Image Access

Bookeye® 2 plus

Operation Manual

This device is ENERGY STAR compliant.

Introduction

Dear Customer,

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

We at Image Access are proud of the work we do; it is the result of our extremely high standards of production and stringent quality control.

With the Bookeye® scanner, Image Access offers an efficient scanner which covers a wide scope of applications due to its versatility. Its integrated web based user interface makes all functions available in structured menus.

This operation manual is designed to lead you through all situations which will arise when using the Bookeye® 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 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® scanner during the entire service life.

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

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

Regards

Your Image Access Team

About this Manual

Operation Manual

All information about the normal operation and behavior of this device is found in the **Operation Manual**. The manual 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 like BSW, BSCAN or BCS2. Refer to the appropriate manual to learn about the application software.

Setup and Assembly Manual

The **Setup and Assembly Manual** is written for technical staff with some basic mechanical as well as software skills. Many resellers will offer on-site installation; therefore, large parts or all of the setup and assembly manual might not be of interest to the reader. The access level at which these setup and adjustment processes are performed is called “Power user”. This “Power user” level is password protected from access by the normal operator.

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

The manual is divided into four sections, A to D.

Section A	describes the hardware of the device. It shows the connectors as well as all other elements of the device.
Section B	describes the operation software and the keyboard functions.
Section C	describes troubleshooting procedures and test scan generation.
Section D	shows all technical data and declarations.

Version History

Version	Published in	Content/Changes/Supplements
A	March 2002	Preliminary version. Description of the device. Description of the integrated user interface, Vers.2.
B	April 2002	Additional information concerning user interface, Vers.2.x
C	May 2003	User interface complemented and revised. User defined formats by Java
D	July 2005	Some minor changes in the S2N user interface. Some menu item has been deleted or moved. Additional information concerning firmware update procedure.
E	September 2005	New content in chapter 13, Updating Firmware.
F	January 2007	Firmware 4.8x: Some modifications in S2N user interface. Content in some menus have been changed, help function available by clicking a “question mark” in the upper right corner of the S2N screen.
G	January 2008	Minor changes in order and numbering of sections in chapter A.1. to A.3.4
H	March 2008	Scan2Net Interface V5 implemented. Some new features and screens. Some functions in new order.
I	May 2009	Scan2Net Interface V5.20 implemented. Content of some screens in the S2N user interface have been changed. Some minor modifications in the list of available parameters, e.g. formats of scan area.

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A Hardware Operation

A.1 Safety Notes

Read all safety notes thoroughly and ensure that you understand the safety notes.

The safety notes are introduced for your personal protection and for your safety.

All safety requirements of the following standards

EN 60950

UL 60950

CSA C22.2 No. 60950

are fulfilled by the Bookeye® scanner.

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.

Safety Note!

Text with description of potential hazard.

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 the scanner safely.

Please follow the safety precautions in this manual exactly.

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. Place the scanner in a clean, well-ventilated room. Do not operate the scanner in an area with poor ventilation.
2. Openings in the scanner's housing in the front or at the back are provided for air circulation. Do not cover or block the openings.
3. Do not place the scanner near a heat or cold emitting source such as a space heater, furnace, or air conditioning unit.
4. Do not place the scanner near any devices or electrical boxes emitting high voltage.
5. Always place the scanner on a flat and stable surface. The load bearing capacity of the base must correspond to the device weight.
6. Do not lean on the scanner.
7. Do not place cups containing liquids or other such objects on the camera head or on the document bed. 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.
8. Do not put any objects into any scanner housing openings unless specifically instructed to do so by Image Access Technical Support.
9. Do not disassemble the scanner. If there is a need to disassemble the scanner, please contact the Image Access Technical Support.
10. 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.
11. The scanner should be used only with the power cord that is supplied with the scanner. If you are unsure, please contact the Image Access Technical Support.
12. Image Access recommends plugging the scanner into an appropriately-rated power conditioner.

A.3 Device Location

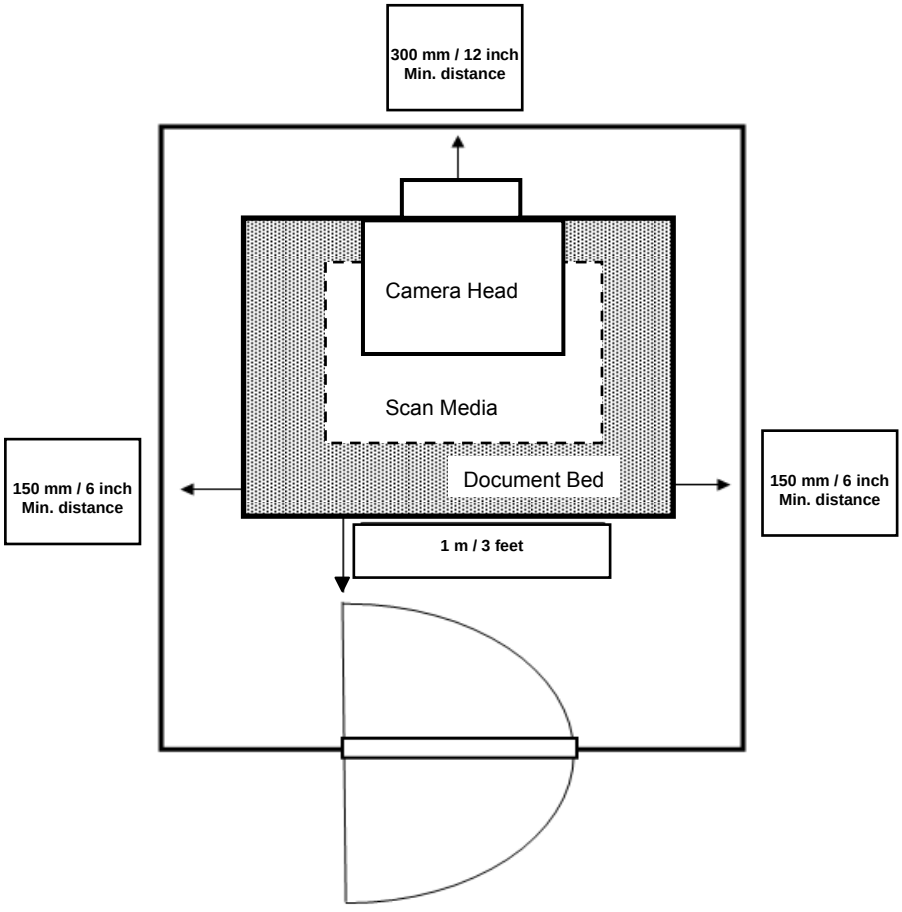
A.3.1 Environment

Choose a location that complies with the limits of temperature and humidity. Refer to the technical specification.

Note: Before using the BOOKEYE® scanner in the new environment allow at least **one hour** for temperature adaptation.

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.

Please allow a minimum of 150 mm (6 inch) from any side walls and 300 mm (12 inch) from a back wall. Leave one meter (3 feet) minimum distance from any door or entrance way. Use illustration below as a guide.



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

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

A.3.2 Ambient Light

The location should have a controlled ambient light situation. Light scenarios to avoid are direct sunlight, spot light from light beams, light sources that cause sharp shadows on the scanning bed, high levels of ambient light and varying light conditions.

The Bookeye® 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.

The recommended location for the Bookeye® scanner:

- Is not exposed to daylight.
- 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 also can produce sharp shadows.

Light beams from spotlights will also produce sharp 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® scanner itself has no infrared content at all. The advantage is that the scanner does not have an image quality degrading infrared filter. Too much infrared content will result in overexposure.

The Bookeye® scanner has an integrated “White Balance” function. This function will compensate the ambient light influences. Therefore it is recommended to perform the “White Balance” function when the ambient light scenario has been changed.

A.3.3 Table

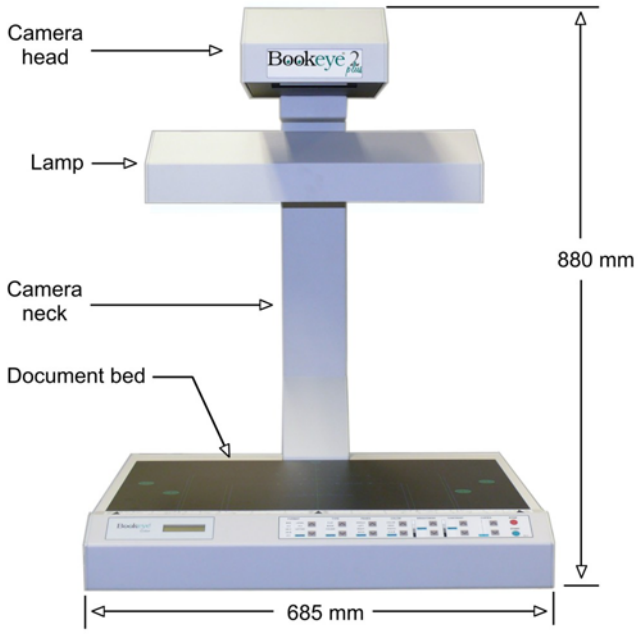
Place the device on a flat and solid base, preferable a solid table. The load bearing capacity of the table must correspond to the device weight. The table should be build to hold at least three times the weight of the unit. Also it should not shake or move to avoid image distortions. If the table is too weak it can be attached to a solid wall to stabilize it.

A.3.4 Power outlet

Safety Note!

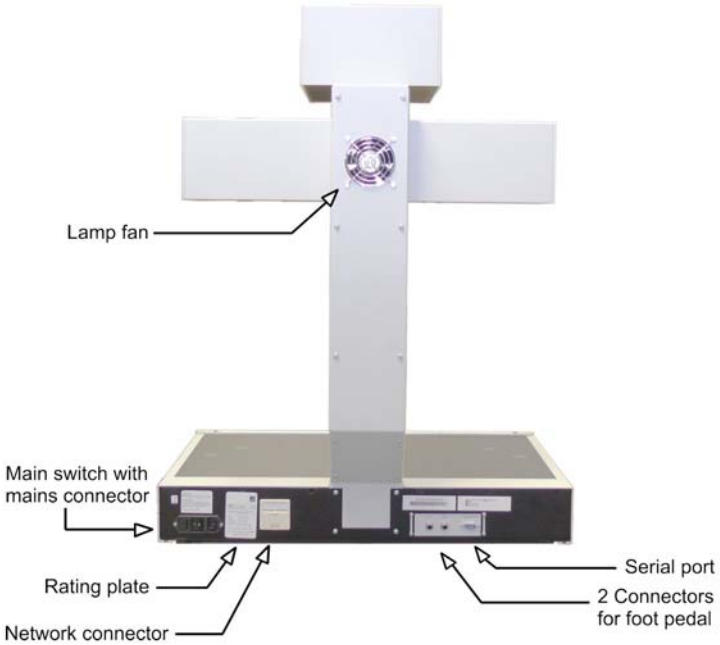
Ensure that the power outlet is always accessible. This will help to separate the device from the power outlet in case of an emergency.

A.4 Device Overview



Picture 1: Front side view

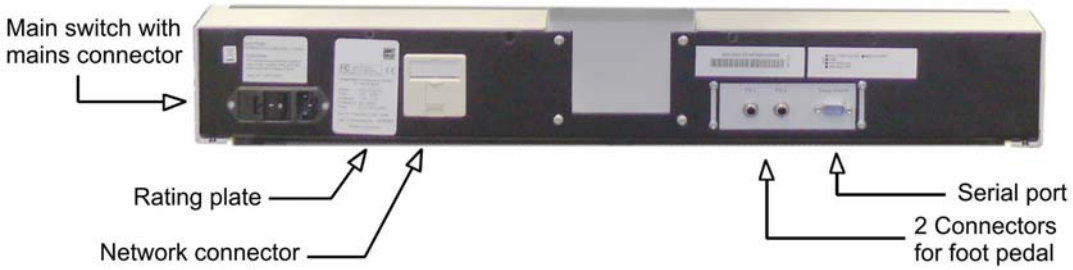
For a first look at the Bookeye® scanner, some of the more important components have been identified in the photos here. These components are referenced in the operation manual.



Picture 2: Details on the back side

A.4.1 Connectors on the Rear Side

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



Picture 3: Connectors on rear side

A.5 Establishing Connections

Important: Before connecting the Bookeye® scanner to the mains voltage, check the following items:

- The wall outlet is in perfect condition and properly grounded.
- The power cable is undamaged.
- The wall outlet is equipped with a correctly dimensioned fuse.
- Turn the device off before plugging or unplugging any cable.

Connect the wall outlet and the power supply connector at the Bookeye® scanner with the power cable.

A.5.1 Connecting the Power Source

The power connector and the main power switch are located at the right side of the back of the document bed.

Important: Before connecting to the power source, check the following items:

The wall outlet is in perfect condition and properly grounded.

The power cable is not damaged in any way.

The wall outlet fuse has the correct electrical dimensions. Refer to the technical specification chart for detailed information.

Check the device fuse. Use only the specified device fuse. The device fuse specification is named on the identification plate.

After the main switch is turned on, the green START field above the START button lights up. This indicates that the Bookeye® scanner is ready-to-use.

A.5.2 Connecting to the Network

The Bookeye® scanner is delivered with a cross-over cable (green cable connectors) and a standard CAT6 network cable.

The network connector is located at the back side of the document bed.

Use the cross-over cable to connect the Bookeye® scanner directly to a PC via a network card.

Use the network cable to connect the Bookeye® scanner to a network.

A.5.3 Connecting Foot Pedal Switches

The scan sequence and other operations can be invoked through the optional available foot pedal switches.

At the back side of the device, there are two jack plugs to which the foot pedal switches can be connected. The jack plugs are labeled with “FS1” and “FS2”.

A.6 Starting the Bookeye® scanner

If the device has been used before and was constantly connected to power, the display will show the message:

Standby Press Start button

and the green START field above the **Start** button is illuminated.

Picture 4: Display before power up

If the device was previously disconnected from the main power supply, the standby message might not be visible. As long as the green START field above the **Start** button is illuminated, the scanner can still be powered up by pressing the **Start** button.

Standby Press Start button

Press the **Start** button. The background light immediately lights up indicating that the device is starting.

The START field becomes dark and the STOP field will light up.

The next message in the display is:

System check Please wait

The message is indicated for some seconds. Meanwhile the device performs the basic hardware and software checks.

followed by:

BE2-SGS-N3 Firmware 5.00

This is the device name followed by the firmware version

At this point during the power up cycle, the display will show:

RESET NETWORK CONFIGURATION ?

for one second.

If the **Start** button is pressed during this interval, the display shows:

ARE YOU SURE ?

If the **Start** button is pressed again in the next three seconds the IP address, gateway and subnet mask are all reset to their factory defaults.

This procedure is followed by:

MECHANICS CHECK 192.168.1.50

Indicates, that the test for the motors and for the end position switches is running. The second line shows the IP address.

If the tests end successful, the display shows:

HARDWARE CHECK 192.168.1.50

Indicates the test of all remaining hardware components. The second line shows the IP address.

When the power-up test sequence is finished error free, the display shows the final message.

Ready to scan

The Bookeye® scanner is now ready to use. On the keyboard, the following LEDs are illuminated:

Function field	LED
FORMAT	A3
TYPE	FLAT
PAGES	LEFT
COLOR	COLOR
BRIGHTNESS	AUTO
CONTRAST	AUTO
COPIES	1

After the device has powered up, the **Start** button has a second function. It can be used to delay a scan until the button is pressed in one of the application software scan modes.

A.6.1 Switching off the Bookeye® scanner

Press and hold the **Stop** button for at least three seconds.

The red STOP LED starts blinking.

The lamps and all LEDs on the keyboard will be switched off.

During the shutdown sequence the display shows

System Shutdown
Please wait

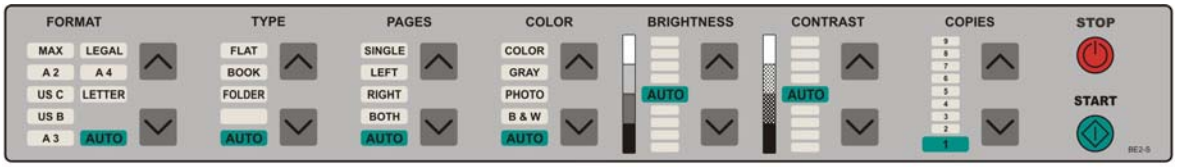
At the end of the shutdown sequence only the green LED above the **Start** button remains on.

The Bookeye® scanner is now in stand-by mode.

Important: If for any reason the Bookeye® scanner does not respond to the application and the keyboard, the start key can power down the device, regardless of the processor status.

To achieve this, the start button must be held for **at least** six seconds.

A.7 Keyboard



Picture 5: Keyboard Bookeye® scanner

The keyboard is laid out in seven function fields. At each function field, upward/downward buttons are used to select the desired setting.

The selected setting is displayed by LEDs at each function field.

