



# Bookeye® 4

V1A Professional

## Operation Manual



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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.

### This manual is divided into sections.

**Section A** contains the safety notes and the safety precautions. These safety precautions must be followed carefully to avoid injury to the user while working with the scanner.

**Section B** describes the scanner hardware and the first steps to take after the device has been delivered. It contains also some maintenance information.

**Section C** describes special functions like “Finger Removal” and “Splitting function” and how to avoid incorrect operation.

**Section D** describes touchscreen operation and the functions of the applications.

**Section E** gives a short introduction and basic information about the new user browser interface ScanWizard. All details about the interface can be found in the integrated “Help” texts in the scanner.

**Section F** informs about the setup levels in general and describes the access level **User** in detail.

**Section G** contains all technical information of the scanner and the manufacturer declarations concerning safety and electromagnetic compatibility (EMC).

## Version History

Version	Published in	Content/Changes/Supplements
	March 2013	<b>Preliminary version</b> for Bookeye 4-V1A Professional.
	July 2013	Preliminary version. Additional information about the glass plate operation modes.
A	August 2013	First version.
B	November 2013	Section C: Content change because of introduction of the new user interface ScanWizard.
B2	December 2013	French translations added for chapters with safety relevant content, with components description, and with description of the first steps. French-language chapters marked with an "F" in the chapter title. Renumbering of some chapters as a result of the mentioned amendments.
B3	March 2014	Copyright note updated.
B4	July 2014	Minor text modifications. Description of 45 degree position modified.
B5	November 2014	Minor modifications in Technical Data table
C	February 2016	Content of the sections reworked, new sections added. Laser warning for laser class 2M added. Chapters in new order. Description of the ScanWizard touchscreen interface added. Technical specifications reworked.

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## A Safety Notes

### A.1 Safety Notes

Read and ensure that you understand the safety notes.

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

Follow all safety notes to avoid damage to the device.

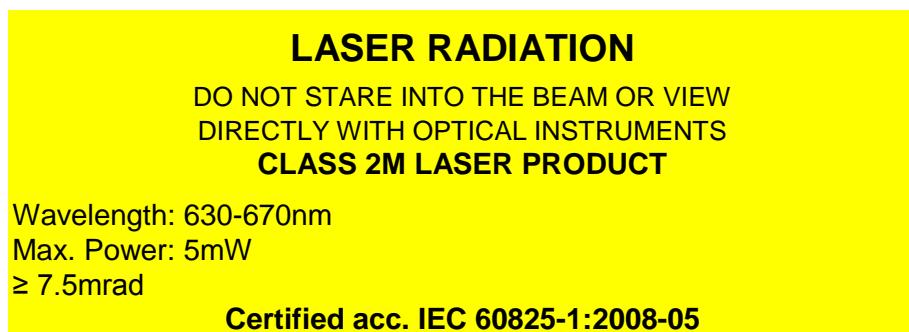
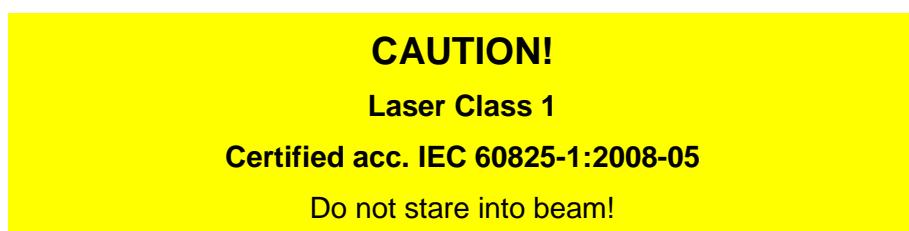
#### A.1.1 Marking of Safety Notes

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.



#### A.1.2 Laser Safety Note



## F-A.1 Notes de sécurité

Lisez ces notes de sécurité et veillez à bien les comprendre.

Ces notes ont été rédigées pour assurer votre protection et votre sécurité.

Respectez toutes les notes de sécurité pour éviter d'endommager le dispositif.

### F-A.1.1 Marquage des notes de sécurité

Toutes les notes de sécurité sont marquées par un panneau d'avertissement.

Vous trouverez une description du risque de sécurité à droite, à côté du panneau d'avertissement.



#### MISE EN GARDE!

<Texte avec description du danger potentiel.>

### F-A.1.2 Marquage des notes de sécurité du laser



#### ATTENTION!

Laser Classe 1

Certifié conformément à IEC 60825-1:2008-05

Ne regardez pas dans le faisceau !



#### RAYONNEMENT LASER

NE PAS REGARDER DANS LE FAISCEAU

NI À L'OEIL NU NI À L'AIDE D'UN

INSTRUMENT OPTIQUE

APPAREIL À LASER DE CLASSE 2M

Longueur d'onde: 630-670nm

Performance max.: 5mW

≥ 7.5mrad

Certifié conformément à 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.

## F-A.2 Précautions de sécurité

**Mise en garde:** Veuillez lire toutes les précautions de sécurité avant de faire fonctionner le scanner. Vous risquez de graves blessures, sur vous-mêmes ou sur autrui, si vous ne savez pas comment vous en servir en toute sécurité.



Pour éviter tout risque d'incendie ou de commotion, **n'exposez pas** cet appareil à la pluie ou à une humidité quelconque.

Respectez toutes les notes de sécurité pour éviter de vous blesser ou d'endommager le dispositif.

1. Des ouvertures sont pratiquées dans le boîtier du scanner pour la circulation de l'air. Ne couvrez ou n'obstruez pas ces ouvertures.
2. Ne placez pas le scanner à proximité d'une source de chaleur ou de froid telle qu'un radiateur électrique portatif, un poêle ou un appareil de climatisation.
3. Ne le placez pas près d'appareils ou de boîtiers électriques émettant une haute tension.
4. Posez toujours le scanner sur une surface stable.
5. Ne posez pas de tasses contenant des liquides ou d'autres objets similaires sur le scanner ou sur les berceaux de livres. Si un liquide est répandu sur le scanner, il risque de l'endommager. Si cela se produit, éteignez le scanner, débranchez le cordon d'alimentation de la prise de courant murale et contactez l'Assistance Technique de Image Access.
6. N'introduisez pas d'objets dans les ouvertures du boîtier du scanner, sauf si l'Assistance Technique de Image Access vous en donne l'instruction.
7. Ne démontez pas le scanner. Si vous êtes obligé de démonter le scanner, veuillez contacter l'Assistance Technique de Image Access.
8. N'utilisez pas le scanner s'il a été endommagé physiquement. Si cela se produit, éteignez le scanner, débranchez le cordon d'alimentation de la prise de courant murale et contactez l'Assistance Technique de Image Access.
9. Le scanner devrait uniquement être utilisé avec l'alimentation électrique qui est fournie avec le scanner. En cas de doute, veuillez contacter l'Assistance Technique de Image Access.
10. Image Access recommande de brancher le scanner sur un climatiseur électrique d'une puissance appropriée.
11. Coupez toujours l'alimentation électrique et débranchez le cordon d'alimentation de la prise de courant murale avant de nettoyer le scanner.
12. Pour ce nettoyage, évitez d'utiliser des solutions, des abrasifs ou des acides quelconques tels que l'acétone, le benzène, le kérósene, des alcools minéraux, de l'ammoniac ou de l'acide nitrique. N'utilisez pas de nettoyants contenant ces produits chimiques.
13. Ne pulvérisez pas de liquides directement sur le scanner. Pulvérisez les liquides de pulvérisation directement sur le chiffon de nettoyage et utilisez-le pour nettoyer le scanner.

## A.3 Certification

All safety requirements of the following standards are fulfilled by the Book**eye**® 4 scanner:

**IEC 60950-1, International Safety Standard for Information Technology Equipment**

**UL 60950-1, Safety for Information Technology Equipment** (US standard)

**CAN/CSA C22.2 No.60950-1, Safety for Information Technology Equipment**  
(Standard of Canada)

**EN 60950-1, Safety for Information Technology Equipment** (European standard)

All approval marks of the above named tests can be found on the type label of the device.

## B      Hardware

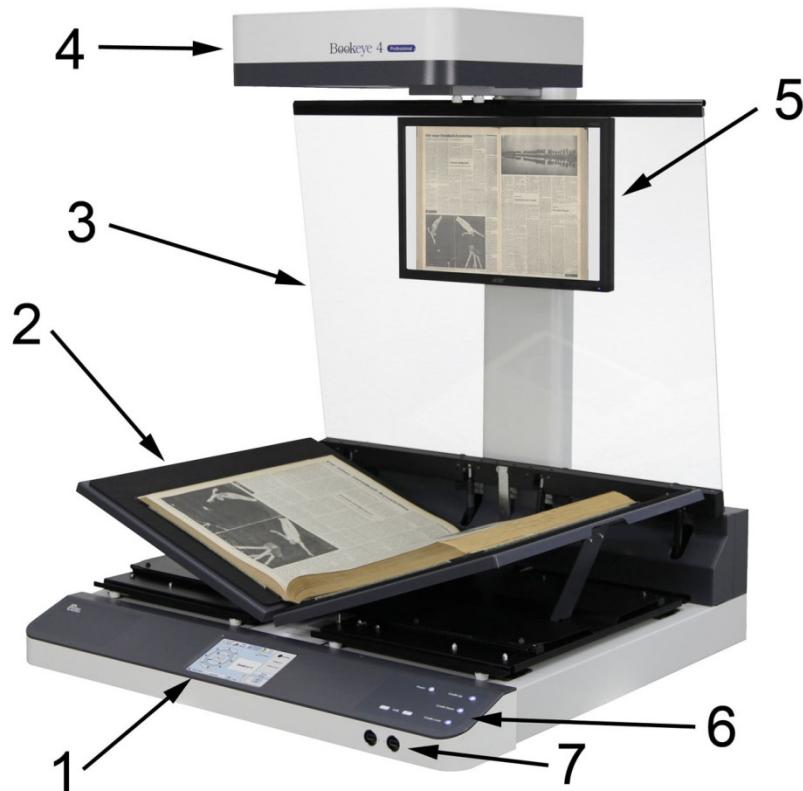
### B.1    Content on Delivery

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

- A folder with four CSTT-2 reference targets
- Three White Reference targets BE4-WA-V1-A
- A foot pedal switch (optional)
- Patch cable, length 3 meters.
- Recovery Key with instructions
- External power supply with power cable

**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.2 Device Overview



**Picture 1: Elements of the Bookeye 4-V1A**

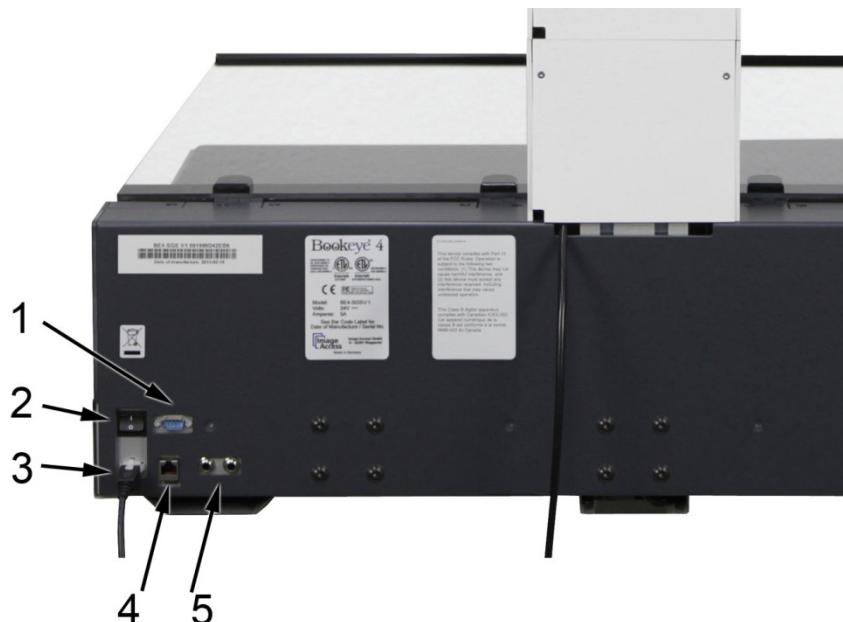
Some of the major components of the Bookeye® 4 scanner have been identified in the above picture. These components are referenced in this operation manual.

The Bookeye® 4 scanner main hardware elements are:

1. 7 inch WVGA touchscreen: The touchscreen shows all menus and provides access to all functions directly from the scanner.
2. 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 degree.
3. Glass plate. Flattens the curvature of book binding and ensures a continuous focus level. The glass plate is held in two positions by gas springs.
4. Camera head. The camera head contains the camera, the red line laser, and the lamps.
5. 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.
6. Front panel. On the front panel there are two USB ports, the "Power" button and the book cradle control keys.
7. Two USB connectors for external storage media.

### B.2.1 Connectors on the Rear Side

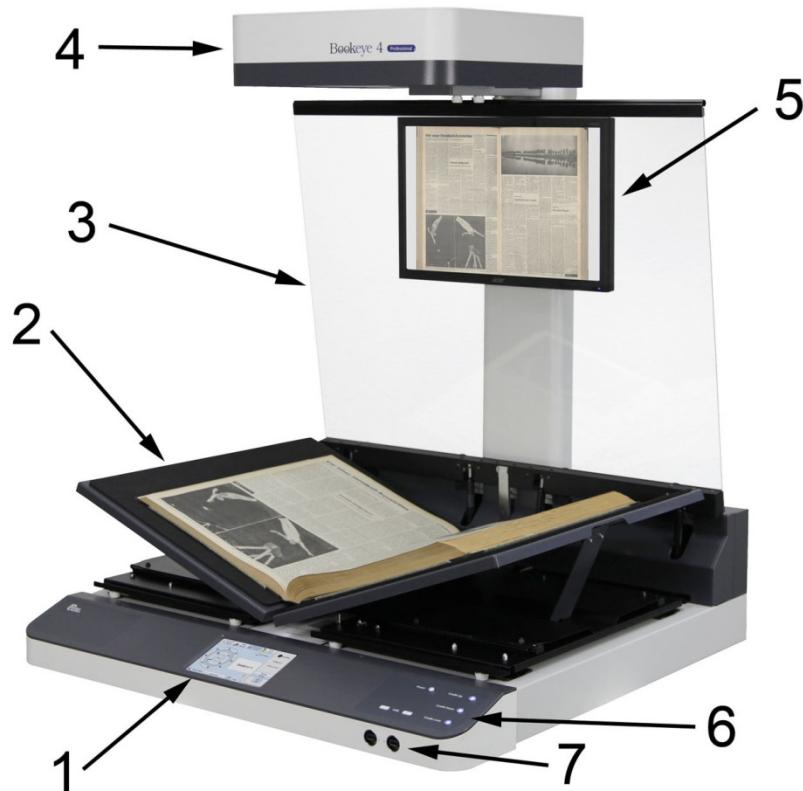
For easy orientation, the connectors found on the rear side of the scanner are depicted in the following picture and described below.



**Picture 2: Connectors on the rear side**

1. Connector for Recovery key.
2. Main power switch. Set the main power switch to position I to set the Bookeye® 4 scanner to standby mode.
3. Connector for external power supply.
4. Network connector. Insert a network cable for access to the scanner via the integrated Scan2Net® user interface.
5. Two foot pedal connectors.

## F-B.1 Aperçu du dispositif



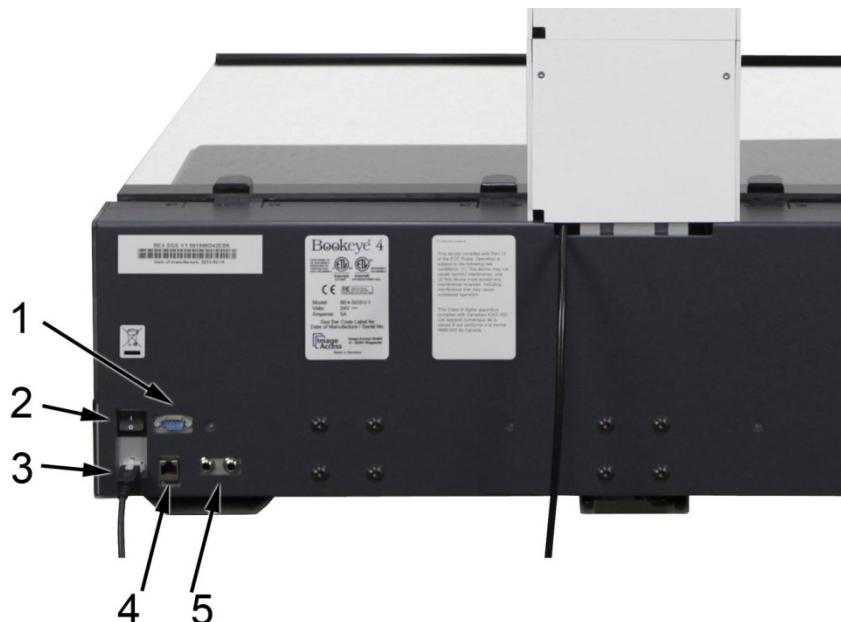
**Photo 1: Eléments du Bookeye 4**

Certains des éléments essentiels du scanner Bookeye® 4 ont été identifiés sur la photo ci-dessus. Ces éléments sont des références dans ce manuel d'utilisation.

1. Ecran tactile : L'écran tactile affiche tous les menus utilisés pour paramétriser et commander le scanner Bookeye® 4.
2. Berceau de livre en forme de V. Peut être fixé en position plate ou replié en V pour numériser un livre ouvert à 140°.
3. La plaque de verre. Aplatit la courbure de reliure et assure un niveau de focalisation en continu. La plaque de verre est maintenue à deux positions par ressorts pneumatiques.
4. Tête de caméra. La tête de caméra contient la caméra, le laser à réticule de lumière rouge, et les lampes.
5. Ecran plat TFT. Affichage l'image numérisée. Toutes les modifications d'une image, par ex. le mode de couleur ou la taille de numérisation, seront immédiatement affichées sur l'écran plat TFT.
6. Panneau frontal. Le panneau frontal comporte deux ports USB, le commutateur de marche/arrêt et l'écran tactile.
7. Deux ports USB. Utilisable pour connecter des supports de données externes.

### F-B.1.1 Connecteurs sur le côté arrière

Pour faciliter l'orientation, les connecteurs du côté arrière du scanner sont illustrés sur la photo ci-après et décrits ci-dessous.



**Photo 2: Connecteurs sur le côté arrière**

1. Port série / connecteur de la clé de récupération.
2. Interrupteur électrique principal. Amenez l'interrupteur électrique principal sur la position **I** pour régler le scanner Bookeye® 4 sur le mode de veille.
3. Connecteur d'alimentation électrique extérieure.
4. Connecteur de réseau. Introduisez un câble de réseau pour accéder au scanner par l'interface utilisateur Scan2Net intégrée.
5. Connecteur à pédale.

## B.3 Connecting the Power Source

Before connecting the scanner to the external power supply and the power supply to the electrical outlet, 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 external power supply and the main power switch are both located at the right side of the rear side of the scanner.

After the power source is connected and the main power switch is turned on, the symbol in the “Power” button lights up.

Red illumination of the “Power” button signals that the Bookeye® 4 is in standby mode.

### B.3.1 Starting the Bookeye® 4

Push the illuminated “Power” button to start the scanner.



Picture 3: Keyboard with Power button

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 WVGA color touchscreen.

At the end of the start-up sequence, the touchscreen displays the start screen.

### B.3.2 Switching the Bookeye® 4 to Standby Mode

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



Press and hold the power 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 touchscreen show the scanner name and version and a progress bar.

The power down sequence will take a few seconds.

Finally the TFT flat screen and the touchscreen switch off and the “Power” button will be illuminated red.

## F-B.2 Raccordement à l'alimentation électrique

Avant de raccorder le scanner à l'alimentation électrique extérieure, et donc à la prise de courant, vérifiez les points suivants:



Veillez à ce que la prise de courant soit en parfait état et qu'elle est correctement mise à la terre.



Veillez à ce que la prise de courant soit munie d'un fusible d'une capacité adéquate.



La prise de courant doit être à proximité de cet appareil et aisément accessible.



Inspectez le câble d'alimentation et veillez à ce qu'il ne soit pas endommagé.  
Utilisez uniquement le câble d'alimentation fourni avec le scanner.



Eteignez l'appareil avant de brancher ou de débrancher un câble.

Le connecteur de l'alimentation électrique extérieure et le commutateur électrique principal se trouvent tous deux du côté droit à l'arrière de la vitre d'exposition.

Une fois que la source d'alimentation est raccordée et que l'interrupteur électrique principal a été allumé, le symbole du bouton de marche/arrêt s'allume.

Lorsque le bouton de marche/arrêt s'allume en rouge, cela signifie que le Bokeye® 4 est en mode de veille.

### B.3.3 Mise en marche du Bookeye® 4

Appuyez sur le bouton "Power" pour éteindre le scanner sous tension.



Photo 3: Clavier avec le bouton "Power"

La lumière de ce bouton devient bleue.

Le scanner démarre par des procédures d'auto-test et vérifie tous les composants du système. Des messages d'état seront affichés sur l'écran plat TFT et sur l'écran tactile.

A la fin de la séquence de démarrage, l'écran tactile affiche l'écran de démarrage.

#### F-B.2.1 Commutation du Bookeye® 4 sur le mode de veille

**IMPORTANT:** Quand vous utilisez le Bookeye® 4 dans des conditions de travail, il devrait uniquement être allumé et éteint par le panneau tactile !



Appuyez sur le bouton de marche/arrêt et restez appuyé dessus pendant au moins trois secondes. Pendant que vous appuyez sur le bouton, un "clic" devient audible.

Le contenu de l'écran plat TFT et de l'écran tactile change et vous voyez s'afficher le message : **Arrêt imminent de l'appareil ...**

Pour finir, l'écran plat TFT et l'écran tactile s'éteignent et le bouton de marche/arrêt s'allumera en rouge.

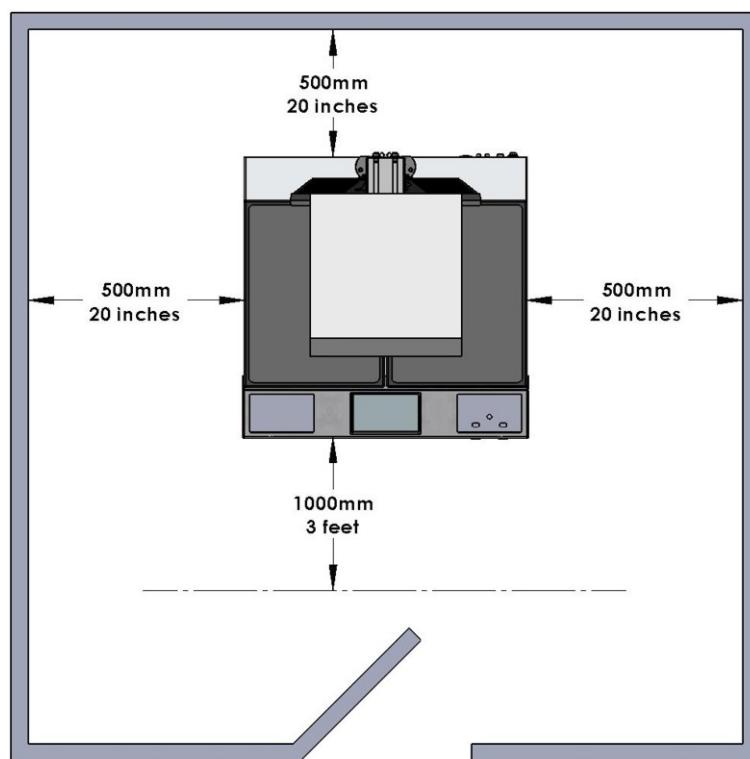
## B.4 Device Location

### B.4.1 Environment

Choose a location that complies with the temperature and humidity specifications. For detailed information on these specifications, see the chapter F-F.3.

Please allow

- a minimum distance of 500 mm (20 inch) from any side walls,
- a minimum distance of 500 mm (20 inch) from a back wall,
- a minimum distance of one meter (3 feet) from any door or entrance way.



**Picture 4: Minimum distance between Bookeye and walls**

Do not operate the scanner in an area that has poor air circulation, and/or that is non-ventilated.

Place the Bookeye® 4 scanner on a flat and solid base. The load bearing capacity of the base must correspond to the device weight.

The dimensions of the base must match with the floor space required by the scanner.

**Please note:** Before using the Bookeye® 4 scanner in the new environment allow at least one hour for temperature adaptation.

What does “temperature adaptation” means?

A fast change from cold to warm environmental conditions can build up condensation inside the housing. This will result in unfavorable scanned images and could cause permanent damages to the unit.

## B.4.2 Ambient Light

The Bookeye® 4 location should have a controlled ambient light situation. The light scenarios should avoid direct sunlight or spot light from light beams.

Also light sources that cause sharp shadows on the document on the book cradles or high levels of ambient light could influence the scan result negative.

The Bookeye® 4 scanner is an open system with a built-in high quality light source. Open system means that the ambient light is added to the light seen by the camera.

Summary of a recommended location for a Bookeye® 4 scanner:

- The location is not exposed to daylight.
- It is evenly illuminated from the ceiling with fluorescent lamps with electronic ballasts. The light intensity measured on the book cradles should be approximately 300 lux.
- The light should not cause any shadows; therefore the variation of the intensity across the scan area should be kept below 20%.

If the fluorescent lamps are powered by non-electronic ballasts, they will produce a flicker twice the frequency of the main power supply (100Hz or 120Hz). If the intensity of this light becomes too high, vertical stripes of even distances of approx. 8-12 pixels will be visible on the scan.

Direct sunlight will vary over the day and will result in overexposed images. Sunlight can also produce distinct shadows.

Light beams from spotlights will also produce distinct shadows. In most cases, they emit a high level of infrared light. Infrared light is not visible to the human eye but to the camera. The light source of the Bookeye® 4 scanner itself has no infrared content at all, which means that the scanner does not have an image quality degrading infrared filter. Too much infrared content will result in overexposure.

The Bookeye® 4 scanner has an integrated “White Balance” function. This function will compensate ambient light influences. A “White Balance” calibration is recommended when the light scenario has changed.

## B.6 Maintenance

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

### B.6.1 Touchscreen

The touchscreen can be cleaned with a micro fiber cloth.

Before cleaning the touchscreen, switch the Bookeye® 4 scanner off and set the main power switch to position **0**.

### B.6.2 Surfaces

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

### B.6.3 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.

## B.7 Repair

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

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

## B.9 Book Cradles

The Bookeye® 4 V1A scanner has a motorized book cradle which can be operated in two modes.

Either in flat position ...



**Picture 5: Book cradles in flat mode and closed**

... or in V position.



**Picture 6: Book cradles in V mode and closed**

The V position is recommended for very delicate, old documents. The opening angle between the book cradle plates is 140 degrees.

When the book cradles are lifted to the "V" position, they are held by a supporting leg on each side.

In the "V" position the plates can also be shifted horizontally from each other.

## B.10 Glass Plate Functionality

### B.10.1 In General

**Note:** For security reasons, the opening force of the glass plate is limited.

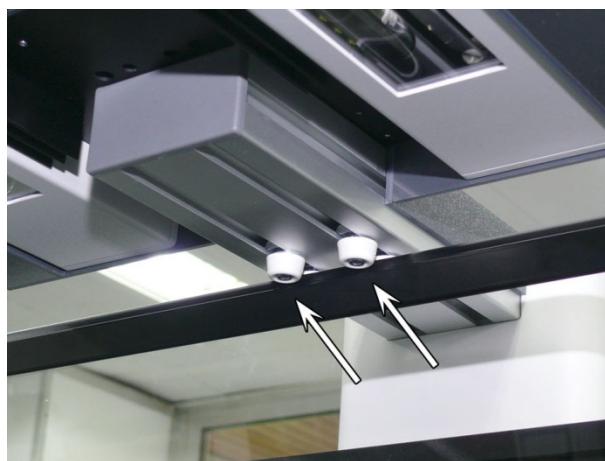
### B.10.2 Glass Plate Positions

The glass plate has three positions.

