



# WideTEK 42 / 48

## Setup and Assembly Manual



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## 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 this 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 manual is designed to lead the user through all necessary assembly and setup steps after the scanner has been delivered.

For this reason, we ask you to read this manual attentively before starting with the assembly procedure. By doing so, you will avoid errors from the beginning and you will be able to control all functions easily.

Please also 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 safe operation of the 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 your new scanner, we wish you success and complete satisfaction.

Regards

Your Image Access Team

## About this Manual

### 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 the setup and adjustment processes are performed is called "Power user". This "Power user" level is password protected to prevent access by the normal operator.

All information about the normal operation and behavior of this device is found in the **Operation Manual**.

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.

**This manual is divided into four sections, A to D.**

**Section A** describes the hardware setup. It includes unpacking and mechanical installation. These instructions must be followed carefully to ensure proper functionality, best possible quality and performance of the device. This device is a precision optical instrument and should be handled accordingly.

**Note:** It is recommended to always use the scanner in combination with the floor stand.

**Section B** describes the software setup. It includes the optical adjustments necessary after the setup. The section also describes the option installation procedure.

**Section C** describes cleaning procedures, troubleshooting procedures, and test scan generation.

**Section D** shows all technical data and necessary declarations.

## Version History

| Version | Published in   | Content/Changes/Supplements  |
|---------|----------------|--|
| A       | March 2008     | <b>Preliminary version.</b><br>Because of the preliminary status of this manual some variations in the screenshots of the S2N user interface are possible.<br>Description of the device elements.<br>Description of assembling steps.<br>Description of Scan2Net Firmware Adjustment Procedure.<br>Description of Recovery Function. |
| B       | September 2008 | <b>Final version.</b><br>Screenshots correspond to Scan2Net Firmware V5.xx.<br>Some minor modifications concerning menu content or menu names.   |
| C       | May 2009       | Some minor supplements in detail descriptions.<br>Some screenshots modified.   |
| D       | January 2010   | Minor corrections and amendments in details description.   |

## Table of Content

|  |           |
|--|-----------|
| <b>Introduction</b>  | <b>4</b>  |
| <b>About this Manual</b>                                       | <b>5</b>  |
| <b>Version History</b>   | <b>6</b>  |
| <b>A Hardware Setup</b>  | <b>14</b> |
| A.1 Content on Delivery  | 14        |
| A.1.1 Contents of Floor Stand Box                              | 15        |
| A.1.1.1 List of Assembling Material and Tools                  | 15        |
| A.1.2 Floor Stand Overview                                     | 16        |
| A.1.3 Parts of Floor Stand                                     | 17        |
| A.2 Assembling the Floor Stand                                 | 18        |
| A.3 Combining Floor Stand and Scanner                          | 21        |
| A.4 Connecting to the Power Source                             | 25        |
| A.4.1 Connectors at the Scanner                                | 26        |
| A.5 Powering up the Scanner                                    | 27        |
| A.6 The Touch Panel  | 27        |
| A.6.1 Starting the Scanner from Stand-By Mode                  | 27        |
| A.6.2 Turning-off the Scanner                                  | 28        |
| A.6.3 The Help Function  | 28        |
| A.7 Navigating through the Screens                             | 29        |
| A.7.1 How to Enter or Change Values                            | 29        |
| A.8 IP Address Setup   | 30        |
| A.8.1 IP Address Setup by Touch Panel                          | 30        |
| A.9 Optical Adjustment   | 32        |
| A.9.1 White Balance  | 32        |
| A.9.1.1 Helpful information about the white balance adjustment | 32        |
| A.9.1.2 Performing the White Balance Adjustment                | 33        |