The **Start** button and the **Stop** button control several functions. The function of these buttons is defined by the mode of operation of the Bookeye® scanner.

The Bookeye® scanner has two modes of operation.

— Scan mode: In this mode of operation the Bookeye® scanner is controlled by the function fields or by the integrated user interface.

Pressing the **Start** button starts the scan sequence with the defined parameters. During the scan sequence the display shows the current status.

A brief push of the **Stop** button interrupts the scan sequence. All scanned data is lost.

Pressing the **Stop** button for at least three seconds switches the Bookeye® scanner off. While switching off, the red LED blinks. During this time the display shows the current status.

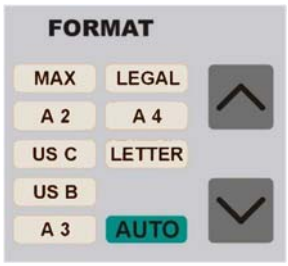
At the end of the shutdown sequence, the green LED above the **Start** button lights up. The Bookeye® scanner now is in stand-by mode.

— Set-up mode: In this mode of operation all specific device parameters of the Bookeye® scanner are set.

For this purpose, five function fields of the keyboard are used.

Detailed information about the setting of device parameters can be found in chapter A.8.

A.7.1 FORMAT



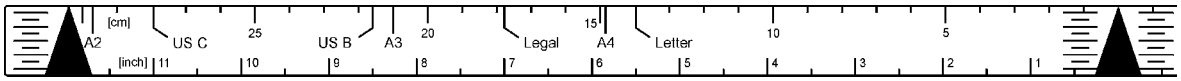
Picture 6: Function field FORMAT

The function field **FORMAT** defines the size of the scanned area.

At the end of the system-test the A 3 field lights up.

The size, indicated by the LED, always refers to the horizontal format. For easy orientation above the keyboard, a format reference can be found. The available formats are marked on this reference.

All formats defined on the reference are center symmetric.



Picture 7: Reference with format definitions

Table 1 indicates the dimensions of the scanned area.

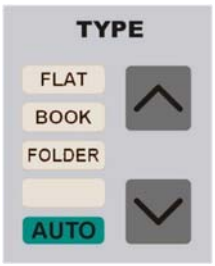
Lettering	Size	Lettering	Size
MAX	Maximum scan area	LEGAL	215,9 x 355,6 mm
A2	420 x 594 mm	A4	210 x 297 mm
US C	431,8 x 558,8 mm	LETTER	215,9 x 279,4 mm
US B	249,4 x 431,8 mm		
A3	297 x 420 mm	AUTO	Automatic size detection

Table 1: Size of the scanned area

The **AUTO** setting activates the automatic size detection.

By using the **AUTO** setting, the Bookeye® scanner scans the complete, maximum scan area. The size of the document which is placed on the document bed is recognized automatically and displayed in the correct size.

A.7.2 TYPE



Picture 8: Function field TYPE

The function field **TYPE** defines the document type.

At the end of the system-test the FLAT field lights up.

Function	Document type
FLAT	Documents with consistent thickness, e.g. single pages.
	Documents without binding or center fold.
BOOK	Documents with a high center fold, e.g. books, catalogues or similar things.
FOLDER	Documents with distinct differences in level, e.g. opened files.
AUTO	No function at this time.

A.7.2.1 FLAT

The type **FLAT** is suitable for all documents with a slight difference or no difference in thickness level over the whole document.

If the type **FLAT** is selected, the focus value is measured in a narrow range to the left, next to the center line of the document bed. The distance to the center line results from the size of the document to be scanned. Place the document at the edge of the document bed and with at least a third of the document size left from the center line.

With the setting PAGES ➔ RIGHT, the focus value is measured right from the center line. In this case, place the document so that at least a third of the document size is right of the center line.

The distance between the measurement area and the center line depends on the selected format. The smaller the selected format is, the closer the measuring area is to the center line.

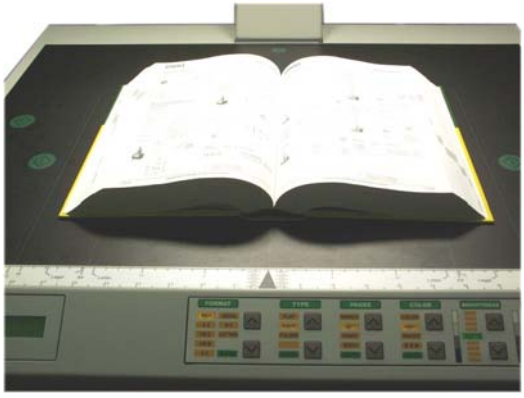
A.7.2.2 BOOK

The type **BOOK** is suitable for bounded or stitched documents with a high center fold, the so called “book fold”.

The setting **BOOK** activates the Book Fold Correction.

The following criteria must be met for proper functioning of the Book Fold Correction:

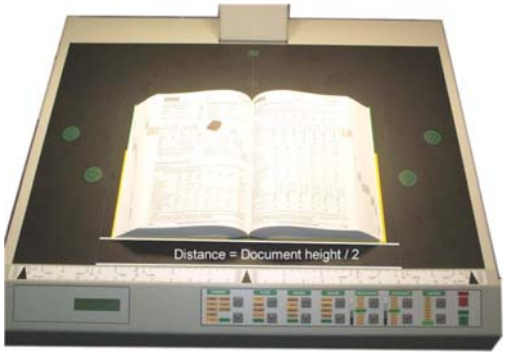
— The middle of the book fold must be positioned on the center line.



Picture 9: Book fold positioned on center line

— The document must not be positioned at the document bed edge. The distance between document and document bed edge should be at least half of the document height.

Picture 10: Example for document height



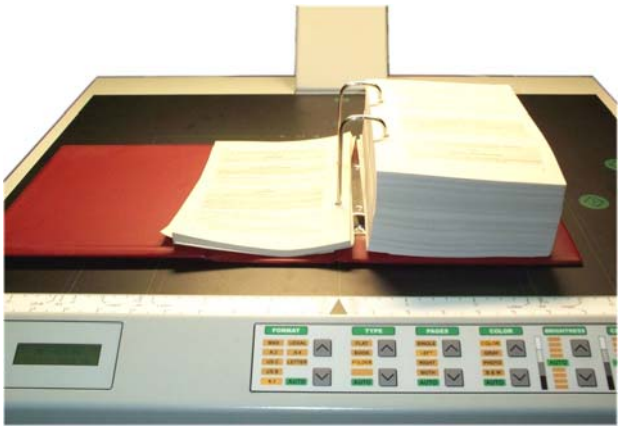
Picture 11: Distance to document bed edge

If these criteria are not met, the Bookeye® scanner produces an uncorrected image.

A.7.2.3 FOLDER

The type **FOLDER** is suitable for documents with plain differences in levels between left and right page.

These are e.g. extensive files or documents without bound or center fold.



Picture 12: Example for document used with FOLDER

In combination with the setting PAGES ➔ BOTH, the left and right half of the document are focused and sent separately.

Because of the separate focusing for each side, it is not necessary to take the documents out of the file.

The second side is sent after further pushing the **Start** button or by clicking again the buttons

Scan Preview Now

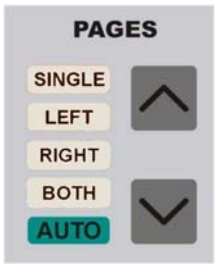
Or

Scan Now

in the integrated user interface.

Chapter B.1 describes the functions and the use of the integrated S2N user interface.

A.7.3 PAGES



Picture 13: Function field PAGES

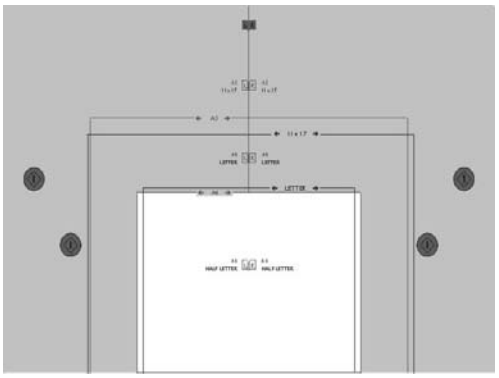
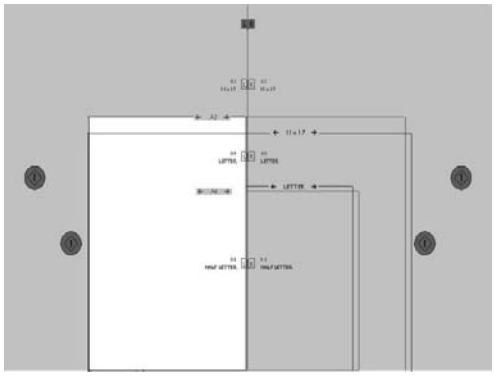
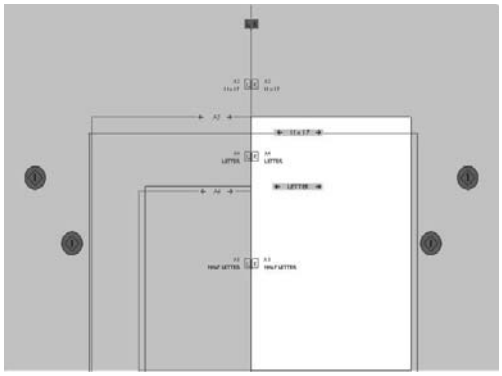
The function field **PAGES** defines the output mode.

At the end of the system-test the **SINGLE** field lights up.

The settings LEFT, RIGHT and BOTH activate the page separation.

Function	Output mode
SINGLE	No page separation. Selected document size as one image.
LEFT	Page separation activated. Output of the left half of the selected scan area size.
RIGHT	Page separation activated. Output of the right half of the selected scan area size.
BOTH	Page separation activated. Output of the left and right half of the selected scan area size consecutively.
AUTO	No function at this time.

Examples:

Selected setting	**Scan area** (white area)
Example 1: Function field FORMAT: A4. Function field PAGES: SINGLE.	
Example 2: Function field FORMAT: A3. Function field PAGES: LEFT	
Example 3: Function field FORMAT: A3 Function field PAGES: RIGHT	

A.7.4 COLOR

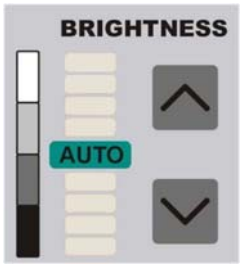
Picture 14: Function field COLOR

The function field **COLOR** defines the color mode.

At the end of the system-test the COLOR field lights up.

Function	Output mode
COLOR	Scans the document in 24-bit color mode.
GRAY	Scans the document in 8-bit gray scale mode.
PHOTO	Scans the document in bi-tonal (black/white) mode combined with a dithering effect. The readability of details in the scan is improved by the dithering.
B & W	Scans the document in bi-tonal (black/white) mode.
AUTO	No function at this time.

A.7.5 BRIGHTNESS



Picture 15: Function field BRIGHTNESS

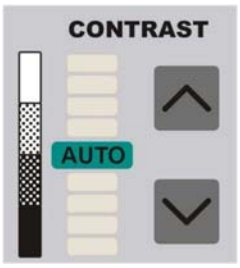
The function field **BRIGHTNESS** sets the brightness value while scanning.

At the end of the system-test the AUTO field lights up.

Moving the LED bar upwards increases the brightness.

Moving the LED bar downwards decreases the brightness.

A.7.6 CONTRAST



Picture 16: Function field CONTRAST

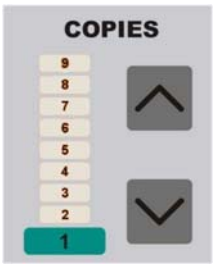
The function field **CONTRAST** sets the contrast value while scanning.

At the end of the system-test the AUTO field lights up.

Moving the LED bar upwards increases the contrast value.

Moving the LED bar downwards decreases the contrast value.

A.7.7 COPIES



Picture 17: Function field COPIES

Note: This function field is only active in the copier version of the device.

At the end of the system-test the 1 field lights up.

The function field **COPIES** selects the number of copies.

A.8 Set-up Mode

In set-up mode, the user can set different parameters of the Bookeye® scanner.

A.8.1 Activating the Set-up Mode

The Bookeye® scanner must be off.

Press and hold the **Stop** button and then press the **Start** button.

The lamps light up and the display shows in two lines:

Self Test
KBD vers. (version number)

This message will be displayed until the end of the internal self-test sequence.

During the internal self-test sequence, all LEDs on the keyboard light up consecutively.

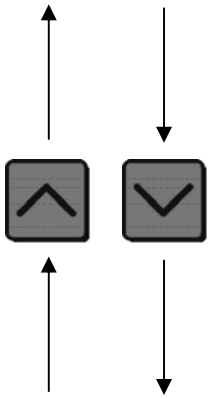
After the self-test is completed, the LEDs light up in the same position which was active when the device was switched off.

The display now shows the serial number of the Bookeye® scanner in two lines.

A.8.2 Checking the current settings

To check the current settings of the IP address, the subnet mask, the gateway address and DHCP value, perform the following steps.

Press the up / down buttons at the FORMAT keyboard field to select the displayed value.



The display shows …

Serial number of the device (e.g. BE2-SCL-N2)
Serial number of the device

IP:
AAA.BBB.CCC.DDD

Subnet:
AAA.BBB.CCC.DDD

Gateway:
AAA.BBB.CCC.DDD

DHCP
YES / NO (displayed value depends on the current setting)

A.8.3 Setting new values

To set new values for the displayed parameters, use the following buttons:

— Use the up / down buttons at the function field **TYPE** to change the value for **AAA** as well as to switch the setting for **DHCP** between YES and NO.

— Use the up / down buttons at the function field **PAGES** to change the **BBB** value.

— Use the up / down buttons at the function field **COLOR** to change the **CCC** value.

— Use the up / down buttons at the function field **BRIGHTNESS** to change the **DDD** value.

Press the corresponding button to increase or decrease the desired value.

Press the button continuously to change the values fast upwards or downwards.

A.8.3.1 Special advice for the gateway address setting

If no gateway is used, use the same address as for the IP address setting.

A.8.4 Saving new values

Press and hold the **Start** button for at least one second to save the new value.

The display shows the following message.

Settings stored
Please reboot

After this message, the display returns to the serial number.

A.8.5 Ending the Set-up Mode

To end the set-up mode, press and hold the red **Stop** button for at least three seconds.

The red STOP LED starts blinking.

The display shows the message:

System Shutdown
Please wait

The lamps and all LEDs on the keyboard will be switched off.

After the power-down sequence is finished, only the green LED above the **Start** button remains on.

B Software Operation

Essentially, the scanner is a web server and comes with its own HTML based user interface. To access a Scan2Net scanner, any standard web browser can be utilized.

A basic requirement before using the integrated user interface is to configure the browser as follows:

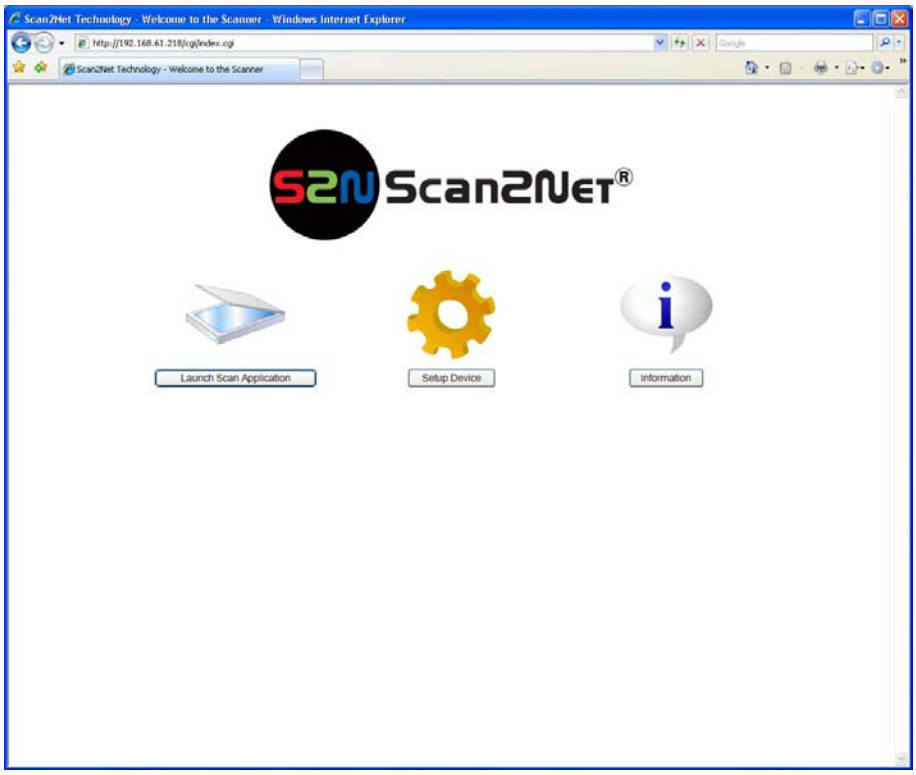
- Force the browser to reload the page content every time directly from the scanner and not to load from the cache memory.
- Enter the scanner's IP address in the exception list.