#### B.10.2.1 Transport lock position

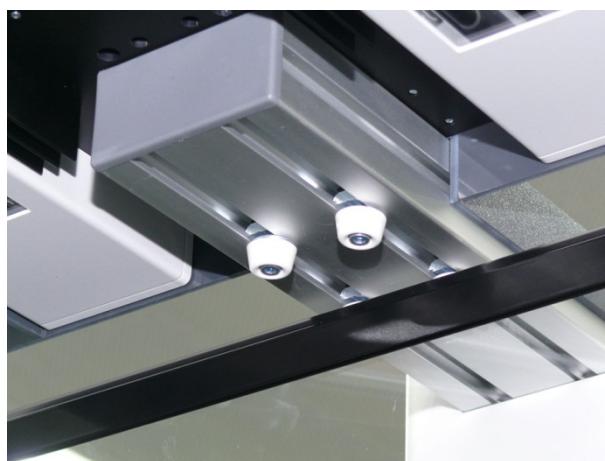
When the scanner is delivered, the glass plate is fixed in its fully up position by two transport locks (two rubber bumpers).

The transport locks are positioned at the bottom side of the upper part of the camera neck, near the camera head. When the transport locks are in place, the glass plate cannot be lowered.



**Picture 7: Loosen the transport locks**

Loosen the transport locks by turning it counterclockwise. A tool is not necessary. Slide the transport locks a little to the camera head direction. Finally fasten the transport locks by hand again.



**Picture 8: Transport locks opened**

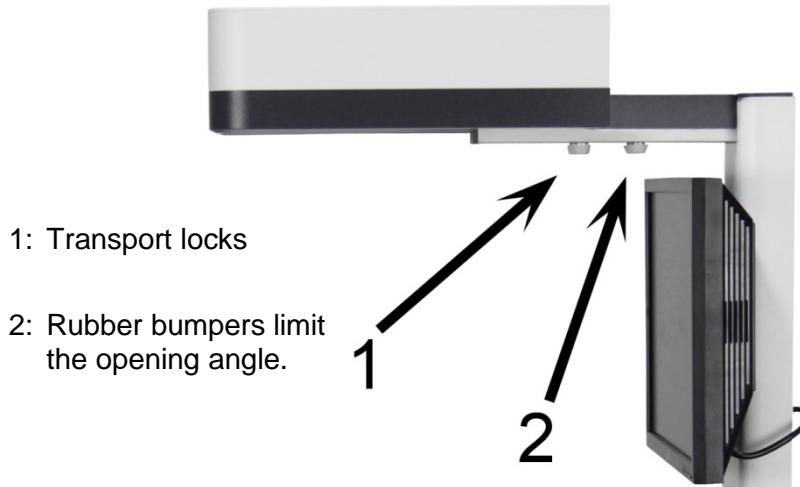
### B.10.2.2 Fully up position



**Picture 9: Glass plate completely opened**

At the bottom side of the camera neck are four rubber bumpers located. The rubber bumpers in front are the transport locks (see chapter B.10.2.1).

The two rubber bumpers in the back protect the TFT flat screen and limit the movement of the glass plate.



**Picture 10: Transport locks and rubber bumpers**

The two rubber bumpers may need adjustment from time to time.

The tool needed to unlock them is an Allen wrench, size 4 mm.

Unlock the rubber bumpers in the back just a little and adjust the position

The position should be set in a way, that the distance between glass plate und the lower edge of the TFT flat screen is at least five millimeters.

Finally fasten the rubber bumpers again with the Allen wrench.

### B.10.2.3 The 45 degree angled position

The glass plate can be stopped by the operator in the 45 degree position.

When stopped, the glass plate will be hold in this position.

This is a stable position and the recommended working position when scanning with the glass plate.



Picture 11: Glass plate opened in 45 degree position

## B.11 Operating the motorized book cradle

### B.11.1 The Cradle Lock Button

**Off:** If the button light is off, the magnetic lock function is turned off

**Blue:** If the button light is blue, the magnetic lock function of the glass plate is activated.

**Red:** If the button light is red, the magnetic lock is engaged and the glass plate is held in the closed position.

If the “Automatic mode” (see chapter B.12.1) is selected, the scan sequence starts automatically.

### B.11.2 The Cradle Up / Cradle Down Buttons

To move the book cradle to the desired position, press and hold the

- **Cradle Up** button to lift the book cradle plates,
- **Cradle Down** button to lower the book cradle plates.

Depending on the weight of the document placed on the book cradle, e.g. book or catalogue, lifting of the book cradle plates starts at the side with the lighter load.

While moving the book cradle plates, the illumination in the respective buttons changes from blue to red.

When the button is released the illumination returns to blue.

When both book cradle plates have been lifted completely, the motor stops.

**Note:** If there is no weight on the cradles, the operator has to press down the cradle plates manually while holding the “Cradle Down” to get them down completely.

## B.12 Glass Plate Operating Modes

The Bookeye® 4 scanner has two operation modes for the glass plate:

- Manual mode
- Automatic mode.

### B.12.1 Setting the Operation Modes

The scanner starts with the operation mode which was set before it was powered-down.

To toggle between the modes, press and hold the **Cradle Lock** button (Picture 12) until the **Cradle Up** and **Cradle Down** buttons blink.

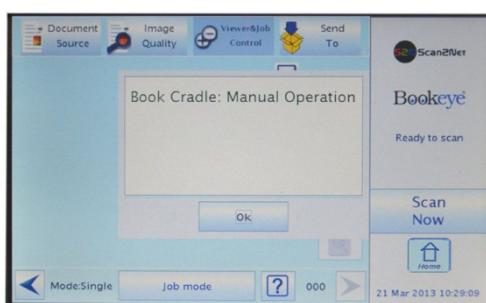


**Picture 12: Setting the book cradle mode**

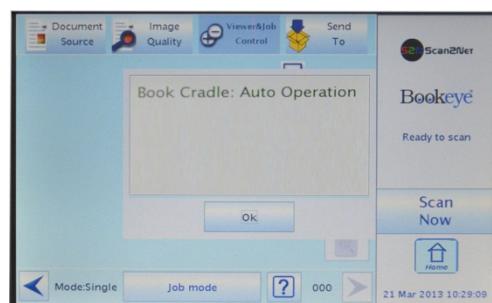
If both buttons blink in blue, the operation mode is set to automatic operation.

If both buttons blink in red, the operation mode is set to manual operation.

The current setting is also shown briefly (for approximately two seconds) on the touchscreen. (see pictures below).



**Picture 13: Manual operation**



**Picture 14: Automatic operation**

If the operation mode is set to automatic operation, the scan sequence starts automatically when the glass plate is closed. In the setup level **User** a delay between closing the glass plate and scan start can be defined.

It is recommended to set the operation mode to manual mode, before starting a scan job.

## B.12.2 Manual Mode

While working with the Bookeye® 4 scanner in manual mode, the **Cradle Lock** button only signalizes if the magnetic lock is activated (blue) or not (not illuminated).

The glass plate will be held in closed position until

- a scan sequence is started and finished or
- the **Cradle Lock** button is pressed and the magnetic lock releases.

## B.12.3 Automatic Mode

To increase productivity, the automatic mode is recommended.

Automatic mode differs from the manual mode in one point. After the glass plate is closed and the magnetic lock is engaged, a scan sequence is triggered automatically with the defined settings.

Position the document as described in chapter B.12.4.

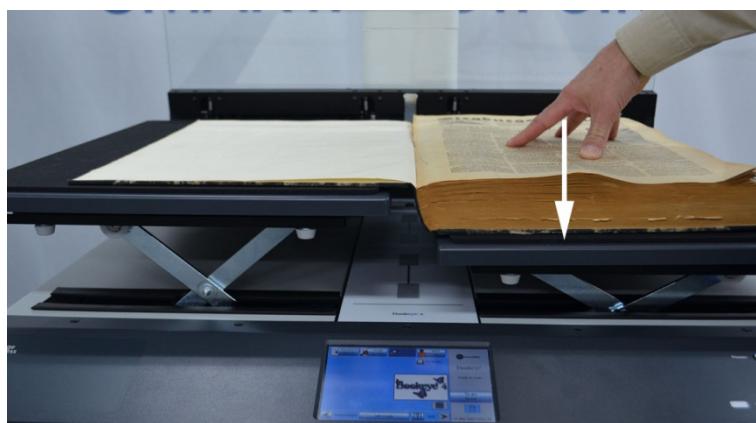
To activate the automatic mode, press down and hold the **Cradle Lock** button until the **Cradle Down** and **Cradle Up** buttons blink and illuminated in blue.

In automatic mode, the glass plate lock releases after each scan automatically and the glass plate moves to the 45 degree position.

The delay before the scan sequence starts can be defined by the administrator in the setup level **User** in the Scan2Net® user interface of the scanner.

### B.12.3.1 Manual adjustment of the height of the book cradle plates

If the book cradle plates should be positioned at different heights, they can manually be moved by pressing at one of the plates.



Picture 15: Pushing one side lifts other side simultaneously

#### B.12.4 Working with the Book Cradle Plates

The book cradles can be moved up and down by using the **Cradle Up** and **Cradle Down** buttons.

Place the document, e.g. a book, on the cradle plates and open the cradle plates until the book spine can freely move between the book cradle plates.



**Picture 16: Book cradle plates opened**

When setting the height of the book cradle plates, the target is to have both sides of the book on nearly the same height before closing the glass plate. Picture 16 shows an example.

If the height between the left and the right side differs (see Picture 17), the height of the book cradle plates can be moved manually.



**Picture 17: Book prepositioned at book cradle**

The plates of the book cradle move simultaneously in opposite directions. That means, if one plate is lowered, then the other plate lifts automatically.

Push the book cradle down manually until both sides of the document are at the same height.



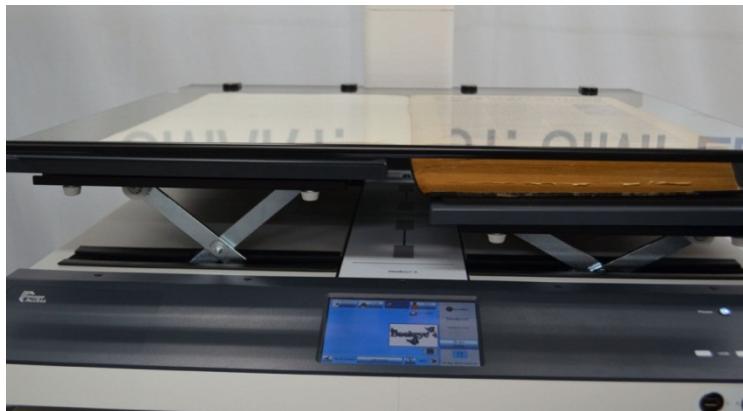
**Picture 18: Lowering the book cradle**

Activate the magnetic lock of the glass plate by pressing the **Cradle Lock** button. The button is illuminated in blue

Move down the glass plate until the cradle lock engages.

When the cradle lock engages, you will hear a “click” sound and the **Cradle Lock** button turns red.

If necessary, move the cradle plates up or down in small steps with the control buttons to optimize the document's position below the glass plate.



**Picture 19: Glass plate closed**

The cradle lock has a limited force for security reasons.

After successfully adjusting the book cradle height and the appropriate pressure, the cradles support the weight of the book. The cradle plates can now be rocked up and down without the motor being involved.

While scanning, the glass plate holds the same pressure on the book with respect to the glass plate, keeps the book height at the same level, and keeps the same distance between the book and the camera.

Touch the **Scan Now** button on the touchscreen to start the scan sequence.

After scanning, the glass plate lock releases and the glass plate opens. It can be stopped by the operator in the 45 degree position.

The only interaction necessary while scanning through the book is applying light manual pressure on one of the book sides to keep it in equal distance to the glass plate. This is not always required because when the glass plate is closed for the next scan, the cradle plates move automatically to a proper position.

## C Special Function

### C.1 The “Finger Removal” Function

#### C.1.1 Position of Document

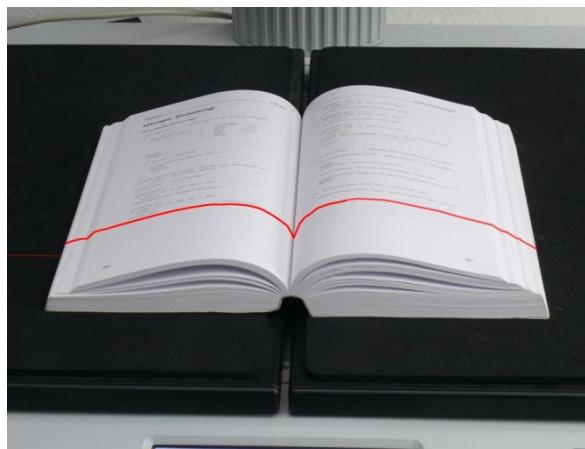
The Bookeye® 4 scanner offers a helpful function which detects fingers at the margin of books and eliminates them from the image. This is the “Finger Removal” function.

The following easy-to-understand requirements must be fulfilled to operate the Bookeye® 4 using the “Finger Removal” function properly:

The book cradle can be set to “V” position or in flat position.

Place the book as shown in Picture 20 or Picture 21 on the book cradle.

**Please note:** The following pictures show an earlier version of the Bookeye 4-V2 scanner housing.



**Picture 20: Book at book cradle in flat position**



**Picture 21: Book at book cradle opened in “V” position**

The distance depends on the thickness of the book. The distance should be at least the half of the thickness of the book.

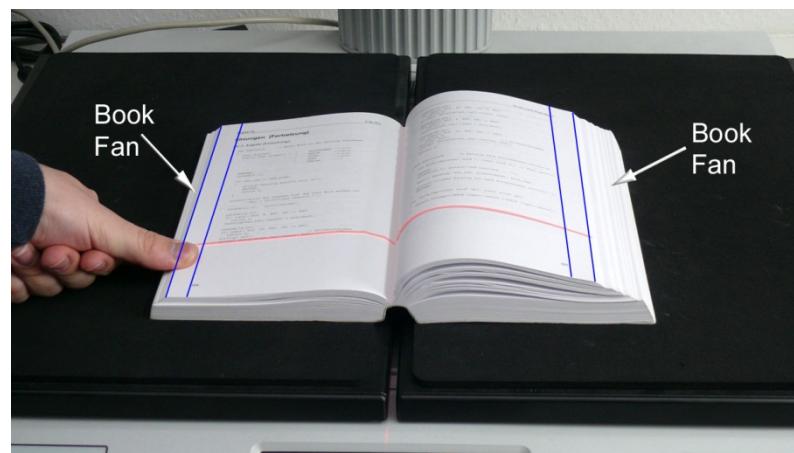
The book must be aligned parallel to the horizontal red laser line.

The book fold area must be placed below the vertical red laser line.

### C.1.2 Finger Positions

Another important criterion for a proper function of the “Finger Removal” function is the position of the fingers which hold 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.

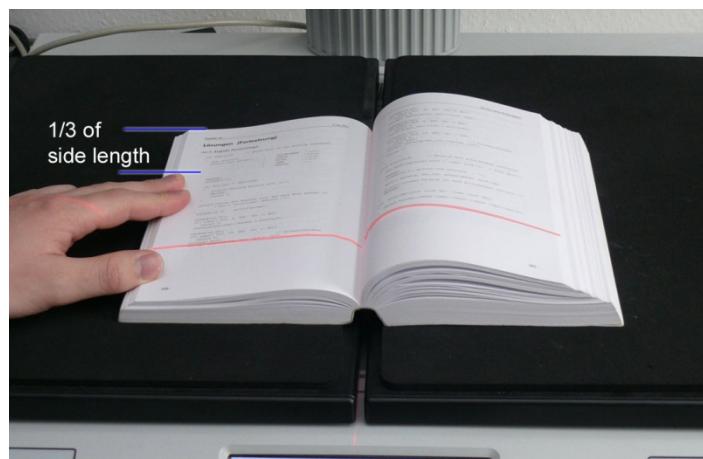


**Picture 22: Correct finger position**

Picture 22 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 23: Minimum vertical distance**

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

## C.1.3 Wrong Finger Positions

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

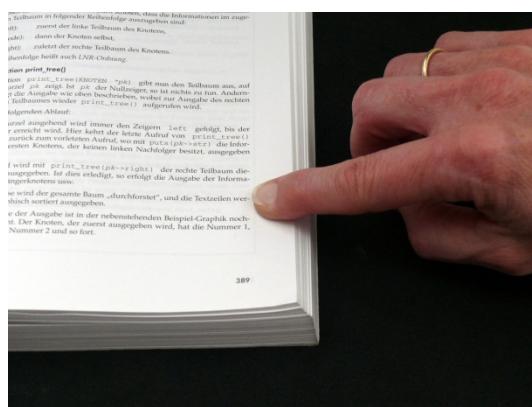
The following chapters show a few examples of wrong and correct finger positions.

### C.1.3.1 Distance too small

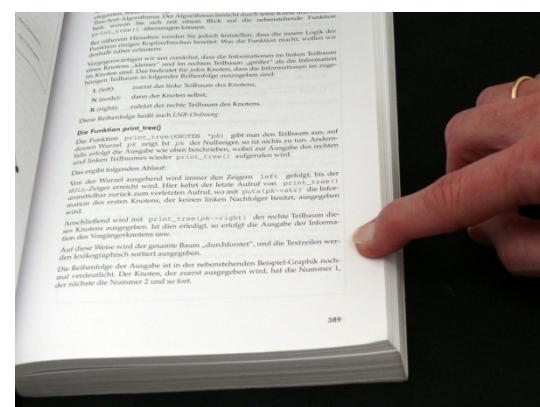
The fingers should be positioned with distance to the text or to graphical elements in the document.

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**

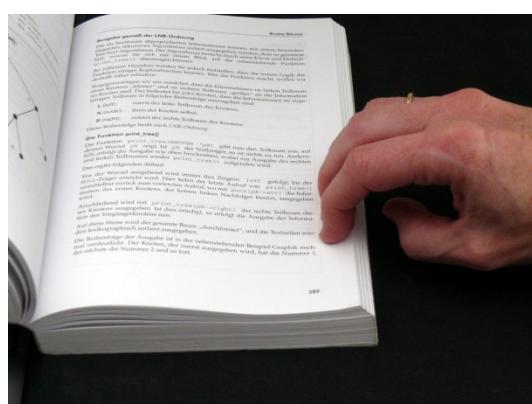


Increase the distance between finger and text or picture.

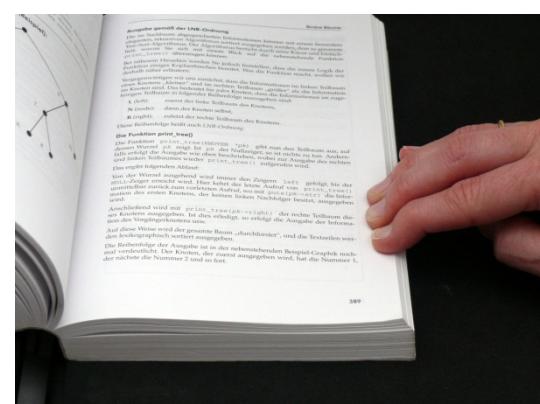
### C.1.3.2 Finger position too steep

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**

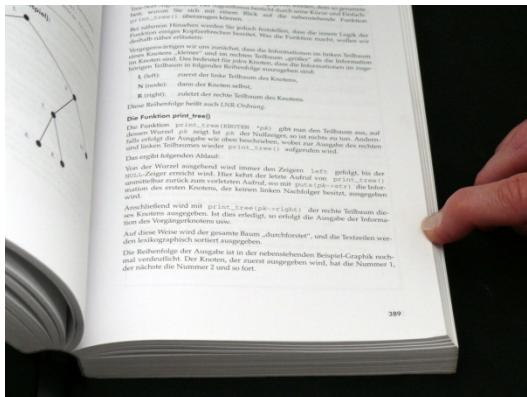


Always place the fingers flat on the edge of the document.

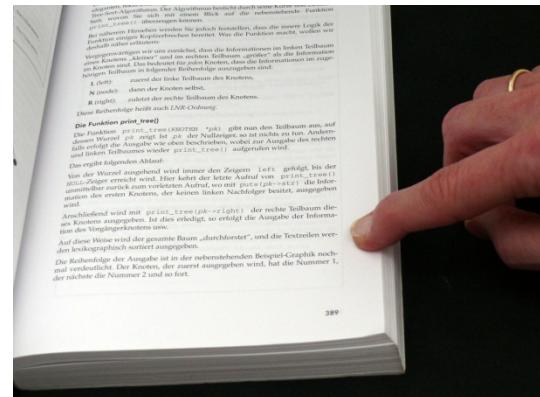
### C.1.3.3 Fingers hold too close to the margin of the document

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

**Wrong**



**Correct**



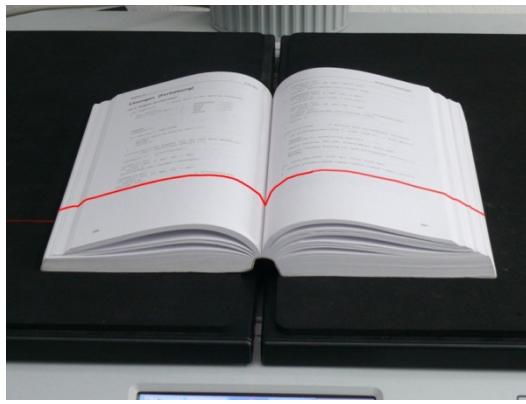
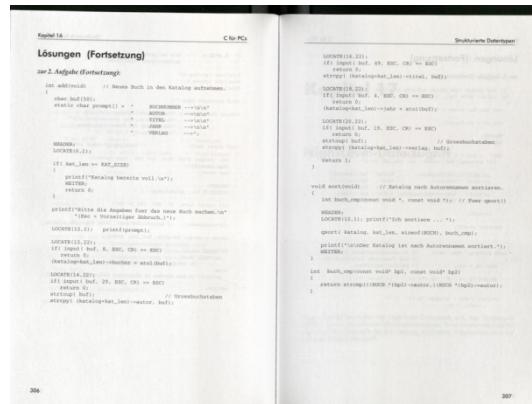
Move the fingers in small steps from the edge of the document to the inside and repeat the scan sequence.

## C.1.4 Examples of Finger Removal

Some examples in the following chapter show the functionality of the “Finger Removal” function. A requirement is that in the ScanWizard user interface or in the kiosk application (see chapter D.3.3.1 and D.3.3.1.3) the scanner is set to **Book Mode**.

### C.1.4.1 Book positioned at the book cradle

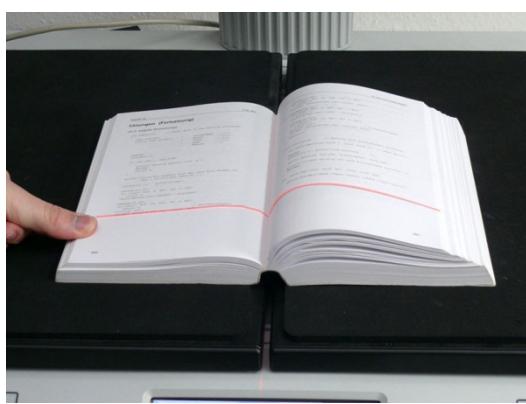
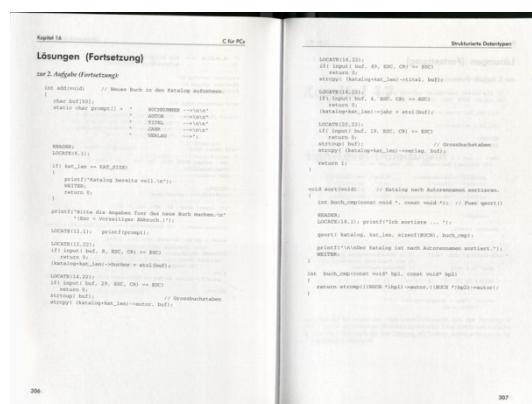
**Book Mode, Finger Removal Mode: Book Fan**

<b>Book position</b> 	<b>Scan result</b> 
--	---

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.

### C.1.4.2 Single finger holds the book

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

<b>Book and finger position</b> 	<b>Scan result</b> 
--	--

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

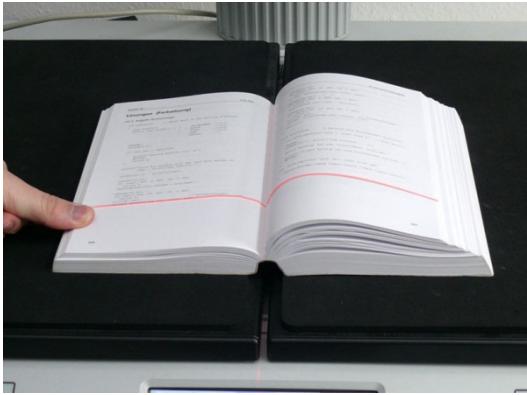
Additionally the finger contour will be detected. It is eliminated in the image and the finger contour area is filled with a pattern and/or color.

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

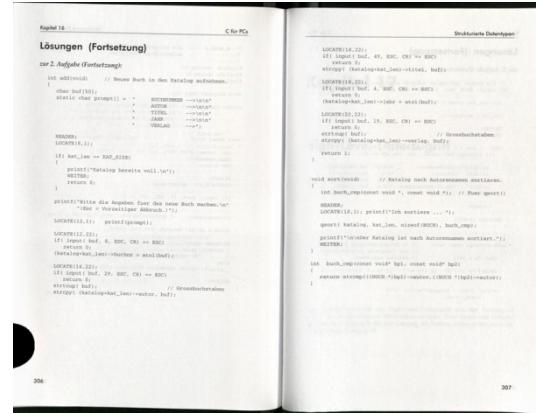
## Book Mode, Finger Removal Mode: On, Finger Removal Color: Black

**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 massive black color.

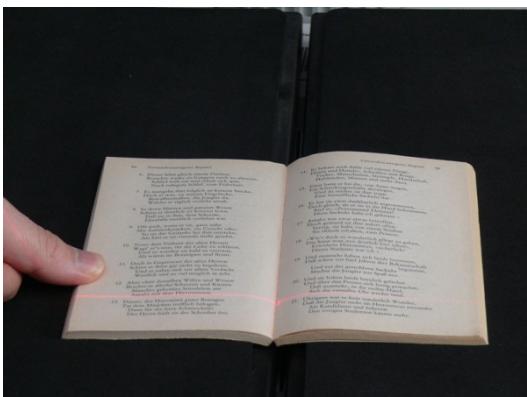
## Small book kept flat by single finger

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

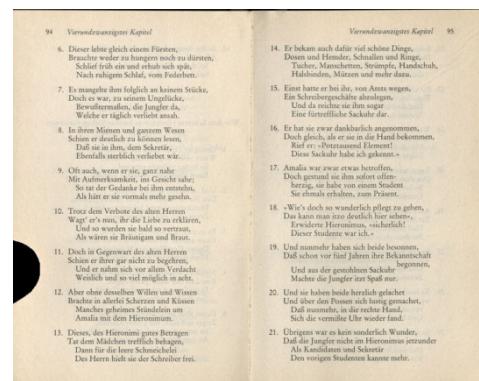
**Note:** The Finger Removal Color is defined in the ScanWizard user interface.

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

**Book and finger position**



**Scan result**



The scan result shows for demonstration purposes the detected finger contour filled with massive black color.

Book position on the book cradle:



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

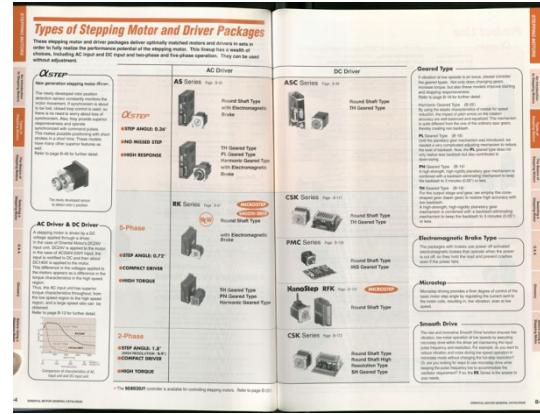
**Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto**

**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 in the lower left corner a part of the finger.

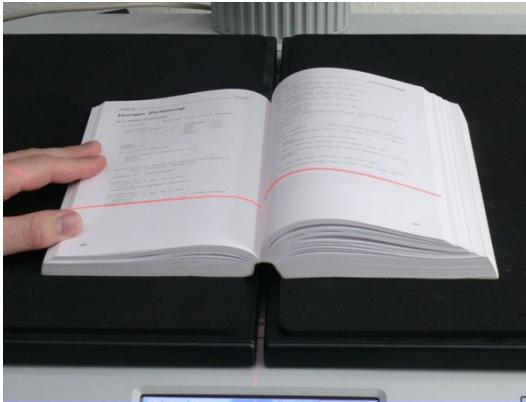
The reason is that the analyzing algorithm detected at the left border of the image an area of mixed patterns and colors. In this case, it is the register of the catalogue.