## Table of Content, part 2

|          |   |           |
|----------|---|-----------|
| <b>B</b> | <b>Software Setup</b>                                 | <b>34</b> |
| B.1      | Start Screen of the Scan2Net User Interface           | 34        |
| B.2      | Setup Menu  | 35        |
| B.2.1    | Selecting the Login Level                             | 35        |
| B.3      | Poweruser Login Level                                 | 36        |
| B.3.1    | Setup Network IP Address                              | 37        |
| B.3.2    | Adjust Time & Date                                    | 38        |
| B.3.3    | Sound Control   | 39        |
| B.3.3.1  | Set Volume  | 40        |
| B.3.3.2  | Wave Files  | 41        |
| B.3.3.3  | Link Events   | 42        |
| B.3.4    | Firmware Update                                       | 43        |
| B.3.5    | Install ICC Profiles                                  | 45        |
| B.3.6    | Install Option  | 47        |
| B.3.7    | White Balance   | 48        |
| B.3.8    | Brightness Correction                                 | 50        |
| <b>C</b> | <b>Cleaning, Test and Troubleshooting</b>             | <b>51</b> |
| C.1      | Cleaning the Transport Drums                          | 51        |
| C.2      | Cleaning the Glass Plate                              | 53        |
| C.3      | Replacing the Glass Plate                             | 53        |
| C.4      | Scan Test Targets                                     | 58        |
| C.4.1    | Scan CSTT Test Target                                 | 58        |
| C.4.2    | Scan IT8 Test Target                                  | 59        |
| C.5      | Network Analyzer                                      | 60        |
| C.6      | Recovery Function                                     | 61        |
| C.6.1    | Important Notes Before Recovering to Factory Defaults | 61        |
| C.6.2    | How to Recover to Factory Defaults                    | 62        |
| C.7      | Error Codes   | 65        |
| C.8      | Warnings  | 68        |
| C.9      | Information   | 68        |



Table of Content, part 3

**D Technical Data----- 69**

D.1 Scanner Specifications ..... 69

D.2 Ambient Conditions..... 69

D.3 Electrical Specifications ..... 70

D.4 Dimensions and Weight..... 70

## Table of Pictures

|  |    |
|--|----|
| Picture 1: Transport box opened .....                                      | 14 |
| Picture 2: Floor stand box opened .....                                    | 15 |
| Picture 3: Assembling material .....                                       | 15 |
| Picture 4: Technical drawing of floor stand .....                          | 16 |
| Picture 5: Floor stand components.....                                     | 17 |
| Picture 6: Side pillar in foot profile.....                                | 18 |
| Picture 7: Traverse inserted into foot bracket.....                        | 18 |
| Picture 8: Inserting screws with washer .....                              | 19 |
| Picture 9: Bottom and side components assembled .....                      | 19 |
| Picture 10: Top bracket on vertical leg .....                              | 20 |
| Picture 11: Upper traverse inserted.....                                   | 20 |
| Picture 12: Inserting the rod .....  | 21 |
| Picture 13: Two persons lifting the scanner out of the transport box ..... | 21 |
| Picture 14: Lift the scanner to remove the foam rubber element .....       | 22 |
| Picture 15: Removing foam rubber element and cardboard element.....        | 22 |
| Picture 16: Bottom side, front side left.....                              | 23 |
| Picture 17: Bottom side, back side left .....                              | 23 |
| Picture 18: Fastening the scanner onto the floor stand.....                | 23 |
| Picture 19: WideTEK 42 with optional table placed on floor stand.....      | 24 |
| Picture 20: Connectors at Scanner .....                                    | 26 |
| Picture 21: Start menu screen.....   | 27 |
| Picture 22: Touch panel while shut down in progress .....                  | 28 |
| Picture 23: Keyboard with capital letters .....                            | 29 |
| Picture 24: Keyboard with lower case letters .....                         | 29 |
| Picture 25: Self Test 1 menu .....   | 30 |
| Picture 26: Network setup .....  | 31 |
| Picture 27: Numeric key pad .....  | 31 |
| Picture 28: Confirm changes .....  | 31 |
| Picture 29: White Balance screen .....                                     | 33 |
| Picture 30: Progress indicator .....                                       | 33 |

