introduction

Dear Customer

We congratulate you on the acquisition of this innovative product from Image Access.

At Image Access, we are proud of the work we do; our products are the result of our extremely high production standards and stringent quality control.

With the Bookeye® 4, Image Access offers an efficient V-cradle book scanner which covers a wide range of applications due to its versatility. The integrated web based user interface enables access to all functions via a structured set of menus.

This operation manual is designed to lead you through the most typical situations experienced when operating the Bookeye® 4 scanner.

For this reason, we ask you to read the operation manual attentively before starting to work with the device. By doing so, you will avoid operation errors and you can control all functions effectively from the beginning.

In addition, please consider the following points:

- Damages to your unit may have occurred during shipping. Please check for damages immediately after delivery of the unit. Inform your supplier if damage has occurred.
- Read and ensure that you understand the safety notes. They were developed for your protection and safety as well as to protect the unit.
- Regular maintenance conserves the high quality and safety of the Bookeye® 4 scanner during the entire service life.

If you have any further questions, please feel free to contact your local dealer or Image Access, Inc. directly. Our staff will be happy to help you.

For your daily work with the Bookeye® 4, we wish you success and complete satisfaction.

Regards

Your Image Access Team

About this Manual

Operation Manual

The **Operation Manual** provides all necessary information pertaining to the normal operation and behavior of the device. It is written for people who only operate the device and do not perform setup and adjustment procedures. All device elements and software functions are described in detail, although some of them might never be used. This manual does not cover any application software. Refer to the appropriate manual to learn about the application software.

All manuals can be downloaded from our customer service portal at portal.imageaccess.de. Be sure to always check for the latest versions of these manuals.

This manual is divided into sections.

Section A Safety notes and device location. Read the safety notes attentively for your own safety. Operate the scanner in a device location as described.

Section B Describes the hardware of the scanner and gives an overview of all components and connectors. Remember that this device is a precise optical instrument and should be handled accordingly.

Section C Hardware Operation. Describes how the hardware components may be controlled.

Section C Contains all information about the User Setup Level

Section F Contains all technical information of the scanner .

Version History

Version	Published in	Content/Changes/Supplements
A	January 2017	First version for Bookeye 4-V1A-C35 Rev. B

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A Safety Notes and Device Location

A.1 Safety Notes

Read and ensure that you understand the safety notes.

The safety notes have been written to ensure your protection and your safety.

Follow all safety notes to avoid damage to the device.

A.1.1 Marking of Safety Notes

All safety notes are marked with a warning sign.

A description of the potential hazard is found at the right side beside the warning sign.

WARNING!

<Text with description of potential hazard.>

A.1.2 Laser Safety Note

CAUTION!

Laser Class 1

Certified acc. IEC 60825-1:2008-05

Do not stare into beam!

LASER RADIATION

DO NOT STARE INTO THE BEAM OR VIEW
DIRECTLY WITH OPTICAL INSTRUMENTS
CLASS 2M LASER PRODUCT

Wavelength: 630-670nm
Max. Power: 5mW
≥ 7.5mrad

Certified acc. IEC 60825-1:2008-05

A.2 Safety Precautions

Warning: Please read all the safety precautions before you operate the scanner. Serious injury can occur to you or to others if you do not know how to use it safely.

To prevent fire or shock hazard, **do not expose** this device to rain or any type of moisture.

Follow all safety precautions to avoid personal injury or damage to the device.

1. Openings in the scanner's housing are provided for air circulation. Do not cover or block the openings.
2. Do not place the scanner near a heat or cold emitting source such as a space heater, furnace, or air conditioning unit.
3. Do not place the scanner near any devices or electrical boxes emitting high voltage.
4. Always place the scanner on a stable surface.
5. Do not place cups containing liquids or other such objects on the scanner or on the book cradles. If liquid spills into the scanner it can cause damage. If this occurs, turn the scanner off, unplug the power cord from the wall receptacle and contact the Image Access Technical Support.
6. Do not put any objects into any scanner housing openings unless specifically instructed to do so by Image Access Technical Support.
7. Do not disassemble the scanner. If there is a need to disassemble the scanner, please contact the Image Access Technical Support.
8. Do not use the scanner if it has been physically damaged. If this occurs, turn the scanner off, unplug the power cord from the wall receptacle and contact the Image Access Technical Support.
9. The scanner should be used only with the power supply that is delivered with the scanner. If you are unsure, please contact the Image Access Technical Support.
10. Image Access recommends plugging the scanner into an appropriately-rated power conditioner.
11. Always turn the power off and unplug the power cord from the wall receptacle before cleaning the scanner.
12. When cleaning, do not use any type of solutions, abrasives, or acids such as acetone, benzene, kerosene, mineral spirits, ammonia, or nitric acid. Do not use any cleaners that contain these chemicals.
13. Do not spray any liquids directly onto the scanner. Spray cleaning fluids directly onto the cleaning cloth and use the cloth to clean the scanner.

A.4 Maintenance

Important: Ensure that no liquids penetrate into the device housing.

A.4.1 Touchscreen

The touchscreen can be cleaned with a micro fiber cloth.

Before cleaning the touchscreens of the dual display, switch the scanner unit power switch (see item #5) to position **0**.

A.4.2 Surfaces

Use a soft, dampened cloth to clean the housing of the scanner. Recommended is a microfiber cloth.

A.4.3 Book Cradles

Important: The rubber mats on the book cradles may **only be cleaned dry!**

Use a vacuum cleaner from time to time to clean the mats from dust and particles.

A.5 Repair

Please note: There are not any parts or components of the Bookeye® 4 V1A-C35 scanner which can be repaired by the user.

All repairs and service work should be done by a trained technician only.

A.6 Content on Delivery

The scanner is delivered in a wooden transport box. The transport box also contains:

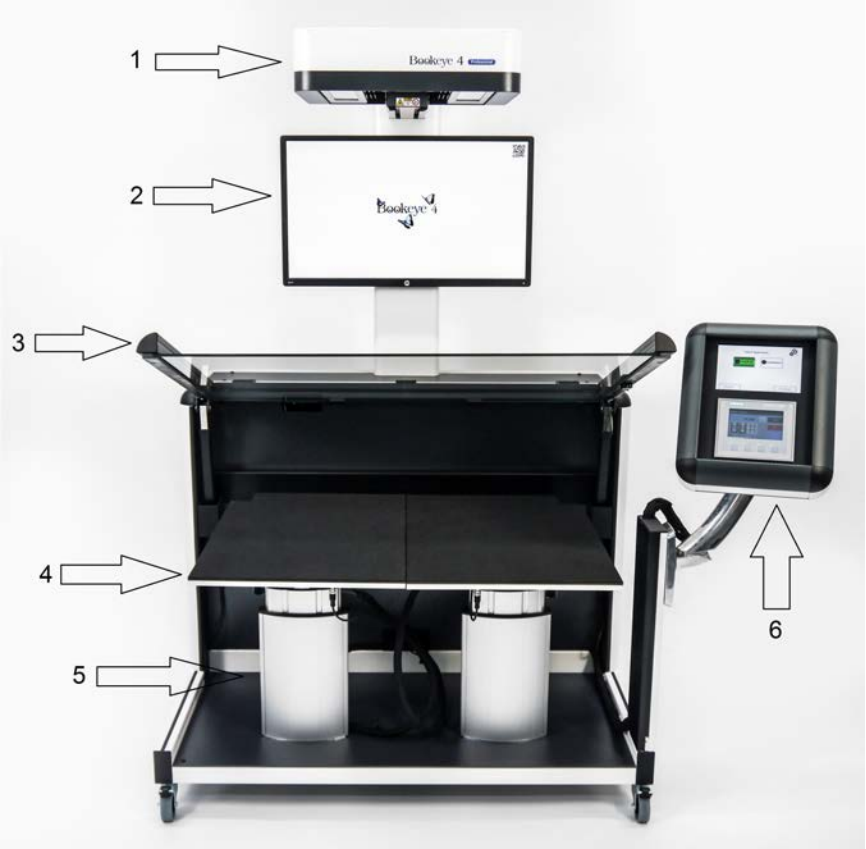
- A reference folder with
  - 4x CSTT-2 reference targets,
  - 8x Line Reference Targets S2N-LRS-200.
- 3x White Reference Targets BE4-WA-V1-A.
- 1x Color Reference Set IT-8 folder
- A foot pedal switch
- Network cable, length 3 meters.
- A plastic bag with recovery key and instructions.
- A reference plate with reference label BE4-Z-C35-01-A.
- 3x power cables with connectors for European -, British- and US wall sockets.