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

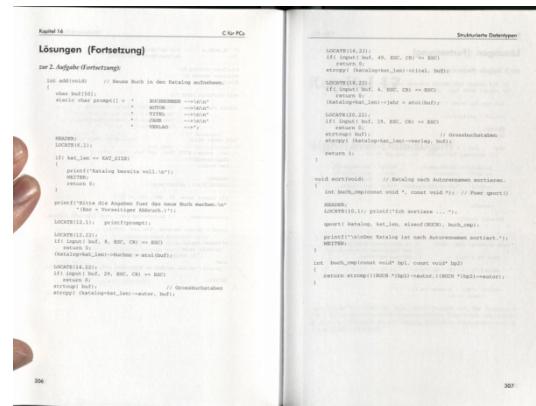
### C.1.4.3 Multiple fingers hold the book

**Book Mode, Finger Removal Mode: Book Fan**

**Book and multiple fingers position**



**Scan result**



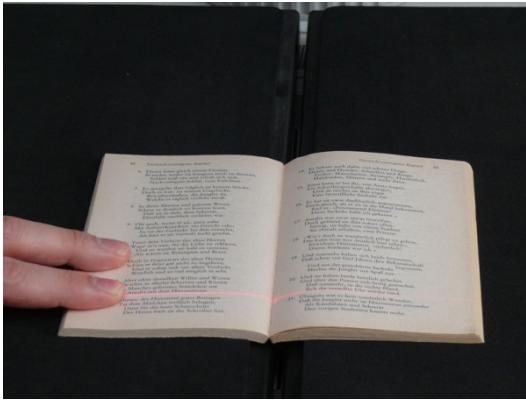
### Small book kept flat by multiple fingers

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

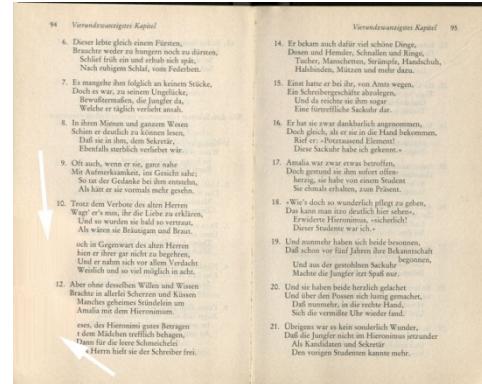
**Note:** The **Finger Removal Color** is defined in the ScanWizard user interface.

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**

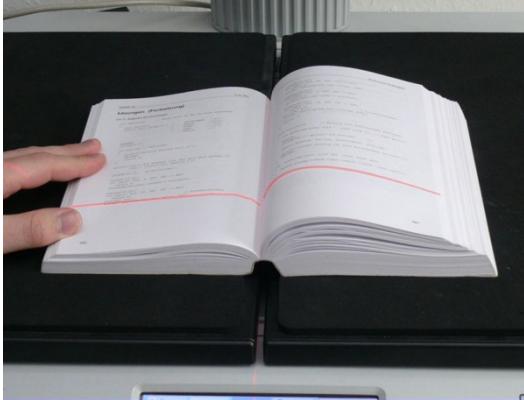


The white arrows in the scan result image mark the area where the finger contours have been filled with automatically defined color.

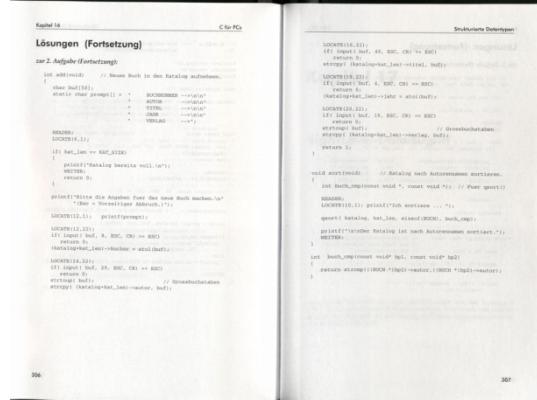
## Book Mode, Finger Removal Mode: On, Finger Removal Color: Auto

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

### Book and multiple fingers position



### Scan result

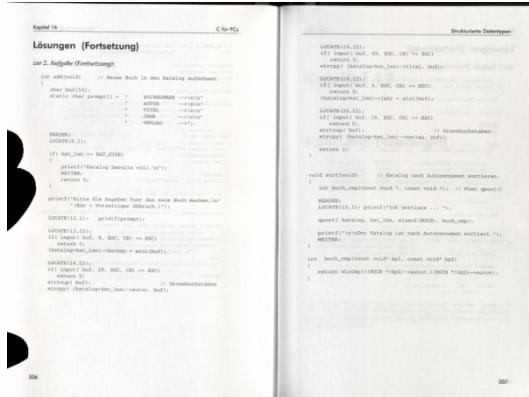


The position of the three fingers has been detected.

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 massive black, the result looks like this:



#### C.1.4.4 Small books with pattern at margin

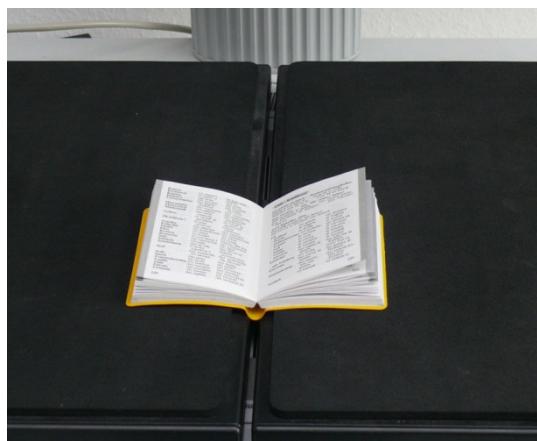
If a book has small dimensions, the finger removal mode **Book Fan** very often delivers good results without flattening the book by fingers.

##### **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:



## C.2 The “Splitting” Function

Another useful function of the Bookeye® 4 scanner is the “Splitting” function.

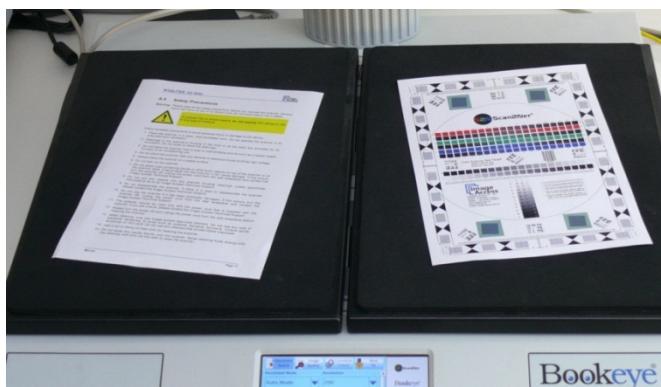
This function splits the scanned document into two separate images. The left and the right page of an opened book can be scanned in one sequence and subsequently be saved as two images, or two sheets of paper can be scanned without interruption and saved as two separate images.

Another benefit is the combination of document mode **Auto**, format **Crop and Deskew** and the “Splitting” function.

### C.2.1 “Splitting” function with two separate documents

Picture 24 shows as an example how single pages can be positioned at the book cradle plates.

**Please note:** The following pictures show a former version of the Bookeye 4-V2 scanner.



**Picture 24: Single pages on book cradle plates**

**In general:** The sheets should have a distance of at least 25 mm (1 inch) to the gap between the book cradle plates.

The black area around the sheets is necessary for the **Auto Format** detection and for the **Crop and Deskew** function.

Define the settings in the touchscreen menu as follows:

Document Mode: Auto Mode (see D.3.3.1.1) or Flat Mode (see D.3.3.1.4)

Format: Crop and Deskew (see chapter D.3.3.3.5)

Splitting Image: Auto (see chapter D.3.3.4)

Define the settings in the ScanWizard interface (see Picture 132) as follows:

**Size menu → Flat Mode** or no defined mode, which results in automatic selecting the matching mode

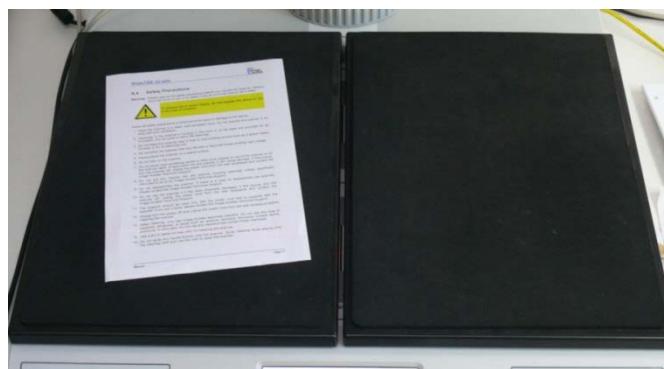
**Size menu → Format → Auto or Crop and Deskew**

**Orientation → Splitting Image Auto**

The second image is delivered after pressing the **Scan Now** button (touchscreen) or the **Scan Now** icon (ScanWizard user interface).

## C.2.2 “Splitting” function with a single document

Select the settings as described in chapter C.2.1



**Picture 25: Single document on book cradle plate**

With a single document placed on a book cradle plate the scanner displays only the scanned image on the external monitor or in the browser window (S2N user interface).

For the empty side of the book cradle the scanner shows the Bookeye screen saver screen.

The ScanWizard interface shows an error message in a separate window.

Click on the **OK** button to confirm the error message.

If the document is placed at the right side of the book cradle, the error message is send at first.

To get the image, press the **Preview** or **Scan Now** button in the S2N user interface again.

### C.2.3 “Splitting” function with single document at middle of the book cradle plates

Depending of the alignment of the document and of the selected **Format** mode, the results of the “Splitting” function differ.

#### Format: Crop and Deskew

Parameters set as follows:

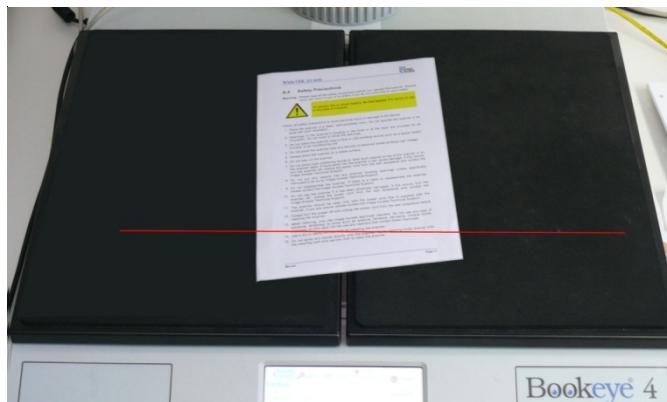
Document Mode: Auto Mode

Format: Crop and Deskew

Splitting Image: Auto

Starting at the vertical gap between the left book cradle plate and the right book cradle plate the “Splitting” function measures to the left the distance to the edge of the document.

The measured distance gives the width for the left part of the split image.



Picture 26: Document position on book cradle plates



Picture 27: Splitting result with Format = Crop and Deskew

After splitting the images will be aligned (deskew) and the surrounding black border will be deleted.

**Format: Auto**

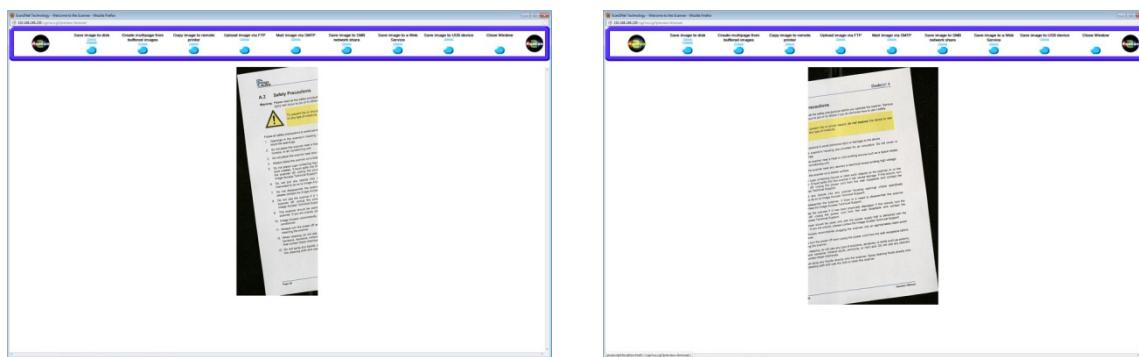
Parameters set as follows:

Document Mode: Auto Mode

Format: Auto

Splitting Image: Auto

If the document is placed in the middle of the scan area the image is split along the detected middle of the document



**Picture 28: Splitting result with Format = Auto**

The resulting images show the parts of the document with a black border. These images show the left and the right half of the scanned document.

### C.2.4 “Splitting” function with a book

It is recommended to set the book cradle plates into “V” position when scanning books or other documents with a book spine.



**Picture 29: Book cradle plates set to “V” position**

The book cradle plates can be shifted horizontally from each other (see chapter B.4). This is recommended for books with a large book spine.



**Picture 30: Large book at book cradle in “V” position**

**Define the settings in the touchscreen menu as follows:**

Document Mode: Book Mode (see D.3.3.1.3) or Auto Mode (see D.3.3.1.1)

Format: Auto (see chapter D.3.3.3)

Splitting Image: Auto (see chapter D.3.3.4)

Define the settings in the ScanWizard interface as follows:

**Size → Book Mode or Size → V- Mode**

**Size → Format → Auto or Size → Format → Crop and Deskew**

**Orientation → Splitting Image Auto**

The “Splitting” function detects the curvature of the binding and splits the document at this position.

## C.2.5 Document positions which can result in malfunction

### C.2.5.1 Single pages

Always place single pages on the book cradle which is in flat position.

Position the single pages with at least a minimum distance of 25 mm (1 inch) between the pages.



**Picture 31: Wrong position of book cradle and pages**

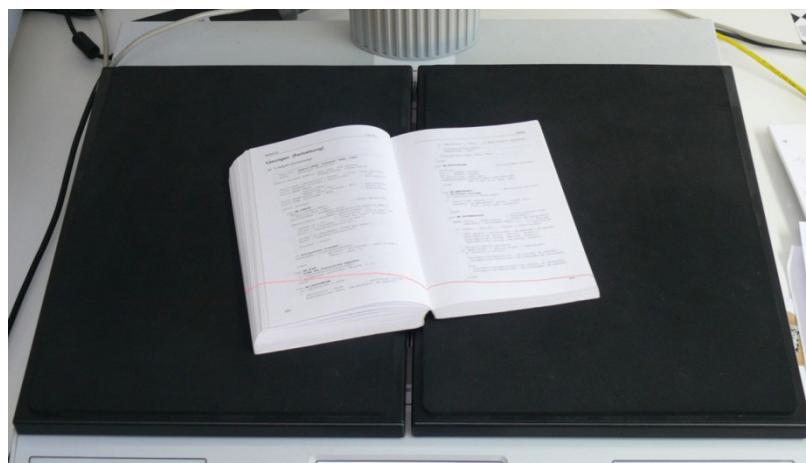
Picture 31 shows two errors:

The book cradle plates are set to "V" position.

The pages are placed too close to each other.

### C.2.5.2 Books

Books should always be aligned along the laser line and the book cradles plates should be set into "V" position.



**Picture 32: Book in bad position for splitting**

In the above displayed situation, the "Splitting" function splits the image along the vertical laser line.

If the rotation angle between book and laser lines is too large, the "Crop and Deskew" function cannot turn the image for a proper result of the "Splitting" function.

## D Touchscreen Operation

The Bookeye® 4 scanner can be controlled in two ways.

- Via the integrated touchscreen. The functions of the touchscreen are described starting with chapter D.3.
- Via a standard browser and the ScanWizard user interface. A short description of the functions of the integrated ScanWizard user interface starts in chapter E.1.

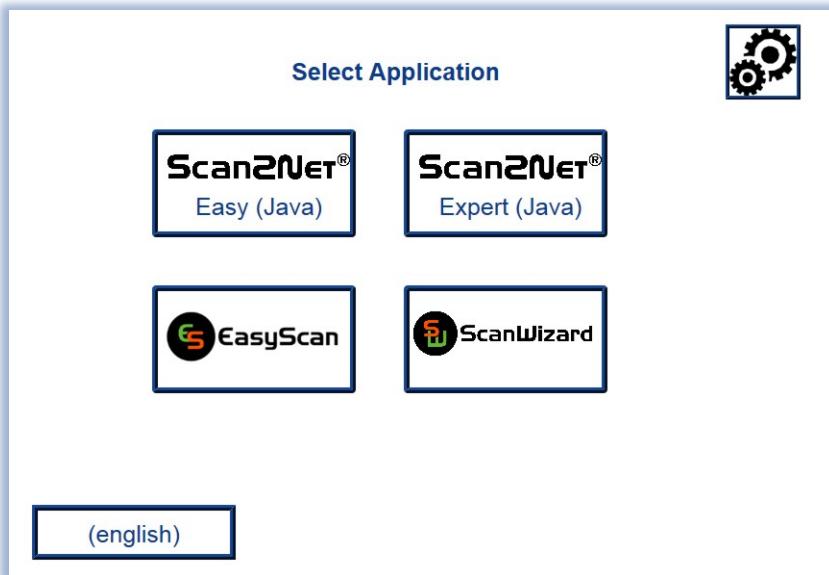
**Please note:** All screenshots are taken from a fully equipped device with all options and functions activated. Depending on the selected mode, the menus displayed on the screen can vary.

### GENERAL NOTICE

This manual describes the functions of a complete equipped Bookeye® 4 scanner. If your device is not equipped with all features, deviations are possible.

## D.1 Select Application Screen

When the Bookeye® 4 scanner starts from standby mode and finishes the startup procedure, the touchscreen displays the **Select Application** screen.



Picture 33: Select application screen after start-up



Touching one of these buttons activates the **Scan2Net®** kiosk application.



The **Easy** mode differs from the **Expert** mode by a reduced number of available parameters.

The description of the **Scan2Net®** user interface describes the **Expert** mode with all parameters. See chapter D.3 and subchapters.



Touching this button will switch to a user programmable application. As factory default the **EasyScan** application is integrated.

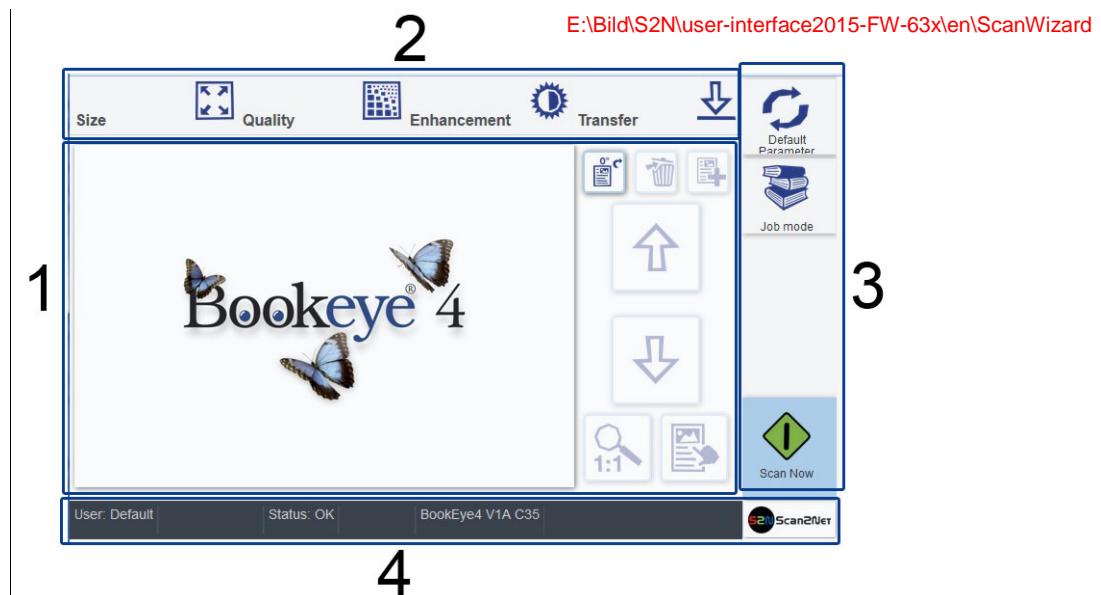
To leave the application, touch a free section in the title line of the application. Confirm the request by touching the STOP button.



Touching this button switches to the start screen of the integrated ScanWizard application.

## D.2 ScanWizard Application

ScanWizard is an intuitive user interface for your Scan2Net® scanner, which enables the user to control the scanner and all scanning parameters by clearly structured menus.



**Picture 34: ScanWizard application main screen**

- 1: Preview section. The scanned image is displayed here as preview. The buttons beside the preview window have the following function:



Turns the image in clockwise direction.



Deletes the selected image. Only active in **Job Mode**.



Marks where in the list an image should be inserted.  
Only active in **Job Mode**.



Moves upwards through the list of images.  
Only active in **Job Mode**.



Moves downwards through the list of images.  
Only active in **Job Mode**.



Displays the image in 100% size.



Fits the image size to the screen size. Alternates with the above displayed icon. Available, if the image is displayed in 100%.



Marks an image.

- 2: Menu button bar. Used to select scanning parameters and in order to set the parameters in detail.

**3: Button      Function**



Returns the scanner to default parameter settings.



Activates the job mode.



Touch this icon to end the job mode and to return to single mode. Only active in **Job Mode**.



Starts the scan sequence.



This icon is displayed if an image has been marked in the list for rescanning. Only active in **Job Mode**.

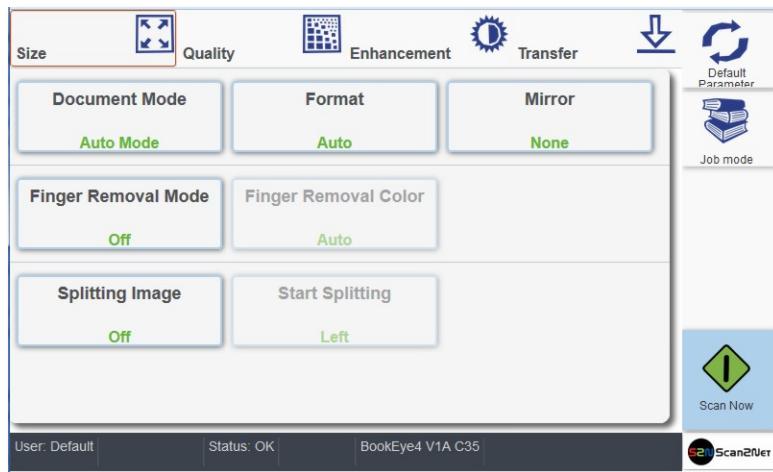
- 4: Status line. Shows some information of the scanner.



Touch the Scan2Net symbol to return to **Select Application** screen.

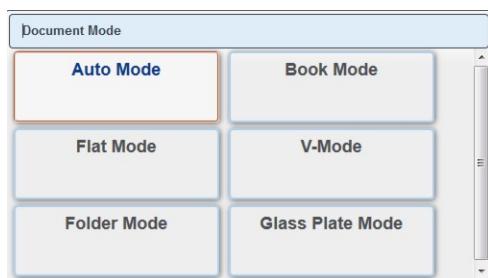
## D.2.1 Size

Select here the parameters which define the resulting image size and activate special features.



Picture 35: Menu with Size parameters

### D.2.1.1 Document mode

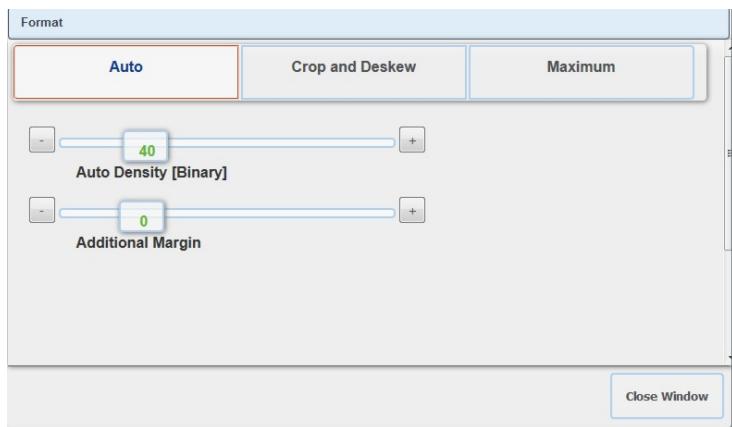


Picture 36: Select document mode

Document Mode	Function
<b>Auto Mode</b>	<p>This mode automatically detects the position of the book cradle and the type of document to be scanned.</p> <p>The focus is set depending on the detected document mode that matches the best.</p> <p>The document should always be placed in the horizontal middle of the book cradles.</p> <p>The laser line must be visible at the lower third of the document.</p> <p>Minimum document width: ≥ Ten centimeter</p> <p>A minimum of four centimeters of the documents width must be placed left from the gap between the book cradle plates.</p> <p>The resulting image is cut to a rectangle which covers the four document corners. If the document is not aligned properly to the laser line, a small black border is displayed around the document.</p>

Document Mode	Function
<b>Book Mode</b>	<p>Recommended for scanning books.</p> <p>The book binding curvature will be compensated and flattened out.</p> <p>The focus will be set depending</p> <ul style="list-style-type: none"><li>- on the form of the book and its curvature.</li><li>- on the position of the book cradle plates.</li></ul> <p>If the book cradle plates are set in "V" position the focus will be set dynamically according to the detected book curvature.</p>
<b>Flat Mode</b>	<p>The focus value will be set dependent on the document height.</p> <p>The measured focus value will be used for the complete scan area.</p>
<b>V-Mode</b>	<p>To be used when the book cradle is positioned in the "V" position.</p> <p>The focus will be dynamically set dependent on the "V" position of the book cradle.</p>
<b>Folder Mode</b>	<p>Sets separate focus values for the left and right book cradle plates.</p> <p>This mode is recommended when scanning documents with significant height differences on each side.</p>
<b>Glass Plate Mode</b>	<p>The Glass Plate Mode adapts the system setting to the special illumination situation when scanning documents in conjunction with a flat glass plate.</p>

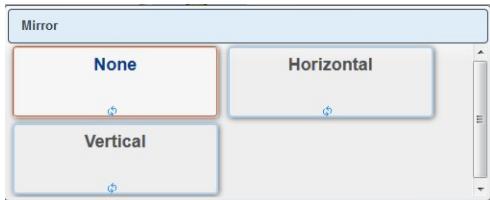
### D.2.1.2 Format



**Picture 37: Format settings for the scan area**

Parameter	Function						
<b>Auto</b>	<p>The complete scan area will be scanned.</p> <p>The resulting image will be reduced to the document size.</p> <p>If the document is not aligned to the red laser line the resulting images will have the smallest possible black margin.</p> <p>The black margin depends on the size of rectangle which covers the complete document.</p>						
<b>Crop and Deskew</b>	<p>The complete scan area will be scanned.</p> <p>If a document is not placed perfectly aligned horizontally and vertically, this function will correct the alignment.</p> <p>The resulting image shows the aligned document without any border.</p>						
<b>Maximum</b>	<p>In conjunction with <b>Maximum</b>, three more buttons will be displayed.</p>  <table border="1" data-bbox="504 1343 1235 1477"> <tr> <td>Auto</td> <td>Crop and Deskew</td> <td>Maximum</td> </tr> <tr> <td>Landscape</td> <td>Portrait left</td> <td>Portrait right</td> </tr> </table> <p><b>Landscape</b> Scans the maximum scan area in landscape orientation.</p> <p><b>Portrait left</b> Scans the area left from the gap between the book cradle plates in portrait orientation.</p> <p><b>Portrait right</b> Scans the area right from the gap between the book cradle plates in portrait orientation.</p>	Auto	Crop and Deskew	Maximum	Landscape	Portrait left	Portrait right
Auto	Crop and Deskew	Maximum					
Landscape	Portrait left	Portrait right					
<b>Auto Density</b>	<p>Defines the scanner's sensitivity for the automatic format detection.</p> <p><b>Please note:</b> The higher the numeric value, the more contrast there must be between background and scanned document.</p>						
<b>Additional Margin</b>	Adds an additional margin to the resulting image symmetrical in horizontal and vertical direction.						

### D.2.1.3 Mirror

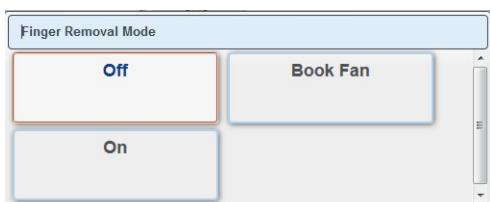


Picture 38: Mirror parameters

This control mirrors the image along the selected mirror axis.