B.1 The Integrated User Interface

Start your browser.

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

The following start screen of the integrated user interface will be displayed.



Picture 18: Start screen

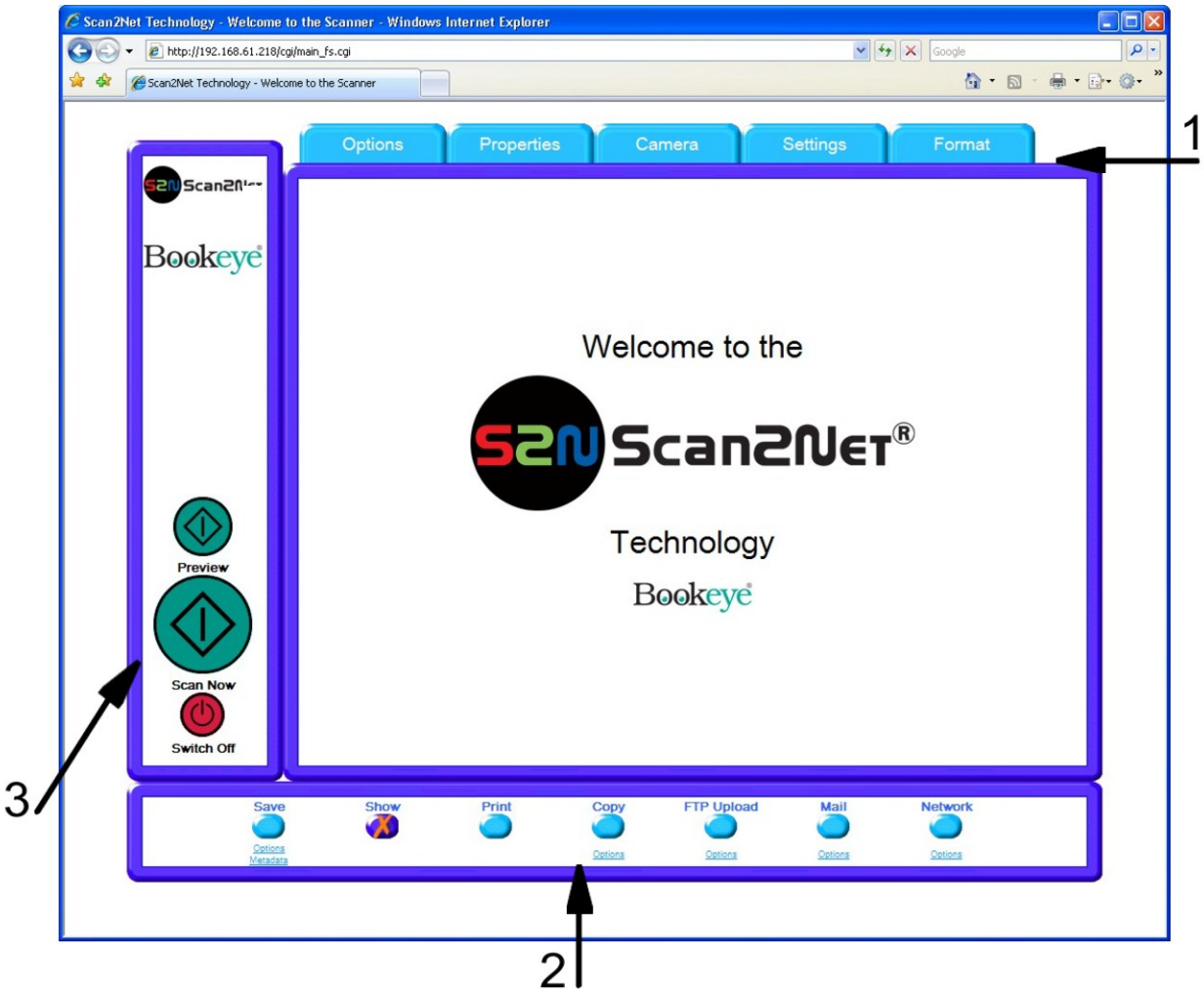
Launch Scan Application switches to the main screen. Detailed information will be found starting in chapter B.2.

Setup Device switches to the setup menu. Detailed information will be found starting in chapter B.5.

Information gives a short summary of the device parameters. Information will be found in chapter B.4.

B.2 The Main Screen

After launching the scan application, the main screen of the integrated user interface will open. The main screen is structured in three parts. Switching between the sections is done with a mouse click.



Picture 19: Main screen

1: The menu bar of the large frame on the upper right part has five menu items:

- Options
- Properties
- Camera
- Settings
- Format

2: The seven control buttons in the lower part of the screen control the output modes.

As default the output mode **Show** is selected. After clicking onto the button **Preview** or onto the button **Scan Now** a window opens and shows the image.

When selecting **Save** the scanned image will not be displayed. Instead of the second window a box opens where the desired directory can be set.

Selecting **Print** will display the scanned image in a second window and direct the scanned image to locally available printers.

Selecting **Copy** prints directly to a previously installed network printer.

Selecting **FTP Upload** scans directly a FTP server.

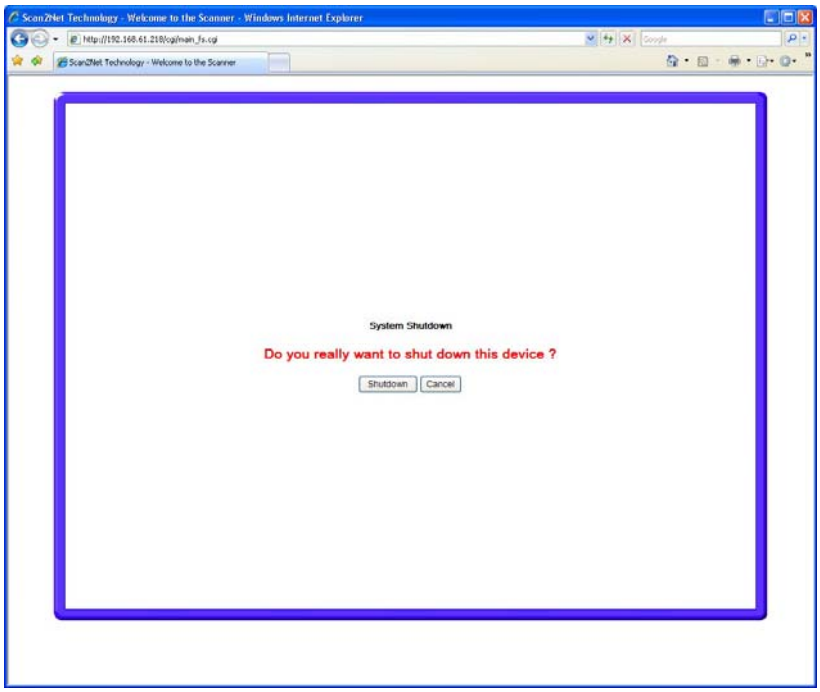
Selecting **Mail** sends the scanned image directly to a previously defined e-mail address.

Selecting **Network** uploads the scanned image directly to a previously defined workstation in the network.

3: The frame on the left side shows the buttons for preview scan (**Preview**) and main scan (**Scan Now**).

Pressing this button switches the scanner off.

If the red button is pressed, the following screen will appear.



Picture 20: Confirm shutdown

Click on the button Shutdown and the scanner switches off.

B.2.1 The Options Screen

Picture 21: Options screen

The **Document Mode** allows the user to select between different types of documents:

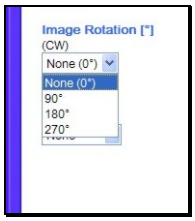
In **Flat Mode** the document is treated as flat, i.e. with a fixed focus setting, regardless of the actual shape of the document. This mode avoids out of focus problems when scanning three dimensional objects that cannot be described as folders or books.

In the **Book Fold Correction** mode the focus follows the surface of a book while the scanner advances from left to right or right to left. Also all geometric distortions are compensated. It is essential that the book is positioned on the document bed as described in chapter A.7.2.2.
More details of the book fold correction can be specified in the ***(Options)*** dialog (see chapter B.2.1.1).

In the **Folder Mode** the focus is fixed on the right side and the left side of the document independent of each other. It is essential that the open folder is aligned straight to the laser line to get optimal results.

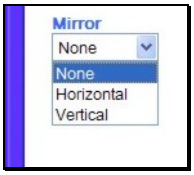
The **Scan Mode** allows the user to select between **High Quality** with a reduced scanning speed or **Fast** with normal speed.

Image Rotation Rotates the image before displaying.



The **Image Rotation** can be any degree of rotation out of 90°, 180°, 270° or none. The rotation angle is defined in clockwise direction.

Mirror The image can be mirrored before displaying.



Click on the selection arrow and set the desired mirror axis. Available are **Horizontal** or **Vertical**.

Select **None** to display the image without mirroring.

The **Preview Scale** value sets the size of the preview image. If set to **Auto** the function will perform a best fit before the image is displayed on the screen.

The **Preview Quality [%]** sets the JPEG quality of the preview image.

The **Embedded ICC Profiles** switch is either **Yes** or **No**. If set to **Yes** an ICC profile is embedded into every image after scanning.

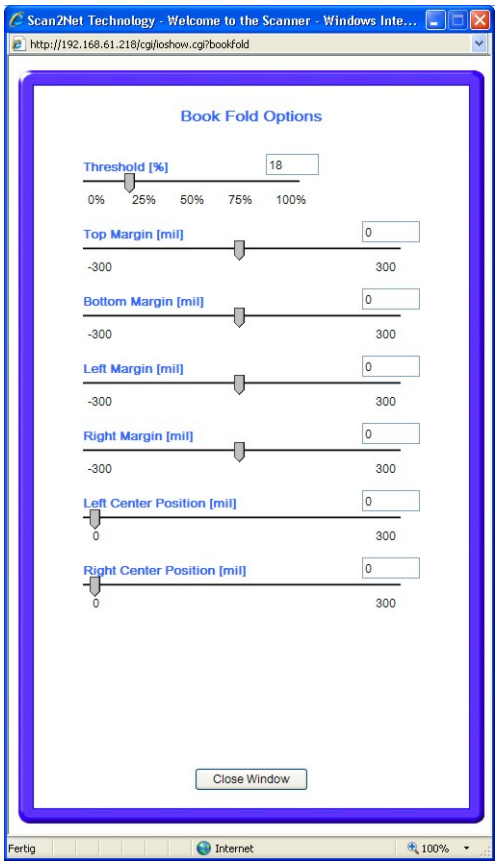
Embedded Metadata Select **Yes** to add metadata information to the image.

Clicking the **Option** link opens a window, where the embedded metadata can be entered.

To close the option window click the button Close Window

B.2.1.1 Book Fold Options

Clicking on **(Options)** beside **Book Fold Correction** opens an additional window.



Picture 22: Book Fold Option screen

It allows to set the value for

- the threshold value,
- the top and the bottom margins,
- the left and the right margins
- the left and the right center position.

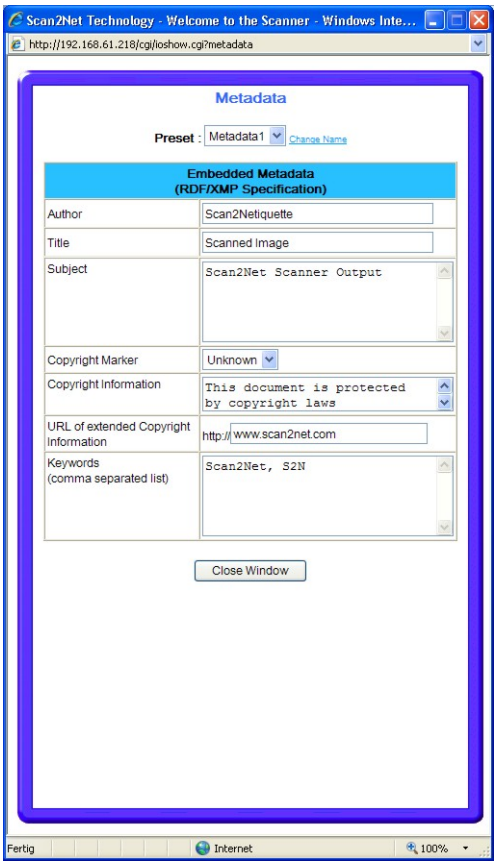
The unit of measurement is “mil”. This unit of measurement is defined as 1000 mil = 1 inch.

The selected values for the margins will be added to the image.

The sliders for **Left Center Position** and **Right Center Position** define the width of the area beside the detected book fold to be filled in white color.

B.2.1.2 Embedded Meta Data

Clicking on **(Options)** below **Embedded Metadata** opens an additional window.



This function is used in conjunction with the file formats JPEG, TIFF or PDF.

It will allow the operator to include a set of XMP/RDF compliant document metadata in the file header.

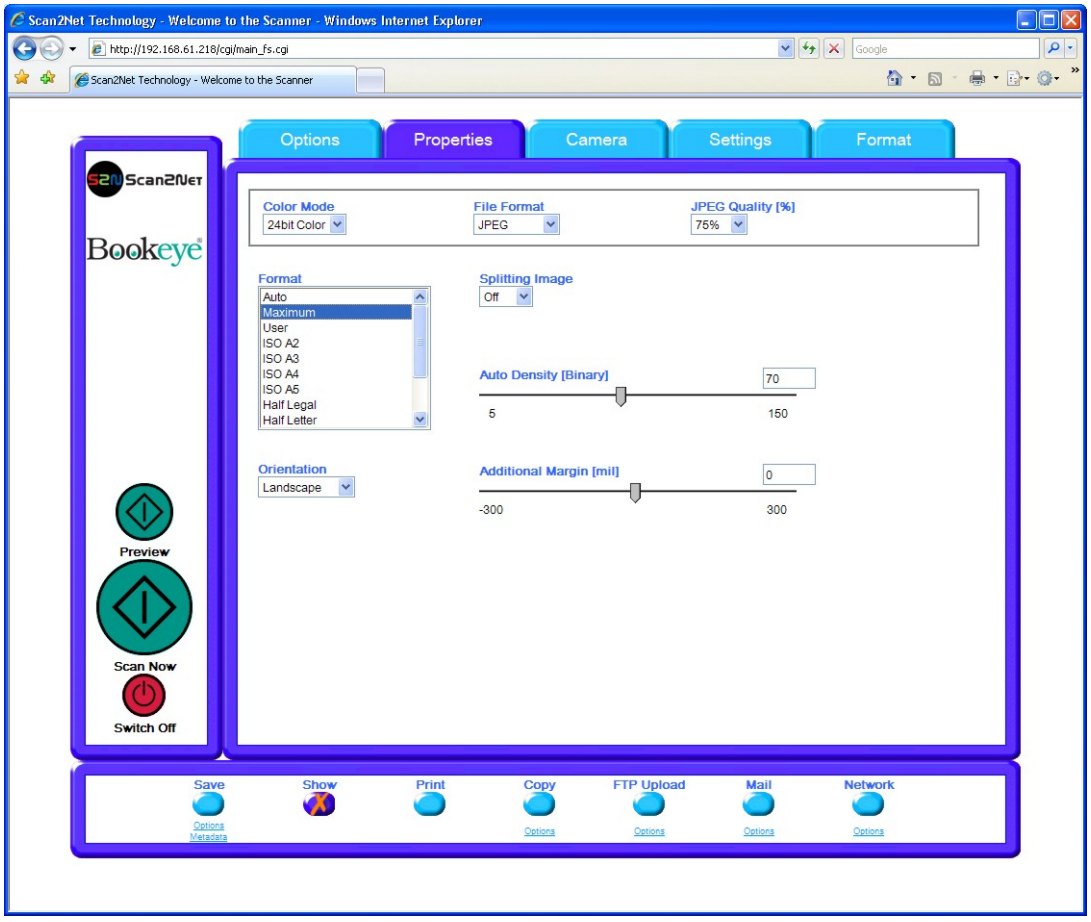
Up to five presets can be saved by selecting a name from the **Preset** list. The presets names can also be changed.

To close the option window click the button Close Window

Picture 23: Metadata screen

Metadata	Description
Author	Enter the name or organization that created the document or is the copyright owner of the document.
Title	Enter a short title for the scanned document.
Subject	Abstract of the document.
Copyright Marker	Select if the scanned document is copyright protected.
Copyright Information	Enter the copyright message. This message will be only embedded in the scanned document if the copyright marker is set to “yes”.
URL of extended Copyright Information	Enter an external URL which shows a detailed copyright message.
Keywords (comma separated list)	Enter a list of comma separated keywords which describe the content of the document.

B.2.2 The Properties Screen



Picture 24: Properties screen

The **Color Mode** control allows the user to select from a list the desired color modes. Available are **24bit Color** and **Grayscale** as well as **Binary** and **Photo**.