## Table of Pictures, part 2

|   |    |
|---|----|
| Picture 31: White balance result.....                       | 33 |
| Picture 32: Start screen .....                              | 34 |
| Picture 33: Login level screen.....                         | 35 |
| Picture 34: Poweruser main menu.....                        | 36 |
| Picture 35: Network parameters of the scanner .....         | 37 |
| Picture 36: Adjust Time and Date Screen.....                | 38 |
| Picture 37: Sound System screen .....                       | 39 |
| Picture 38: Volume level displayed.....                     | 40 |
| Picture 39: List of sound files.....                        | 41 |
| Picture 40: Link Sounds to Events screen .....              | 42 |
| Picture 41: Firmware Update .....                           | 43 |
| Picture 42: Summary of successful firmware update.....      | 44 |
| Picture 43: ICC Profile screen .....                        | 45 |
| Picture 44: Upload ICC Profile screen .....                 | 46 |
| Picture 45: Embed ICC profile .....                         | 46 |
| Picture 46: Install Option screen.....                      | 47 |
| Picture 47: Click the marked button.....                    | 48 |
| Picture 48: Select „White Balance“ .....                    | 48 |
| Picture 49: White Reference Target on document table.....   | 49 |
| Picture 50: Selecting “Brightness Correction” .....         | 50 |
| Picture 51: Selecting the correction factor .....           | 50 |
| Picture 52: Self Test 1 .....                               | 51 |
| Picture 53: Transport drums at front and back .....         | 52 |
| Picture 54: Hexagon screws at scanner’s backside .....      | 53 |
| Picture 55: Hexagon head screw at left side of housing..... | 53 |
| Picture 56: Lifting the main cover .....                    | 54 |
| Picture 57: Placing the main cover .....                    | 54 |
| Picture 58: Audio connector.....                            | 54 |
| Picture 59: Sensor connector .....                          | 54 |
| Picture 60: Controller connector .....                      | 55 |

## Table of Pictures, part 3

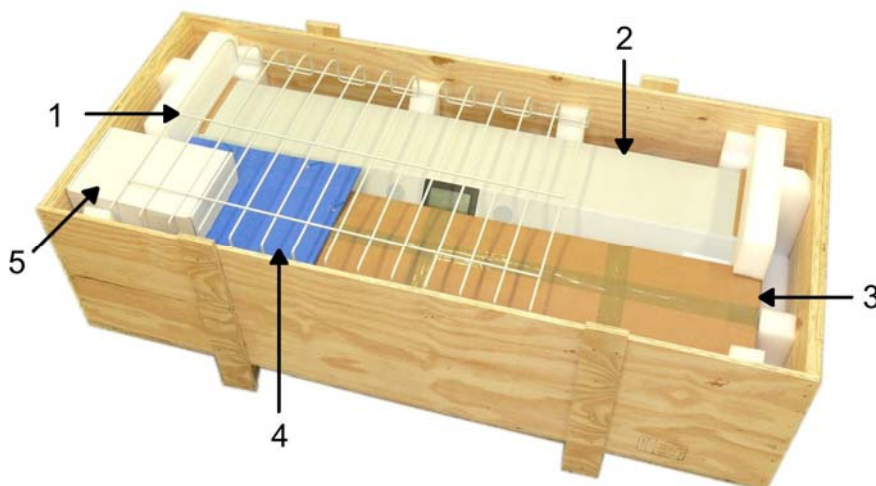
|  |    |
|--|----|
| Picture 61: Cable connector .....                                | 55 |
| Picture 62: Screw at back, left side .....                       | 56 |
| Picture 63: Screw at back, right side .....                      | 56 |
| Picture 64: Screw at front, left side .....                      | 56 |
| Picture 65: Screw at front, right side .....                     | 56 |
| Picture 66: Holding the glass plate rack .....                   | 57 |
| Picture 67: Removing the glass plate rack .....                  | 57 |
| Picture 68: Position of CSTT target on the document table .....  | 58 |
| Picture 69: Position of IT8 test target on the glass plate ..... | 59 |
| Picture 70: Network Analyzer screen .....                        | 60 |
| Picture 71: IP address for testing .....                         | 60 |
| Picture 72: Recovery Key .....                                   | 61 |
| Picture 73: Position of gap on right side .....                  | 62 |
| Picture 74: Position of gap on left side .....                   | 62 |
| Picture 75: Moving the compensator plate upwards .....           | 62 |
| Picture 76: Compensator plate on document table .....            | 63 |
| Picture 77: Compensators lifted .....                            | 63 |
| Picture 78: Inserting recovery key .....                         | 63 |
| Picture 79: Connectors on rear panel .....                       | 63 |