Using this setting can be helpful if scanning transparencies from the back.

### D.2.1.4 Finger Removal Mode



Picture 39: Finger Removal Modes

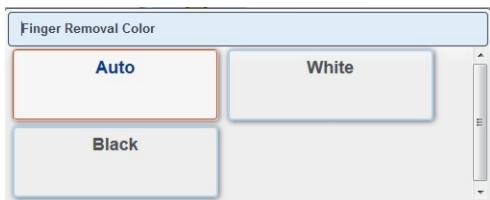
**Off** Disables the **Finger Removal Mode**.

**Book Fan** The book fan at the left and right side will be detected and eliminate from the image.

**On** The book fan at the left and right side will be detected and eliminate from the image. If the book is kept flat by one or multiple fingers, the contour of the fingers will be detected and removed.

The detected contour then will be filled with black or white color or with an automatically detected pattern. The pattern depends on the color which is found in the image below and above the finger contour.

### D.2.1.5 Finger Removal Color



Picture 40: Finger Removal Color

**Auto** The filling color and/or pattern is automatically taken from the area above and below the finger contour.

**White** The contour of the detected finger will be filled with white color.

**Black** The contour of the detected finger will be filled with black color.

### D.2.1.6 Splitting Image



**Picture 41:** Splitting Image parameters

The **Splitting Image** function splits the scanned image symmetrically in two parts.

- Left** The left part of the split image will be displayed.
- Right** The right part of the split image will be displayed.
- Auto** Both parts of the split image will be displayed successively as separate images.
- Off** Disables the splitting function.

### D.2.1.7 Start Splitting



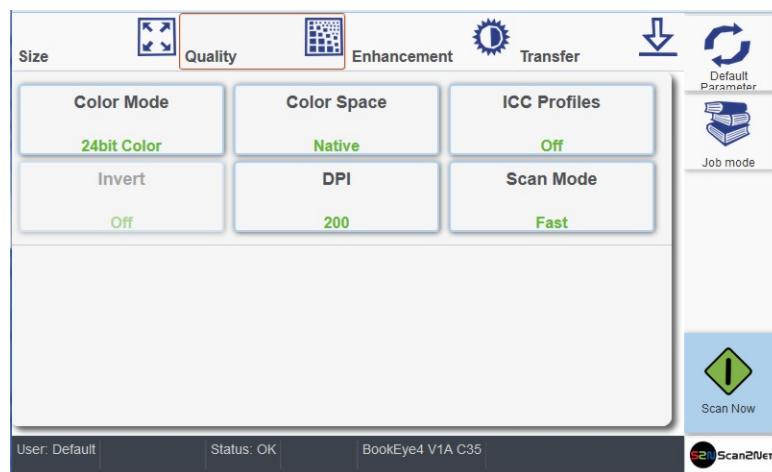
**Picture 42:** Defines the splitting function start page

Defines the start page if **Splitting Image** is set to **Auto**.

- Left** Sets the left part of the split image as start page.
- Right** Sets the right part of the split image as start page.

## D.2.2 Quality

Select here the color parameters, set the resolution and set the scan mode.



Picture 43: Menu with Quality parameters

### D.2.2.1 Color Mode



Picture 44: Available color modes

Touch the button of the desired color mode.

Depending at the selected color modes other menu items become active.

For example **Binary** and **Enhanced Halftone** activate the **Invert** button.

### D.2.2.2 Color Space



**Picture 45: Color Space**

Available are three predefined color spaces, which can be used while scanning.

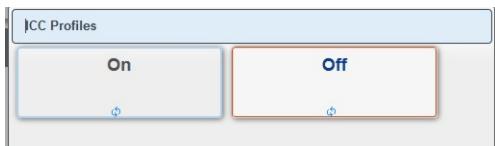
Touch the button to select the color space.

**Native** Color space determined by the hardware (CCD camera) of the scanner.

**AdobeRGB** This is an RGB color space, defined by Adobe Systems. It contains half of the colors defined for the Lab color space.

**sRGB** The standard RGB (sRGB) color space is a color space with a reduced amount of colors.

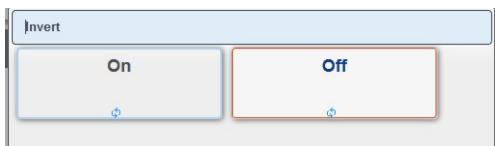
### D.2.2.3 ICC Profiles



**Picture 46: Activates ICC profile embedding**

Touch **On** to activate the ICC profile for the external monitor.

### D.2.2.4 Invert



**Picture 47: Invert function**

This setting is only available with the color modes **Binary** and **Enhanced Halftone**.

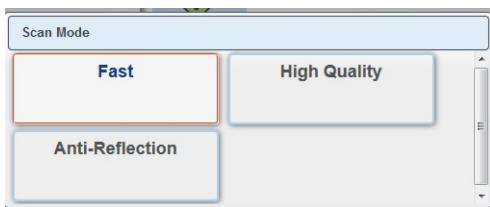
### D.2.2.5 DPI



**Picture 48: Resolutions available with the scanner**

The content of the list can vary, depending on the hardware features of the scanner.

### D.2.2.6 Scan Mode



**Picture 49: Scan modes of the scanner**

**Fast** Scans with normal speed. The scan speed depends on the selected scan resolution. That means, the higher the resolution, the lower the scan speed.

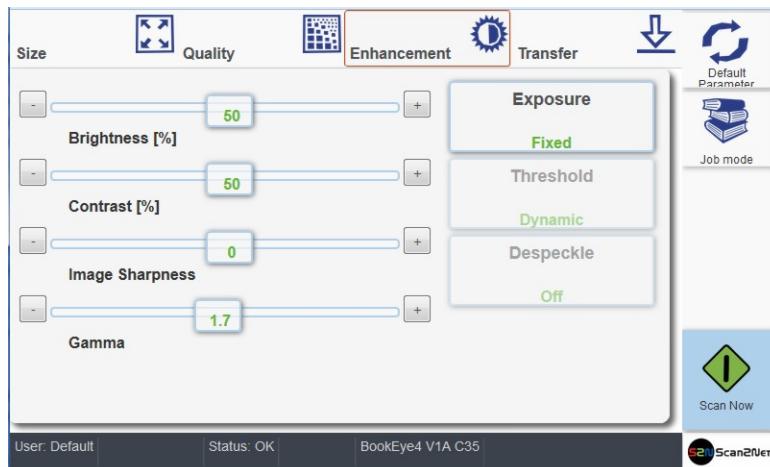
**High Quality** Scans with reduced scanning speed but improved scanning quality.

**Anti-Reflection** Scans with reduced scanning speed. Both lamps are active during the complete scan sequence.

This mode reduces reflection in the image and improves the results significantly during scanning documents with reflecting surface.

### D.2.3 Enhancement

Set here the values for image enhancement.



Picture 50: Slider for Enhancement parameters

#### D.2.3.1 Brightness

The **Brightness** slider defines the resulting brightness in the image. Lower brightness values result in darker images, higher values result in brighter images.

Values close to 0% or to 100% may result in unwanted artifacts.

Touch the slider and move it to the desired position to set the value.

Otherwise touch the buttons + (plus) or – (minus) to modify the value.

#### D.2.3.2 Contrast

The **Contrast** slider defines the contrast in the image. Lower contrast values result in “smoother” images; higher values show more details and the images become “crisper”.

Values close to 0% or to 100% may result in unwanted artifacts.

Touch the slider and move it to the desired position to set the value.

Otherwise touch the buttons + (plus) or – (minus) to modify the value.

#### D.2.3.3 Image Sharpness

The **Image Sharpness** slider invokes an advanced automatic sharpening algorithm which sharpens the image before any other operation is performed.

The value “zero” disables the function. Very high values may produce artifacts depending on the type of document.

Touch the slider and move it to the desired position to set the value.

Otherwise touch the buttons + (plus) or – (minus) to modify the value.

#### D.2.3.4 Gamma

The **Gamma** slider defines the gamma correction directly inside the camera electronics. A value of 1.7 is a good approximation for most documents.

Higher gamma values show more details in dark areas and compress bright areas of the image.

Touch the slider and move it to the desired position to set the value.

Otherwise touch the buttons + (plus) or – (minus) to modify the value.

#### D.2.3.5 Exposure



**Picture 51: Exposures modes**

**Fixed** switches the function off.

If **Auto** is selected, the sliders of Enhancement parameters (Picture 50) change.



**Picture 52: Black / White Threshold sliders**

The sliders **Brightness** and **Contrast** are not displayed.

Two sliders for **Black Threshold** and **White Threshold** are displayed instead.

**Black Threshold:** Sets the threshold for **black**. All pixel values found in the image below the selected value are set to solid black.

**White Threshold:** Sets the threshold for **white**. All pixel values found in the image above the selected value are set to white.

### D.2.3.6 Threshold



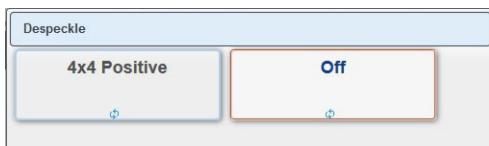
Picture 53: Threshold selector

If color mode is set to either binary or enhanced halftone, **Threshold** is selectable.

**Dynamic** If threshold is set to **Dynamic**, the result is better on low contrast documents.

**Fixed** If set to **Fixed**, the function is disabled.

### D.2.3.7 Despeckle



Picture 54: Despeckle selector

If color mode is set to either binary or enhanced halftone, **Despeckle** is selectable.

When scanning in binary or enhanced halftone, speckles (small dots which are actually extra pixels visible to the scanner) may appear on the image. Speckles can be caused by dust, scratches or imperfections in the print of the source document.

Selecting **Despeckle** removes these imperfections from the scanned image.

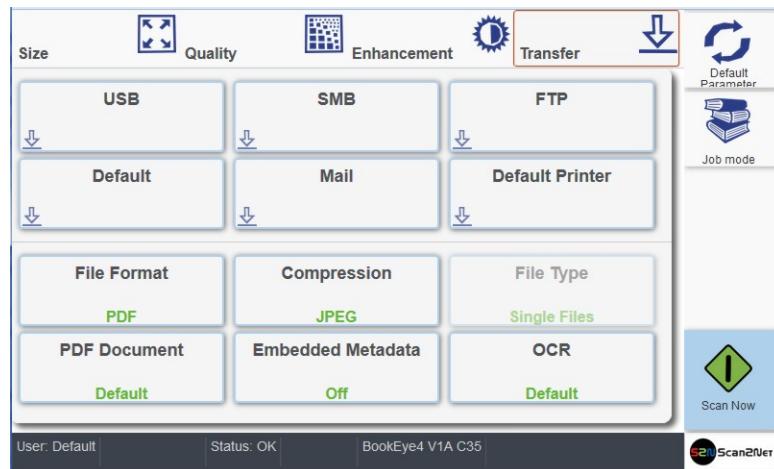
**4x4 Positive** Activates the function.

**Off** Disables the function.

## D.2.4 Transfer

Select here in the upper two rows the targets, whereto the image should be transferred.

In the third and fourth row select the parameters of the file format and all parameters associated with the file format.



**Picture 55: Transfer targets and specific file parameters**

The buttons of the two upper lines do have a blue symbol in the lower left corner.

Touch here to open the touchscreen with the settings of the selected transfer target.

The content depends on the selected transfer target.

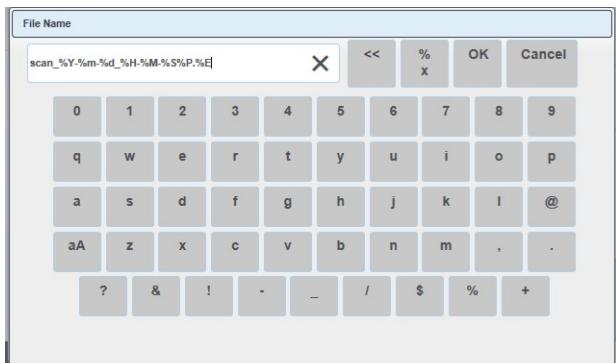
Chapter D.2.4.1 describes how an entry can be changed.

#### D.2.4.1 Modifying an entry of the transfer target

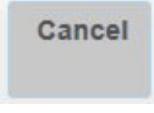
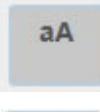
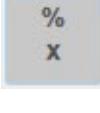
To change a file name, to select a subdirectory or to modify other entries for the transfer target, click the blue symbol. The touchscreen shows the current settings.

To change an entry, click in the respective line, for example “File name”.

The touchscreen changes and shows a keyboard. The cursor is positioned behind the entry to be changed.



Picture 56: Keyboard, displayed on the touchscreen

Key	Function
	Delete character.
	Confirms changes and returns to former screen.
	Cancel changes and returns to former screen.
	Shift button for upper/ lower case writing.
	Switches the keyboard and shows all variables which could be used in the name.

Use the keyboard to modify the entry.

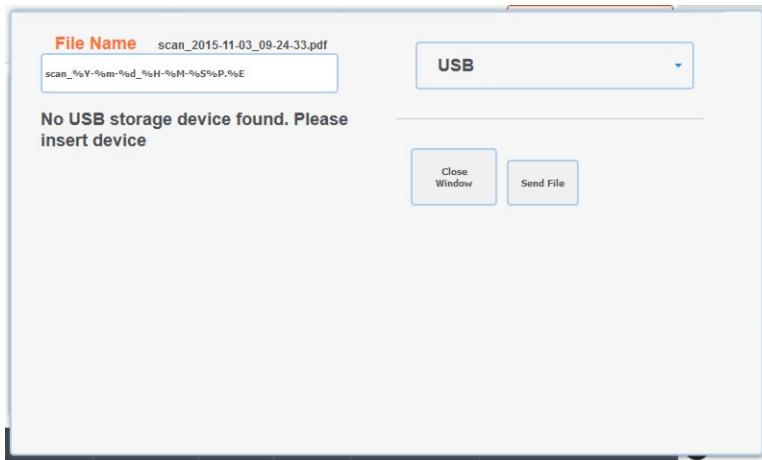
To confirm changes, touch the **OK** button.

The return to former screen without changes, touch the **Cancel** button.

### D.2.4.2 USB

Transfers the scanned images to a USB storage device connected with the scanner.

If there is no USB storage device connected, you will see an error message otherwise the file name and the directory will be displayed.

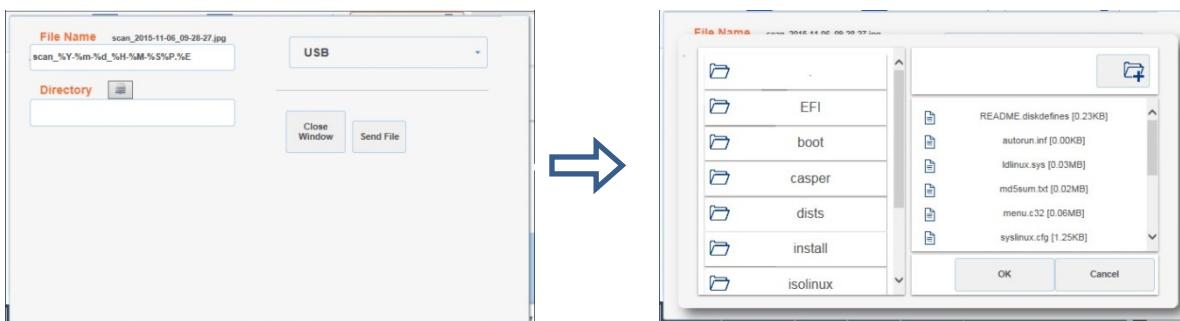


**Picture 57: Error message if USB device is missing**

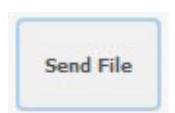
If you want to change the file name, touch the line with the file name entry.

Modify the entry as described in chapter D.2.4.1.

If you want to save your image to a subdirectory on the USB storage device, click the icon beside **Directory**. The directories will be listed.



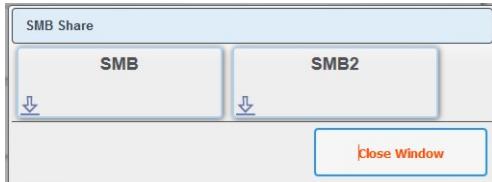
Select the directory. Touch **OK** to confirm or touch **Cancel** to return without changes.

Key	Function
	Touch here to close the window and to return to the main screen (Picture 34).
	Touch here to send the file to the selected transfer target.

### D.2.4.3 SMB

Touch this button in order to upload the scanned images directly to a previously defined network drive and directory or subdirectory or to a workstation drive and directory.

Click the **SMB** button to see the current settings.



**Picture 58: SMB pre-sets**

The number of available SMB presets depends on the setting defined by the administrator in the **Poweruser** setup menu.

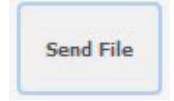
Click at the blue arrow symbol to open the parameter list of the respective preset.

If necessary, change the entries for **SMB Path** and/or **File Name**.

Chapter D.2.4.1 describes how the entries can be modified.



**Picture 59: Entries for SMB path and file name**

Key	Function
	Touch here to close the window and to return to the main screen (Picture 34).
	Touch here to send the file to the selected transfer target.

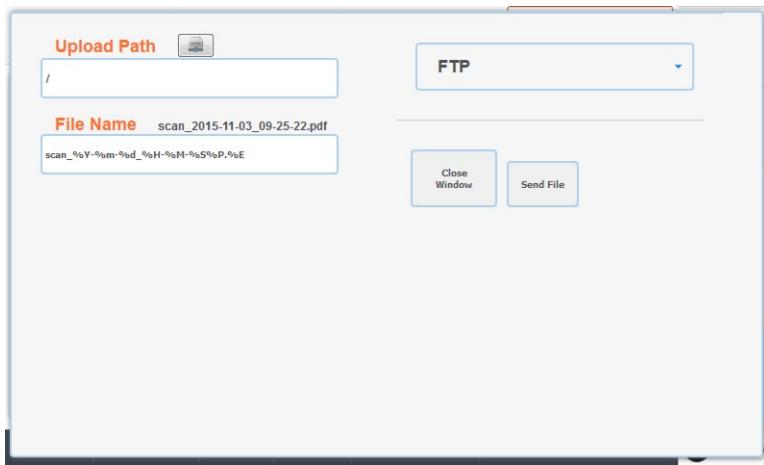
#### D.2.4.4 FTP

Scans directly to an FTP server.

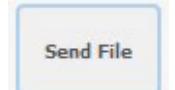
Click the **FTP** button to see the current settings.

If necessary, change the entries for **Upload Path** and/or **File Name**.

Chapter D.2.4.1 describes how the entries can be modified.



Picture 60: Entries for FTP path and file name

Key	Function
 Close Window	Touch here to close the window and to return to the main screen (Picture 34).
 Send File	Touch here to send the file to the selected transfer target.

#### D.2.4.5 Default

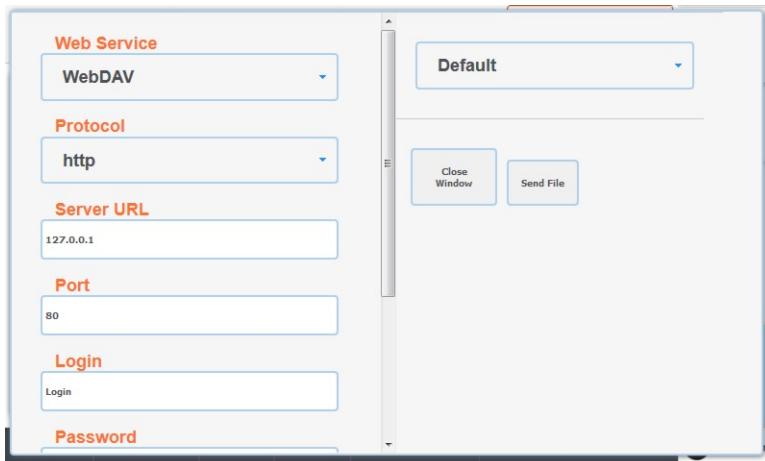
Scans directly to a defined directory in a cloud service.

Click the **Default** button to see the current settings.

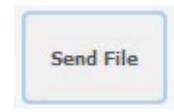
All parameters can be defined from the touchscreen.

Click on the selection arrow beside the entries of **Web Service** and **Protocol** to see the list of available settings.

All other entries can be changed as described in chapter D.2.4.1.



Picture 61: List of cloud parameters

Key	Function
	Touch here to close the window and to return to the main screen (Picture 34).
	Touch here to send the file to the selected transfer target.

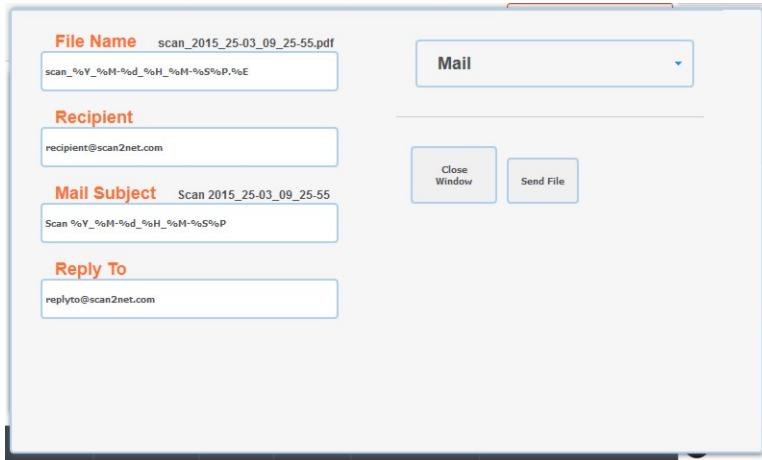
#### D.2.4.6 Mail

Sends scanned images via email to a defined email recipient.

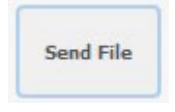
Click the **Mail** button to see the current settings.

The mail server information, the sender's name, the email address and the reply-to address can all be configured by clicking in the respective line.

Chapter D.2.4.1 describes how the entries can be modified.



Picture 62: Mail transfer settings

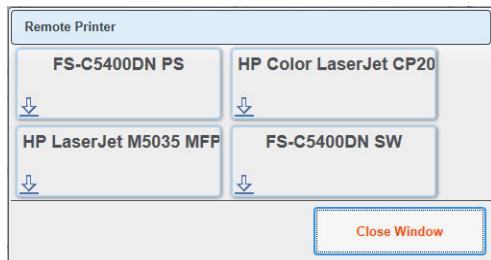
Key	Function
	Touch here to close the window and to return to the main screen (Picture 34).
	Touch here to send the file to the selected transfer target.

#### D.2.4.7 Remote Printer

Prints the images on a network printer to which the user has access.

Click the **Remote Printer** button to see the available pre-defined printer settings.

The number and names of the available printers depend on the administrator settings in the **Poweruser** setup.

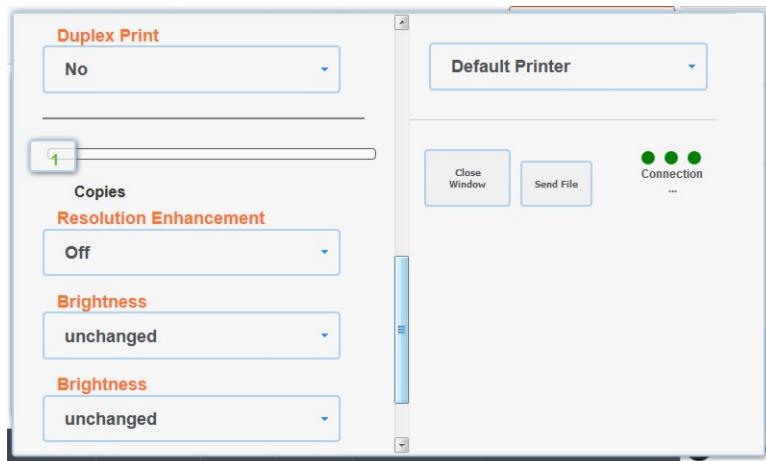


**Picture 63: Available printers (example)**

Click on a button to select a printer.

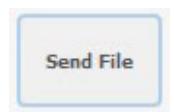
To list the settings of the selected printer, tap on the arrow symbol in the lower left corner of the button. This opens the parameter list.

The available parameters to be modified depend on the printer.



**Picture 64: List of printer parameters**

Click on the selection arrow (if displayed) beside the entries to see the list of available settings.

Key	Function
	Touch here to close the window and to return to the main screen (Picture 34).
	Touch here to send the file to the selected transfer target.

#### D.2.4.8 File Format

Allows the user to select the file format in which scanned images are saved.



**Picture 65: Select file format**

Touch the button with the desired file format.

The current file format is displayed in the bottom line of the button.

#### D.2.4.9 Compression

Allows the user to select the compression factor used when saving the file in the specified format. The compression factor will vary, depending on the file format selected.

If JPG is selected as file format, a list with values is displayed.



**Picture 66: JPEG compression**

If TIFF is selected as file format, two compression methods are available.



**Picture 67: TIFF compression**

#### D.2.4.10 File Type

Only active if the scanner is operated in **Job Mode**.

The file type can vary, depending on the file format selected.

##### File Format    File Types

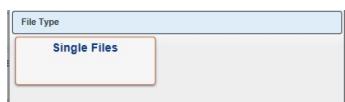
**JPEG**



**TIFF**



**PNM**

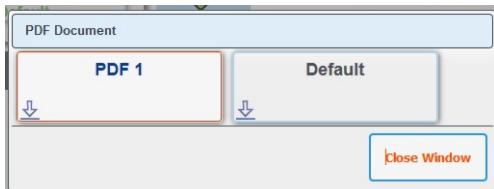


**PDF**



#### D.2.4.11 PDF Document

Defines the PDF format to be used when saving scanned images as PDF file.



**Picture 68: Predefined PDF settings**

Touch the button with the desired setting. A list with available PDF formats will be displayed.

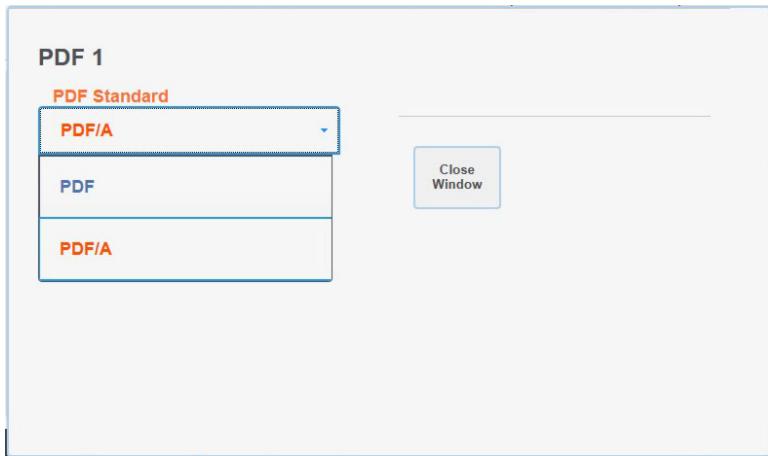
Select between PDF and PDF/A format.

Key	Function
-----	----------

Touch here to close the window and to return to the main screen (Picture 34).

To list the settings, tap on the arrow symbol in the lower left corner of the button.

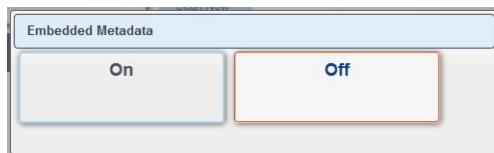
Available are PDF and PDF/A.



**Picture 69: List of available PDF formats**

#### D.2.4.12 Embedded Metadata

Activates the embedding of metadata to the scanned image.



Touch the button and select **On** embedding metadata.

Select **Off** to disable the function.

#### D.2.4.13 OCR

Select the OCR settings here.



The number of available OCR presets depends on the setting defined by the administrator in the **Poweruser** setup menu.

Currently available is the setting **Default**.