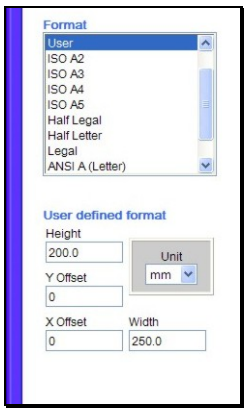
The **File Format** control defines the file format that is used to store a scanned image. Some interdependencies exist between the **File Format** control and the **Color Mode** control. For example, it is not possible to store an image scanned in **24bit Color** mode in TIFF G4 file format.

The **JPEG Quality [%]** control 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.

The **Format** control selects between various standard paper formats. If **Auto** is selected, the scanner scans the maximum format and then crops the document to its real size. This function is highly advanced and works with default values most of the time.

If any other setting than **Auto** or **User** is selected, the additional control **Orientation** will be displayed. It allows to select in dependence from the dimension of the scan area format between **Landscape**, **Portrait (left)** and **Portrait (right)**.

The **Auto** function can also be statically configured with the two sliders **Auto Density** and **Additional Margin** on the right side.



If **User** is selected the **User defined format** control opens.

It allows to set the values for **Height** and **Width** of the area to be scanned.

It also allows to define the position of the area to be scanned. The position is set by the values for **X Offset** and **Y Offset**.

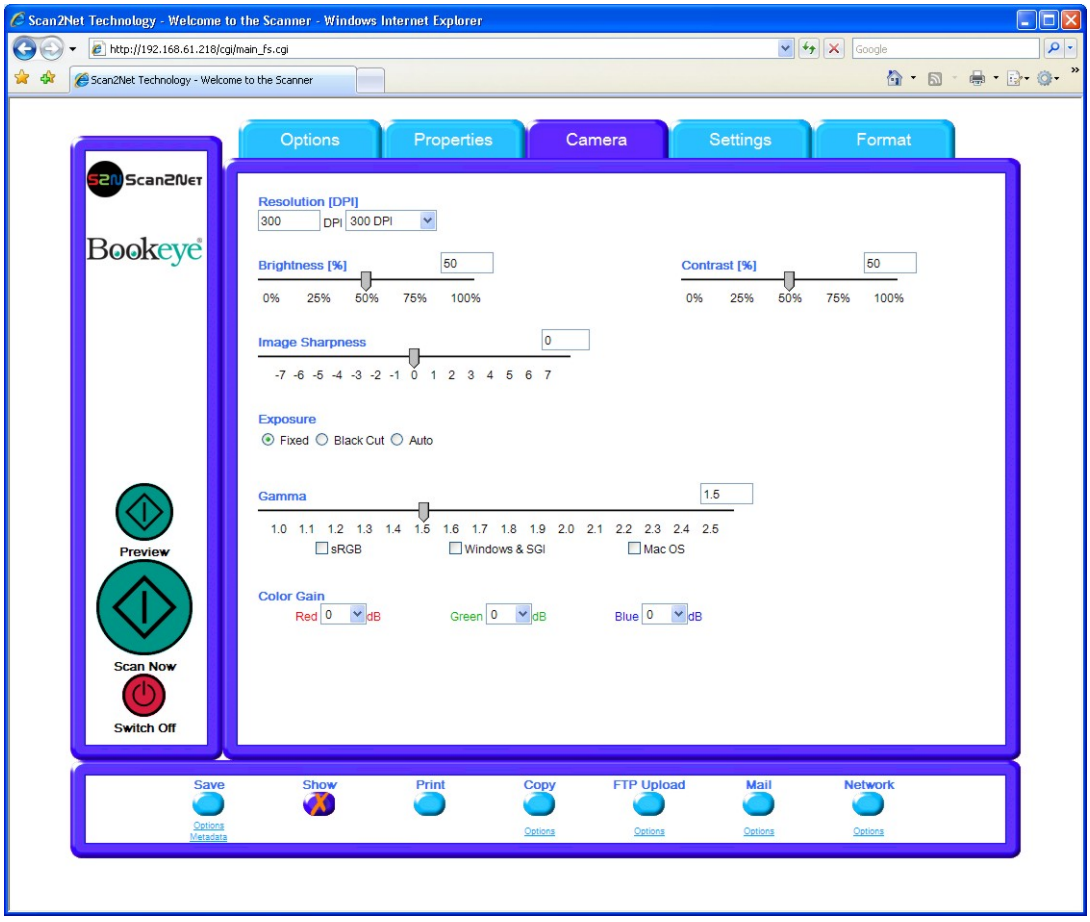
Note: The point of origin for **X Offset** and **Y-Offset** is defined in the upper left corner of the document area. Only positive values are allowed.

The **Splitting Image** button allows splitting the image into two pages although only one scan is performed.

The **Auto Density** value defines the brightness level of the background. All areas that are darker are considered background and will be used to find the borders of the document.

A value for **Additional Margin** can be added to or taken away from the image. It is defined in units of pixels.

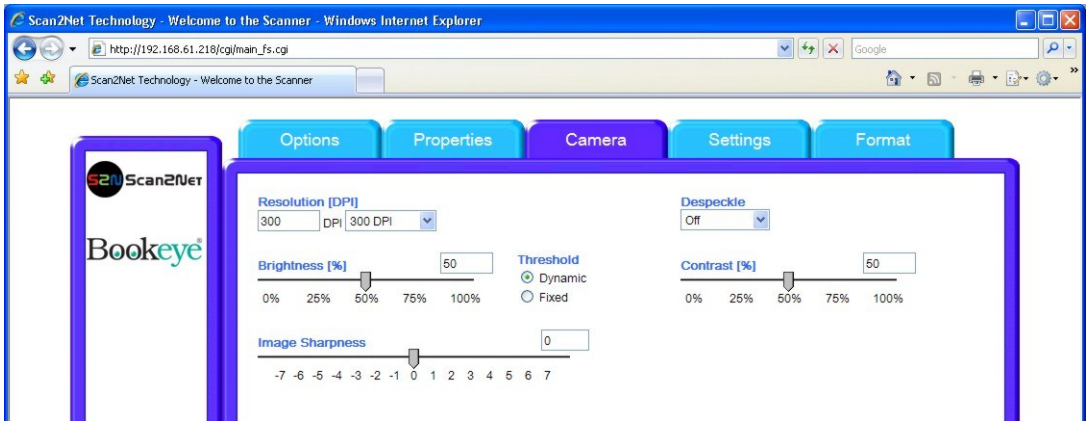
B.2.3 The Camera Screen



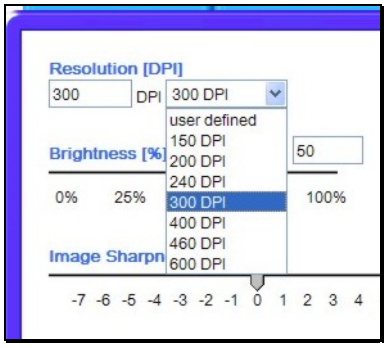
Picture 25: Camera screen

In this screen all parameters concerning the camera will be set.

Some interdependencies exist between controls displayed in this screen and settings in other screens. The **Despeckle** control and the **Threshold** control are only displayed if the color mode **Binary** is selected.



Picture 26: Color mode Binary



Picture 27: List of resolutions

The **Resolution** can be selected out of a drop down list in the **Resolution** field.

This values can be manually overridden.

Enter the desired resolution in the field left from the drop down list field. The value can be varied in steps of 1 dpi. To send the new value to the scanner, click on another menu item or press the “Tab” key or the “Enter” key on your PC keyboard.

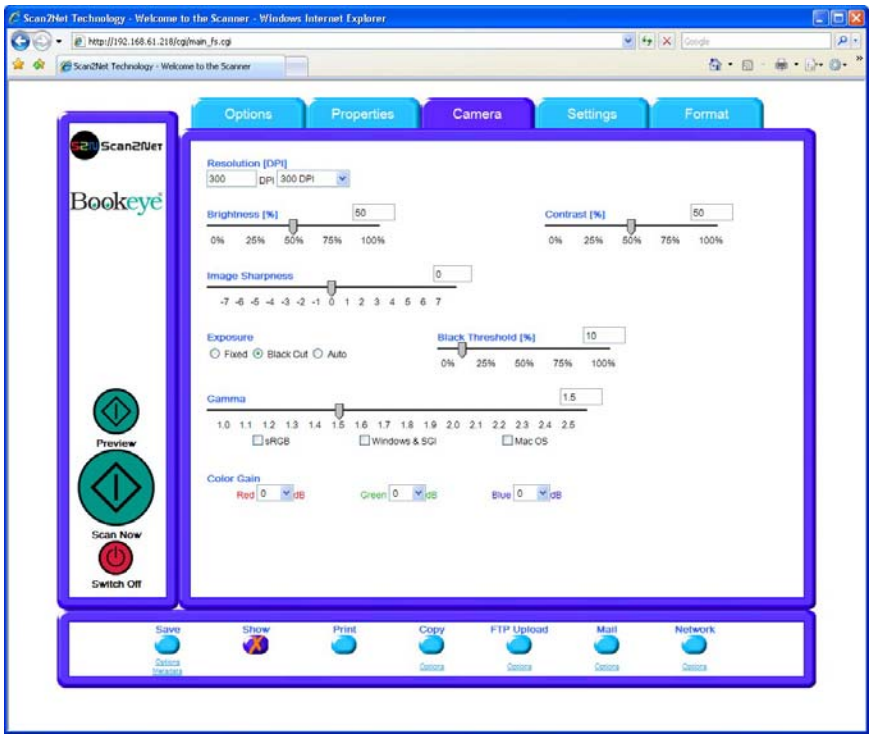
If the **Resolution** field value is changed, the right box will show **user defined**.

The **Brightness** slider defines the brightness of the resulting image. Lower brightness values make the image darker.

The **Contrast** slider defines the contrast of the resulting image. Higher contrast values show more details. If scanning in **Binary** color mode, the behavior of the contrast slider changes.

The **Image Sharpness** slider invokes an advanced algorithm which sharpens the image according to the local content of a given area.

The **Exposure** function sets the threshold value for the black cut function or for the auto exposure function.



Picture 28: Black Threshold slider

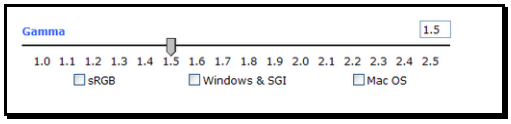
Fixed disables the exposure function.

When **Black Cut** or **Auto** is selected an additional slider is displayed.

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 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 searches the image for the highest and the lowest pixel value. The highest pixel value is defined as “white”. Is the lowest pixel value higher than the threshold it is defined as “black”. Otherwise all values below the threshold are defined as “black”. Result: Automatic contrast control and the image contrast is improved.

Note: The **Exposure** function is not displayed in the color modes **Binary** and **Photo**.

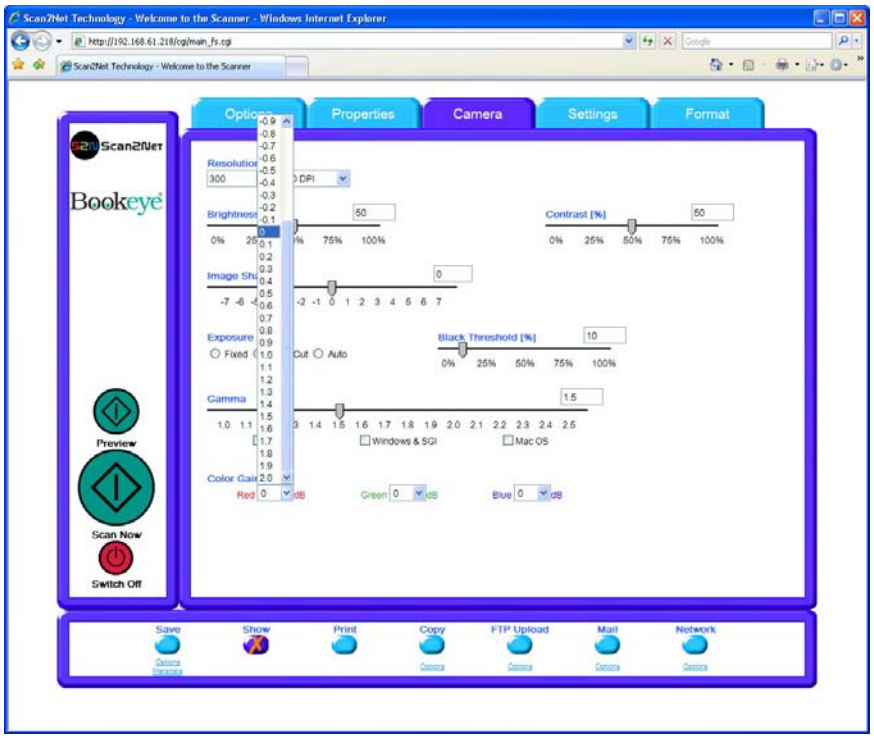
The **Gamma** slider does the gamma correction directly inside the camera electronics.



Picture 29: Gamma slider with preselection buttons

Three typical values are predefined on the **Preselection** buttons.

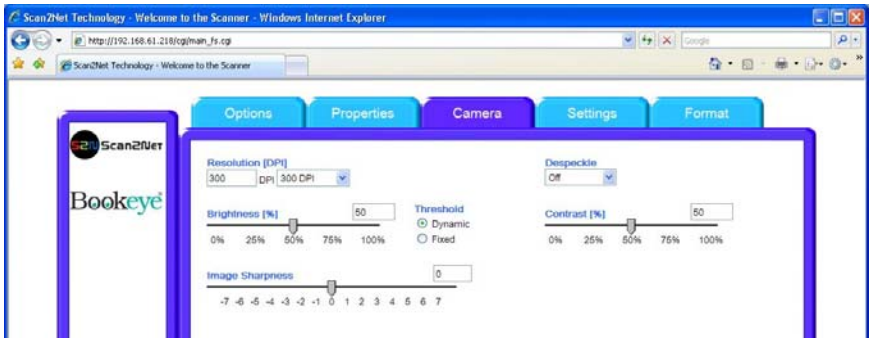
The **Color Gain** drop down list changes the gain on a specific channel. This function is used to eliminate any color shift or tints from the background.



Picture 30: Color Gain screen

Note: The **Color Gain** controls are only displayed in color mode **24bit Color**

B.2.3.1 Threshold Dynamic / Threshold fixed



Picture 31: Threshold method selector

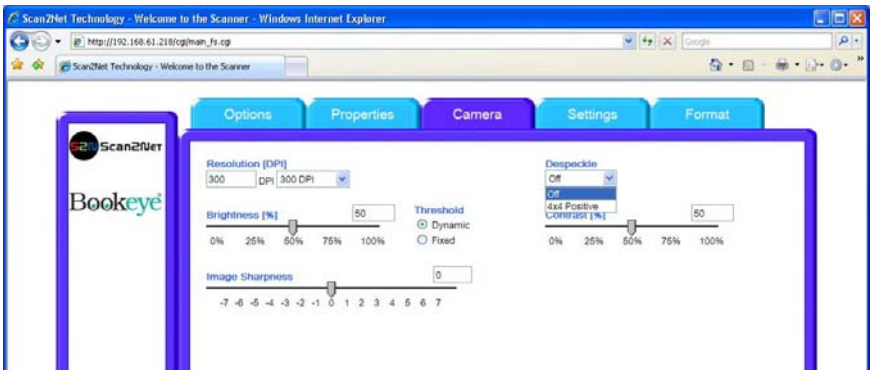
In color mode **Binary** an additional button allows to select between **Dynamic** and **Fixed** threshold.

Dynamic The contrast level in the image varies depending on the content of the document. This can help to improve fine details in the image.

Note: In this mode set the setting of the contrast slider carefully because unexpected image artifacts can occur if set to the extremes.

Fixed The contrast level is fixed to a specific value.