Please note: Keep the wooden transport box for future use! If the scanner needs to be returned to depot, it must be sent back in the original transport box to avoid transport damages.

B Hardware

B.1 Device Overview

B.1.1 Front Side Elements



Picture 1: Elements of the Bookeye 4-V1A C35

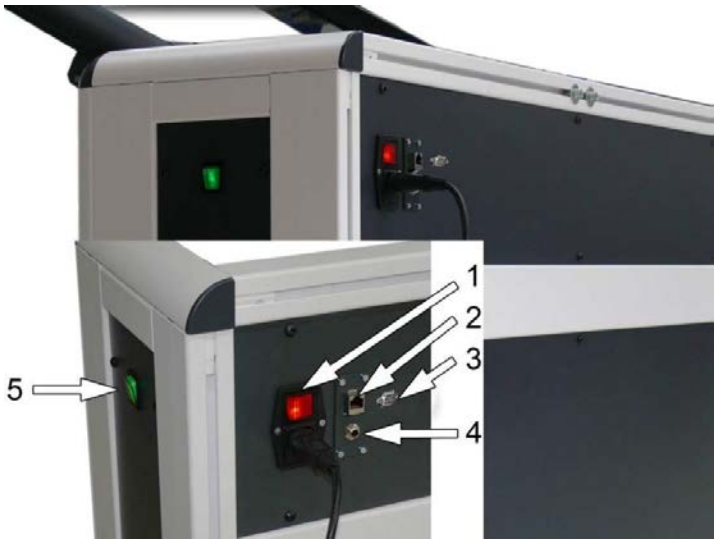
Some of the major components of the scanner have been identified in the above picture. These components are referenced in this operation manual.

The main hardware elements are:

1. Camera head. The camera head contains the camera, the red line laser, and the lamps.
2. TFT flat screen. Shows the scanned image. All modifications of an image, e.g. color mode or scan size, will be displayed immediately on the TFT flat screen.
3. Glass plate. Flattens the curvature of the book binding and ensures a continuous focus level. The glass plate opens and closes motor-powered.
4. V-shaped book cradle. Can be fixed in “V” position or lie in a flat position. The opening angle of the book cradle plates in V-position is 140 degrees.
5. Motor-powered lifting column.
6. Dual display to set the scan parameters (upper touchscreen) and to control the lifting columns of the book cradle plates, the glass plate, and the automated scan modes (lower touchscreen).

B.1.2 Connectors on the Rear Side

For easy orientation, the connectors found on the rear side of the scanner are depicted in the following picture and described below.



Picture 2: Connectors on the rear side

1. Main power switch with integrated power cable connector
2. Network connector. Insert a network cable for access to the scanner via the integrated Scan2Net® user interface.
3. Connector for recovery key.
4. Foot pedal connector.
5. Second main power switch.

B.2 Connecting the Power Source

Before connecting the scanner to the external power source check the following items:

Ensure the electrical outlet is in perfect condition and that it is properly grounded.

Ensure that the electrical outlet is equipped with a fuse with the proper capacity.

The electrical outlet must be near this device and must be easily accessible.

Inspect the power cable and ensure that it is undamaged.

Use only the power cable delivered with the scanner.

Turn the device off before plugging or unplugging any cable.

Set the main power switch to position **0**

The connector for the power source cable, the main power switch and the power switch for the scanner unit are located at the back side of the device.

B.2.1 Starting the Bookeye® 4-V1A C35

The Bookeye® 4-V1A C35 has two power switches, one at its rear side and one on the right side (see Picture 2).

The main power switch turns on the power for the motor-powered lifting columns, the motor-powered glass plate and the TFT flat screen and the scanner unit.

The standby button in the front panel (Picture 4) is illuminated in red.

The lower touchscreen starts with a self test and shows some status messages.

The self test lasts approximately one minute.

At the end, the touchscreen shows the control menu with the buttons of the motor-powered lifting columns, the motor-powered glass plate and the scan modes control buttons.

Picture 3 Control panel

The red illumination of the standby button signals that the Bookeye® 4-V1A C35 scanner unit is in standby mode.

Picture 4 USB connectors and standby button

Press the standby button to start the scanner unit.

The button illumination changes to blue.

The scanner starts with self test routines and verifies all system components.

Status messages will be displayed on the TFT flat screen and on the upper color touchscreen of the dual display.

At the end of the startup sequence, the touchscreen displays the start screen.

B.2.2 Switching to Standby Mode

IMPORTANT: Always use the “Standby” button to switch the scanner to standby mode.

Press and hold the standby button for at least three seconds. While pressing the button, a “click” sound is audible.

During the shut down sequence, the TFT flat screen and the upper touchscreen of the dual display show the scanner name and version and a progress bar.

The shut down sequence will take a few seconds.

Finally, the TFT flat screen and the touchscreen switch off.

The “Standby” button will be illuminated red.

The lower touchscreen remains on when the scan unit is in “Standby” mode.

C Hardware Operation

The Bookeye® 4 V1A C35 scanner is equipped with two motor-powered lifting columns and a motor-powered glass plate.

The integrated Scan2Net software as well as an external scan application allow the user to scan a wide range of documents with brilliant quality and a high throughput.

The scanner settings can be defined by the upper touchscreen. It shows the menus of the **Scan2Net** kiosk user interface.

The motor-powered glass plate, the motor-powered lifting columns and the scan modes can be controlled by the user through the lower touchscreen with the Simatic interface..

The scanner can also be controlled by an external scan application.

The next chapters describe the functions of the two touchscreens and the available automated scan modes.

C.1 Book Cradle

The book cradle can take up two different positions when the Bookeye® 4 V1A-C35 scanner scans your documents.

Either flat position …

Picture 5: Book cradle in flat position; glass plate closed

… or V position.

Picture 6: Book cradles in V position, glass plate open

The V position is recommended for very delicate, old books and other documents that cannot take up a flat position. The opening angle of the book cradle is 140 degrees.

IMPORTANT: **Before setting the book cradle to V position**, press INIT on the lower Simatic touchscreen.

For setting the book cradle in V position, **always select V-Scan** from the lower touchscreen menu.

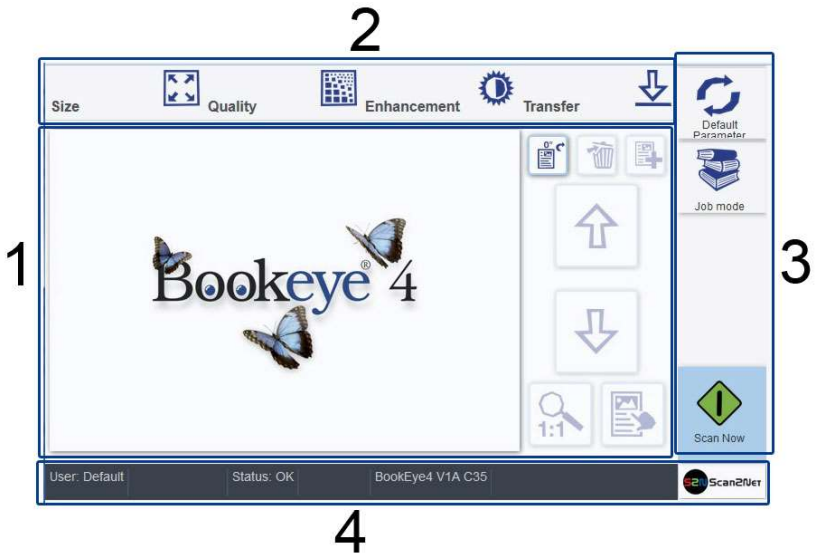
When you lift the book cradle up to V position, a support at each side keeps the cradles in position. The glass plate cannot move while the cradle is in V-position.