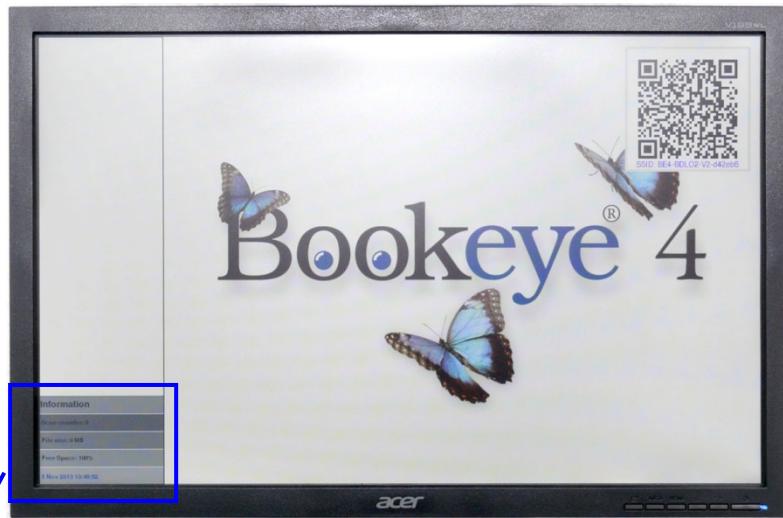
## D.2.5 Job Mode in ScanWizard application

The default scan mode is **Single**.

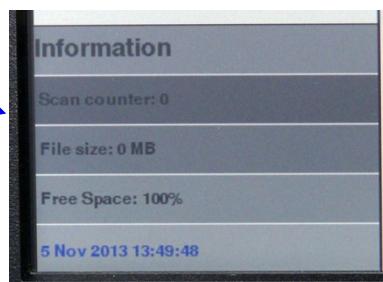


Touch this icon in order to switch to **Job mode**

After selecting **Job mode** the TFT monitor displays an “Information Panel” at the left margin.



Picture 70: TFT flat screen after selecting “Job mode”



The **Information** panel contains:

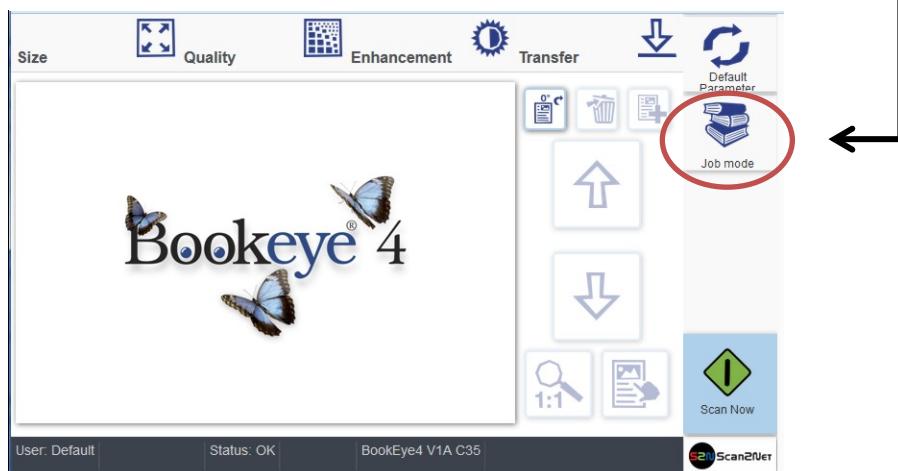
**Scan counter:** Number of images since starting **Job mode**.

**File size:** Size of all scanned images since starting **Job mode**.

**Free Space:** Remaining storage volume in percent.

**<Date Time>:** Current date and time

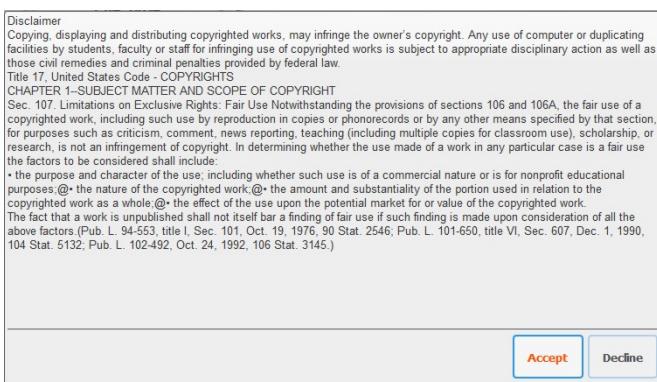
If the **Job Mode** is active, the ScanWizard start screen changes in one detail.



**Picture 71: Startscreen Job Mode**

After touching **Scan Now** the screen shows in a separate window a disclaimer with information about copyright and the legal situation while scanning documents.

This disclaimer must be accepted. Touch the respective button below the disclaimer text.



S2N\_6-xx\_en\_001.jpg

S2N\_6-xx\_en\_006.jpg

Drehen.jpg

**Picture 72: Disclaimer with copyright notes**

While scanning in job mode, some icons right beside the preview section will be activated.



Deletes the selected image.



Marks where in the list an image should be inserted.



Moves upwards through the list of images.  
Moves a selected image upwards in the list.



Moves downwards through the list of images.  
Moves a selected image downwards in the list.



Selects an image from the list. A frame marks the image in the list of images displayed on the TFT monitor.

The image scanned at last is marked with a “pencil” symbol in the list on the external monitor.

The menu button bar (Picture 34, item 2) remain the same.

#### D.2.5.1 Job mode, move image



Use the upwards / downwards buttons to move the blue frame at first to the desired image.



Then touch the button. The image is marked with a red frame; the button itself and the up-/downwards buttons are marked with a red dotted frame.



Use the upwards / downwards buttons to move the selected image to its new position.



Press this button again to lock the image at the new position.

#### D.2.5.2 Job Mode, rescanning an image



Use the upwards / downwards buttons to move the blue frame to the image which should be rescanned.



The **Scan Now** button changes to **rescanimage**.

Touch the button to start the scan sequence.

The image will be inserted at the marked position.

#### D.2.5.3 Job Mode, adding an image to the list at any position



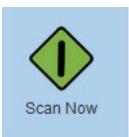
Use the upwards / downwards buttons to move the blue frame to the image where an image should be added.



Mark the image prior to the position where the image is to be inserted.



Touch this button. An empty frame will be inserted prior to the marked image.



Touch the button. The scanned image will be inserted at the desired position.

#### D.2.5.4 Job Mode, deleting an image



Use the upwards / downwards buttons to move the blue frame to the image which should be deleted.



Touch the button to select the image. The image is marked with a red frame; the button itself and the up/downwards buttons are marked with a red dotted frame.



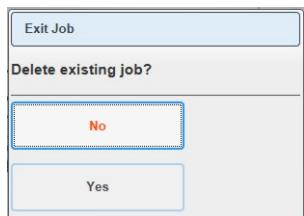
Touch the button. The image will be deleted. The images, which follows in the list, will be moved upwards.

#### D.2.5.5 Quit Job Mode



Touch this button in order to exit the **Job Mode** and to return to single mode scanning.

On the touchscreen a window opens.



**Picture 73: Exit Job Mode request**

Touch **Yes** to confirm the end of the **Job Mode**.

Otherwise touch **No** to continue the scanning in **Job Mode**.

## D.2.6 Return to Select Application Screen



Touch the button to leave the ScanWizard application. This will return the touchscreen to the **Select Application** screen (Picture 33).

Chapter D.3 to chapter D.3.6 and the corresponding subchapters describe the available functions of the Scan2Net application.

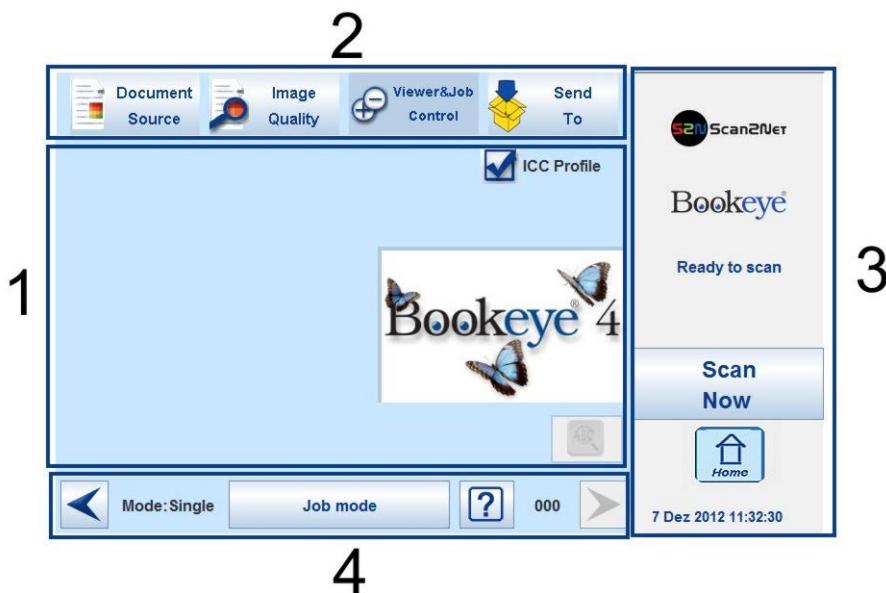
To leave the application, touch a free section in the title line of the application. Confirm the request by touching the **STOP** button.

### D.3 Scan2Net® Start Screen

**In general:** The description of the Scan2Net application refers to the **Scan2Net Expert** version.

The **Scan2Net Easy** version has reduced parameters.

After touching **Scan2Net** the kiosk application starts with the **Viewer&Job Control** screen.



Picture 74: 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 the main controls or parameters depending on the selected control field in section 2.
- 2: Control fields to select the menu screens directly.
- 3: This section shows the status of the scanner, e.g. “Ready to scan”, allows starting the scan sequence by touching **Scan Now**, allows returning to the start screen, and displays date and time.
- 4: The content of this section changes dependent on the selected control field in section 2. More specific information can be found in the respective chapters.

### D.3.1 Control Fields of the Touchscreen

By touching the buttons in section 2 each menu screen can be reached directly.



The chapters D.3.3 to D.3.6 describe the functions of the menus in detail.

**Scan  
Now**

Touch this button to start the scan sequence.



Touch this button to return to the start screen from every other menu.



If available, this two arrow buttons switch to the next or to the previous menu screen.

**< Back**

Touch this button to return to the main menu.

**default**

Touch this button to set all parameters to default values.



Touching this button opens an additional window. The additional window contains short information about the available functions.

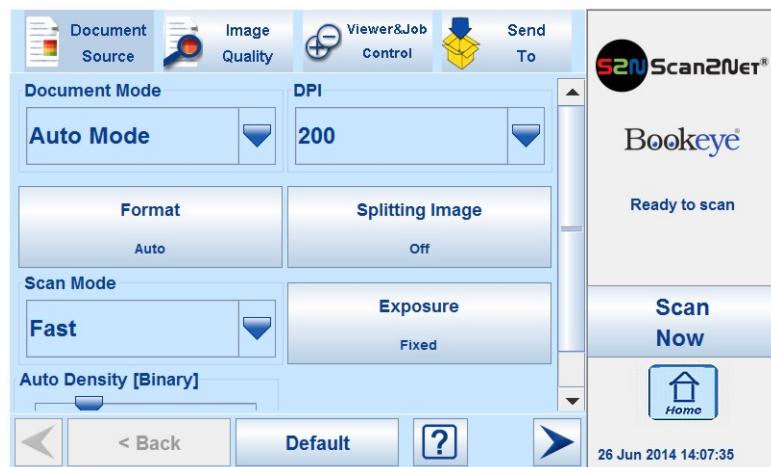
### D.3.2 Return to Select Application Screen



Touch the button to leave the Scan2Net application. This will return the touchscreen to the **Select Application** screen (Picture 33).

### D.3.3 Touchscreen – Document Source

The **Document Source** screen allows selecting from a wide range of scan parameters.



**Picture 75: Document Source screen**

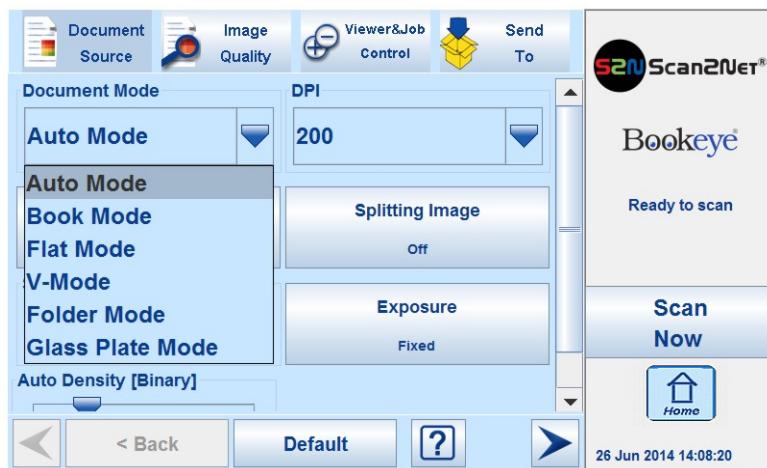
The content of the menus which are selectable with the buttons can vary.

This depends on the selected document mode.

The variation affects specially the content of the **Format** menu. A detailed description can be found in chapter D.3.3.3 and the following subchapters.

### D.3.3.1 Document Mode

The **Document Mode** setting defines the focusing method when scanning documents.



Picture 76: List of Document Modes

#### D.3.3.1.1 Auto Mode

This mode automatically detects the position of the book cradle and the type of document to be scanned. The focus is set depending on the detected document mode that matches the best.

The Auto Mode selects automatically between Flat Mode, Folder Mode or V-Mode.

**Please note:** The document should always be placed in the horizontal middle of the book cradles. The laser lines cross must be visible at the document.

Document minimum width must be ten centimeter.

A minimum of four centimeters of the documents width must be placed left from the laser lines cross.

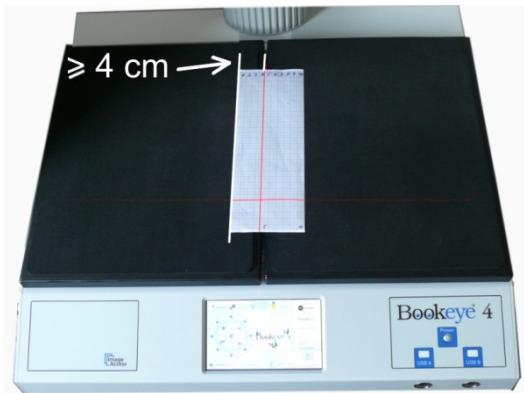
The **Auto Mode** function cuts the image to a rectangle which covers the four document corners. If the document is not aligned properly to the laser lines, a small black border is displayed around the document.

If the document is too small, the image shows the complete scan area.

### D.3.3.1.2 Document Position / Minimum Document Size

**Please note:** The following pictures show a former version of the Bookeye 4 scanner.

Example for correct document position ...      ...and image result



Picture 77: Document placed correctly

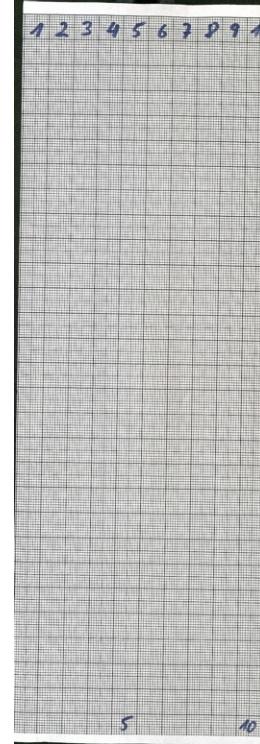
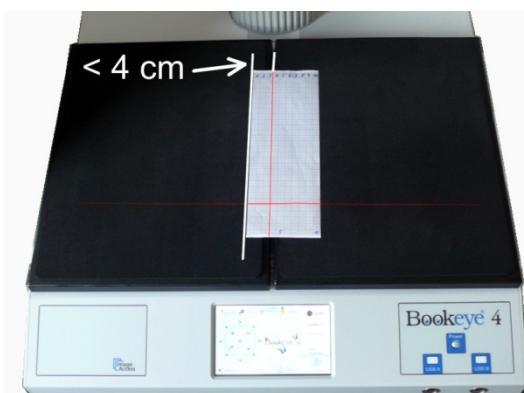


Image shows only the document

Example for false document position ...

...and image result



Picture 78: Document placed incorrectly

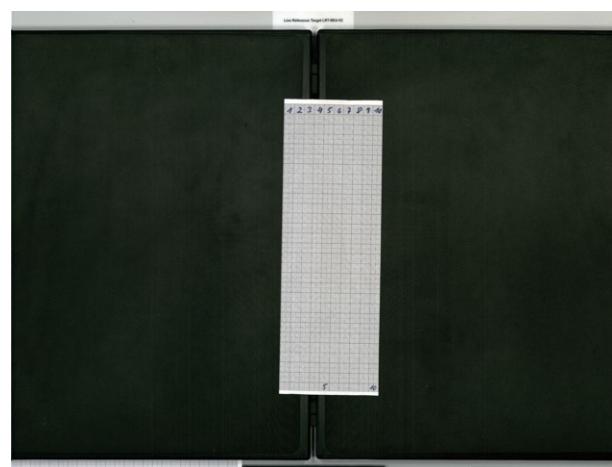
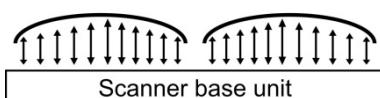


Image shows both book cradles

### D.3.3.1.3 Book Mode

Book cradle



Recommended method for scanning books.

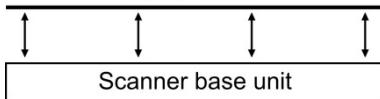
The book binding curvature will be compensated and flattened out. The focus will be set depending on the form of the book and its curvature.

The focus will be set depending on the position of the book cradle plates.

If the book cradle plates are set in "V" position the focus will be set dynamically according to the detected book curvature.

### D.3.3.1.4 Flat Mode

Book cradle

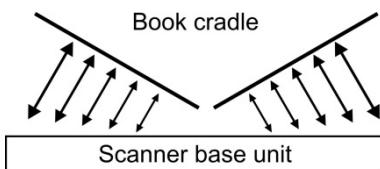


The focus value will be set dependent on the document height.

The measured focus value will be used for the complete scan area.

### D.3.3.1.5 V-Mode

Book cradle

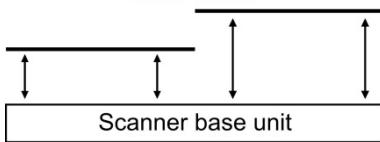


To be used when the book cradle is positioned in the "V" position.

The focus will be dynamically set dependent on the "V" position of the book cradle.

### D.3.3.1.6 Folder Mode

Book cradle

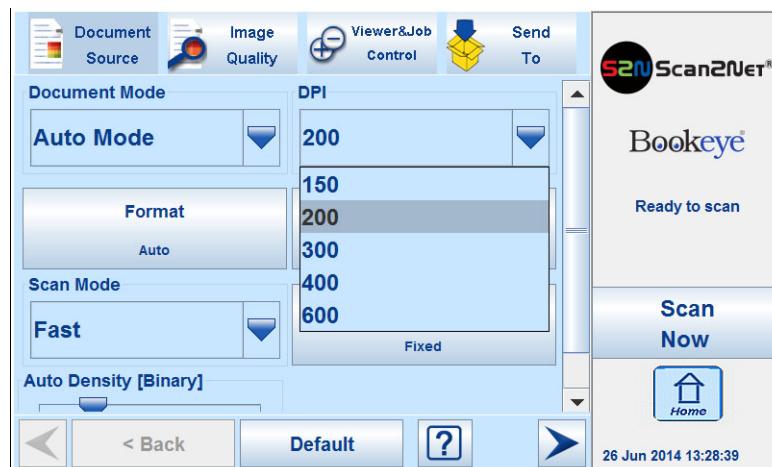


Sets separate focus values for the left and right book cradle plates.

This mode is recommended when scanning documents with significant height differences on each side.

### D.3.3.2 DPI

The **DPI** setting allows selecting a resolution from a list of resolution values supported by the Bookeye® 4 scanner.



**Picture 79: List of Resolutions**

Touch the blue arrow beside the currently selected value to open the list of available resolutions.

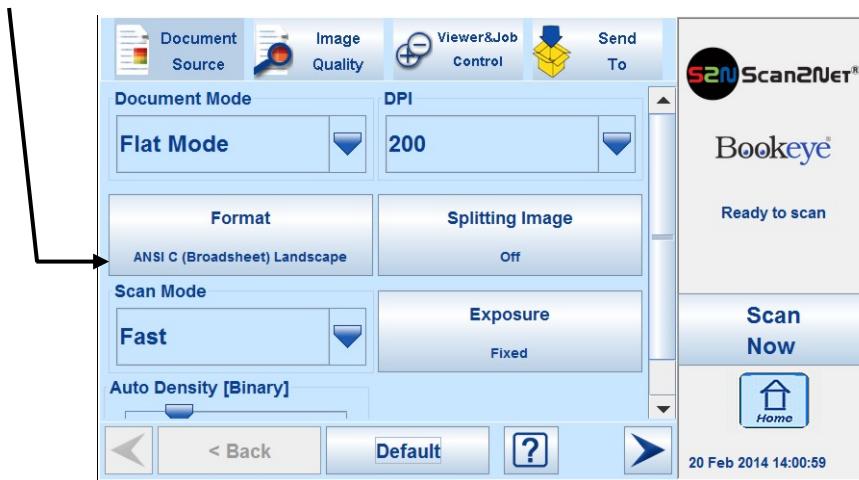
Select the desired value by touching the value in the list.

The list closes and the selected value is displayed.

### D.3.3.3 Format

The **Format** button allows defining the scan area size.

The bottom line of the button **Format** shows the current format setting.



Picture 80: Selector for Format settings

Depending on the **Document Mode** selected, the available formats will vary.

Chapter D.3.3.3.1 describes the dependencies between **Document Mode** and **Format**.

The formats are described in detail in the chapters D.3.3.3 to D.3.3.7.

#### D.3.3.3.1 Dependencies between Document Mode and Format

The table below shows the dependencies between **Document Mode** and the available settings in **Format**.

Document Mode	Format
Auto Mode	Maximum → Landscape / Portrait left / Portrait right Auto Crop and Deskew
Book Mode	Auto Crop and Deskew
Flat Mode	Maximum → Landscape / Portrait left / Portrait right Auto Crop and Deskew DIN ANSI
V-Mode	Maximum → Landscape / Portrait left / Portrait right Auto
Folder Mode	Maximum → Landscape / Portrait left / Portrait right Auto Crop and Deskew DIN ANSI
Glass Plate Mode	Maximum → Landscape / Portrait left / Portrait right Auto Crop and Deskew DIN ANSI

### D.3.3.3.2 Finger Removal Mode

The **Finger Removal Mode** function is available with all formats except **Maximum**.

It allows selecting from three settings. The settings are displayed with check boxes at the bottom line of the touch screen.



Picture 81: Finger Removal Modes

**Off** Disables the **Finger Removal Mode**.

**Book Fan** The book fan at the left and right side will be detected and eliminate from the image.

**On** The book fan at the left and right side will be detected and eliminate from the image. If the book is kept flat by one or multiple fingers, the contour of the fingers will be detected and removed.

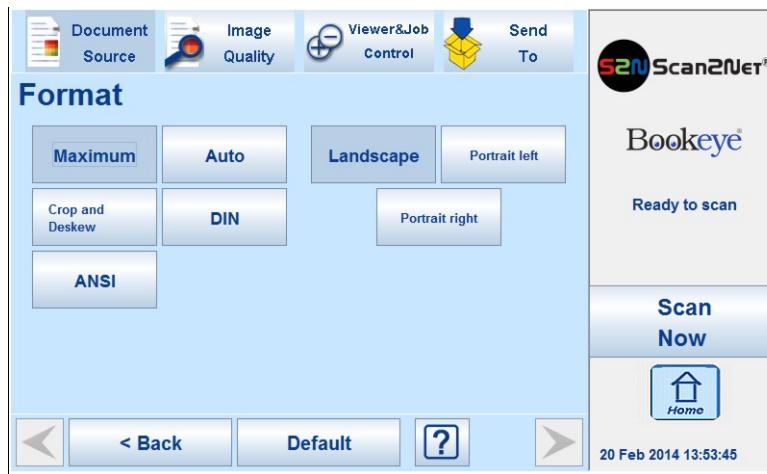
The detected contour then will be filled with black or white color or with an automatically detected pattern. The pattern depends on the color which is found in the image below and above the finger contour.

Read chapter C.1 and its subchapters for detailed information about the criteria and the requirements of the **Finger Removal Mode**.

**Please note:** If the document is held at both sides in its position, it is recommended to use a foot pedal for starting the scan sequence.

### D.3.3.3.3 Maximum

With **Maximum** three buttons will be displayed.



**Picture 82: Parameters for Maximum format**

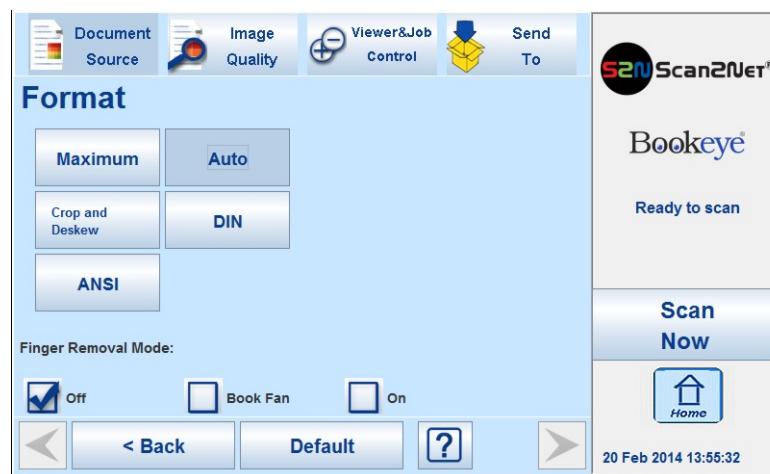
- Landscape** Scans the maximum scan area in landscape orientation.
- Portrait left** Scans the area left from the gap between the book cradle plates in portrait orientation.
- Portrait right** Scans the area right from the gap between the book cradle plates in portrait orientation.

 < Back

Press this button to return from a submenu to the main menu.

#### D.3.3.3.4 Auto

The complete scan area will be scanned.



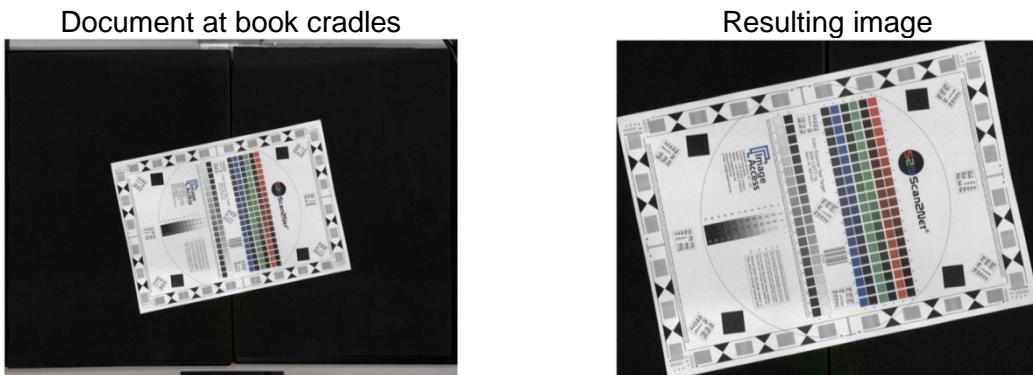
Picture 83: Book Mode Formats

#### Auto

The resulting image will be reduced to the document size. If the document is not aligned to the red laser line the resulting images will have the smallest possible black margin.

The black margin depends on the size of rectangle which covers the complete document.

**Example:** Scanning with Format → Auto:

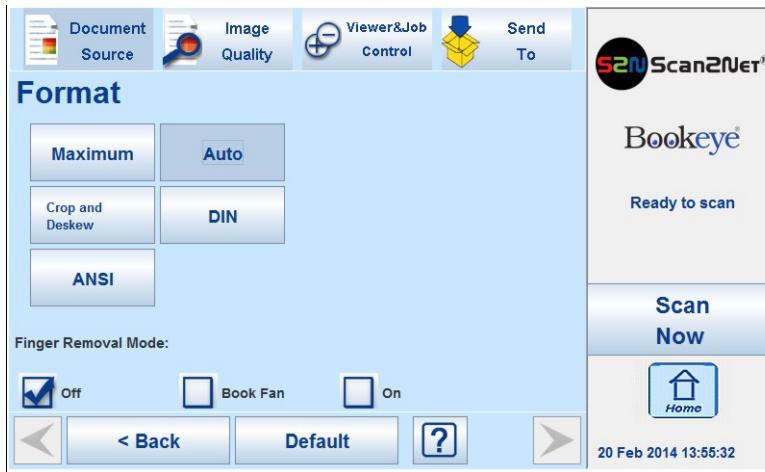


< Back

Press this button to return from a submenu to the main menu.

### D.3.3.3.5 Crop and Deskew

The complete scan area will be scanned.