B.2.3.2 Despeckle

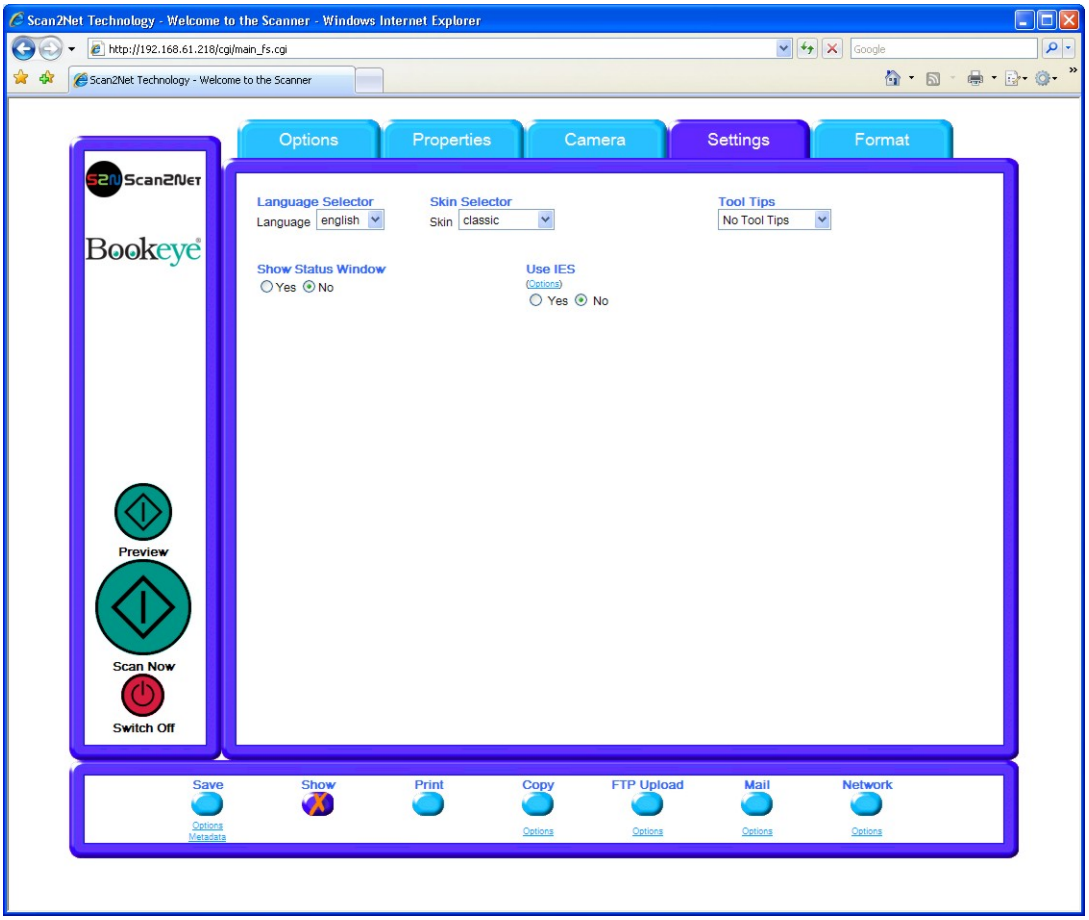


Picture 32: Despeckle function

The **Despeckle** function is only available in color mode **Binary**.

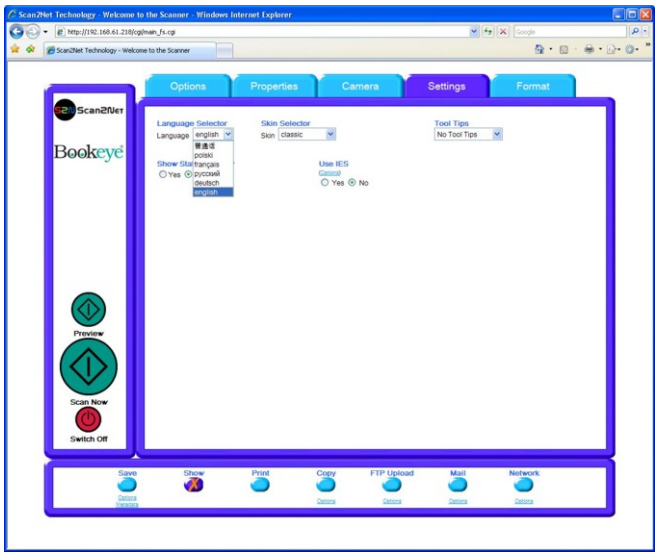
This function removes isolated speckles in the image. Its use is recommended if old documents on crumpled paper or vellum should be scanned.

B.2.4 The Settings Screen



Picture 33: Settings screen

This screen allows the user to set some secondary parameters.



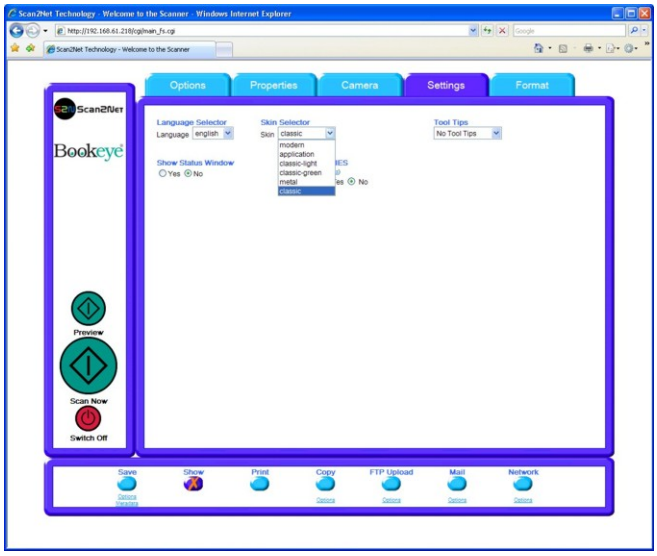
This screen allows the user to set some secondary parameters.

The **Language Selector** offers a drop down list of languages for the scanner's user interface.

Currently available languages are **english**, **deutsch**, **français**, **polski** and with special characters **Chinese** and **russian**.

The S2N user interface shows all texts in the selected language immediately after switching.

Picture 34: List of available languages

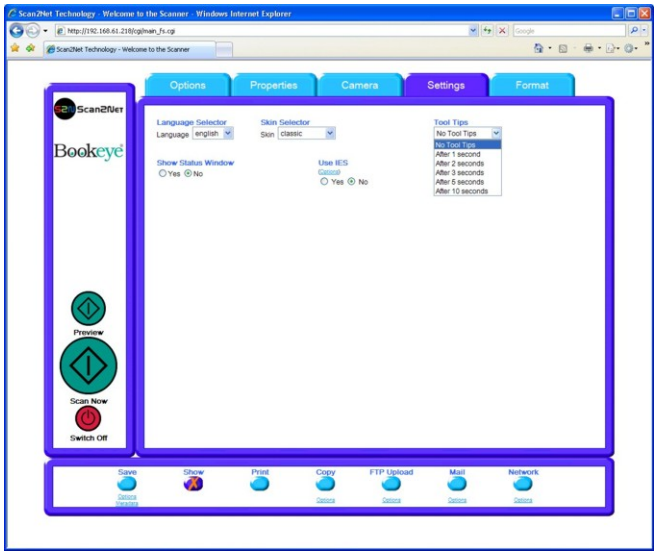


Picture 35: Skin Selector

The **Skin Selector** offers different surfaces (skins) for the user interface.

Currently available surfaces are **modern** and **application, metal** and **classic**, **classic-green** and **classic-light**.

Other skins can be designed and integrated by the user.



Picture 36: Tool Tips

Tool Tips can be activated to inform the user with short texts about the available functions in each screen.

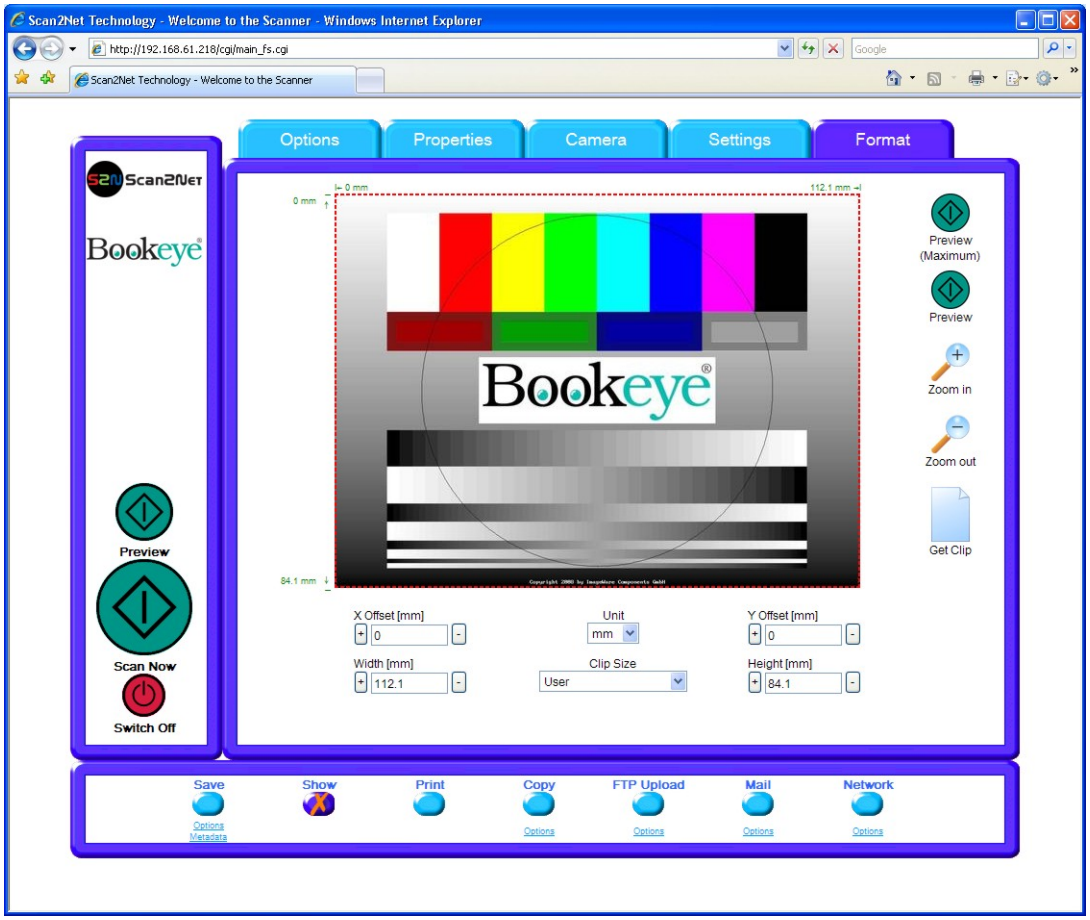
With the drop down list the delay time can be defined. Selecting **No Tool Tips** switch this function off.

Show Status Window turns on and off the display of a scanner status window. Click the **Yes** button to activate this window.

Picture 37: Status window

Use IES opens an additional window to show the **Image Enhancement System** in demo mode. The **IES** allows to modify specific scan parameters.

B.2.5 The Format Screen



Picture 38: Format screen

When selecting the **Format** screen, the test image as shown in the above picture is displayed.

The dimension of the image and the color mode depends on the settings in the **Properties** screen.

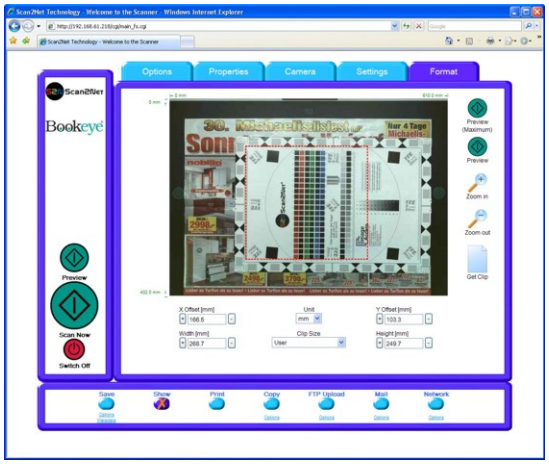
The **Preview (Maximum)** button allows to rescans the complete document area. The image will be displayed in the preview area of the **Format** screen.

The **Preview** button rescans the document area which is set in the **Properties** screen.

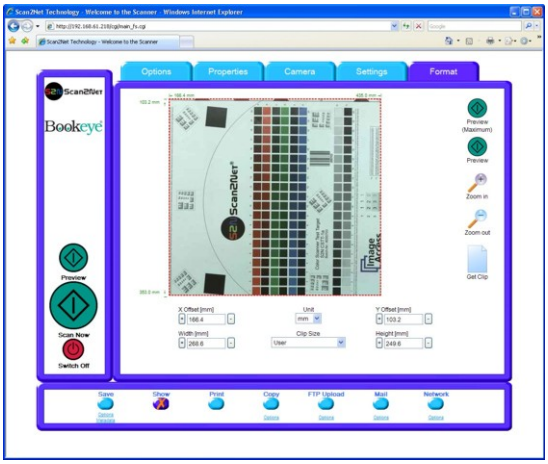
To get a new preview scan, first change to the **Properties** screen, set the new format, and finally return to the **Format** screen. Click on the **Preview** button to display the new image.

To select a specific area of the image, click with the mouse in the preview area and drag a rectangle. Dragging with the mouse the rectangle starts in the upper left corner and ends in the lower right corner.

Click the **Zoom in** button to display the selected area of the image in detail.



Picture 39: Rectangle dragged with mouse



Picture 40: "Zoom in" result

Click the **Zoom out** button to return to the previous dimension of the image.

Click the **Get Clip** button to get the selected area of the image in full resolution in a separate window.

The control fields **X Offset** and **Y Offset** allow the user to position the rectangle.

The control fields **Width** and **Height** allow the user to set the dimension for the rectangle of the specific area.

The control field **Unit** allows the user to select from a list the unit of measurement for the specification of the rectangle.

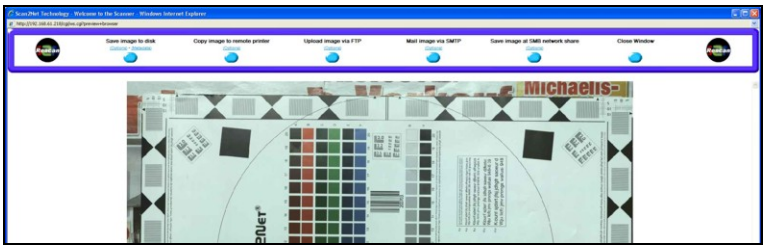
The control field **Clip Size** offers a list of formats for the specific area. The content of the list depends on the size of the preview scan area. I.e. the smaller the preview scan area, the shorter the list of available formats.

B.3 Output Options

There are various output options available on a Scan2Net scanner. In most cases, the button **Show** is activated.

Picture 41:Output Option Show

A scan will open a new browser window and display the image on the screen. The output options described in this chapter are accessible via the above menu but are also present in the upper part of each scanned image.



Picture 42: Output Options in Scan Window

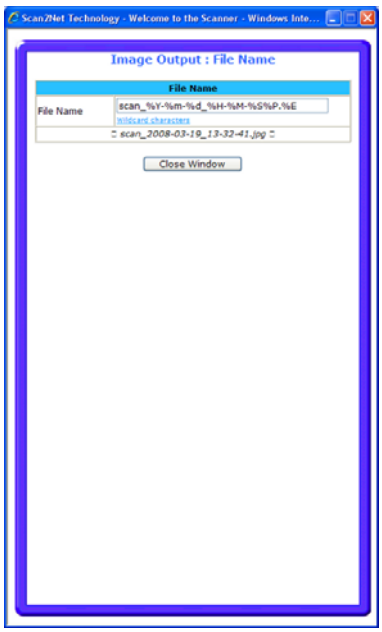
Their functionality is identical, therefore only the output option screen is described here.

B.3.1 Output Option Save

When the output option **Save** is selected, a preview window will not open.

This output option scans to a local or network disk drive. After the scan is performed, a window opens and the default file name is shown.

The user can select local and network drives for the save location and can also change the file name before it is actually stored.



Picture 43: Image output option

The **Options** key below the **Save** button is used to define some parameters for the file name of the image.

The **Wildcard characters** key below the file name gives additional information concerning the parameters of the file name.

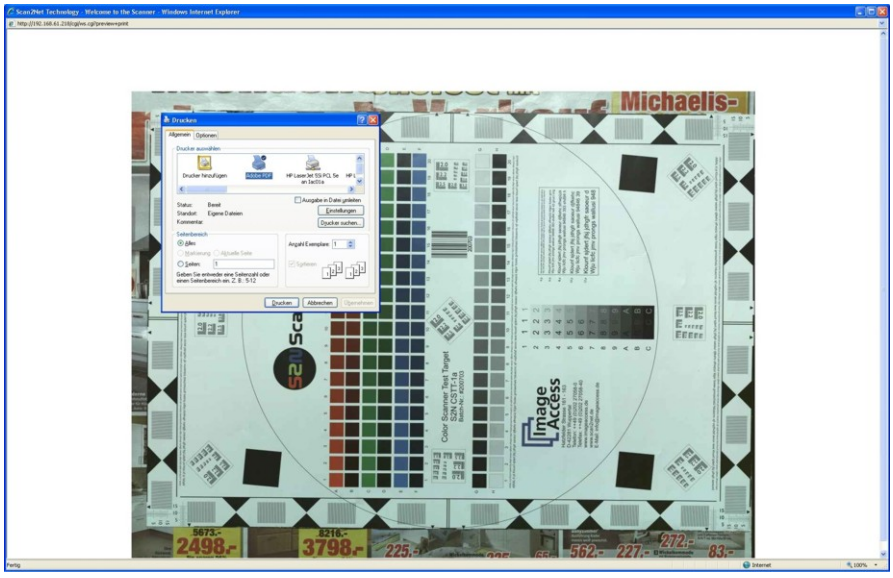
Picture 44: Metadata mask

The **Metadata** key allows the user to define some information which will be added to each file header.