In both positions, the plates can also be shifted apart to enlarge the gap between them. Adjust the gap to match the spine.

When changing the book cradle from V position to flat position, fold the supports to the inside.

C.2 Upper Touchscreen

The **Scan2Net** kiosk user interface is structured in four sections, which allow operators to control and select various functions of the scanner.



Picture 7: Viewer & Job Control screen

The touchscreen is structured in four sections, which allow operators to control and select various functions of the scanner.

1: This section shows a preview of the scanned image and in job mode, allows the operator to scroll through the list of scanned images, delete images from the list and to insert images into the list.

2: Buttons to open a menu with more settings. Touching the button again, closes the menu and returns to the former screen.

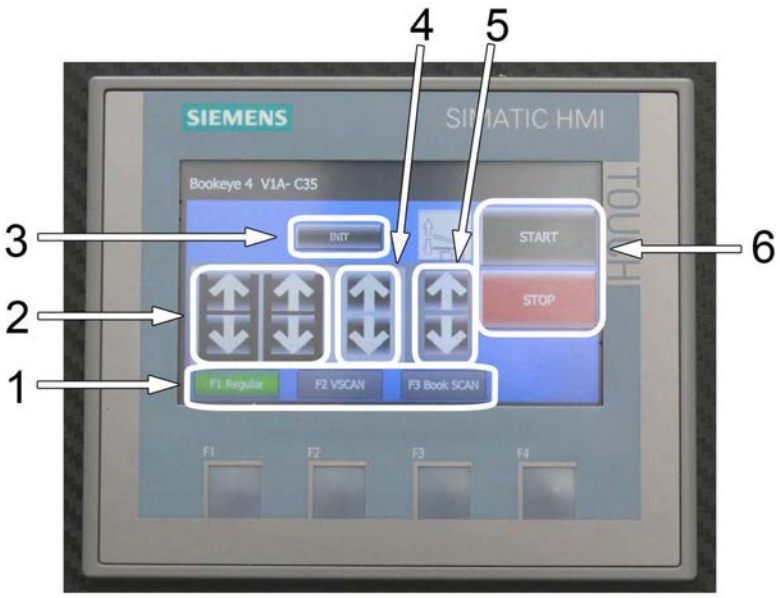
3: This section is used to set the scanner's default parameters, select the **Job Mode** and to start the scan sequence.

4: This section displays information. It shows the selected user, gives status messages and names the scanner type.

C.3 Simatic Touchscreen

The content displayed in the touchscreen varies depending on the selected scan mode.

If a function is not available in a specific scan mode, the control symbols greyed out.



Picture 8: Start menu touchscreen

The lower touchscreen enables the operator

1. to select one of three scan modes,
2. to move the book cradle plates up and down separately,
3. to initialize the book cradles and the glass plate,
4. to move the book cradle plates up and down simultaneously,
5. to open and close the glass plate,
6. to start and stop the scan sequence.

C.4 Activating the Parameter Menu

Important!

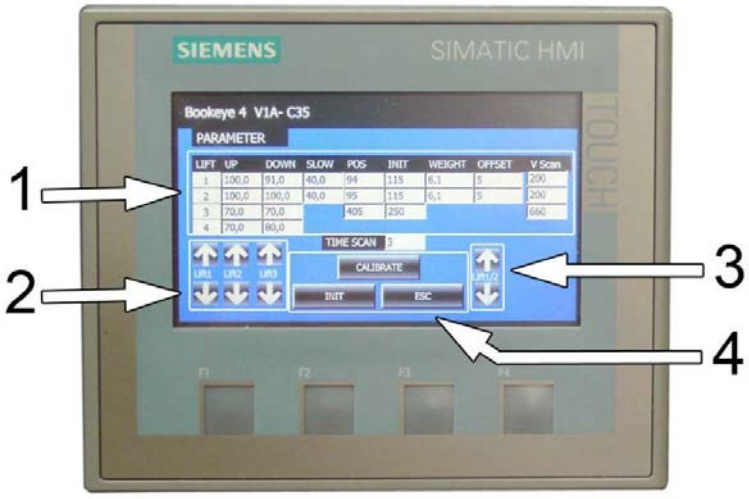
While the **Admin** mode is active, **do not select** the VSCAN (F2) scan mode in the start menu.

The opening angle of the glass plate will override the defined limit.

Severe damage to the glass plate can result.

To avoid damages, please do not change any parameters in the parameter menu!

Press the button “F4” in the bottom line of the touchscreen to open the parameter menu.



Picture 9: Content of parameter menu

1. Parameter table. Detailed description in chapter C.4.1.
2. Controls to move the lifting columns and the glass plate up and down.

   Lift1: Moves the left column up and down.

   Lift2: Moves the right column up and down.

   Lift3: Moves the glass plate up and down.
3. Lift1/2: Moves both lifting columns simultaneously up or down.
4. Buttons with predefined functions

CALIBRATE The maximum lifting height of the lifting columns is limited by a light barrier. The light barrier is positioned in the upper part of the bottom unit.

To place the calibration target in the correct position, it must be pressed to the bottom side of the closed glass plate.

Touch **CALIBRATE** in order to oversteer the light barrier limit. Then lift the lifting columns until the calibration target is pressed at the glass plate bottom side.

INIT Starts the initialization sequence.

Both lifting columns move down to the zero position.

The glass plate closes, i.e. it moves downward completely. Subsequently it opens to its “INIT” position.

Then both lifting columns will be lifted to their “INIT” position.

ESC Closes the parameter menu and returns to the start screen.

TIME SCAN Defines the time the book cradle and glass plate controller will wait for a scan command from the scanner. After the time has passed, the controller moves the book cradles and opens the glass plate.

C.4.1 Touchscreen Parameter Table

The parameter table allows the operator to set value for the initialization and shows status information.

The first column names the controlled elements.

L1: Lifting column motor left

L2: Lifting column motor right

L3: Glass plate motor left

L4: Glass plate motor right

UP L1
UP L2
Values from 1 … 100

Defines the speed when moving the lifting columns L1 and L2 upwards.

UP L3:
UP L4:

Defines the motor’s speed when the glass plate opens.

DOWN L1
DOWN L2
Values from 1 … 100

Defines the speed when moving the lifting columns L1 and L2 downwards.

DOWN L3:
DOWN L4:

Defines the motor’s speed when the glass plate closes.

SLOW L1:
SLOW L2:

Defines the speed when moving the lifting columns L1 and L2 up-/downwards while the light barrier detects them.

POS L1
POS L2

Shows the height of the lifting columns, measured from the zero point

POS L3

Shows the opening height of the glass plate, measured from the fully closed position.

INIT L1
INIT L2
Values from 10… 300

Defines the height from the zero point for the lifting columns after initialization.

INIT L3
Values from 1 … 999

Defines the opening height of the glass plate after a scan sequence, when scanning in regular mode.

WEIGHT L1
WEIGHT L2

Shows the weight measured by the push button switches of the left (L1) and right (L2) book cradle plate.

Maximum load: 45 kg / 99 lbs.

If the maximum load is overridden, the motor of the respective lifting column will stop automatically. A red signal lights up on the touchscreen.

OFFSET L1
OFFSET L2

Allows setting an offset for the maximum load which will be lifted.