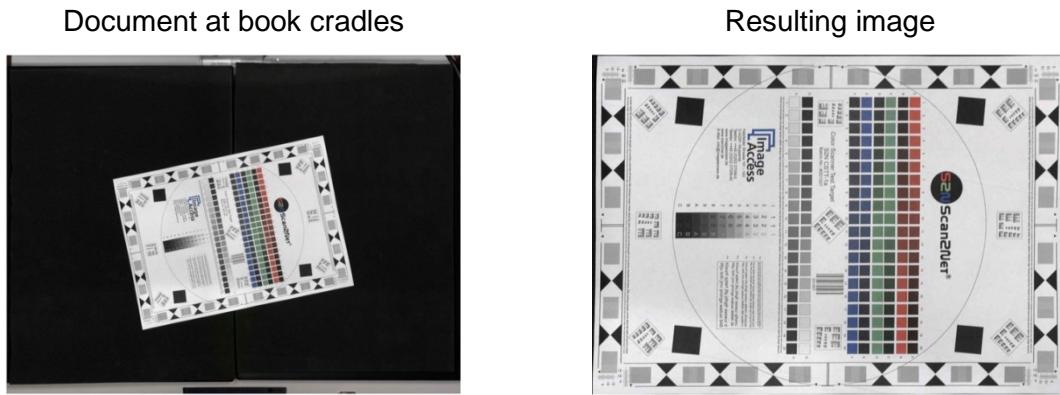


**Picture 84: Crop and Deskew screen**

If a document is not placed perfectly aligned horizontally and vertically, this function will correct the alignment.

The resulting image shows the aligned document without any border.

**Example:** Scanning with Format → Crop and Deskew



**Please note:** In document mode **Book Mode** this function does not work with two single pages positioned at the left and the right book cradle plates. The images will not be aligned as shown in the above example for the resulting image.

If **Splitting Image** (see chapter D.3.3.4) is active, two images will be displayed. Each image shows the respective document, surrounded by a black rectangle. The black rectangle encloses the complete document. The resulting image will not be aligned (= deskewed).

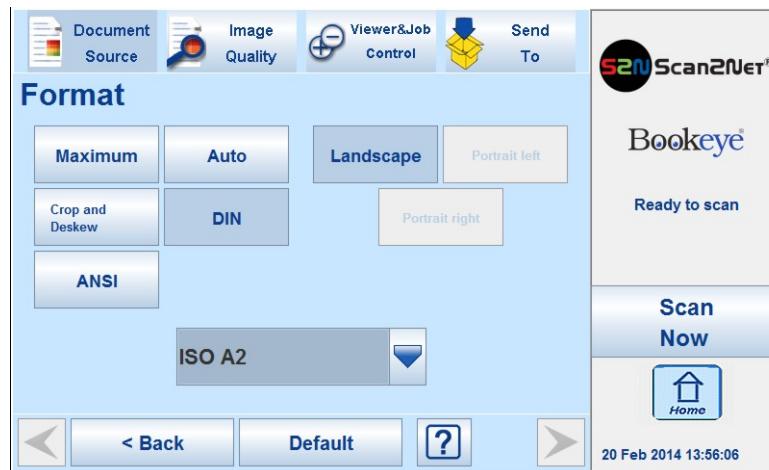
**< Back**

Press this button to return from a submenu to the main menu.

### D.3.3.6 DIN

When selecting **DIN**, an additional small window is displayed in the touchscreen.

It contains the available DIN (=ISO) paper sizes.



**Picture 85: Format DIN (=ISO) selected**

Depending on the selected paper size the buttons for **Landscape**, **Portrait left** and **Portrait right** are inactive (= gray) or active.

If the selected paper size is too large to be scanned in portrait orientation the buttons for **Portrait left** and **Portrait right** are inactive (= gray).

#### **Landscape:**

Press the button to scan the selected size in landscape orientation. The scan area position is symmetrically to the horizontal middle at the lower margin of the book cradles.

#### **Portrait left / Portrait right:**

Press the button to scan the selected size in portrait orientation. The scan area starts left respectively right from the horizontal middle at the lower margin of the book cradles.

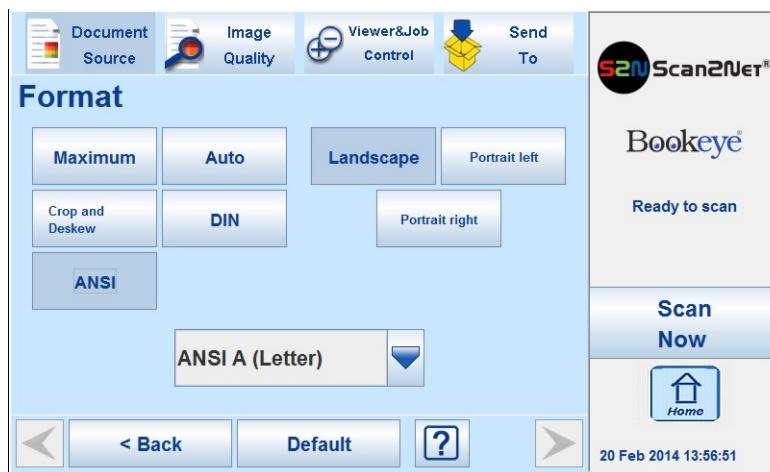
< Back

Press this button to return from a submenu to the main menu.

### D.3.3.3.7 ANSI

When selecting **ANSI**, an additional small window is displayed in the touchscreen.

It contains the available ANSI paper sizes.



Picture 86: List of ANSI formats

Depending at the selected paper size, the buttons for **Landscape**, **Portrait left** and **Portrait right** may be inactive (= grayed) or active.

#### Landscape:

Press the button to scan the selected size in landscape orientation. The scan area is symmetrically to the horizontal middle at the lower margin of the book cradles.

#### Portrait left / Portrait right:

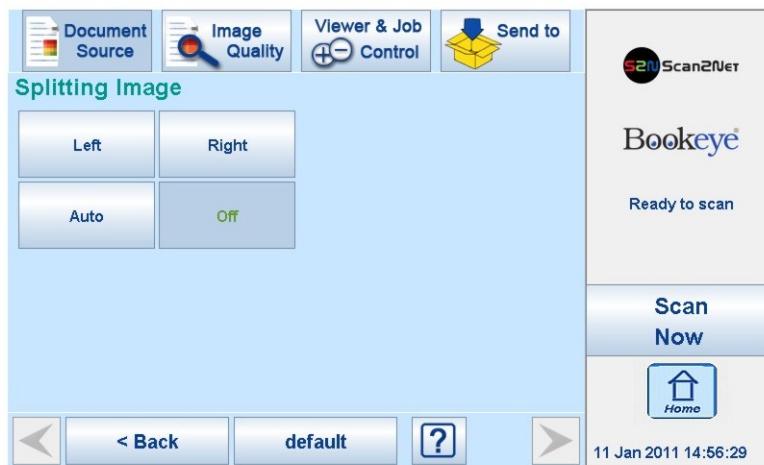
Press the button to scan the selected size in portrait orientation. The scan area is left resp. right from the horizontal middle at the lower margin of the book cradles.



Press this button to return from a submenu to the main menu.

### D.3.3.4 Splitting Image

The button **Splitting Image** is used to select splitting the document scanned for the output images.

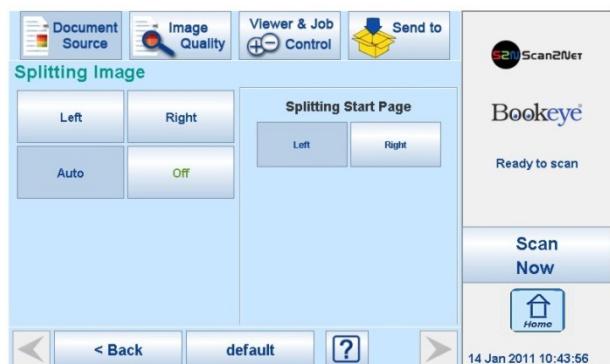


**Picture 87: Splitting Image**

**Left:** The selected format will be scanned completely. Only the left half of the selected format will be displayed.

**Right:** The selected format will be scanned completely. Only the right half of the selected format will be displayed.

### Auto



**Picture 88: Selecting the „Splitting Start Page“**

The complete scan area will be scanned. The resulting image size will be detected and it will be divided into two symmetrical parts. Both parts will be displayed successively as separate images.

Press **Scan now** again to show the second part of the document.

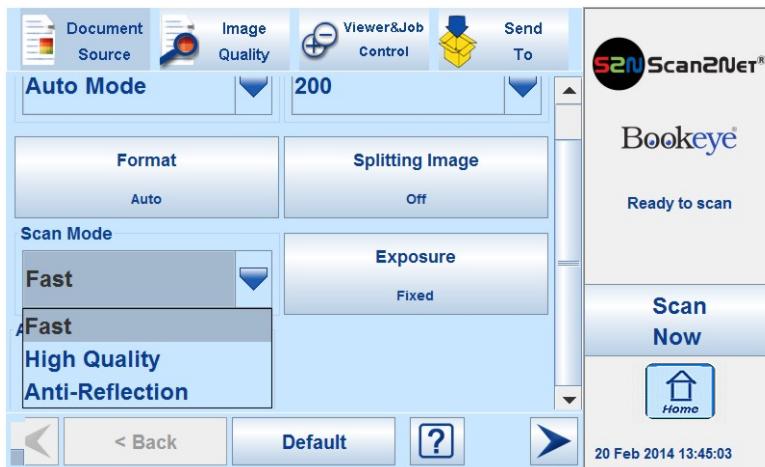
If selecting **Auto**, an additional selector opens. Here the page that will be displayed first can be selected as a start page.

< Back

Press this button to return from a submenu to the main menu.

### D.3.3.5 Scan Mode

The **Scan Mode** screen allows the user to select from three scan modes.



Picture 89: Available Scan Modes

A selection list displays the available modes:

- |                        |  |
|------------------------|--|
| <b>Fast</b>            | Scans with normal speed. The scan speed depends on the selected scan resolution. That means, the higher the resolution, the lower the scan speed.  |
| <b>High Quality</b>    | Scans with reduced scanning speed but improved scanning quality.   |
| <b>Anti-Reflection</b> | Scans with reduced scanning speed. Both lamps are active during the complete scan sequence.<br><br>This mode reduces reflection in the image and improves the results significantly during scanning documents with reflecting surface. |

In general, the scan speed depends at the selected resolution.

That means, the higher the resolution, the lower the scan speed.

To demonstrate the advantages of the scan mode **Anti Reflection**, a magazine has been used which was printed at glossy paper.

## Example 1

Document mode: Flat mode.

Scan mode: Fast



Result: Considerably reflections in the area to the left and to the right of the document's center.

Document mode: Flat mode.

Scan mode: Anti Reflection



Result: The reflections are significantly reduced compared to the image displayed before.

## Example 2

Document mode: Book mode.

Scan mode: Fast

**Geschäftsprozesse in Unternehmen und Vereinigungen**

**Treasury**

**Image Access: Bookeye in deutschen Bibliotheken**

## Das technische Auge

Ein neues Kapitel zur Bewahrung und Nutzung gedruckter Kulturgüter schlägt die Deutsche Nationalbibliothek auf. Die Integration des Wuppertaler Unternehmens Image Access erlaubt es Besuchern, Seiten aus Büchern derart scharnieren zu scannen, dass sogar ein großer Teil bisher gesperrter Bestände zum Kopieren freigegeben werden konnte.

Unterschätzte Schätze hinter die großen Räumen der Landes. Seit 99 Jahren sammeln staatliche Bibliotheken in Deutschland, nach deutscher Prägung, alte und neue deutschnahen Publikationen, nach der deutschen Teilung wurde Frankfurt am Main in die Hauptstadt des Staates für die Westenstadt begründet. Langsam und teilweise zu einer Bürde

unterschätztes Ansehn des Öffentlichen Rechts weniger, jeweils mit Spezialabgaben bereit. Vom jedem einzelnen Buch kann man nicht leicht wirst, wunders zwei Pflicht exemplare in die Sammlung der Deutschen Nationalbibliothek in Ost und West. Dass zur Nutzung außer den Lesezimmern und den Lesesaalnicht mächtig interessante Bücher in angegriffenen Zustand zu schaffen. Ein

Die **Bindung ist der Knopfunkt**  
Die neuwertigen weit über 20 Millionen Seiten aus Büchern erhalten müssen dabei nicht unter Verlust: Sie können allgemein und in bestem Kontakt bewertet werden. Tag für Tag nutzen rund 1000 Besucher die Dienstleistungen der Nationalbibliothek in Ost und West. Dass zur Nutzung außer den Lesezimmern und den Lesesaalnicht mächtig interessante Bücher in angegriffenen Zustand zu schaffen. Ein

großes im Ausland erschienenes Denkschriftliche Fach-Universität von Engmannen aus der Zeit von 1933 bis 1945.

**Bücher schmieden kopieren**  
Um Kosten für Reparatur und Restaurierung von Büchern aufzuholen und die Qualität zu senken und den Zustand der Bände sachtidig zu erhalten, erweiterte Bibliotheken, wie auch die DBNB, zunehmend ihre Lesezeiten und -saale. Das ist eine Selbstbedienungsanwendung, die die Bindung einfacher und schneller als mit dem handschriftlichen Schreibzettel werden.

Der Name Bookeye darf getrennt werden: Bookeye ist der Name das technische Auge, das ein aufgeschlagenes Buch mit hoher Geschwindigkeit und ohne Verlust bewerten kann. „Wir haben die Bänder dabei nämlich ganz plan gelegt, so dass sie nicht nur einen Kurvenverlauf gewölkter Zellen ebenso wie Umschriften enthalten, sondern auch eine optimale optische Auge und Papier. Bis zu 20 Zeilen pro Fokus-Umrechung

veröffentlicht die Kamera vollautomatisch. Das gedrängte Ergebnis sieht also aus, als hätte die Buchseiten etwas verkehrt heraus auf die Camerabasis gelegt. Das ist aber gar nicht – ein Vergleich, der nicht nur zeigt, dass es sich um eine sehr jede Buchbindung einem steigt. Auch schwere Steine und Papiere sind kein Problem. Aufgeschoben geben die Vergangenheit die. Die hohe Auflösung mit einer Auflösung von 1200 dpi sorgt für geschickte scharfe Bilder.

Rüdiger Grässle, Geschäftsführer der Image Access GmbH: „Der Hauptvorteil unserer Technik ist, dass sie eine hohe Verarbeitungsgeschwindigkeit hat. In der Bayrischen Staatsbibliothek in München, einer der ersten Generationen neu Jahr lang im Einsatz, bis sie von unseren Kunden für Reparatur und Restaurierung von Büchern aufgekauft wurden.“

**Bookeys 4 Das App-Konzept**  
Das neue App-Konzept macht sich den bedarfsgerechten Vorteile des Nutzen, dass jeder Bookeye 4 einen eigenständigen integrierten Rechner erhält, der völlig unabhängig von umgebenden Betriebssystemen über eine eigene IP-Adresse angesteuert wird.

- Java-basierte Bedienoberfläche
- Schnelle Anpassung an Kundenwünsche.
- Download als App auf den Scanner.
- Open-Source.
- 25 verfügbare individuelle Anpassungen, darunter
  - Paymet-App (Buchneuprozess),
  - DBB-App (Spezialmodifikation für die Nationalbibliothek),
  - Easy-Scan-App (Fokussierung auf wichtige Funktionen).
  - Metaphysische Benutzeroberfläche und Bedienmenü.
- Sämtliche App-Systembausteine sind über das Image-Access-Customer-Service-Portal online verfügbar. ([service.imageaccess.de](http://service.imageaccess.de))

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Document mode: Book mode.

Scan mode: Anti Reflection

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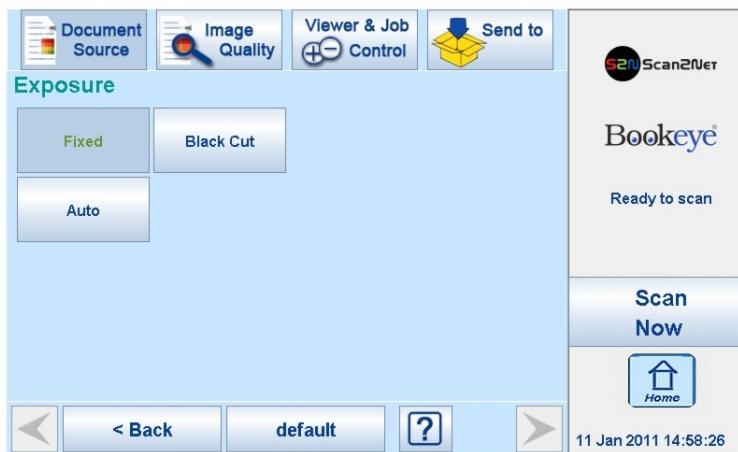
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A further advantage of the book mode is demonstrated in example 2. The curvature of the scanned magazine is flattened, which results in a readability improvement.

### D.3.3.6 Exposure

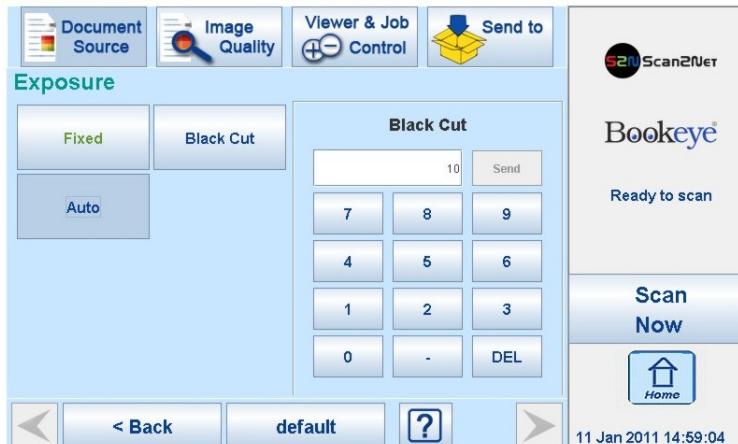
The **Exposure** screen allows selecting the functions **Black Cut** and **Auto**.

**Fixed** switches the function off.



Picture 90: Exposure Modes

When **Black Cut** or **Auto** is selected a numeric key pad opens.



Picture 91: Numeric key pad to set threshold value

**Black Cut**

0 (zero) to 100

Sets the threshold for **black**. All pixel values found in the image below the selected value are set to solid black.

Result: The image contrast is improved.

**Auto**

0 (zero) to 100

Sets the threshold for **black** and activates the **automatic exposure** control.

This function analyzes the image and detects the brightest and the darkest area. The detected brightness range is expanded to the maximum range of the scanner. Otherwise all values below the threshold are defined as "black".

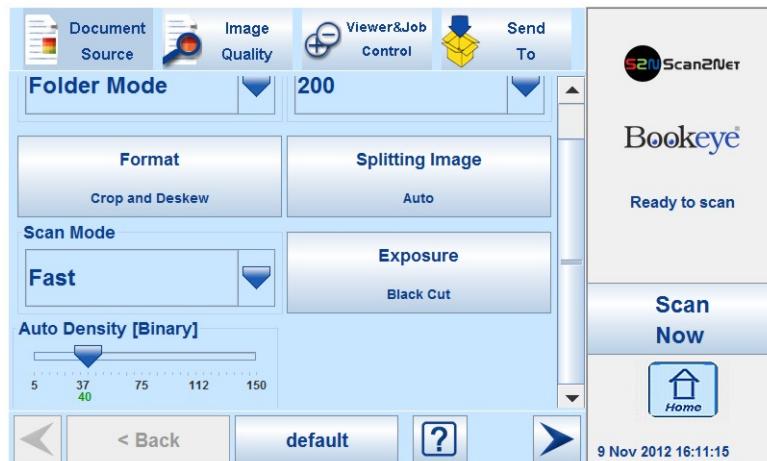
Result: Automatic contrast control and the image contrast is improved.

To set a new value, touch in the line of the displayed value and erase the value with the **DEL** button.

Enter the new value with the key pad and touch **Send** to send the new value.

### D.3.3.7 Auto Density [Binary]

This parameter defines the scanner's sensitivity for the automatic format detection.  
Default value: 40



Picture 92: Auto Density slider

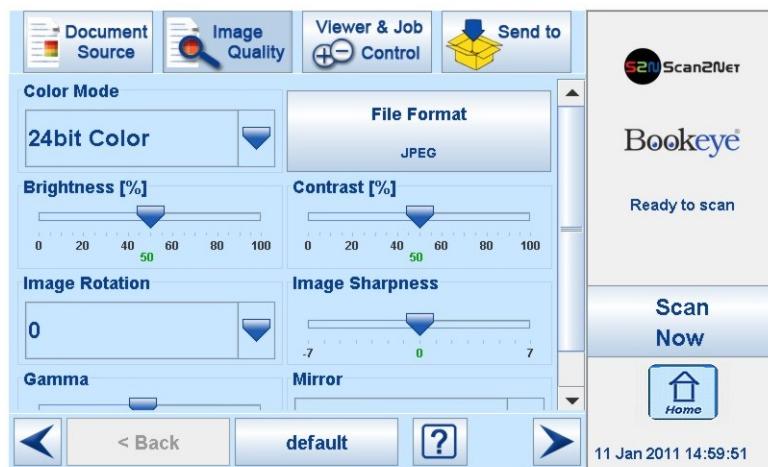
When scanning dark documents, the value should be reduced in small steps until the desired result is achieved.

**Please note:** The higher the numeric value, the more contrast there must be between background and scanned document.

The default value is marked below the scale by the green "40".

### D.3.4 Touchscreen – Image Quality

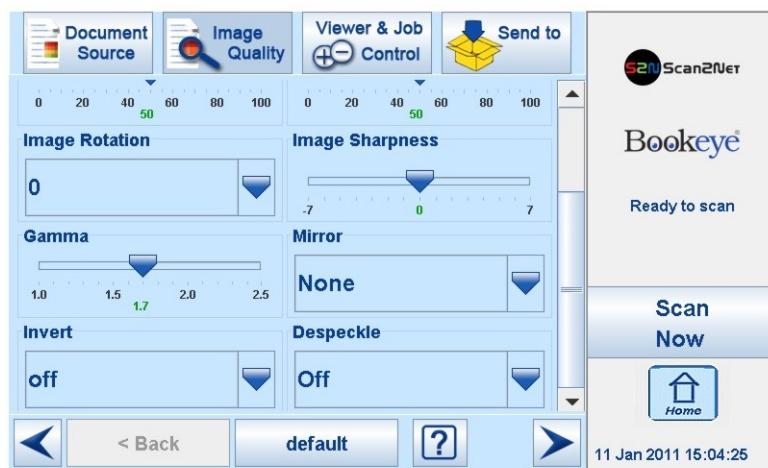
The **Image Quality** screen allows setting a wide range of image quality parameters.



**Picture 93: Image Quality 1**

In color mode **Binary** two additional menu items will be displayed.

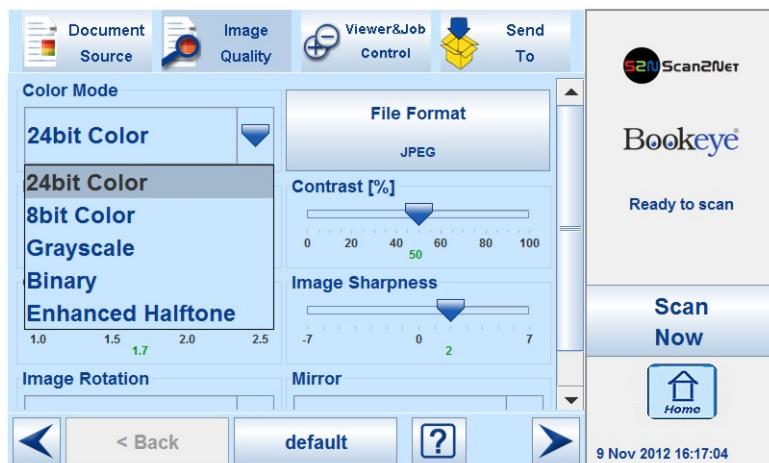
These are the menu items **Invert** and **Despeckle**.



**Picture 94: Image Quality 2**

### D.3.4.1 Color Mode

By touching the selection arrow of the **Color Mode** section the list of available color modes opens.



**Picture 95: List of Color Modes**

Touch the title of the desired color mode to select the mode. The list closes subsequently.

Picture 95 shows the available color modes.

### D.3.4.2 File Format

Press the **File Format** button to select a file format for the images.

#### D.3.4.2.1 JPEG



**Picture 96: Submenu File Format “jpeg”**

Depending on the file format selected, some additional parameters will be displayed.

With the **JPEG** file format, a value for the image quality can be entered by the numeric key pad.

This value determines the compromise between quality and compression rate. A higher quality factor produces larger files. The default setting of 75 is a good compromise for most documents.

#### D.3.4.2.2 TIFF



Picture 97: Submenu File Format TIFF

With the **TIFF** file format, the compression method of the file can be selected with the **TIFF Compression** buttons.

**CCITT G4** Recommended with color mode “Binary”.

**JPEG** Recommended for all other color modes.

**None** Disables the data compression.

#### D.3.4.2.3 PNM

With the **PNM** file format, no additional parameters are available.

#### D.3.4.2.4 PDF

With the **PDF** file format, the same compression methods are available as with the **TIFF** format (see picture above).

< Back

Press this button to return from a submenu to the main menu.

### D.3.4.3 Brightness



**Picture 98: Brightness slider**

The **Brightness** slider defines the resulting brightness in the image. Lower brightness values result in darker images, higher values result in brighter images.

Values close to 0% or to 100% may result in unwanted artifacts.

Move the slider indicator to the desired position to set the value.

### D.3.4.4 Contrast



**Picture 99: Contrast slider**

The **Contrast** slider defines the contrast in the image. Lower contrast values result in “smoother” images; higher values show more details and the images become “crisper”.

Values close to 0% or to 100% may result in unwanted artifacts.

Move the slider indicator to the desired position to set the value.

### D.3.4.5 Gamma



**Picture 100: Gamma slider**

The **Gamma** slider defines the gamma correction directly inside the camera electronics. A value of 1.7 is a good approximation for most documents.

Higher gamma values show more details in dark areas and compress bright areas of the image.

Move the slider indicator to the desired position to set the value.

### D.3.4.6 Image Sharpness



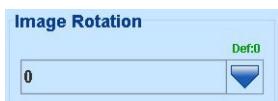
**Picture 101: Image Sharpness**

The **Image Sharpness** slider invokes an advanced automatic sharpening algorithm which sharpens the image before any other operation is performed.

The value “zero” disables the function. Very high values may produce artifacts depending on the type of document.

Move the slider indicator to the desired position to set the value.

#### D.3.4.7 Image Rotation



**Picture 102: Image Rotation**

The value selected from the list defines the rotation of the image in a clockwise direction. The image will be rotated directly after scanning and before display

#### D.3.4.8 Mirror

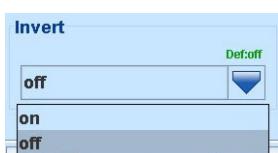


**Picture 103: Mirror**

This control mirrors the image along the selected mirror axis.

Using this setting can be helpful if scanning transparencies from the back.

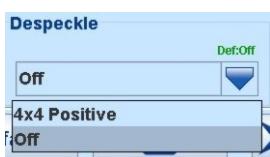
#### D.3.4.9 Invert



**Picture 104: Invert**

This control is only available with the color modes **Binary** and **Photo**.

#### D.3.4.10 Despeckle



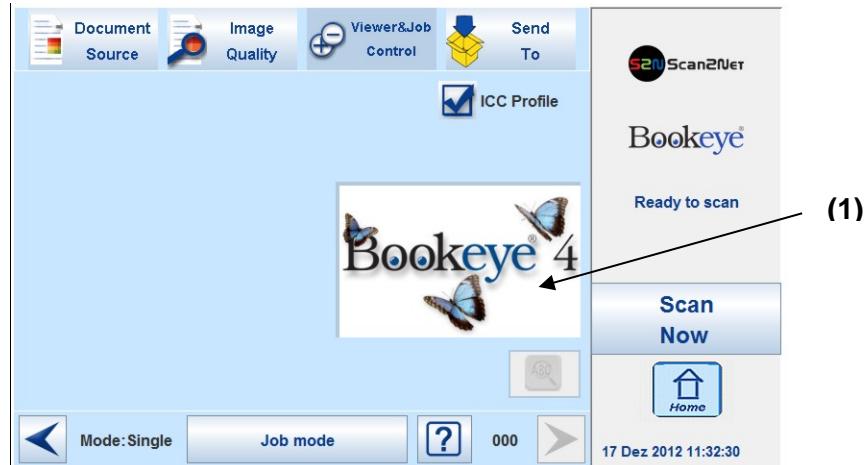
**Picture 105: Despeckle**

(Only available in **Binary** color mode)

Available modes are **4x4p** and **Off**.