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## A Hardware Setup

### A.1 Content on Delivery

The scanner is delivered in a wooden transport box. The transport box also contains the disassembled floor stand in a separate cardboard box and the paper catch basket.



Picture 1: Transport box opened

- 1: Paper catch basket
- 2: Scanner
- 3: Floor stand in separate cardboard box (optional)
- 4: Folder with reference targets, the White Balance reference sheet, and the manuals.
- 5: Box with cable set and accessories.

The cable set consist of:

Network cable. Connects the scanner to the network. All network parameters such as IP address, subnet mask and gateway must be set via the front panel prior to the first use.

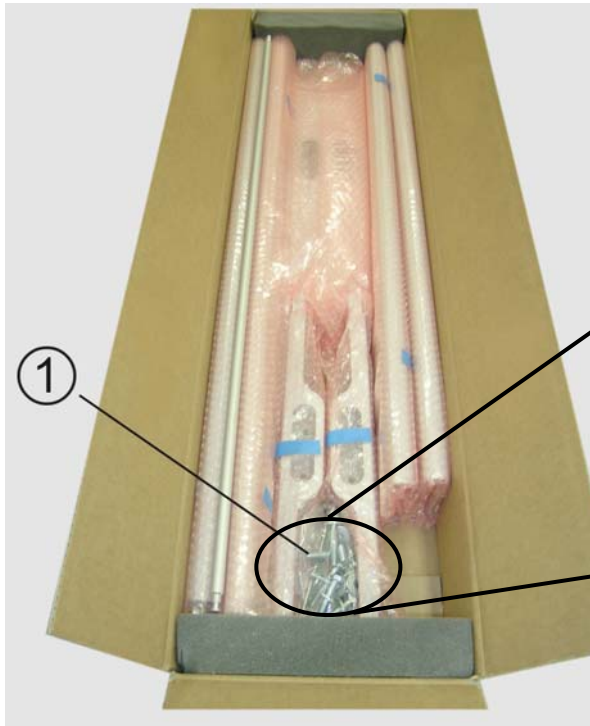
Crossover cable. Connects the scanner directly to a computer via the network card.

Two power cables. US and European standard. Connects the scanner to the wall outlet.

**Please note:** Keep the wooden transport box and the cardboard box for future use! In case of guarantee the scanner must be sent back in the original transport box to avoid transport damages.

## A.1.1 Contents of Floor Stand Box

The cardboard box of the floor stand contains all screws and washers, as well as the tools to assemble the floor stand, in a separate plastic bag.



Picture 2: Floor stand box opened



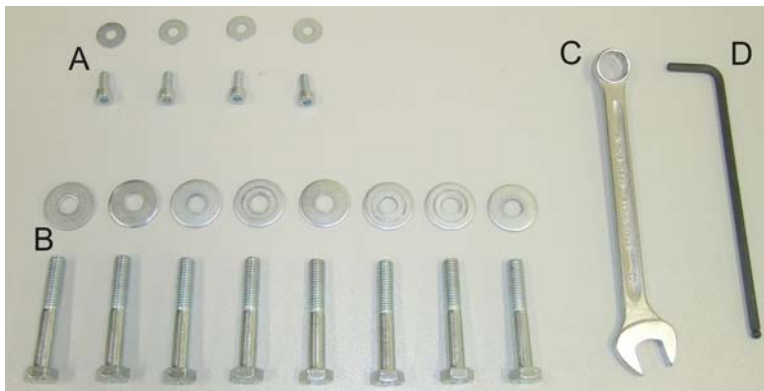
Picture 3: Assembling material

1: Plastic bag with assembly material

The plastic bag contains all screws, washers and tools to assemble the floor stand.