Note: Increase the offset value in small steps and check the lifting columns for proper function.

There is a risk of destroying the glass plate if the offset value is too high.

Min: 5 ≈ 10 kg / 22 lbs.

Max: 30 ≈ 30 kg / 66 lbs.

Increasing the offset value is recommended when documents with heavy weights will be scanned.

V Scan L1
V Scan L2

Only if the book cradle plates are set in V-position!

Defines the height from the zero point for the lifting columns when **VSCAN** mode is selected.

V Scan L3

Only if the book cradle plates are set in V-position!

Defines the opening height of the glass plate when **VSCAN** mode is selected.

The glass plate will be opened in **VSCAN** mode automatically to the defined height.

D Software Operation

D.1 Lower Touchscreen Scan Modes

The Bookeye® 4 V1A C35 scanner offers three automated scan modes. They can be selected by the three buttons in the bottom row.

BOOKSCAN The opened glass plate will be closed automatically before the scan sequence starts.

The plates will be lifted until the document is pressed with a defined force on the glass plate's bottom side.

The scan will be executed.

The book cradle plates will return to the height of their start position.

REGULAR This is the most comfortable mode.

The opened glass plate closes automatically before the scan sequence starts.

The book cradle plates will be lifted until the document is pressed with a defined force on the glass plate's bottom side.

The scan will be executed.

The book cradle plates return to the height of their start position.

The glass plate opens until a pre-defined position is reached.

V-SCAN Recommended for delicate documents, for example historic books.

Set the book cradle plates to V position. A support on each side keeps the plates in this position.

Lift the book cradle plates so that the middle height of the document has approximately the same height than the glass plate when it is in closed position.

The scan will be executed.

The book cradle plates stay at their position.

The glass plate stays open.

Important! Before changing or choosing any mode on the cradle controller, please perform a INIT!

D.2 White Balance Adjustment

1. First, press the “INIT” button on the lower Simatic touchscreen to initialize the book cradle and the glass plate. See picture 8, arrow number. 3.
2. Choose the book mode on the Simatic touchscreen. See Picture 8, arrow 1.
3. Put the calibration plate on the book cradle as shown on the following picture, with the white calibration target on it.

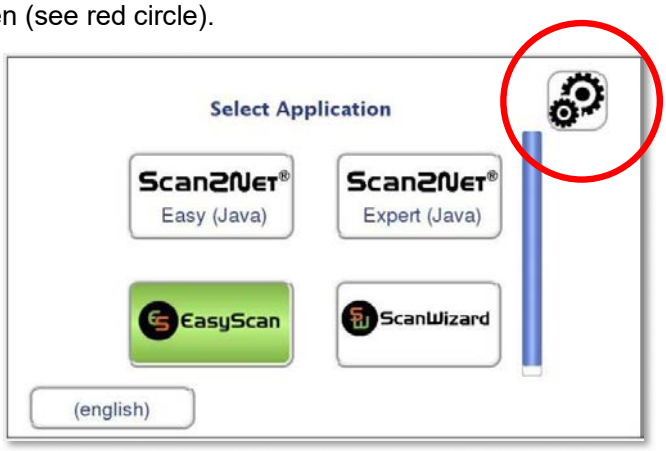
Picture 10: White calibration step 1

4. Press the F4 button on the Simatic touchscreen to access the parameter menu.
5. Press the calibration button, the calibration mode will then be enabled for 5 minutes. See Picture 8 arrow 4.
6. Lift left and right half of the book cradle simultaneously to the maximum height by pressing the arrow up button “Lift 1-2”.

Picture 11: White calibration step 2

7. Activate the Setup Menu on the Scan2Net touchscreen

   To activate the setup menu, tap the gear icon in the upper-right corner of the touchscreen (see red circle).



Picture 12: Symbol to activate the setup menu

On the next screen, enter user login and password.

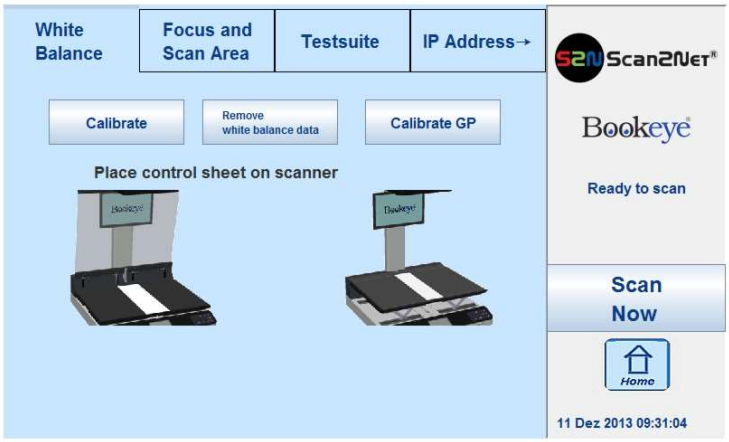
The default user login is **Poweruser**, the default password is **Poweruser** as well. Please note that both user login and password are case-sensitive.

Picture 13: Login window

After entering the user login and the password, tap Ok to confirm.

The screen content changes and shows the setup menu for white calibration.

Perform the white calibration with the glass plate closed by using the “Calibrate GP button”.



Picture 14: Setup menu, white calibration

8. Move the glass plate upwards with the “Lift 3” upper arrow button. While pressing on the arrow up button, a login mask will be shown. It is necessary to login as Admin. (user = admin password= scan2net) The glass plate opening angle should be in V-mode.

Picture 15: White balance without glass plate

Warning: The glass plate opening angle is not limited! The glass plate can crack if it hits the neck of the device.

9. Perform the white balance without glass plate with the “Calibrate” button

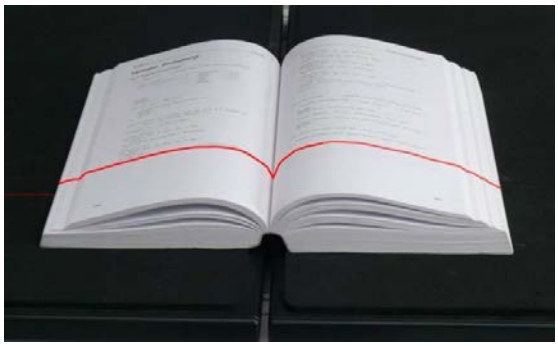
D.3 The “Finger Removal” Function

D.3.1 Position of Document

The Bookeye® 4 scanner offers a helpful function which detects fingers at the margin of books and eliminates them from the image. This is the “Finger Removal” function.

The following simple steps must be completed to operate the scanner using the “Finger Removal” function properly:

- The book cradle can be set to either “V” position or flat position.
- Place the book as shown in Picture 16 on the book cradle.



Picture 16: Book at book cradle in flat position

Allow a small distance between the book’s bottom side and the lower margin of the book cradle.

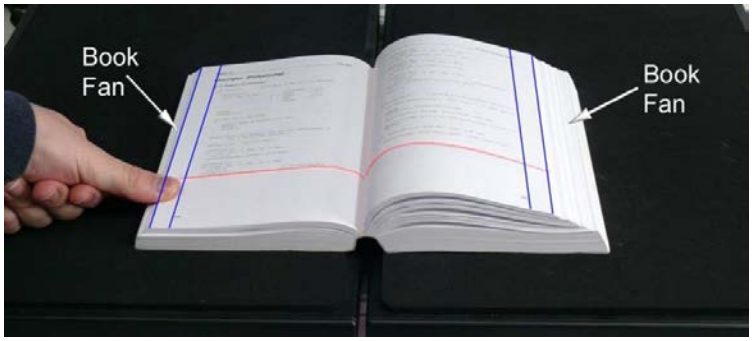
Picture 17: Book at book cradle opened in “V” position

- The distance depends on the thickness of the book. The distance should be at least half of the thickness of the book.
- Align the book parallel to the horizontal red laser line.
- Position the book binding at the lowest point of the book cradles, opened in "V" position.