### D.3.5 Touchscreen – Viewer & Job Control

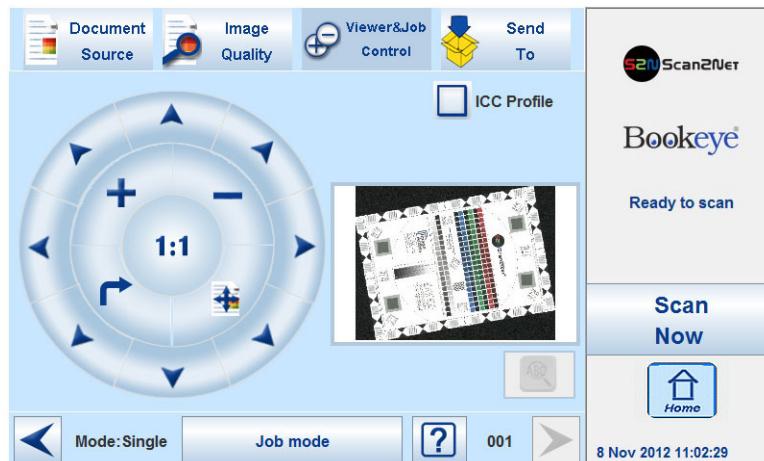
The **Viewer Control** screen allows the operator to control and modify the image on the TFT flat screen.



**Picture 106: Viewer & Job Control screen**

The preview section (1) represents the TFT flat screen.

The scanned image is displayed on the TFT flat screen and with reduced quality in the preview section right beside the controller elements.

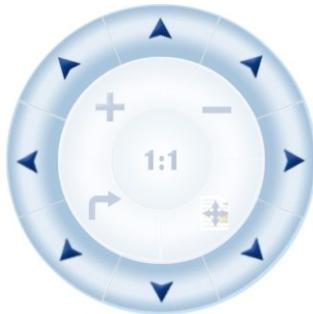


**Picture 107: Scanned image in preview area**



The ICC profile for the external monitor is integrated into the image if the checkbox is selected.

The controller is structured in three round elements (circles).



The outer circle contains the keys to move the zoomed area across the image.

The middle circle contains the keys to



zoom in



zoom out



rotate the image in clockwise direction in steps of 90 degrees



scale the image to the real size of the source document. A centered cutout of the image is displayed on the TFT flat screen.



The inner circle symbol allows selecting between two settings. It shows the selectable setting, not the selected setting.

Touching this symbol displays the image with its genuine dimensions (100%), depending on the resolution selected for scanning.



Touching this symbol displays the complete image on the TFT flat screen. The image will be scaled to a size that matches the screen size.

**Table 1: Controller circles and their functions**

### D.3.5.1 Zonal OCR

The Bookeye® 4 offers a zonal OCR function. This function can be activated by the button positioned right below the preview section.

Zonal OCR means, that only the marked area will be processed by the OCR function. Text and line feed will be found only. A layout analysis will not be executed.

Prior using the zonal OCR it is required to set the scan parameters as follows:

**Format:** Crop and deskew

**Resolution:** Between 300 dpi and 400 dpi.

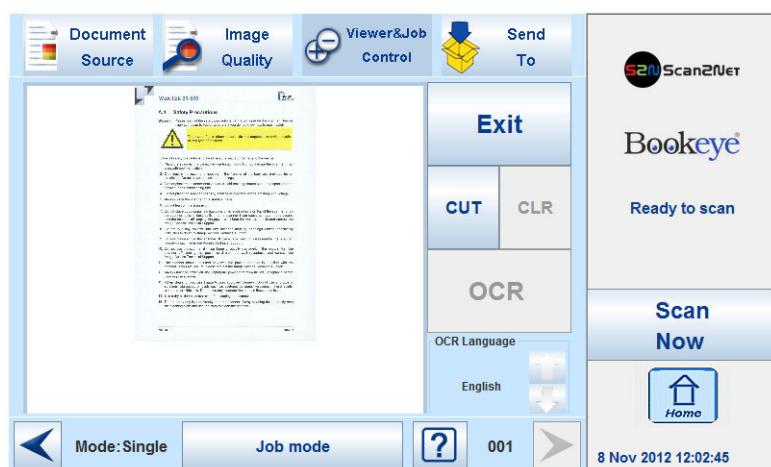
**File format:** PDF

Scan the document. The preview section of the touchscreen shows the image with reduced resolution. After scanning, the OCR button below the preview section is active.



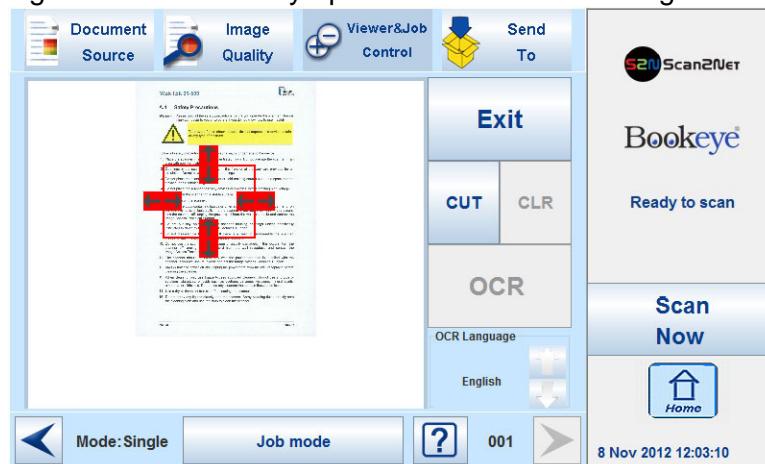
Picture 108: OCR button activated

Press the OCR button. The touchscreen change and shows the image and the control buttons for the OCR function.



Picture 109: OCR touchscreen

Touch the image at an arbitrary position. A red rectangle will be displayed.



**Picture 110: Rectangle defines the area for OCR function**

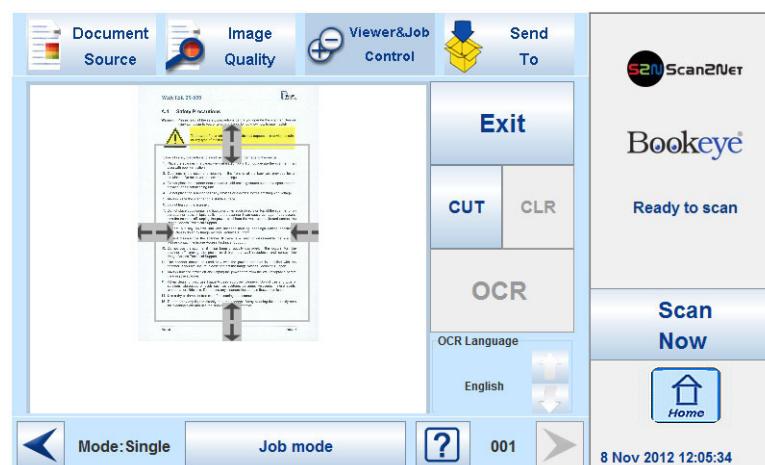
- Exit:** Press **Exit** to return to the former screen.
- CUT:** Press the **CUT** button. The next screen will display the defined area more detailed.
- CLR:** Press **CLR** to delete the defined area.
- OCR:** Press **OCR** to start the OCR process.
- OCR Language:** Press the Up/Down arrows to select a language which is used for the OCR process.

At first, only **CUT** is active.

Touch the arrows at the sides of the rectangle to define the dimension and the position of the area where the OCR function should be executed.

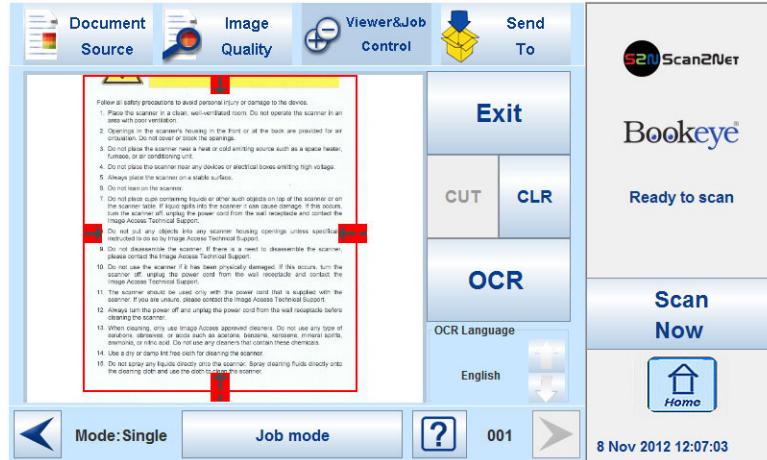
This is the first step and can be understood as a “pre”-selection.

Whenever the dimensions of the rectangle have been modified, it changes the color from “Red” to “Gray”.



**Picture 111: Pre-selection area selected**

Press **CUT** to separate the previously defined area from the complete image and to display it in detail.



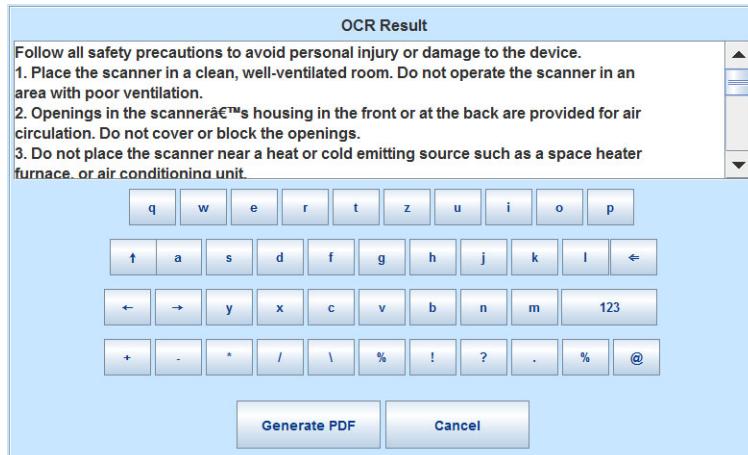
**Picture 112: Selected area magnified**

The next screen shows the selected area magnified and allows again defining an area for the OCR process.

Press **OCR** to start the OCR process.

Press **CLR** to return to the former screen and to repeat the definition of the OCR area.

The result of the OCR process will be displayed in the touchscreen.



**Picture 113: OCR result**

The OCR result shows only the plain text with line feeds, a layout analysis will not be offered.

The text can be edited by the user with the keyboard displayed at the touchscreen.

**Generate PDF:** Generates the PDF file of the text, detected by the OCR analysis.

The touchscreen will return to the **Viewer&Job control screen** (Picture 106).

Press the **Send to** button to save the image together with the text as PDF file.

### D.3.5.2 Job Mode

The bottom line of the **Viewer & Job Control** screen is different to the bottom line of the other screens.



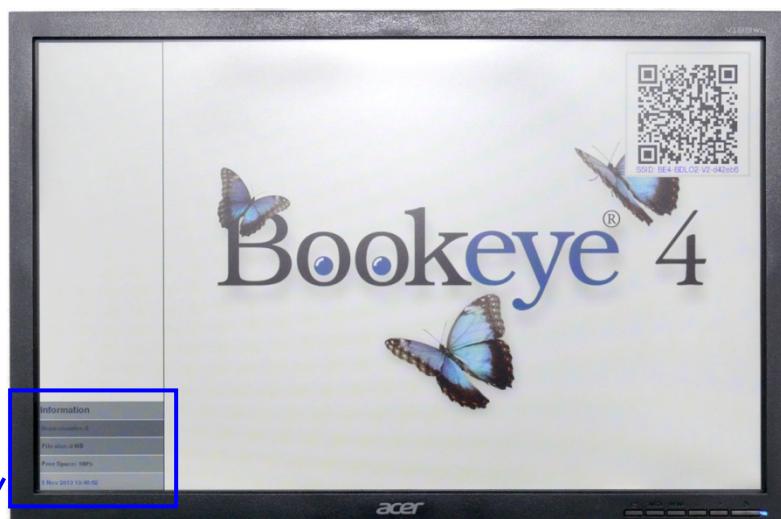
Picture 114: Bottom line with status

The bottom line shows

- the current scan mode status,
- the button to switch the job mode between **Single** and **Job mode**
- a scan counter between the question mark symbol and the “arrow right” symbol.

The default scan mode is **Single**. The button shows the selectable scan mode.

After selecting **Job mode** the TFT flat screen displays an “Information Panel” at the left margin.



Picture 115: TFT flat screen after selecting “Job mode”



The **Information** panel contains:

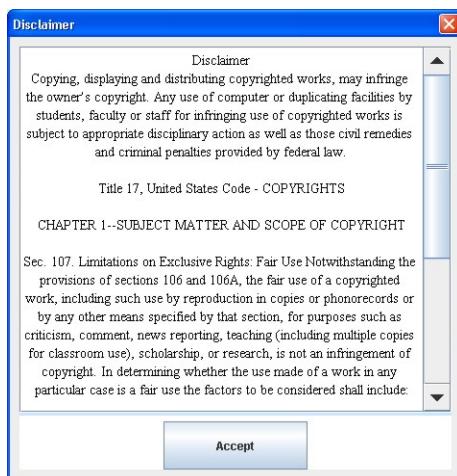
**Scan counter:** Number of images since starting **Job mode**.

**File size:** Size of all scanned images since starting **Job mode**.

**Free Space:** Remaining storage volume in percent.

**<Date Time>:** Current date and time

Before scanning the touchscreen displays a disclaimer, which has to be accepted.



**Picture 116: Disclaimer when starting the Job mode**

After accepting the disclaimer, the **Viewer&Job Control** screen opens.

It contains some additional control buttons above and below the preview section.



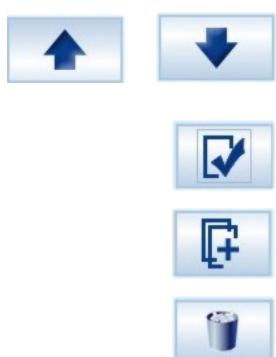
**Picture 117: Job mode start screen**

### D.3.5.2.1 Navigating through the list of images

The control buttons allow navigation through the list of scanned images and image handling while working in **Job mode**.

The currently scanned image is always displayed in the preview section of the touchscreen and will be added as last image to the list displayed at the TFT flat screen.

Function of the control buttons:



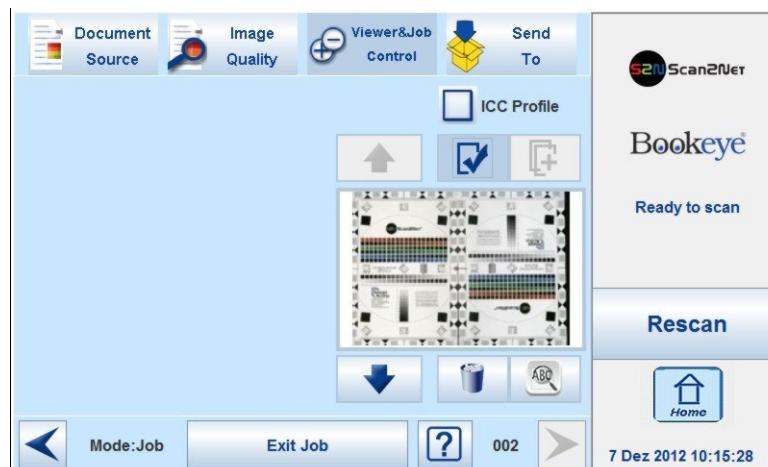
- Moves up- and/or downwards through the list of images to mark an image.
- Moves a selected image up- and/or downwards.
- Selects an image from the list. A red frame marks the image.
- Selects the position where an image should be inserted.
- Deletes the selected image.

After an image has been selected from the list, it is marked in the list with a dark frame.

The control buttons for available actions will be activated, i.e. they will be displayed in full color.

The image which was scanned last is marked with a “pencil” symbol in the list. This symbol signalizes that the image can be modified with the functions in section **Image Quality**.

The controller circles will be blanked out if another image than the last one scanned is selected.



Picture 118: Controller circles blanked out

After selecting an image for rescanning, the button

**Scan Now**

changes to

**Rescan**

#### D.3.5.2.2 Moving an image to another position



Use the upwards / downwards buttons to mark the image to be moved.



Press this button to select the image. The image now can be moved with the upwards / downwards buttons to the new position.



Press this button again to place the image at the new position.

#### D.3.5.2.3 Adding an image at an any position to the list

Use the upwards / downwards buttons to move to the position where the new image should be added.



This control button darkens the background of the selected frame. The image to be added will be inserted before the selected image. The image list will be renumbered.



Press the **Scan Now** button to start the scan sequence and to add a new image to the list at the selected position.

#### D.3.5.2.4 Deleting an image from the list

Use the upwards / downwards buttons to move to the image which should be deleted.



Use this button to select the image to be deleted.



Press this button to delete the selected image.

#### D.3.5.2.5 Rescan an image

Use the upwards / downwards buttons to move to the image which should be rescanned.

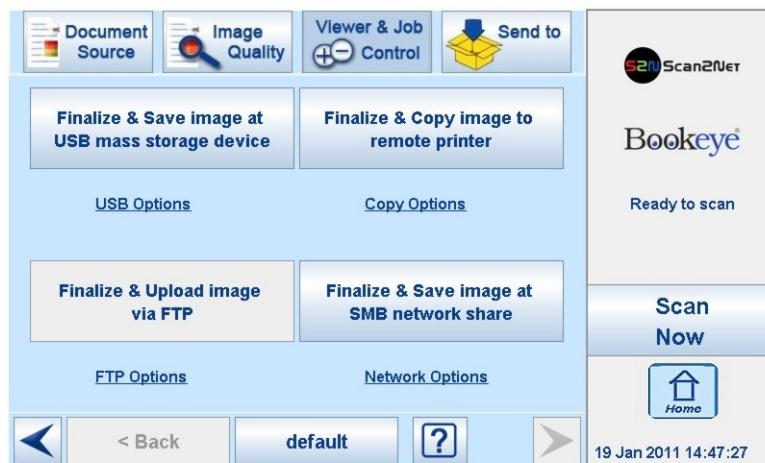


Use this button to select the image.

Press this button to rescan the image. The image will be inserted at the selected position.

### D.3.5.2.6 Finalizing the Job mode

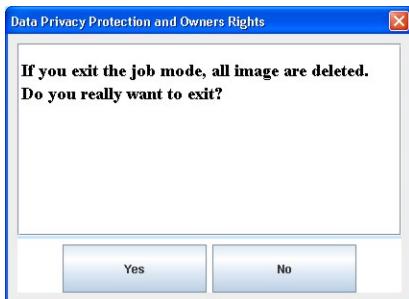
Before finalizing the **Job mode** the scanned images can be transferred to different destinations.



**Picture 119: Destination to finalize Job mode**

The destinations are identical to the destinations described in chapter D.3.6 and its subchapters.

Before the **Job mode** will be finalized, a message is displayed at the touchscreen.



Confirm the message to finalize the **Job mode** or select **No** to return to the menu.

### D.3.5.2.7 Job mode time out

After two minutes of inactivity the **Job mode** is finalized automatically.

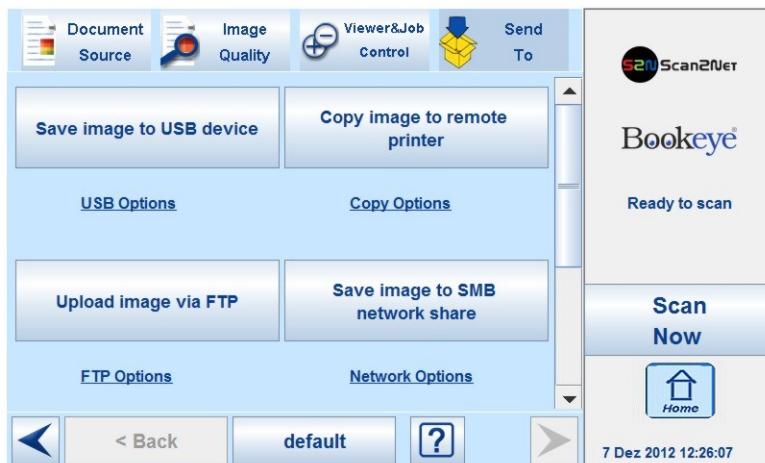
A message box pops up and a warning sound is audible.



**Picture 120: Information when time out ends**

### D.3.6 Touchscreen – Send To

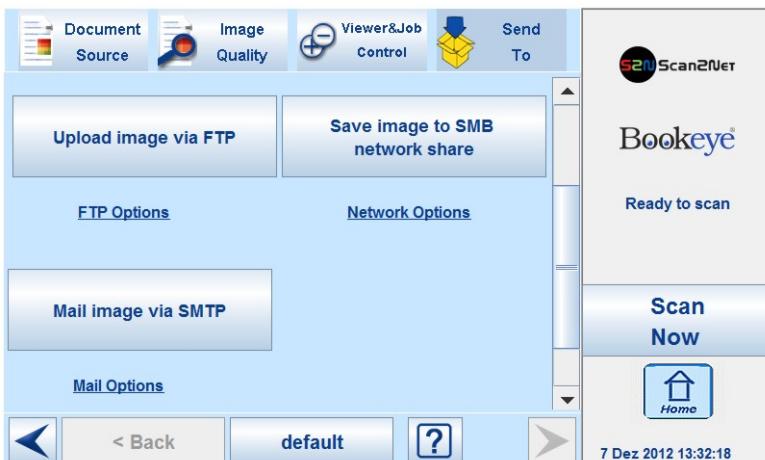
This menu provides the output options in order to transfer the scanned images to the desired destination.



**Picture 121: "Send To" screen #1**

Due to the dimension of the touchscreen, not all output options can be displayed at the same time. By using the scrollbar at the right side, the content of this menu can be moved.

Move the scrollbar to display all output option on the touchscreen.



**Picture 122: "Send To" screen #2**

When pressing the link below the respective button, the touchscreen content changes and displays the option screen.

The chapters D.3.6.2 to D.3.6.6 describe the options to be changed or set from the touchscreen.

### D.3.6.1 Changing a file name or other entries

In some of the option menus the file name can be changed.

To change the file name, touch the respective line.

The screen changes to an alphanumeric keyboard.



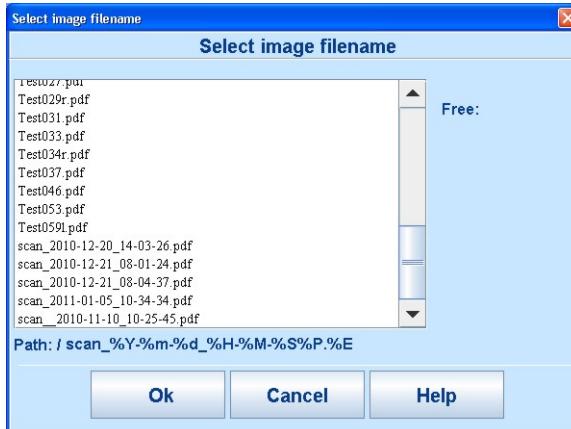
**Picture 123: Alphanumeric keyboard**

- 1: Use the arrow keys to position the cursor in the line.
  - 2: Use this key to delete characters.
  - 3: Use this button to switch between the keyboard layouts.
- Ok:** Touch this button to confirm the new entries and to return to the former screen.
- Cancel:** Touch this button to discard the new entries and to return to the former screen.

### D.3.6.2 USB Options

Two USB connectors are available at the front of the scanner to connect suitable USB data carriers, for example USB sticks.

Touching **USB Options** displays the directory of a connected USB data carrier.



**Picture 124: Directory of connected USB data carrier**

While the directory of the USB data carrier is displayed, the LED indicator of the respective connector is continuously illuminated.

Touch **Ok** or **Cancel** to stop displaying the directory of the USB stick.

When data is transferred between the USB data carrier and the scanner the LED indicator blinks.

**Please note:** When the blue indicator LED stops blinking, data transfer may still be in progress. Before unplugging the USB media, wait a few seconds to avoid loss of data.

#### D.3.6.2.1 List of suitable USB storage media

The criteria in the following list have been defined as a guide line for the storage media that can be connected to the USB connectors.

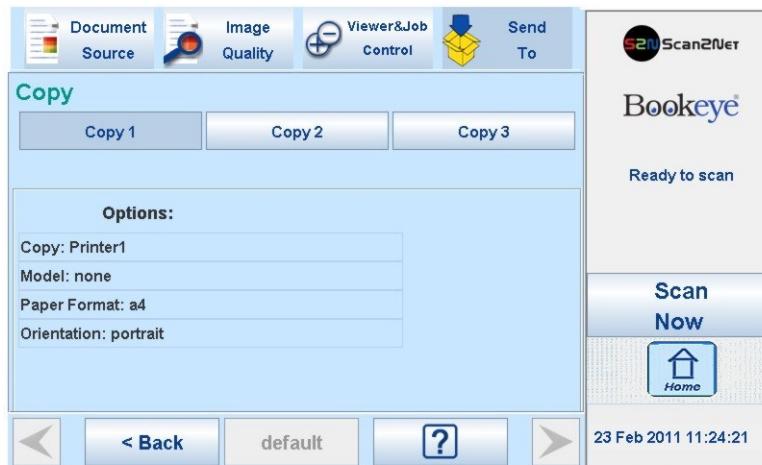
- USB memory sticks,
- USB hard disks,
- USB hard disks without partition, with one or with multiple partitions, formatted with the file systems UDF, FAT, FAT16, VFAT, FAT32, NTFS, EXT2, EXT3 or ReiserFS

The file system EXT4, BTRFS, UFS, ZFS or exFAT currently will not be supported.

### D.3.6.3 Copy Options

Touch **Copy Options** to switch to the screen with the preset copy option configurations.

Three preset options can be stored and activated with the buttons **Copy1** to **Copy3**.

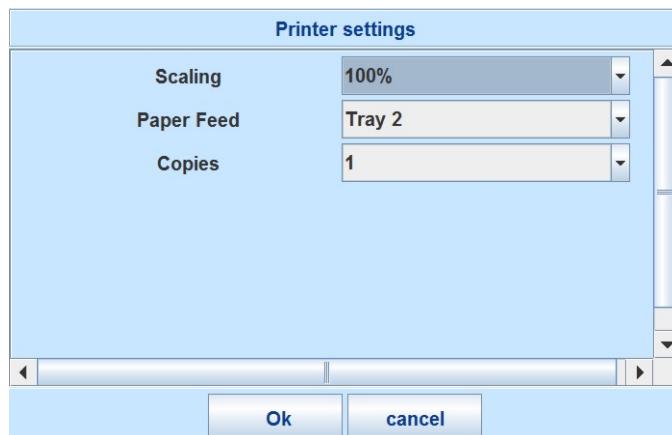


**Picture 125: Parameters of Copy Options**

The parameters displayed in the above picture can only be changed from the Scan2Net® setup interface, user level **Poweruser**.

#### D.3.6.3.1 Printer Settings

After pressing the button **Copy image to remote printer** an additional window opens.



**Picture 126: Printer settings window**

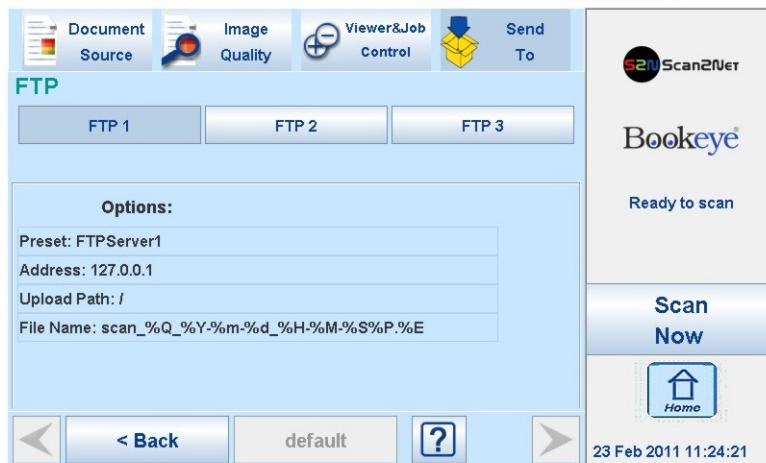
Here the user can select scaling of the image, the paper source and the number of copies.