B.3.2 Output Option Print

This output option prints to the locally available printers. After the scan is executed, the standard windows printer interface is opened. The user can select one of the locally available printers.

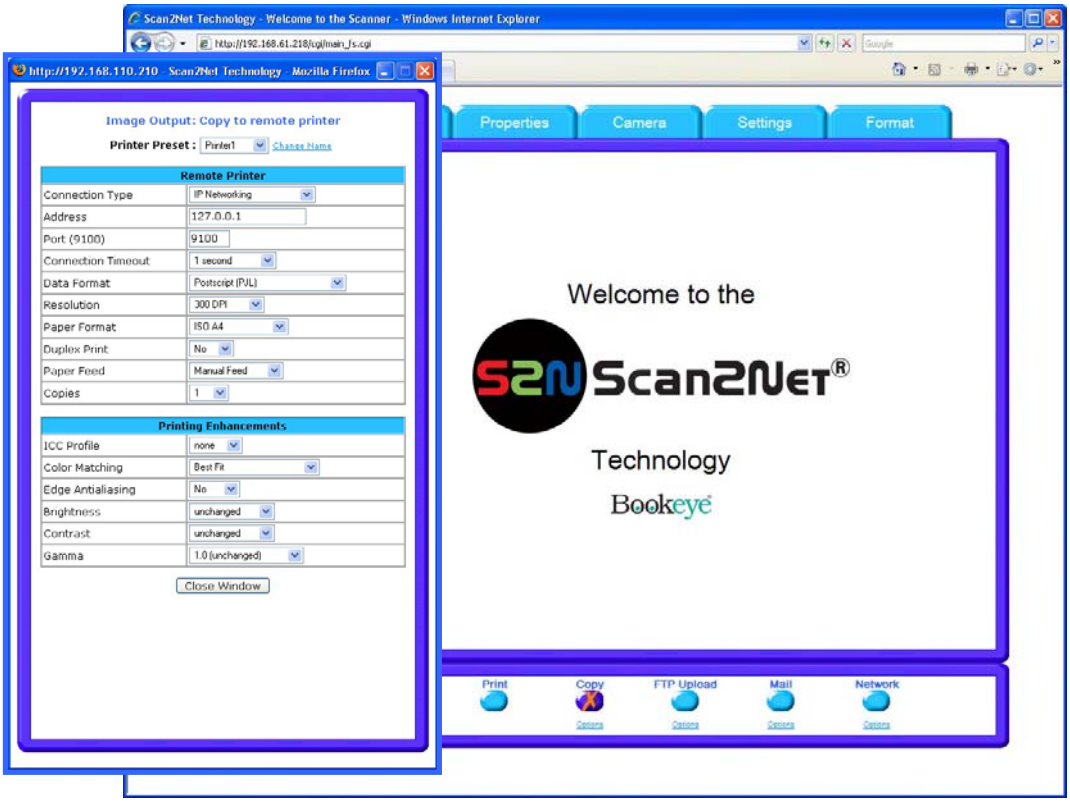
Picture 45: Output Option Print



Picture 46: Available List of Printers for Option Print

B.3.3 Output Option Copy

This output option prints directly to a previously installed network printer. The **Options** key is used to configure the remotely connected printer.



Picture 47: Output Option Copy

B.3.3.1 Remote Printer

Parameter	Description
Printer Preset	Choose a printer configuration out of five possible set of parameters. If you click on Change Name you can change the name of this set.
Connection Type	Choose between **IP Networking** and **SMB Printer Queue**.
Address (with IP Networking only)	Enter the IP address of the printer.
Port (9100) (with IP Networking only)	Enter the IP port of the remote printer. Default is port 9100.
Connection Timeout (with IP Networking only)	Choose the timeout for connecting to the remote printer before the connection is aborted.
Port (139) (with SMB Printer Queue only)	Enter the IP port of the remote printer. Default is port 139.
Server Authentication (with SMB Printer Queue only)	Select **Yes** or **No**

Continued on the following page.

Note: Each change of an entry field is transferred to the scanner immediately.

Parameter	Description
Login (with SMB Printer Queue only)	Enter the login for the printer if Server Authentication is set to **Yes**.
Password	Enter the password for the printer if Server Authentication is set to **Yes**.
SMB Path (with SMB Printer Queue only)	Enter the path of the directory where the printer is established.
Data Format	Choose the data format of the remote printer. Selectable are Postscript, Postscript with framing HP/PJL communication and HP DesignJet (HP/RTL) compliant printers. Changing the data format will change some of the options in this configuration window.
Data Compression (with HP printers only)	Select the data compression of the data to be sent to the printer.
Resolution	Select the printing resolution. If an exact 1:1 copy of the scanned document is required, the scanning resolution and printing resolution must match.
Paper Format (not with HP Design Jet)	Choose the paper format for the output.
Duplex Print	Switch on/off printing on both sides of a sheet (duplex).
Paper Feed	Select the paper feed method for the remote printer. The menu may contain manual paper feed, various paper trays and paper rolls.
Copies	Number of copies of each print

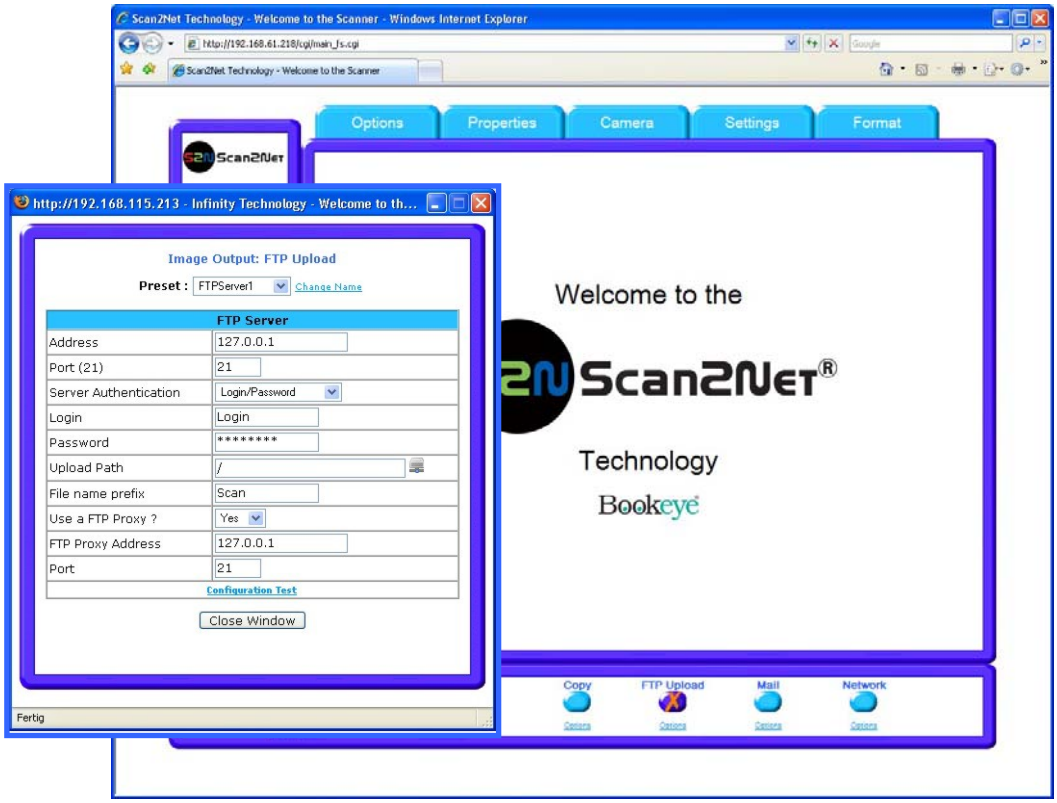
B.3.3.2 Printing Enhancement

Parameter	Description
Quality Level (with DesignJet only)	Toggle the printing quality from draft to high quality. Only available with HP/RTL compliant remote printers.
ICC Profile (not with all printer types)	Select the profile used for printing. One can upload a set of printer ICC profiles in the Poweruser setup. Only available with HP/RTL compliant remote printers.
Color Matching (not with all printer types)	Select the color rendering method for the remote printer. **Best Fit:** The printer uses the nearest matching colors of its own color space. **Printer Color Range**: The printer uses the full range of its color space despite of the color definition of the scanned document. Only available in conjunction with HP/PJL communication framework.
Edge Antialiasing (not with all printer types)	Switch on/off printer featured edge anti aliasing. Only available in conjunction with HP/PJL communication framework.
Brightness	Modify the brightness level of the print. Only available with HP/RTL compliant remote printers.
Contrast	Modify the contrast level of the print. Only available with HP/RTL compliant remote printers.
Gamma	Modify the printer gamma. Only available with HP/RTL compliant remote printers.

Note: Each change to an entry field is transferred to the scanner immediately.

B.3.4 Output Option FTP Upload

The scanner can directly scan to a FTP server.



Picture 48: Output Option FTP Upload

Click on **Options** to configure the FTP interface. A configuration window will pop up.

B.3.4.1 FTP Server

Parameter	Description
Preset	Choose a preset out of five possible sets of parameters. If you click on Change Name you can change the name of this set.
Address	Enter the IP address of the remote FTP server.
Port (21)	Enter the IP port of the remote FTP server. Default is port 21.
Server Authentication	Select the authentication method.
Login	Enter the login name.
Password	Enter the password for the login at the remote FTP server. The password is stored using encryption.
Upload Path	Enter the upload path at the remote FTP server, starting with / (root). Click on the icon, to browse the directory structure of the remote FTP server. Note: You must have a valid login for browsing the directory structure.

Continued on the following page.

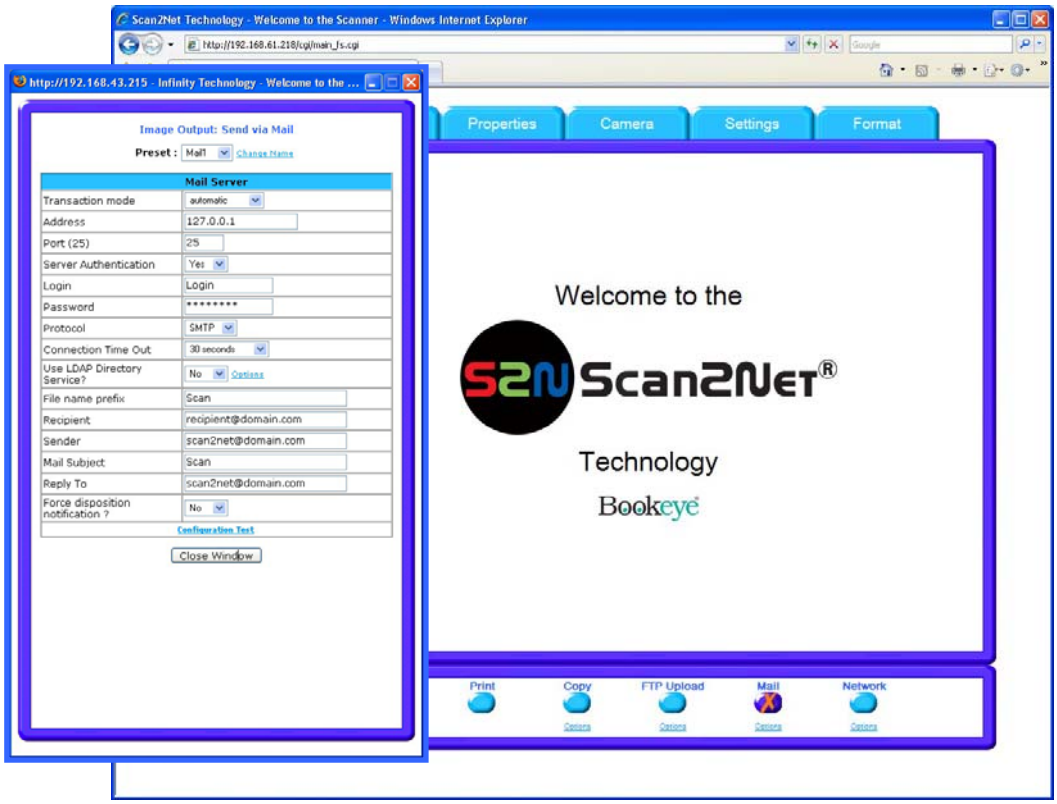
Parameter	Description
File name prefix	Enter the file name prefix. A time stamp will be added to this prefix to form the complete file name.
Use a FTP Proxy ?	Switch on/off the use of an FTP proxy for connecting to a remote FTP server outside the local network.
FTP Proxy Address	Specify the IP address of the FTP proxy.
Port	Specify the IP port of the FTP proxy.

Configuration Test: Click on this link to test the settings. A separate window will open and shows the test results.

Note: Each change of an entry field is transferred to the scanner immediately.

B.3.5 Output Option Mail

The scanner can directly e-mail each scan.



Picture 49: Output Option Mail

The **Option** key is used to configure the mail interface. A configuration window will pop up.

B.3.5.1 Mail Server

Parameter	Description
Preset	Choose a preset out of five possible sets of parameters. If you click on Change Name you can change the name of this set.
Transaction mode	Choose if all scanned documents will be sent to the same recipient (automatic batch mode) or if the scanner should ask after every scan (interactive).
Address	Enter the IP address of the outgoing mail (SMTP/LMTP) server.
Port (25)	Enter the IP Port of the outgoing mail server. Default: Port 25.
Server Authentication	Set to **YES** if the mail server requires an authentication.

Continued on the following page.

Parameter	Description
Login	Enter the user name for authentication at the outgoing mail server.
Password	Enter the password for authentication at the outgoing mail server. The password is stored using encryption.
Protocol	Choose the connection protocol. SMTP is the most common protocol.
Connection Timeout	Choose the timeout for connecting to the outgoing mail server before the connection is aborted.
File name prefix	Enter the file name prefix. Variables can be used to complete the file name. To learn more about the variables, click on the link Wildcard characters.
Recipient	Type in the recipient of the e-mail. Format: fully qualified e-mail address.
Sender	Type in the sender of the e-mail. Format: fully qualified e-mail address.
Mail Subject	Type in the e-mail subject. (Optional) Variables can be added to the mail subject. To learn more about the variables, click on the link Wildcard characters.
Reply To	Type in a reply address for answers. (Optional) Format: fully qualified e-mail address.
Force disposition notification?	Request for a notification when the recipient has opened the mail. **Note:** This feature is not supported by all mail servers or clients.

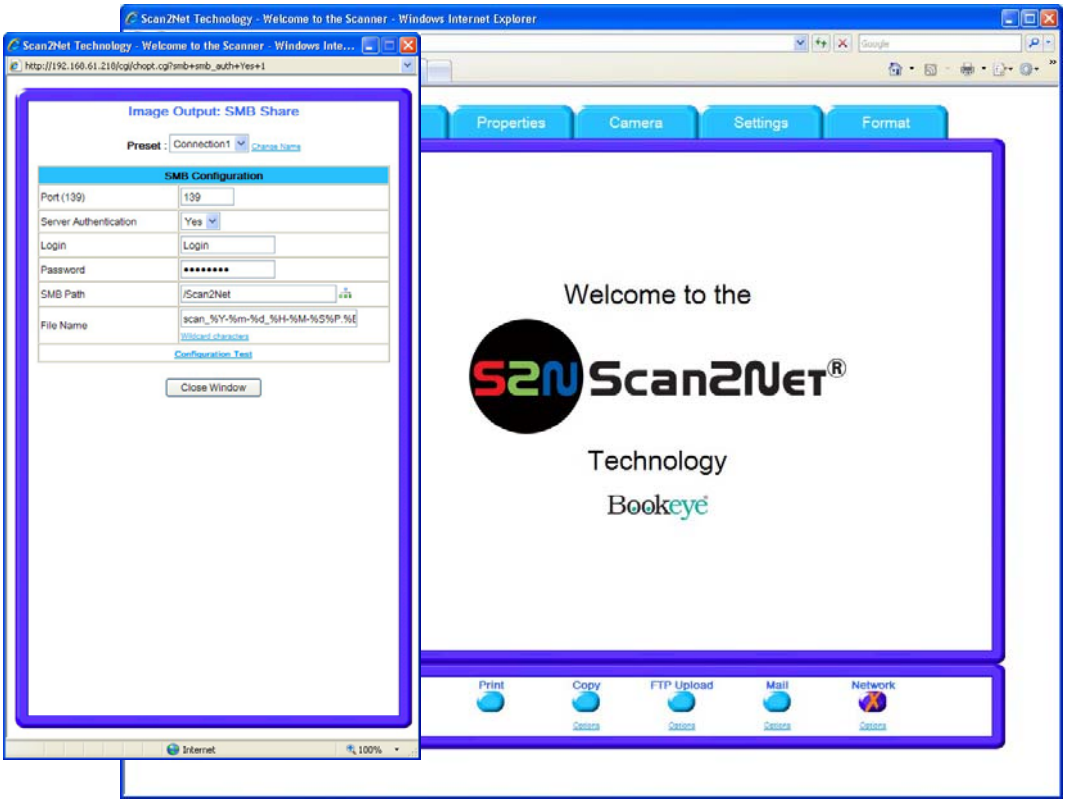
Configuration Test: Click on this link to test the settings. A separate window will open and shows the test results.