D.3.2 Finger Positions

Another important criteria for a proper function of the “Finger Removal” function is the position of the fingers when holding the book in a flat position.

- The fingers must be positioned in a vertical area of max 1 inch = 25 mm width measured from the book fan at each side of the book.

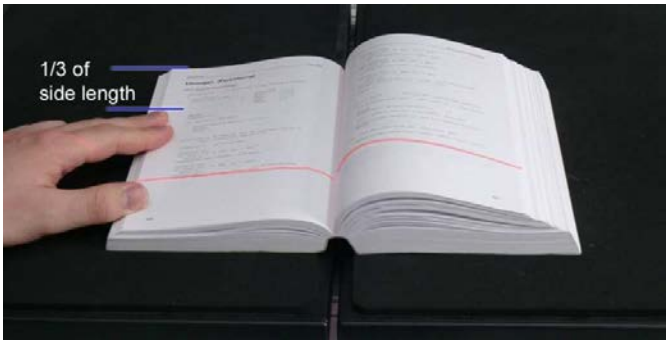


Picture 18: Correct finger position

Picture 18 shows the vertical area marked with blue lines at the left side and the right side of the book.

The book fan area on each side is also marked.

- The fingers must be positioned with a distance of at least a third of the book side length from the upper left corner of the book.



Picture 19: Minimum vertical distance

Holding the book at both sides with one or more fingers is also possible if the above described criteria are kept.

D.3.3 Wrong Finger Positions

Some finger positions can cause malfunction of the “Finger Removal” function.

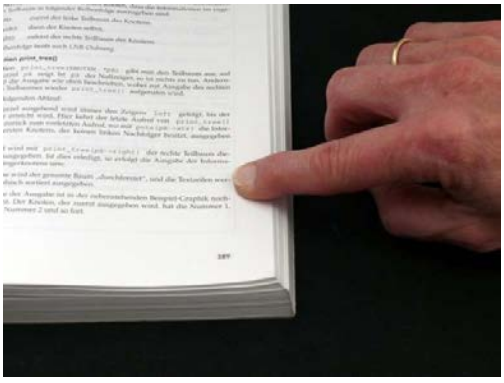
The following chapters show a few examples of wrong and correct finger positions.

D.3.3.1 Distance too small

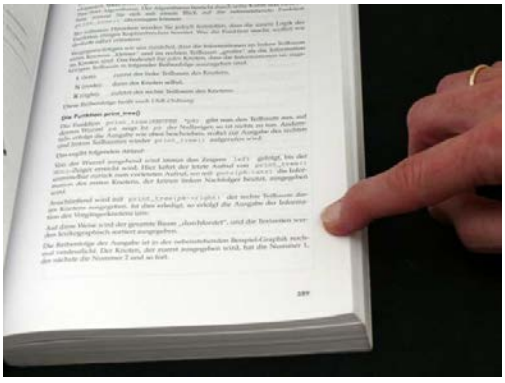
The fingers should be positioned with distance to the text or to graphical elements in the document.

If the distance is too small, the “Finger Removal” function may not remove the fingers from the image or the element (e.g. part of the text) will be removed together with the fingers.

Wrong



Correct

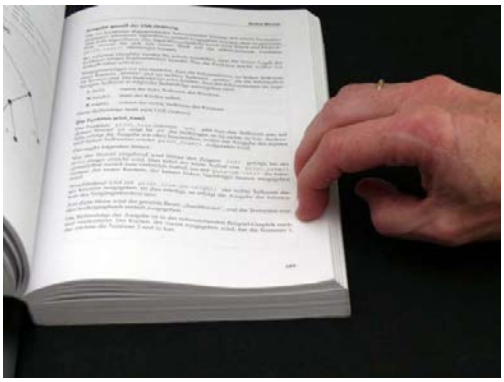


Increase the distance between finger and text or picture.

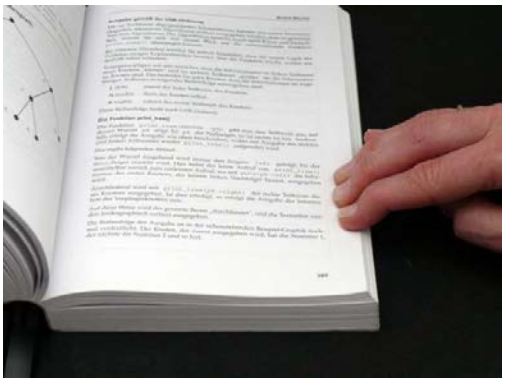
D.3.3.2 Finger position too steep

When the book cradle plates are set to “V” position, the lamps may generate shadows around the fingers if they held too steep.

Wrong



Correct

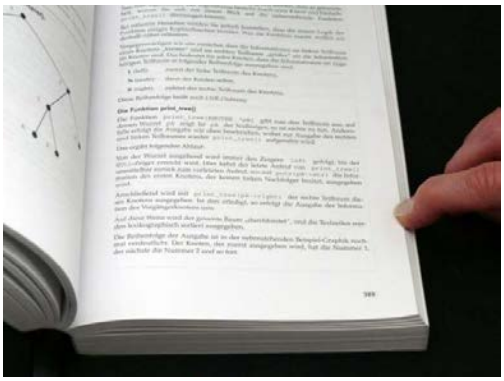


Always place the fingers flat on the edge of the document.

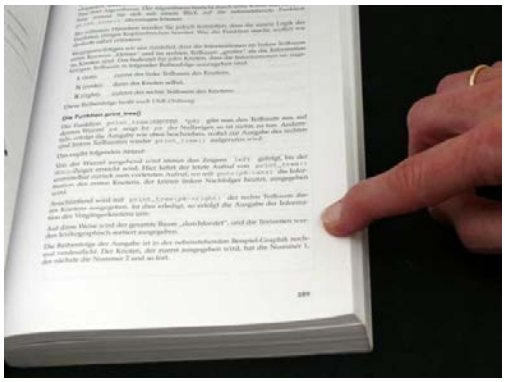
D.3.3.3 Fingers held too close to the margin of the document

When the fingers are held too close to the document's margin, they will **not** be removed by the "Finger Removal" function.

Wrong



Correct



Move the fingers in small steps from the edge of the document to the inside and repeat the scan sequence.

D.3.4 Examples of Finger Removal

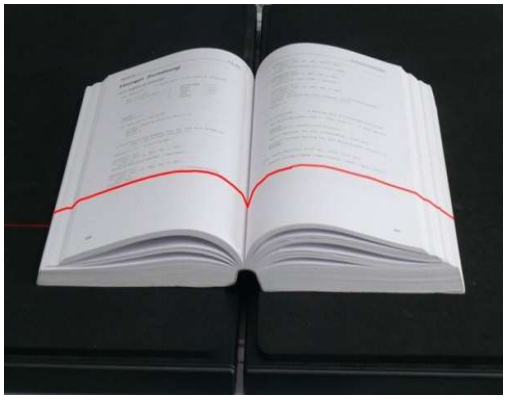
Some examples in the following chapter show the functionality of the “Finger Removal” function. **Finger Removal** is available in all document modes

A requirement is that the scanner is set to **Book Mode** in the ScanWizard application or the external software.