The content of each line depends on the features of the connected printer.

#### D.3.6.4 FTP Options

Touch **FTP Options** to switch to the screen with the preset FTP server configurations.

Three preset FTP servers can be stored and activated with the buttons **FTP 1** to **FTP 3**.



**Picture 127: Parameters of FTP Options**

From the touchscreen, only the entry for **File Name** can be changed.

To change the entry, touch the respective line.

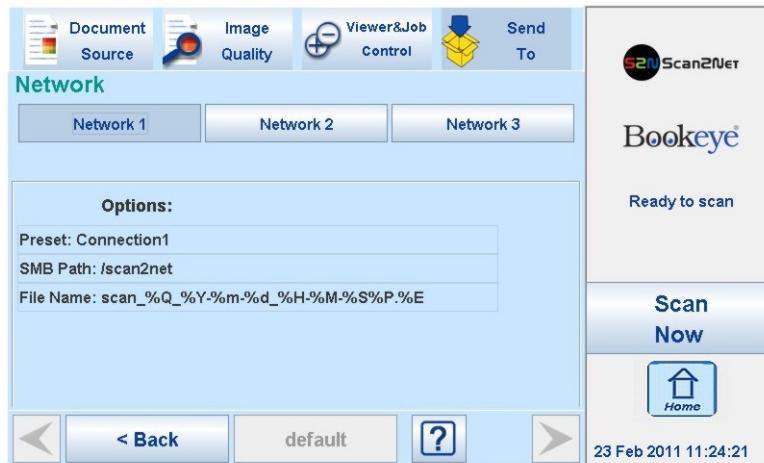
Chapter D.3.6.1 describes how the entry can be changed.

All other parameters must be changed from the Scan2Net® setup interface, user level **Poweruser**.

### D.3.6.5 Network Options

Touch **Network Options** to switch to the screen showing the preset network configurations.

Three preset configurations can be stored and activated with the buttons **Network 1** to **Network 3**.



Picture 128: Parameters of Network Options

From the touchscreen, only the entry for **File Name** can be changed.

To change the entry, touch the respective line.

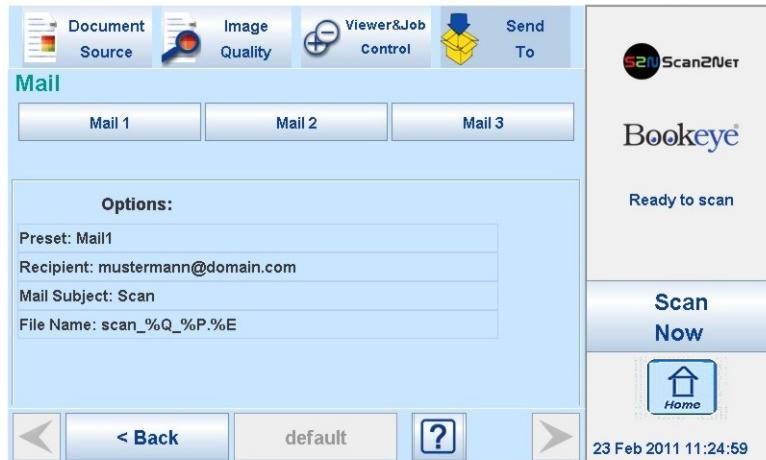
Chapter D.3.6.1 describes how the entry can be changed.

All other parameters must be changed from the Scan2Net® setup interface, user level **Poweruser**.

### D.3.6.6 Mail Options

Touch **Mail Options** to switch to the screen showing the preset email configurations.

Three preset configurations can be stored and activated with the buttons **Mail 1** to **Mail 3**.



**Picture 129: Parameters of Mail Options**

To change an entry, touch the respective line. From the touchscreen the values for

- Recipient
- Mail Subject
- File Name

can be changed.

Chapter D.3.6.1 describes how the entries can be changed.

More parameters can be changed from the Scan2Net® setup interface, user level **Poweruser**.

### D.3.6.6.1 Transaction modes

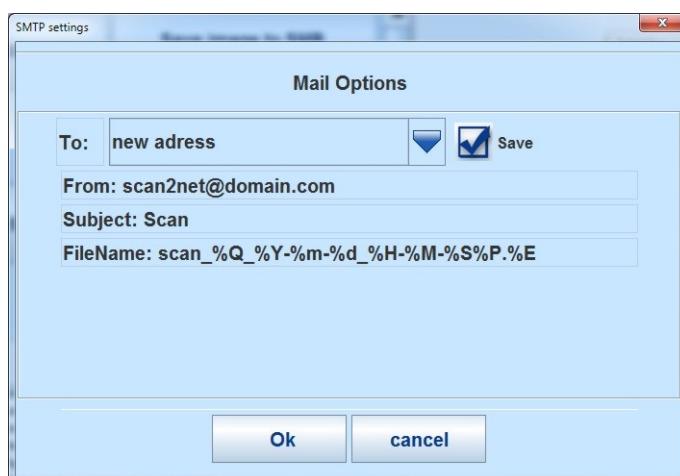
Two transaction modes are available for the mail transfer. The parameters for the transaction modes can be set from the Scan2Net® setup interface.

The mode, selected in the Scan2Net® setup interface, influences the process when a scanned image should be mailed.

**Automatic** When pressing the button **Mail image via SMTP** at the touchscreen, the image will be sent to the address defined in the screen **Mail Options** (Picture 129). The status area of the touchscreen above the **Scan Now** button shows the message: **Mail image via SMTP**.

**Interactive** When pressing the button **Mail image via SMTP** at the touchscreen, another window opens in the touchscreen. It is titled **Mail Options** and allows entering another address for the recipient than the prescribed address. All other settings remain the same.

To enter another address, click in the topmost line.



**Picture 130: Interactive mode, mail options**

All entered addresses will be saved in a list when **Save** is selected with the checkbox. Click at the selection arrow to see the list.

Using **Interactive** is recommended when transferring image to often changing addresses.

## E The User Interface ScanWizard Web

Essentially, the scanner is a web server and comes with its own HTML based user interface, named ScanWizard.

A basic requirement before working with the integrated ScanWizard user interface is to configure the browser as follows:

- Force the browser to reload the page content every time directly from the scanner and not to load from the cache memory.
- Enter the scanner's IP address in the exception list.

ScanWizard is a simple and intuitive user interface for your Scan2Net® scanner, which can be accessed using any standard web browser. ScanWizard is operating system independent and requires no installation of any kind on the user's client PC.

Once your network administrator has assigned the scanner an IP address and installed it in your network, any user can access the scanner and operate it using ScanWizard.

Start your browser.

Enter the IP address which has been assigned to the scanner.

The default IP address of the scanner: **192.168.1.50**

The Scan2Net® main menu will be displayed in the browser.



Picture 131: Scan2Net® main menu

**Launch Scan Application** switches to the ScanWizard interface. Information about the ScanWizard interface will be found starting in chapter E.1.

**Setup Device** switches to the setup menu. If you have access rights to the administrative parts of the Scan2Net® system, press this button to set up the device and access information about the scanner. Information about the setup level **User** can be found in chapter F.

**Information** gives a short summary of the device parameters. Information will be found in chapter E.

## E.1 The ScanWizard User Interface

After pressing the **Launch Scan Application** button the browser will show the ScanWizard interface.



**Picture 132: ScanWizard interface (symbol photo)**

You can bookmark the address of the ScanWizard interface in your browser for easy access later.

ScanWizard is a function rich user interface which allows the user configuring and operating the scanner easily without any additional software.

Even advanced functionality such as job management and color profiling are available in the ScanWizard user interface.

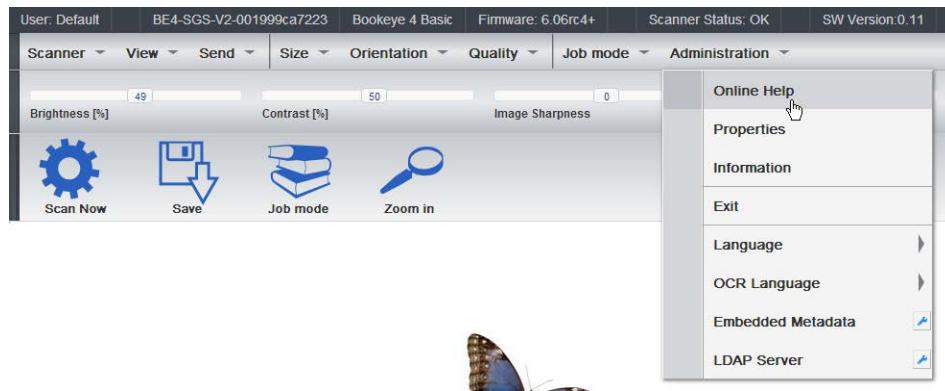


**Picture 133: ScanWizard interface layout**

Using the toolbars shown in Picture 133, the user

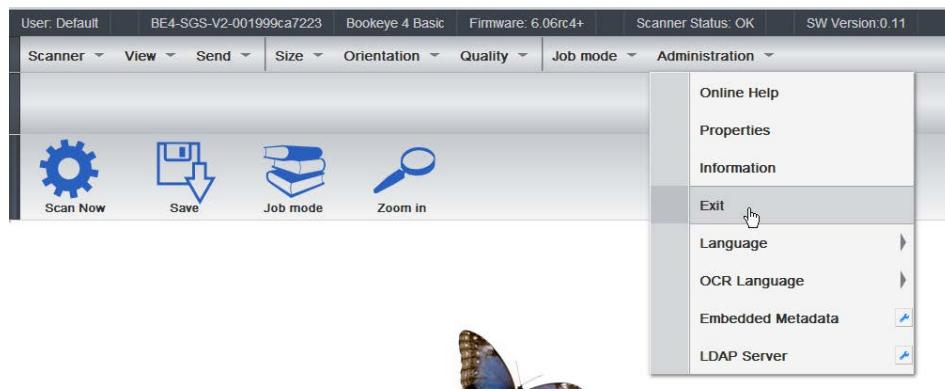
- selects the scanning parameters and scans,
- manipulates the images without having to rescan,
- processes large volume jobs or saves individual images to the destination of their choice.

These tool bars are described in detail in the online help function included in the ScanWizard interface, in the “Administration” menu, item “Online Help”.



**Picture 134: Online Help**

To exit the ScanWizard interface click on the main menu item “Administration” and then click on “Exit”.



**Picture 135: “Exit” returns to Scan2Net® main menu**

The browser will return to the Scan2Net® main menu (Picture 131).

## E.2 Information

Click on the button **Information** in the Scan2Net® main menu (Picture 131) to get a short summary of the device parameters.

The screenshot shows a web-based interface for a Scan2Net device. At the top, there's a header bar with a back arrow, forward arrow, and a search bar. Below the header, the title 'Information' is centered. On the left, there are two buttons: 'Show 20 entries' and 'Search:'. The main content area is a table listing various device parameters:

Device	BE4-BOL02-V2
Model	Office
Serial #	001999d42eb6
Scanner Chassis	
Firmware	6.20B
Service Pack	SP
IP Address #0	192.168.23.215
Subnet Mask #0	255.255.0.0
Default Gateway #0	192.168.23.215
IP Address #1	10.0.0.50
Subnet Mask #1	
Default Gateway #1	10.0.0.50
Userdefined Device Name	001999d42eb6
SMB Workgroup	scan2net
WINS Server	none
IP Configuration Method DHCP	No
Power Saving	60 minutes
Installed Options	<ul style="list-style-type: none"><li>• Book Fold Correction</li><li>• Batch Scan Wizard</li><li>• PDF Generator</li><li>• BE34-GSCL-OPT</li><li>• Scan2USB</li><li>• Scan2VGA</li><li>• ICC Subscription</li><li>• TWAIN Driver</li><li>• BE34-GSCL-OPT</li><li>• FreeFlow Lite</li><li>• FreeFlow PDF Module</li><li>• FreeFlow Image Enhancement Module</li><li>• FreeFlow OCR/PDF/Audio Module</li><li>• FreeFlow Batch Module</li><li>• FreeFlow Endorse Module</li><li>• FreeFlow Barcode Module</li><li>• FreeFlow Import Module</li></ul>

At the bottom of the table, it says 'Showing 1 to 18 of 18 entries'. To the right, there are buttons for 'Previous', 'Next', 'Back' (with a left arrow), and 'Launch Scan Application' (with a right arrow).

**Picture 136: Information**

The screen is helpful if technical support is necessary. It shows e.g. the exact device type, the installed firmware version as well as currently installed options.

Click the button **Back** to return to the start screen.

Click the button **Launch Scan Application** to switch to the Scan2Net® main menu (Picture 131).

## F The Setup Level

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

The **User** access level allows showing certain information about the system like 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 Picture 131) 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 137: Login screen

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

## F.1 Access Level User

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



Picture 138: 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.

### F.1.1 Device Info

In the section **Device Information**, click the button **Device Info** and the following list (Picture 139) will be displayed.

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



**Picture 139: 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 140: 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 (Picture 138) scroll down completely and click the **Back to Main Menu** button.

To return to the **Login** screen (Picture 137) click the button **Setup Menu** 

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

## F.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 141: Operation Info screen**

The following table gives a brief description.

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 activating the job mode for scanning.
Operating Time	The total operating time since the scanner left the factory. This is the 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 (Picture 138), click the button **Back to Main Menu** or click on the "Return" button in your browser.

To return to the **Login** screen (Picture 137) click the button **Setup Menu**

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

### F.1.3 User Settings

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



**Picture 142: User Settings start screen**

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

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

To return to the **Login** screen (Picture 137) click the button **Setup Menu** 

To return to the **USER** screen (Picture 138) 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.

### F.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 143: 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 (Picture 138) respectively the button titled in the selected language.

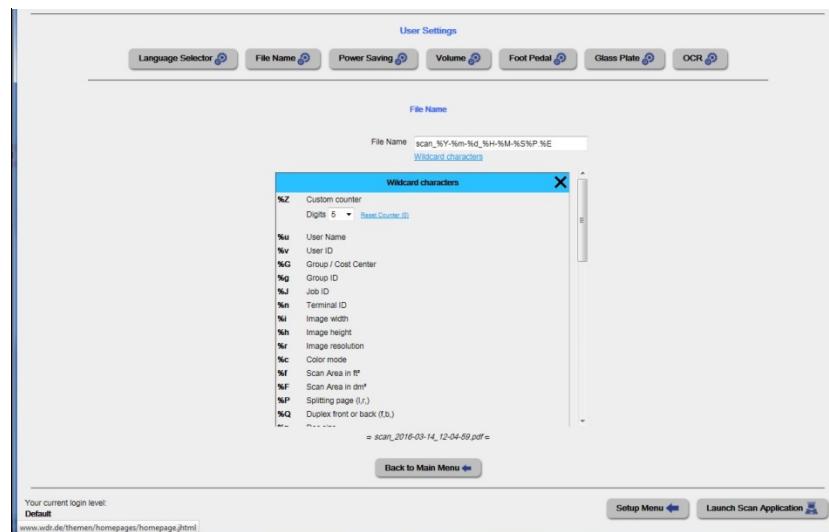
### F.1.3.2 File Name

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



**Picture 144: File name**

When defining the default name, variables can be used. To get a list of the variables, click at the link [Wildcard characters](#).

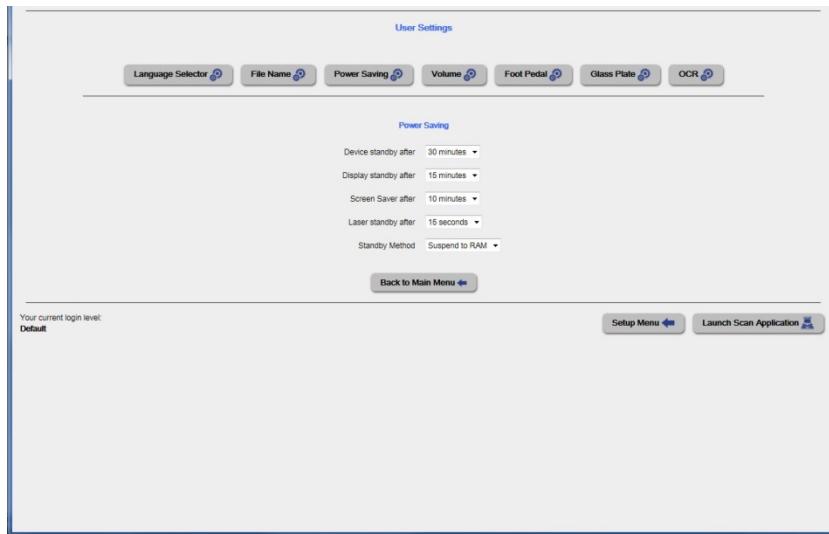


**Picture 145: List of wildcard characters**

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

### F.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 146: 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.

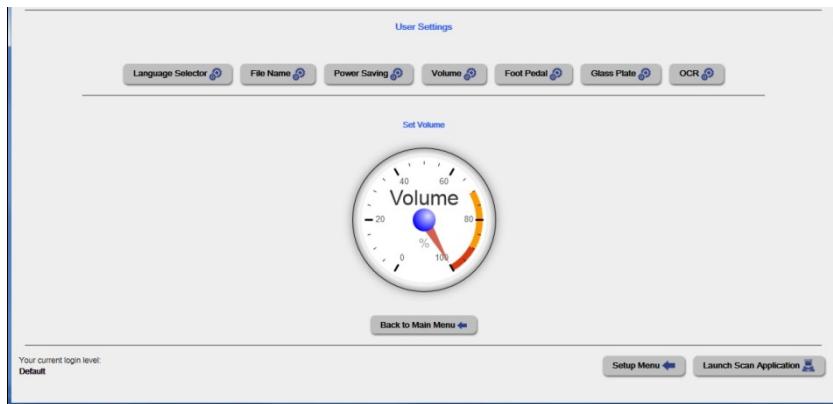
Standby mode	Available values
Device standby after Display standby after Screen Saver after	<p>A dropdown menu titled 'Power' showing time intervals from 5 minutes to Never. The '1 hour' option is selected. The menu includes 'Device standby after', 'Display standby after', and 'Screen Saver after' labels. A 'Back to Main menu' button is at the bottom.</p> <ul style="list-style-type: none"><li>5 minutes</li><li>10 minutes</li><li>15 minutes</li><li>20 minutes</li><li>30 minutes</li><li>45 minutes</li><li><b>1 hour</b></li><li>2 hours</li><li>3 hours</li><li>4 hours</li><li>Never</li></ul>
Laser standby after	<p>A dropdown menu titled 'Laser' showing time intervals from 15 seconds to 90 seconds. The '15 seconds' option is selected. The menu includes 'Laser standby after' and a 'Back to Main menu' button.</p> <ul style="list-style-type: none"><li>15 seconds</li><li>30 seconds</li><li>45 seconds</li><li>60 seconds</li><li>75 seconds</li><li>90 seconds</li></ul>
Standby Method	<p>A dropdown menu titled 'Standby Method' showing 'Suspend to RAM' and 'Power off'. The 'Suspend to RAM' option is selected.</p> <ul style="list-style-type: none"><li>Suspend to RAM</li><li><b>Power off</b></li></ul>

**Never** disables the power save function of the respective menu item.

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

#### F.1.3.4 Volume

Click the button **Volume** to set the loudspeakers volume of the scanner.



**Picture 147: 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 (Picture 137) click the button

**Setup Menu** 

To return to the **USER** screen (Picture 138) 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.

### F.1.3.5 Foot Pedal

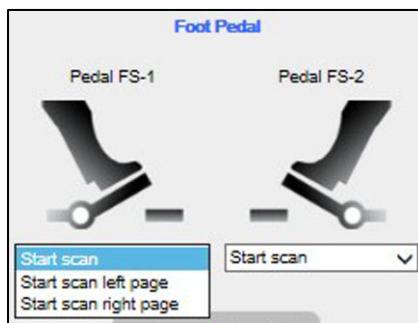
Click the button **Foot Pedal** to define a function for the foot pedals.



**Picture 148: Foot pedal settings**

The scanner has connectors on its rear side to connect a foot pedal (Picture 2, #5). 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 149: 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.

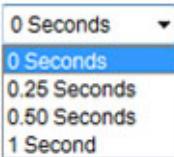
### F.1.3.6 Glass Plate

Click the button **Glass Plate** to define the action of the scanner when the glass plate lock is engaged.



**Picture 150: Setting for automatic mode**

Start scan defines if the scanner starts scanning after the glass plate lock is engaged.

<b>Start scan?</b>	<b>Yes:</b> The scan sequence starts after the glass plate lock is engaged. <b>No:</b> No action after the glass plate lock is engaged.
<b>Start scan delay</b>	Select from the list the time delay of the scan start after the glass plate lock is engaged.   Click at the selection arrow and choose the desired value.

### F.1.3.7 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 an information that no OCR engine has been found.

If no OCR engine is installed the screen shows an information that no engine is installed.



**Picture 151: OCR information**

To return to the **Login** screen (Picture 137) click the button **Setup Menu** .

To return to the **USER** screen (Picture 138) 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.

## G Technical Data / Caractéristiques techniques

### G.1 Scanner Specifications

#### Scan Area / Document Size

Maximum scan area	635 x 850 mm (25 x 33.5 inch)
Scanner resolution	400 x 400 dpi
Optical resolution	400 dpi
Pixel dimension	9.3 x 9.3 µm
Minimum document size	100 x 100 mm / 4 x 4 inch

#### Luminosity

Light intensity while scanning:	Max. 1800 LUX
Standby, idle	0 LUX (lamps off)

#### Lamps:

Light source	High Power White LED, classified according IEC 60825-1: Class 1
Warm up time	None. Maximum brightness immediately.
Temperature-related alteration	None
IR-/ UV radiation	None
Lifetime	50,000 hours (typ.)

#### Color modes

Grayscale digitization	12 bit
Color digitization	36 bit
Scan modes	24 bit color, 8 bit grayscale, bitonal, enhanced halftone

## F-F.1 Spécifications du scanner

### Zone de numérisation

Surface de numérisation maxi [mm]	635 x 850 mm
Résolution de numérisation	400 x 400 ppp
Résolution du capteur	400 ppp
Taille des pixels	9.3 x 9.3 µm
Minimum la taille du document	100 x 100 mm

### Luminosité

Intensité lumineuse pendant la numérisation	Max. 1800 LUX
Veille, au repos	0 LUX (lampes éteintes)

### Lampes

Source lumineuse	DEL blanche de grande puissance, classés selon IEC 60825-1: Classe 1
Temps de chauffage	Pas de luminosité maxi immédiate
Altération liée à la température	Aucun
Rayonnement IR / UV	Aucun
Durée de vie	50 000 heures (typ.)

### Modes de couleur

Niveaux de grise numérisation	12 bits
Numériser en couleur	36 bits
Modes de numérisation	Couleur 24 bits, 8 bits en niveaux de gris, monochrome, renforcée en demi-teinte

## G.2 Electrical Specifications

### External Power Supply

Voltage	100 – 240 V AC
Frequency	47 – 63 Hz
Inrush current	120 A max / 264 V AC
Efficiency	85 %
Idle consumption	≤ 0.5 W
Operating temperature	0 to 65 °C / 32 to 150 °F
Operating humidity	20 ...80 % RH, non-condensing
ECO standard	CEC level V

### Scanner

Voltage	24 V DC
Current	Max. 5 A

### Power Consumption

Sleep	≤ 0.5 W
Standby	2.5 W
Ready to scan, monitor on	75 W
Scanning	130 W

## F-F.2 Spécifications électriques

### Alimentation électrique extérieure

Tension	100 – 240 V c.a.
Fréquence	47 – 63 Hz
Courant d'appel	120 A maxi / 264 V c.a.
Efficience	85 %
Consommation en veille	≤ 0,5 W
Température de service	0 à 65 °C / 32 à 150 °F
Humidité en service	20 ... 80 % d'HR (sans condensation)
Norme ECO	Niveau CEC V

### Scanner

Tension	24 V c.c.
Courant électrique	Maxi 5 A

### Consommation électrique

Hors tension, écran allumé	≤ 0,5 W
Standby	2,5 W
Prêt à numériser, écran allumé	75 W
Numérisation	130 W

## G.3 Dimensions and Weight

Scanner outer dimensions, book cradle closed	1100 x 880 x 855 mm (H x W x D) 43.3 x 34.6 x 33.7 inch
Scanner outer dimensions, book cradle opened	1100 x 1000 x 855 mm (H x W x D) 43.3 x 39.4 x 33.7 inch
Total weight of scanner, ready to use	Approx. 77 kg / 170 lbs.

**Transport Box:**

Dimensions Transport Box (contains complete scanner on wooden drawer)	1270 x 1030 x 1020 mm (H x W x D) 50 x 40.6 x 40.2 inch
Weight Transport Box:	73 kg / 161 lbs.

**Total shipping weight:**

Total shipping weight	150 kg / 331 lbs.
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## F-F.3 Dimensions et poids

Dimensions extérieures du scanner, berceau de livre fermé	1100 x 880 x 855 mm (H x L x P)
Dimensions extérieures du scanner, berceau de livre ouvert	1100 x 1000 x 855 mm (H x L x P)
Poids total du scanner, prêt à l'emploi	env. 77 kg

**Transport Box:**

Dimensions du carton de transport	1270 x 1030 x 1020 mm (H x L x P)
Poids du carton de transport	73 kg
Poids de transport total	106,5 kg

## G.4 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)
Ambient luminance	≤ 300 Lux
Noise Level	≤ 42 dB(A) (Operating) ≤ 33 dB(A) (Standby)

## F-F.4 Conditions ambiantes

Température de service	5 à 40 °C / 40 à 105 °F
Température de stockage	0 à 60 °C / 32 à 140 °F
Humidité relative	20 à 80 % (sans condensation)
Luminance ambiante	≤ 300 Lux
Niveau de bruit	≤ 42 dB(A) (en marche) ≤ 33 dB(A) (en veille)

## G.5 CE Declaration of Conformity

The undersigned, representing the manufacturer:

**Image Access GmbH**  
**Hatzfelder Strasse 161 – 163**  
**42281 Wuppertal, Germany**



herewith declares that the

Product: **Bookeye 4 V-Cradle Book Scanners**

Model Designation: **BE4-xxxxx-yyyy**

The **x** can be minimum 3 and maximum 5 alphanumeric characters representing the equipment feature.

The **y** can be maximum 3 alphanumeric characters representing the scanner version.

Serial number: **All**

is in conformity with the following European standards and IEC directives:

### Safety:

Low Voltage Directive (Safety) 2006/95/EC as per  
IEC 60950-1:2005 (2nd Edition) + A1:2009-12  
EN 60950-1:2006 + A11:2009 + A1:2010

The national differences for **United States of America and Canada** are included.

The equipment was tested and has been found in conformity with the following standards:

ANSI/UL 60950-1-2007, 2<sup>nd</sup> Edition, Issued 2007/03/27  
CAN/CSA C22.2 No. 60950-1-07, 2<sup>nd</sup> Edition, Issued 2007/03/27

**EMC:**

EMC Directive 2004/108/EC as per

EN 55022 :2006 + A1 :2007 Class B

EN 61000-3-2:2006

EN 61000-3-3:2008

EN 55024 :1998 + A1:2001 + A2:2003 Passed according criteria class A and B

EN 61000-4-2:2009

EN 61000-4-3:2006 + A1 :2008

EN 61000-4-4:2004

EN 61000-4-5:2006

EN 61000-4-6:2009

EN 61000-4-11:2004

Wuppertal, July 2013



Thomas Ingendoh , President and CEO

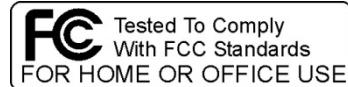
## G.6 FCC Declaration of Conformity

Responsible party:

**Image Access GmbH**

**Hatzfelder Strasse 161 – 163**

**42281 Wuppertal, Germany**



Product: **Bookeye 4 V-Cradle Book Scanners**

Model Designation: **BE4-xxxxx-yyy**

The **x** can be minimum 3 and maximum 5 alphanumeric characters representing the equipment feature.

The **y** can be maximum 3 alphanumeric characters representing the scanner version.

Serial number: **All**

### This device complies with Part 15, Class B of FCC 47.

The test setup F≤ 1000 MHz and test was done according to  
**ANSI C63.4: 2003** and **CISPR 22: 2006+A1:2007**

Compliance with CISPR 22 is being used to demonstrate conformity with FCC DoC requirements. This conforms with FCC Part 15.107(e) and 15.109(g).

The test setup F> 1000 MHz and test was done according to  
**ANSI C63.4: 2003**

American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

**NOTE:** This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

**For your notes**