Note: Each change of an entry field is transferred to the scanner immediately.

B.3.6 Output Option Network

SMB is a network protocol which is used by Microsoft windows based networks.

If output option **Network** is selected, the scans will be stored directly in a network directory.



Picture 50: Output Option Network

The **Options** key is used to configure the SMB Upload interface. A configuration window will pop up.

B.3.6.1 SMB Configuration

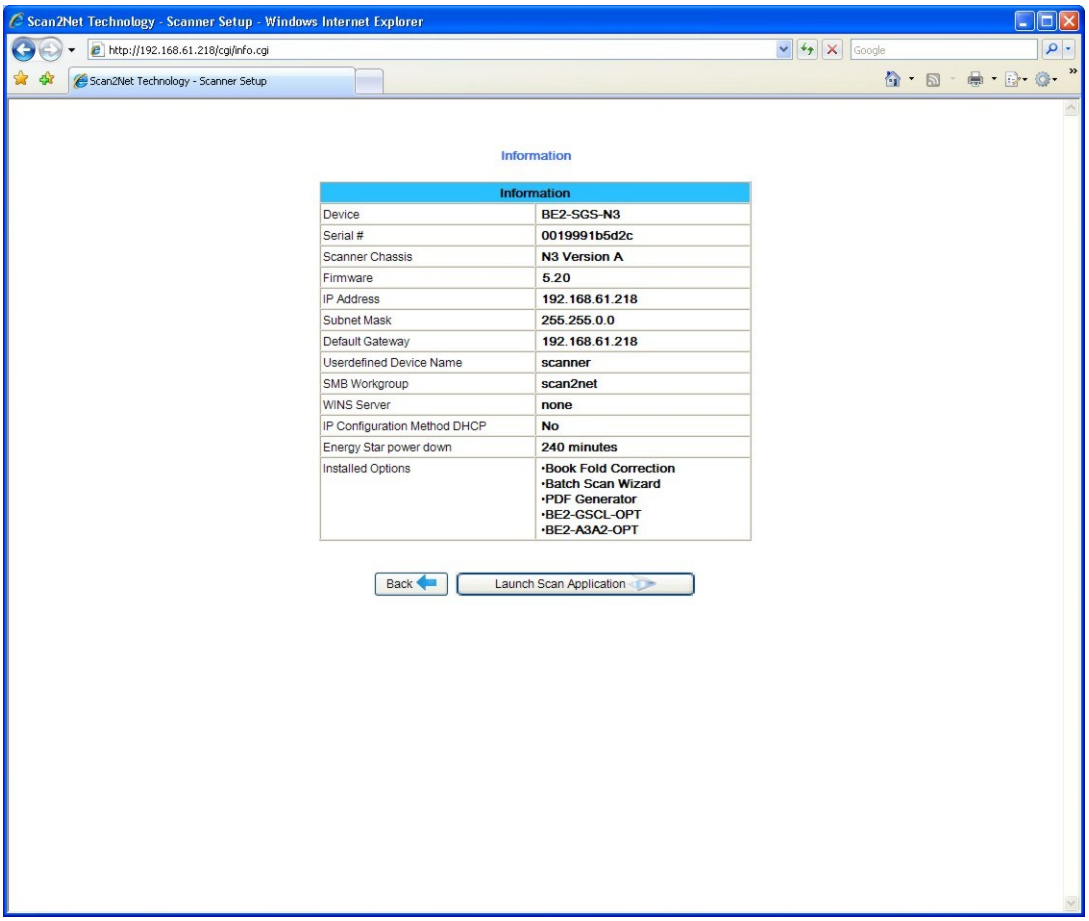
Parameter	Description
Preset	Choose a preset out of five possible sets of parameters. If you click on Change Name you can change the name of this set.
Port (139)	Enter the IP port of the SMB network communication. Default is port 139.
Server Authentication	Select the authentication method.
Login	Enter the user name on the Windows workstation/file server which you want to connect to.
Password	Enter the password associated with the user name for the login at the Windows workstation/file server which you want to connect to. The password is stored using encryption.
SMB Path	Enter the upload path at the Windows workstation, starting with a single */* (slash), which stands for the root directory. If you click at the icon you can browse the workstation/server list and the directory structure of the Windows workstation/file server. **Note:** You must have a valid login for browsing the directory structure.
File name	Enter the file name. Variables can be used to complete the file name. To learn more about the variables, click on the link Wildcard characters.

Configuration Test: Click on this link to test the settings. A separate window will open and shows the test results.

Note: Each change of an entry field is transferred to the scanner immediately.

B.4 Information

The start screen (Picture 18) shows three buttons. The button Information gives a short summary of the device parameters.



Picture 51: Information

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 main screen (Picture 19).

B.5 The Setup Screen

The system 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 to set some basic parameters.

Start your browser and enter the IP address of the scanner to get access to the scanner. The start screen (see chapter B.1) will open.

B.5.1 Login Screen

On the start screen, click the button Setup Device.

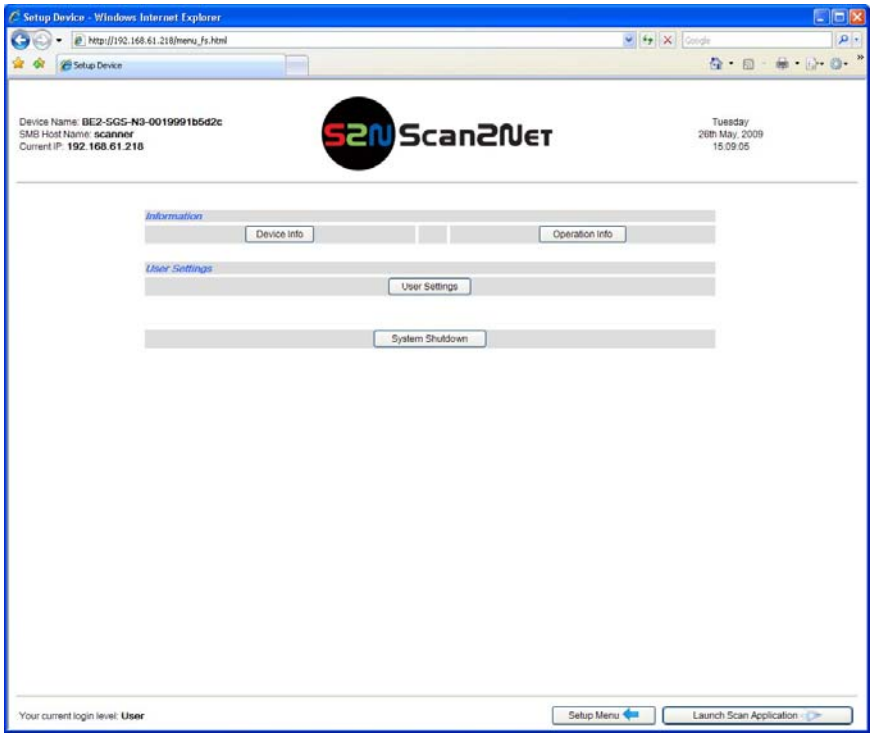
The next screen shows the login levels User, Poweruser and Admin.

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

Picture 52: Login screen

B.5.2 Access Level User

Click the button User.



Picture 53: User screen

The user screen is divided into two sections.

The section **Information** shows some details of the scanner and gives a 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.

B.5.2.1 Device Info Screen

In the section **Information** click the button Device Info and the following list (Picture 54) will be displayed.

Specific information can be reached by clicking the links below the headline **Device Info** or by scrolling through the list.

Picture 54: Device Info screen

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

The most important information for users is the firmware version in the second table. Other information may be of interest if a service technician is onsite or if the service hotline is called.

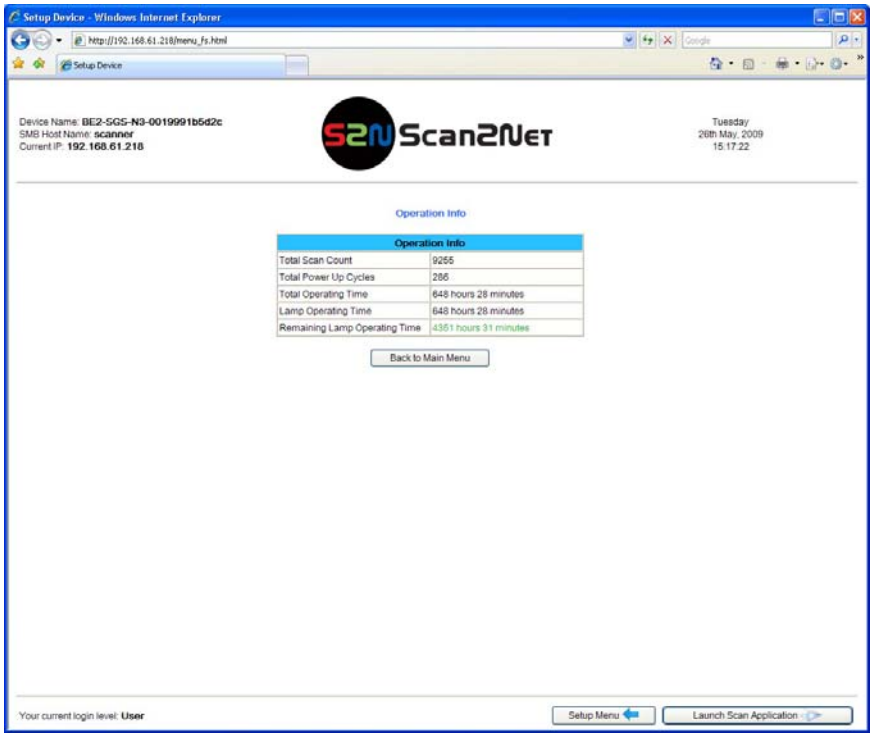
To return to the **USER** screen (Picture 53) scroll down completely and click the button Back to Main Menu or click on the “Return” button in your browser.

To return to the **Login** screen (Picture 52) click the button Setup Menu.

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

B.5.2.2 Operation Info Screen

In the section **Information** click the button Operation Info and the following list will show various scan counters and elapsed time described in the following table.

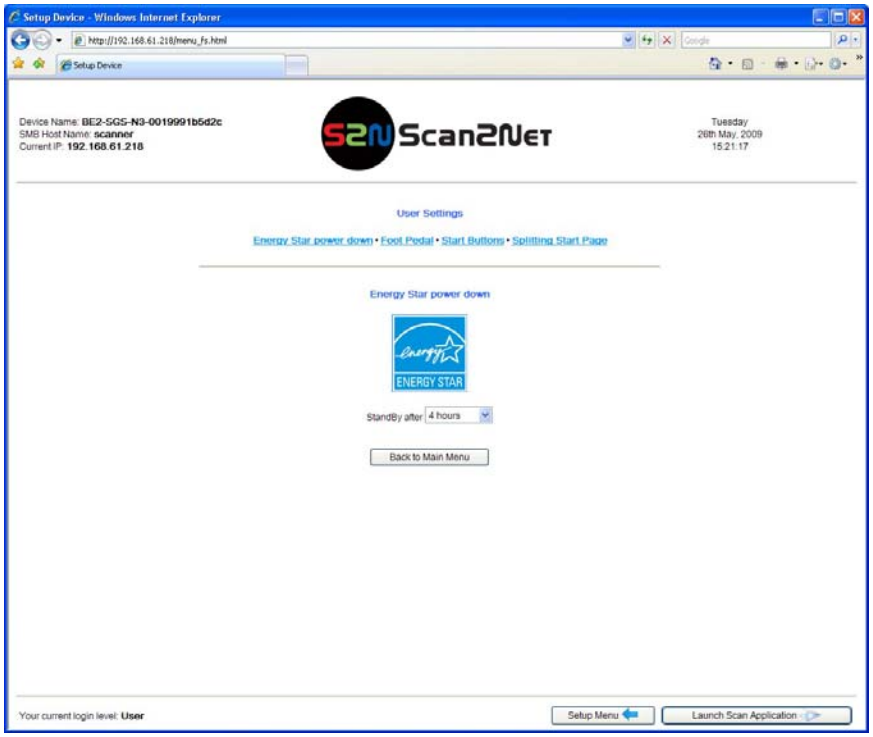


Picture 55: Operation Info screen

Field	Description
Total 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.
Total Power Up Cycles	The total number of power up cycles performed since the scanner left the factory. This function counts the start/stop button invoked cycles only.
Total 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. This is the on-time including the dimmed periods.
Remaining Lamp Operating Time	The typical remaining life time of the lamps. The Bookeye® 3 scanner life time is so long, that the lamps usually last for the life time of the device.

B.5.2.3 User Settings Screen

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



Picture 56: Available user settings

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

To return to the **USER** screen (Picture 53) scroll down completely and click the button Back to Main Menu or click on the “Return” button in your browser.

To return to the **Login** screen (Picture 52) click the button Setup Menu.

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

B.5.2.4 Energy Star power down

The Bookeye scanner is Energy Star compliant.

Use the function **Energy Star Power down** to set the time until the scanner goes into stand-by mode.

Click on the link **Energy Star power down.**

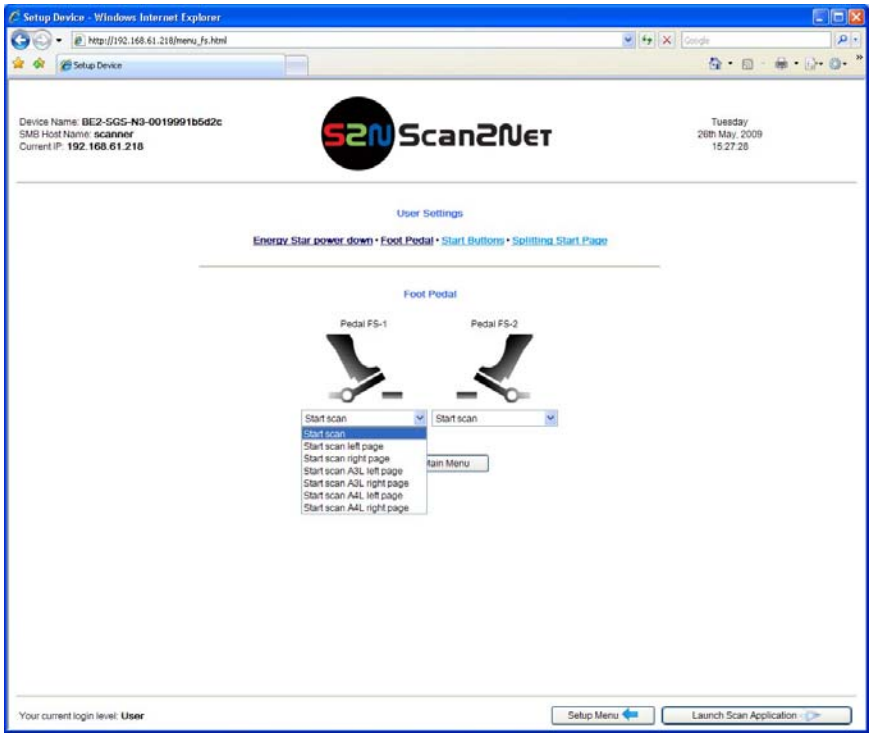
In stand-by mode it consumes only 5W of power. The Energy Star guidelines require the default time until the device goes into standby to be 15 minutes. Select the desired time from the list.

To return to the **USER** screen (Picture 53) scroll down completely and click the button Back to Main Menu or click on the “Return” button in your browser.

To return to the **Login** screen (Picture 52) click the button Setup Menu.