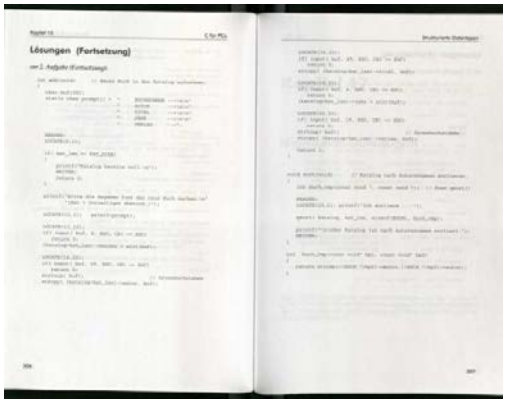
D.3.4.1 Book positioned at the book cradle

Book Mode, Finger Removal Mode: Book Fan

Book position



Scan result



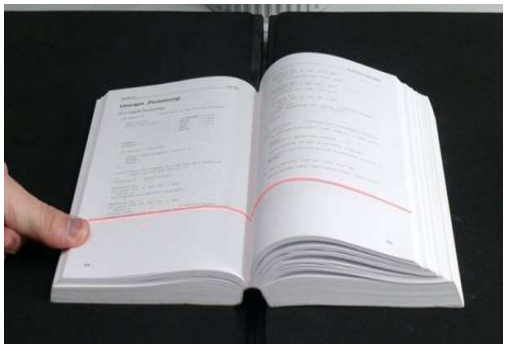
The setting „Finger Removal Mode: Book Fan“ cuts away the left and right book fan from the resulting image and flattens the curvature of the book binding.

D.3.4.2 Single finger holds the book

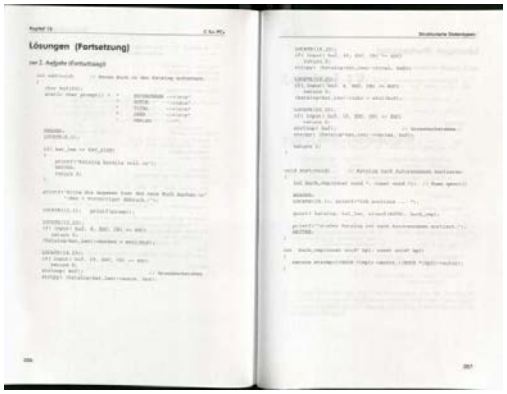
Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto

Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

Book and finger position



Scan result



This setting corrects the resulting image as with the previous setting.

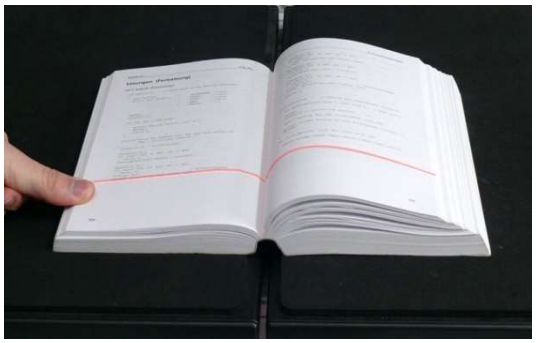
Additionally, the finger contour will be detected. It is eliminated in the image and the finger contour area is filled with a pattern and/or color.

The filling color is automatically taken from the area above and below the finger contour.

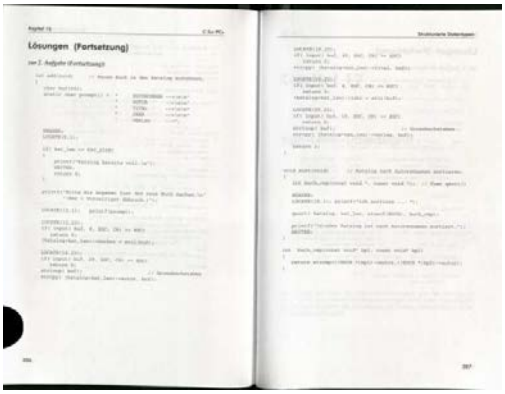
Book Mode, Finger Removal Mode: On, Finger Removal Color: Black

Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

Book and finger position



Scan result



The resulting image now shows the area where the finger contour was detected. The detected area is filled with a solid black color.

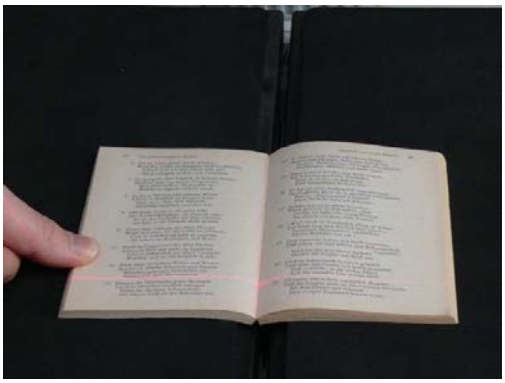
Small book kept flat by single finger

Book Mode, Finger Removal Mode: On, Finger Removal Color: Black

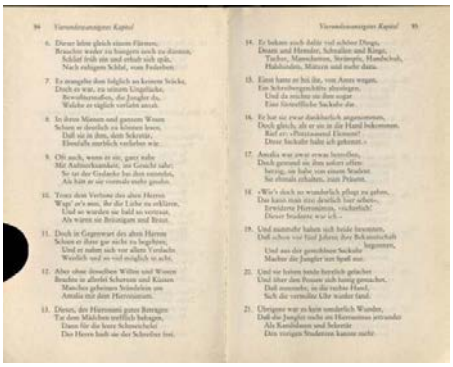
Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

The “Finger Removal” mode works properly with books of different dimensions.

Book and finger position



Scan result



For demonstration purposes, the scan result shows the detected finger contour filled with a solid black color.

Book position on the book cradle:

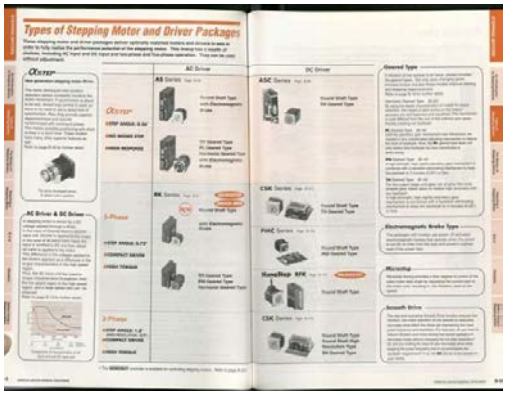
Large book (e.g. catalogue) kept flat by single finger

Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto

Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

Book and finger position

Scan result



The book fan has been removed and the surrounding black area is reduced to a minimum.

The scan result shows a part of the finger in the lower left corner.

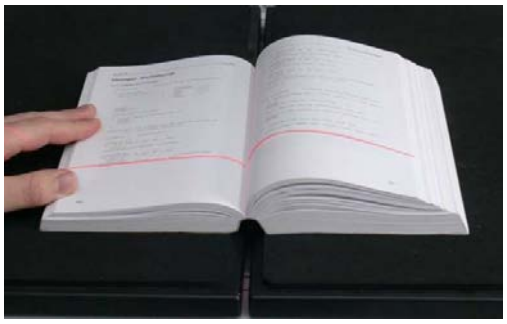
The reason is that the analyzing algorithm detected an area of mixed patterns and colors at the left border of the image. In this case, it is the register of the catalogue.

The finger at the lower left edge was interpreted as part of the register. For this reason, the finger removal was not executed.

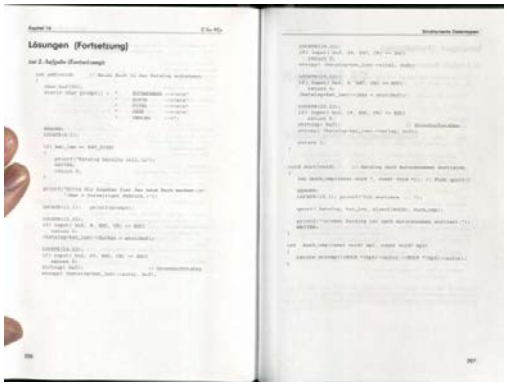
D.3.4.3 Multiple fingers hold the book

Book Mode, Finger Removal Mode: Book Fan

Book and multiple fingers position



Scan result



Small book kept flat by multiple fingers

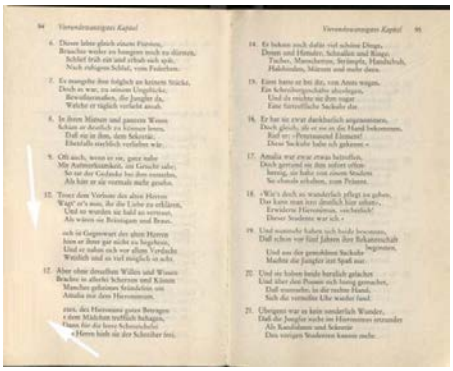
Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto

Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

If parts of the content of the book are covered by a finger or by multiple fingers, the removal function detects the contour and fills the area with the selected fill option.