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

B.5.2.5 Foot Pedal



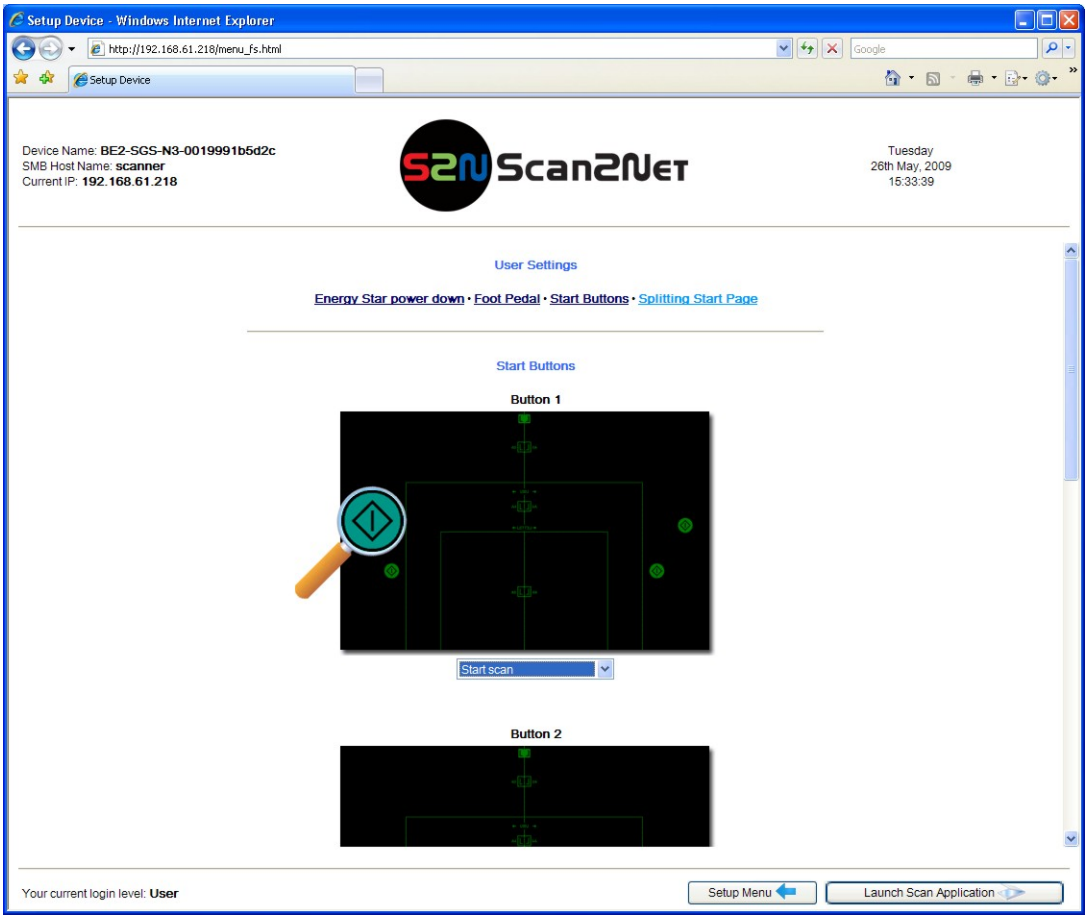
Picture 57: Foot pedal settings

The scanner has two connectors on its back to connect foot pedals. For each foot pedal a specific action can be defined.

Click the button **Foot Pedal**. Go to the left or right pedal drop-down list and select which action to take if the corresponding pedal is operated.

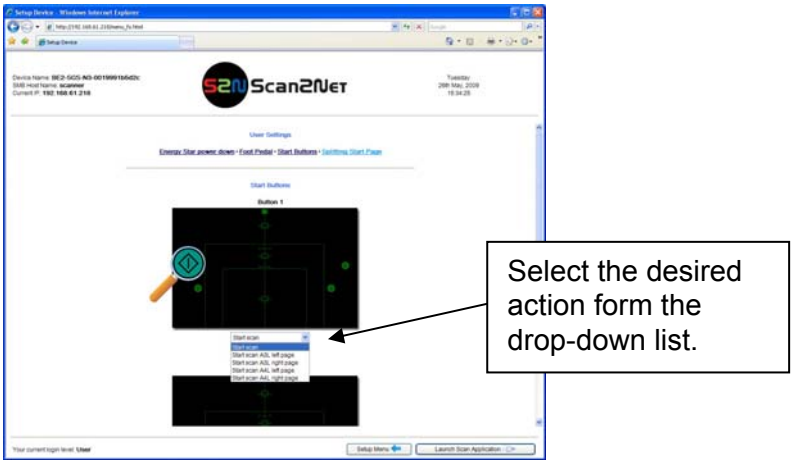
Drop-down list item	Function
Start scan	Starts the scan with the selected scan area size
Start scan left page/right page	Starts the scan with the left/right half of the defined scan area.
Start scan A3L left page/right page	Starts the scan in ISO A3 landscape format at the left / right side of the document area.
Start scan A4L left page/right page	Starts the scan in ISO A4 landscape format at the left / right side of the document area.

B.5.2.6 Start buttons



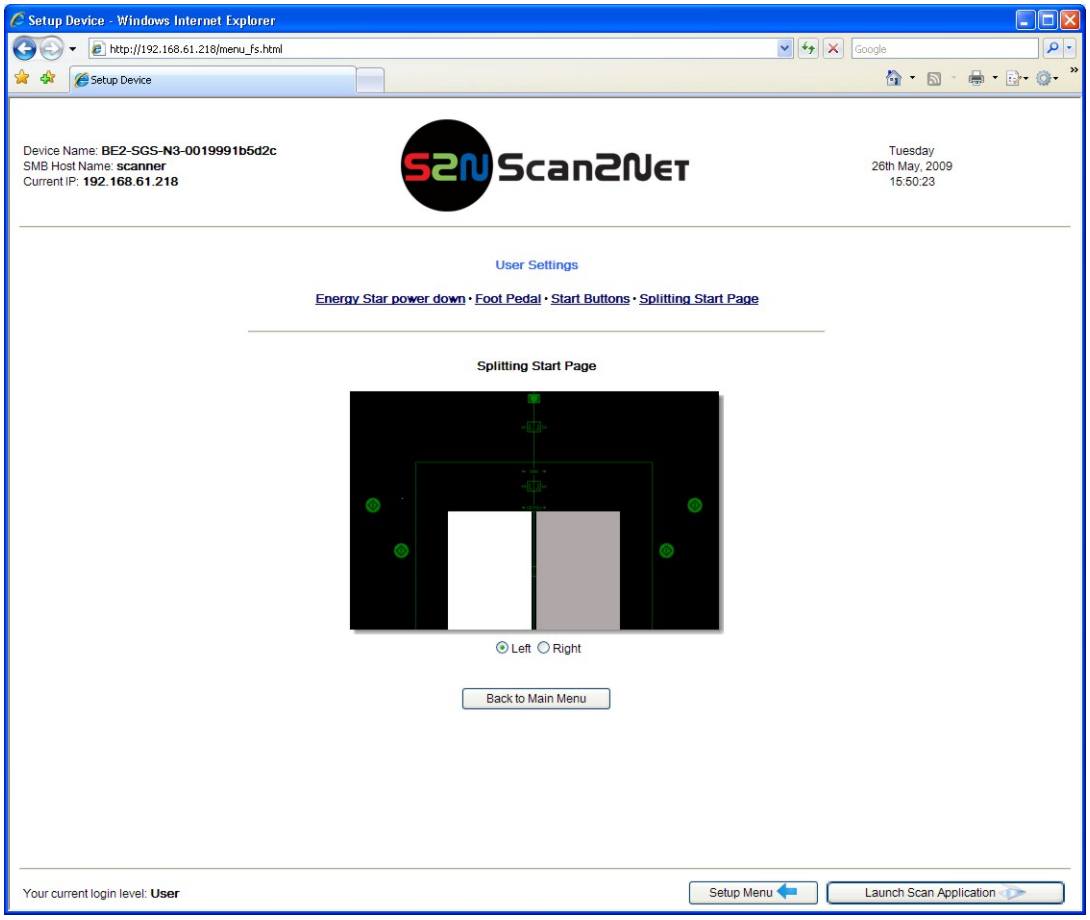
Picture 58: Start button actions

Click the button **Start Buttons** to define the actions for the four start buttons on the document bed. Each button is displayed and marked with a magnifier.



Picture 59: Available actions

B.5.2.7 Splitting Start Page



Picture 60: Splitting Start Page

In some languages, books are printed from right to left. In these cases, it can be desirable to start the page splitting in the reverse order, i.e. starting with the right side followed by the left side in the second step.

Click the button **Splitting Start Page** and select either the left page or the right page as start page.

To return to the **USER** screen (Picture 53) scroll down completely and click the button Back to Main Menu or click on the “Return” button in your browser.

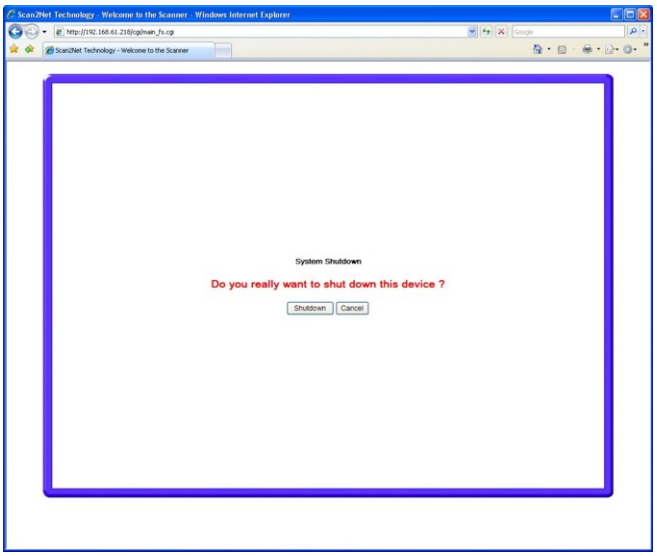
To return to the **Login** screen (Picture 52) click the button Setup Menu.

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

B.5.3 Turning off the device

Click the red STOP button to switch off the device.

A window with a security query opens. Click the Shutdown button.



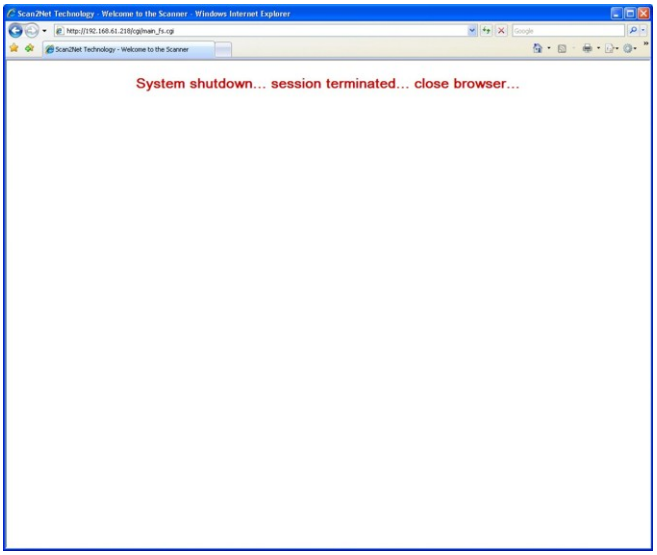
Picture 61: Security query after shutdown command

After confirming the query the display in the keyboard shows the message:

System Shutdown

****

After the device is switched off, the browser window shows the final message.



Picture 62: Browser message after shutdown

C Tests and Troubleshooting

C.1 Troubleshooting Matrix

Fields with light blue background need the power user access level. All other fields are available to all users.

Problem	Possible cause	Action
Green start button does not light up.	No power	Check main outlet, power cord, power-on switch on the back of the device.
Start button does not power up the device.	Connector failure, software glitch …	Switch power off for at least 10 seconds. Retry after green start button lights up again.
Stop button does not power down the device.	Internal software hangs, application hangs …	End all applications and retry. If problem persists, press the **start button** for at least 10 seconds. Power up again.
Image is darker than expected.	The target used for white balance is much brighter than the scanning target.	Go to the White Balance function and modify the Brightness Correction setting.
Image is brighter than expected.	The target is much brighter than the target used for white balance.	Go to the White Balance function and modify the Brightness Correction setting.
Image is darker on one side than on the other side.	The electronics gear is out of sync.	Exercise the Scan Start procedure.
Image shows a color shift towards red (tint)	The target used for white balance is bluer than the scanning target.	Go to the RGB adjustments and lower the gain on red.
Image shows a color shift towards blue (tint)	The target used for white balance is more red than the scanning target.	Go to the RGB adjustments and lower the gain on blue.
Image shows a color shift towards red (tint)	The scanner receives significant amounts of infrared light (sun or spot lights) not visible to the human eye.	Change position, close blinds, dim or shut off any bright spotlights.
Image shows areas that are overexposed and too bright.	The scanner receives too much ambient light from a point source like sunlight, spotlight etc.	Change position, close blinds, dim or shut off any bright spotlights.

Problem	Possible cause	Action
Image has unevenly spaced vertical stripes or streaks.	The electronics gear is out of sync.	Exercise the Scan Start procedure.
Image has evenly spaced vertical stripes or streaks.	50/60Hz interference from fluorescent ceiling lights.	Change position, dim or shut off some lamps, change ceiling lights to electronic ballasts.
Image has horizontal stripes or streaks.	Improper white balance.	Exercise the White Balance procedure.

Scanning two A4 (letter) pages perfectly centered in A3 (double letter) format cuts of one side of the scan.	The scanner's optical middle (in the horizontal direction) is lost or misaligned.	Exercise the Scan Start procedure.
A small portion of the lower side of the target is missing in the image.	The scanner's optical center (in the vertical direction) is lost or misaligned.	Go to the Scan Center function and lower the value.
The image shows an extra small portion on the lower side of the target	The scanner's optical center (in the vertical direction) is lost or misaligned.	Go to the Scan Center function and raise the value.

The image is out of focus on a flat target with significant contrast, book cradles in their lowest position and flat mode scanning.	The reference focal point is lost or misaligned.	Exercise the Autofocus procedure.

D Technical Data

D.1 Scanner Specifications

Scan Area

Maximum Scan Area [pixel]	5136 x 7253 pixels
Maximum Scan Area [mm]	432 x 610 mm
Optical Resolution	300 x 600 dpi
Resolution	150 – 600 dpi

Luminosity

Scanning	4400 LUX
Stand-by, idle	0 LUX (lamps off)

Lamps:

Fluorescent Lamp	UV- and IR-radiation free

D.2 Ambient Conditions

Operating Temperature	+5 to +40° Celsius
Storage Temperature	0 to +60° Celsius
Relative Humidity	20 to 80% (non-condensing)
Ambient luminance	≥ 300 Lux
Noise Level	< 50 dB(A) (Operating) < 30 dB(A) (Stand-by)

D.3 Electrical Specifications

This device is Energy Star compliant.

Voltage	110–240 VAC
Frequency	50/60 Hz

Power Consumption

Standby	6 W
Self-test mode	135 W
Stand-by, operational, lamps off	90 W
Operating	260 W
Pre-Scan	130 W

D.4 Dimensions and Weight

Scanner outer dimensions	880 x 685 x 673 mm (H x W x D) 34,6 x 27 x 26,5 inch
Dimensions Transport Box	1080 x 800 x 780 mm (H x W x D) 42,5 x 31,5 x 30,7 inch
Weight of scanner, complete:	28.5 kg / 62.9 lbs
Weight Transport Box, compl.:	38,5 kg / 84,7 lbs
Total shipping weight	43,5 kg / 95.7 lbs

D.5 CE Declaration of Conformity

The undersigned, representing the manufacturer:

Image Access GmbH

Hatzfelderstrasse 161 – 163

42281 Wuppertal, Germany

herewith declares that the

Product:	Bookeye Planetary Scanners
Model Designation:	BE2-AAA-BCd with AAA = SCL or SGS or CGS B = R or N C = 1 or 2 or 3 d = + or not applicable
Serial number:	All

For unique identification of the product configuration, please submit the 12-digit serial number found on the product to the manufacturer.

is in conformity with the following European standards and IEC directives:

EMC (Electromagnetic compatibility)**:**

EMC Directive 89/336/EEC with amending directives 92/31/EEC & 93/68/EEC

EN 55022 Class B

EN 55024

EN 61000-3-2

EN 61000-3-3

Safety of information technology equipment:

Low Voltage Directive (Safety) 73/23/EEC as per

EN 60950(A1/A2/A3/A4/A11)

UL 60950

Wuppertal, 01.05.2006

Thomas Ingendoh , President and CEO

D.6 FCC Declaration of Conformity

Responsible party:

Image Access GmbH

Hatzfelderstrasse 161 – 163

42281 Wuppertal, Germany

Tested To Comply With FCC Standards FOR HOME OR OFFICE USE

Product:	Bookeye Planetary Scanners
Model Designation:	BE2-AAA-BCd with AAA = SCL or SGS or CGS B = R or N C = 1 or 2 or 3 d = + or not applicable
Serial number:	All

For unique identification of the product configuration, please submit the 12-digit serial number found on the product to the manufacturer.

This device complies with Part 15, Class B of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

D.7 Safety Declaration

Product:	Bookeye Planetary Scanners
Model Designation:	BE2-AAA-BCd with AAA = SCL or SGS or CGS B = R or N C = 1 or 2 or 3 d = + or not applicable
Serial number:	All

For unique identification of the product configuration, please submit the 12-digit serial number found on the product to the manufacturer.

This device complies with:

EN 60950 :2000

UL 60950

CSA C22.2 No. 60950

Thomas Ingendoh , President and CEO

For your notes