Book and multiple fingers position

Scan result

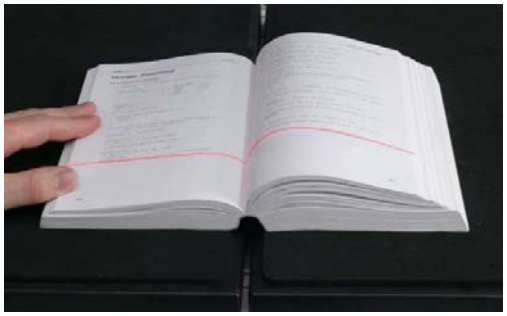


The white arrows in the scan result image mark the area where the finger contours have been filled with automatically defined color.

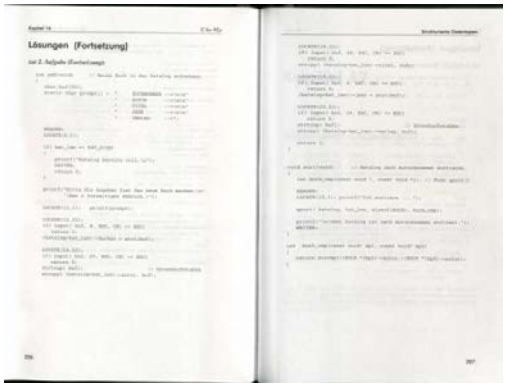
Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto

Note: The **Finger Removal Color** is defined in the ScanWizard user interface.

Book and multiple fingers position



Scan result

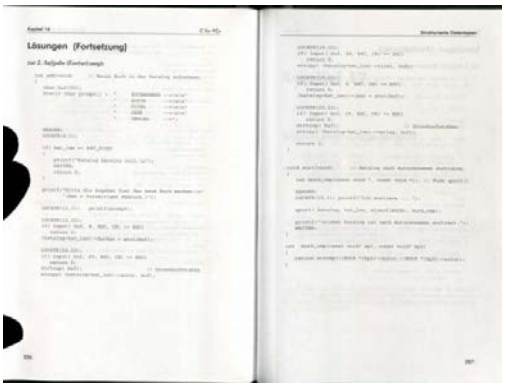


The position of the three fingers has been detected.

The fingers contour is eliminated in the resulting image and filled with a pattern and/or color.

If **Finger Removal Color** is set to **Auto** the filling color and/or pattern is automatically taken from the area above and below the finger contour.

When the detected finger contour is filled with solid black, the result looks like this:



D.3.4.4 Small books with pattern at margin

If a book has small dimensions, the finger removal mode **Book Fan** very often delivers good results without flattening the book by fingers.

Book Mode, Finger Removal Mode: Book Fan

Book position

Scan result

The scan result shows the content of both pages. The curvature of the book binding is flattened and the pattern at the margins has been removed.

Position of the book on the book cradle:

E The Setup Level

The setup level is divided into three access levels. The access levels **Poweruser** and **Admin** are password protected.

The **User** access level allows showing certain information about the system such as power up time, remaining lamp life time or firmware version.

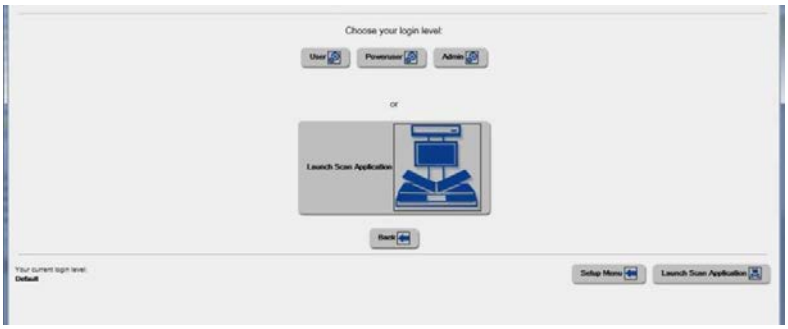
Furthermore, the access level **User** allows setting some basic parameters.

Start your browser and enter the IP address of the scanner to get access to the scanner. The Scan2Net® main menu (see **Fehler! Verweisquelle konnte nicht gefunden werden.**) will open.

The Login Screen

On the start screen, click the button Setup Device.

The next screen shows the login levels User, Poweruser and Admin.



Picture 20: Login screen

Please note: The login levels **Poweruser** and **Admin** are password protected. Only trained technicians should use these levels.

E.1 Access Level User

Click the button User. This will open the below displayed screen.

Picture 21: User screen

The user screen is divided into two sections.

The section **Device Information** shows some details of the scanner and gives general operation information.

The section **User Settings** allows the user to define some basic parameters of the scanner.

The button System Shutdown switches the scanner off.

E.1.1 Device Info

In the section **Device Information**, click the button Device Info and the following list (**Fehler! Verweisquelle konnte nicht gefunden werden.**) will be displayed.

Click the buttons below the headline **Device Info** to get specific scanner information.

Picture 22: Device Info screen

The tables following the keyword show the current status of the Bookeye® 4 scanner.

The most important information for users is the firmware version in the second table.

Picture 23: Firmware information

Other information may be of interest if a service technician is onsite or if the service hotline is called.

To return to the **USER** screen, scroll down completely and click the Back to Main Menu button.

To return to the **Login** screen, click the button Setup Menu

Click the button Launch Scan Application to switch directly to the main screen of the integrated ScanWizard user interface.

E.1.2 Operation Info

In the section **Device Information**, click the button Operation Info and the following list will show various scan counters and elapsed times.

Picture 24: Operation Info screen

The following table provides a brief description of the operation information.

Field	Description
Scan Count	The total number of scans performed since the scanner left the factory. Each CCD scan cycle is counted, regardless of it being a pre-scan or a full scan.
Power Up Cycles	The total number of power up cycles performed since the scanner left the factory. Only the power up cycles are counted which were invoked by the on/off button.
Job count	The total number of job mode activations for scanning.
Operating Time	The total operating time since the scanner left the factory. This is the power on time only, standby time does not count.
Lamp Operating Time	The total lamp operating time since the scanner left the factory.
Remaining Lamp Operating Time	The typical remaining lifetime of the lamps. With normal working conditions, the lamp life is sufficient for the lifetime of the device.

To return to the **USER** screen, click the button Back to Main Menu or click on the "Return" button in your browser.

To return to the **Login** screen click the button Setup Menu

Click the button Launch Scan Application to switch directly to the main screen of the integrated ScanWizard user interface.

E.1.3 User Settings

In the section **User Settings**, click the button User Settings and the following screen will be displayed.

Picture 25: User Settings start screen

The **Power Saving** screen will be displayed as start screen of the **User Settings** section.

Click the links below the headline to set the respective parameters.

To return to the **Login** screen click the button Setup Menu

To return to the **USER** screen (click the button Back to Main Menu.

Click the button Launch Scan Application to switch directly to the main screen of the integrated ScanWizard user interface.

E.1.3.1 Language Selector

Use the function **Language Selector** to set the language for the user interface and the OCR language of the Bookeye® 4 scanner.

Picture 26: Language Selector screen

Click on the selection arrow beside **Language** and a list of available languages opens.

Select the desired language for the user interface with a mouse click.

The setting changes immediately after the selection.

Click the button Back to Main Menu to return to the **USER** screen respectively the button titled in the selected language.

E.1.3.2 File Name

Use the function **File Name** to define a default file name.

Picture 27: File name

When defining the default file name, variables can be used. To see a list of the variables, click the link Wildcard characters.

Picture 28: List of wildcard characters

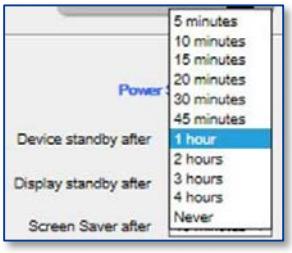
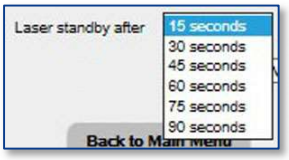
Below the field “File Name”, the defined file name is displayed. To show the file name with the defined variables, reload the page.

E.1.3.3 Power Saving

Click the button **Power Saving** to set the timers for the standby modes and the standby method. The available settings are displayed on the screen.

Picture 29: Power Saving

Click on the selection arrow to open the list of available values for the respective standby mode. The list of available values varies with the selected standby mode.

Standby mode	Available values
Device standby after Display standby after Screen Saver after	
Laser standby after	
Standby Method	

The selection “**Never**” disables the power save function of the respective menu item.

To return to the previous screen click the button Back to Main Menu.

E.1.3.4 Volume

Click the button **Volume** to set the loudspeaker's volume of the scanner.

Picture 30: Volume level

A screen opens and shows a graphic to symbolize the volume level.

Click on the scale to set the volume level or right click with the mouse at the arrow and move the arrow to the desired value while holding the mouse button pressed.

To return to the **Login** screen click the button Setup Menu.

To return to the **USER** screen click the button Back to Main Menu.

Click the button Launch Scan Application to switch directly to the main screen of the integrated ScanWizard user interface.

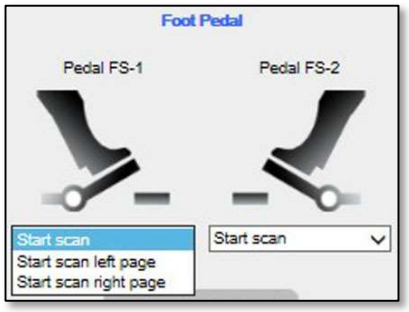
E.1.3.5 Foot Pedal

Click the button **Foot Pedal** to define a function for the foot pedals.

Picture 31: Foot pedal settings

The scanner has connectors on its rear side to connect a foot pedal. The symbol for the second foot pedal will be used in a later firmware version.

Click below the symbol of **Pedal FS-1** or **Pedal FS-2** and select from the drop-down list which action should be executed when the pedal is operated.



Picture 32: Functions for the foot pedal

Drop-down list item	Function
Start scan	Starts the scan with the selected scan area size.
Start scan left page	Starts the scan and displays the left page of the selected scan area size.
Start scan right page	Starts the scan and displays the right page of the selected scan area size.

E.1.3.6 OCR

Click the button **OCR** in order to select the OCR engine from the list.

If there is no OCR engine available, the screen displays a message that no OCR engine has been found.

If no OCR engine is installed, the screen displays a message that no engine is installed.

Picture 33: OCR information

Picture 34: Splitting start page

To return to the **Login** screen click the button Setup Menu.

To return to the **USER** screen click the button Back to Main Menu.

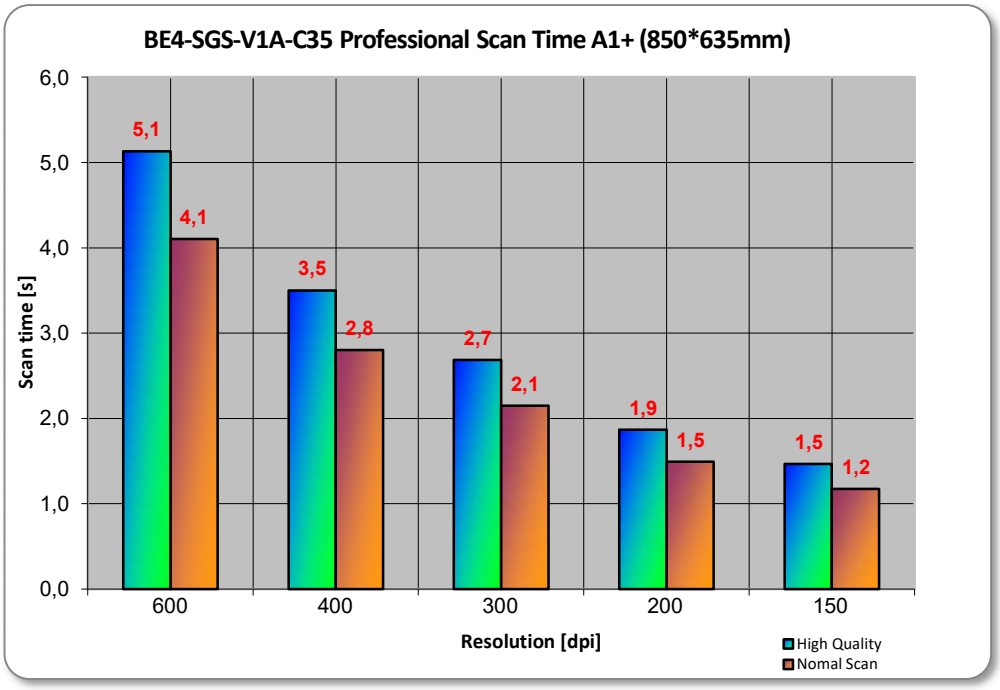
Click the button Launch Scan Application to switch directly to the main screen of the integrated S2N user interface.

F Technical Data

F.1 Scanner Specifications

Scanning Speed

The scanning speed depends on the resolution alone. The Bookeye 4 scanner always scans in full color, even if bitonal image output is selected. This produces the best possible images. The following table shows the scan speed depending on the resolution.



Optical System

Maximum scan area	635 x 850 mm (25 x 33.5 inches) 8% > DIN A1
Scanner resolution	600 x 600 dpi
Pixel dimension	9.3 x 9.3 µm
Minimum document size	100 x 100 mm (4 x 4 inches)
Camera	CCD camera, 45,000 pixels (22,500 Color, 22,500 B&W)
Color depth	48 bit color 16 bit grayscale
Scan modes	24 bit color, 8 bit grayscale, bitonal, enhanced halftone

File Formats	Multipage PDF (PDF/A) and TIFF, JPEG, JPEG 2000, PNM, PNG, BMP, TIFF (Raw, G3, G4, LZW, JPEG), AutoCAD DWF, JBIG, DjVu, DICOM, PCX, Postscript, EPS, Raw data

Illumination System

Light source	White LEDs, tested according to IEC 62471
Warm-up time	None
Temperature dependency	None
UV / IR emission	None
Lamp lifetime	50,000 hours (typ.)

Electrical Specifications

External Power Supply

Voltage	100 – 240 V AC
Frequency	50/60 Hz

Power Consumption

Standby	33 W
Ready to scan, monitor on	< 90 W
Scanning	< 130 W
Fully automatic scan cycle	< 230 W

Dimensions and Weight

Scanner outer dimensions, Book cradles closed (H x W x D)	1700 x 1100 x 960 mm (67 x 43.3 x 37.8 inches)
Weight of scanner	140 kg (309 lbs.)

Ambient Conditions

Operating temperature	5 to 40 °C (40 to 105 °F)
Storage temperature	0 to 60 °C (32 to 140 °F)
Relative humidity	20 to 80% (non-condensing)
Noise level	< 55 dB(A) (Fully automatic scan) < 38 dB(A) Scanning < 33 dB(A) (Standby)