### A.1.1.1 List of Assembling Material and Tools

- A 4x screws DIN 912 M5x10
- 4x washer DIN 9021 – 5.3



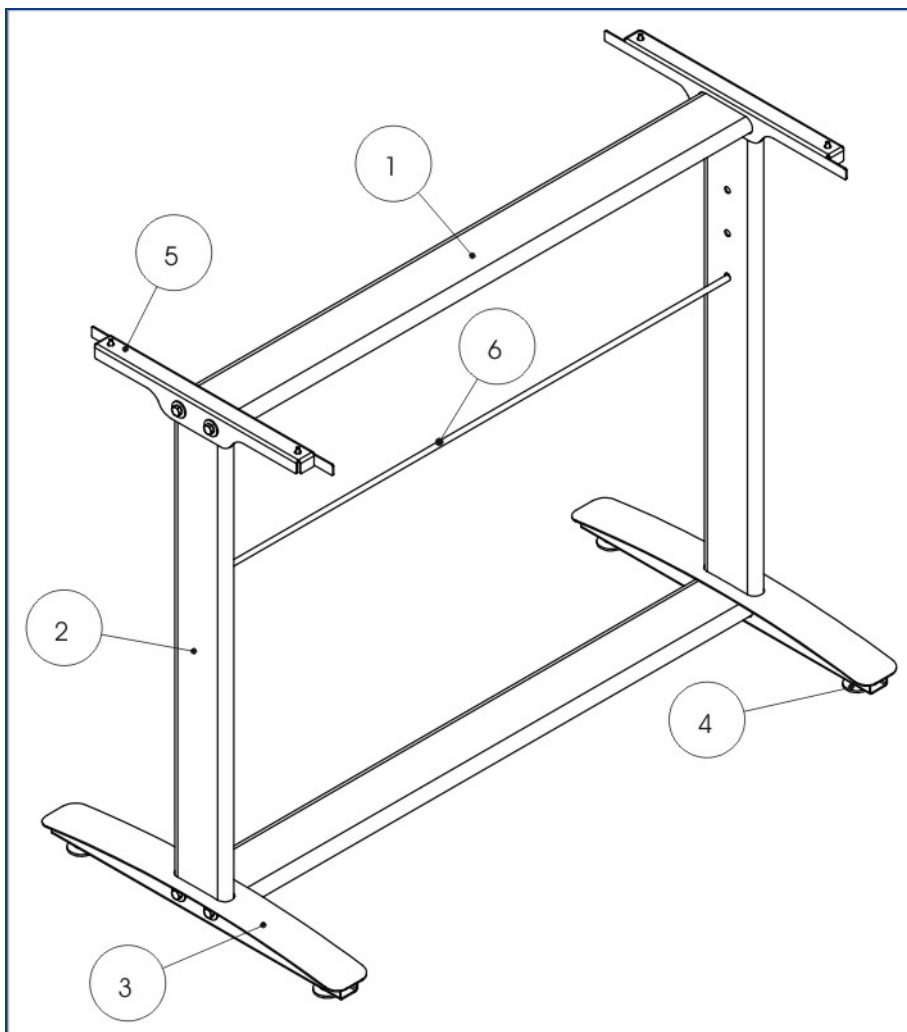
- B 8x screws ISO 4016 – M8x50x22-WS
- 8x washer DIN 9021 – 8.4

C Combination wrench, size 13

D Allen wrench size 4

### A.1.2 Floor Stand Overview

The engineering drawing below shows all major elements of the floor stand.



**Picture 4: Technical drawing of floor stand**

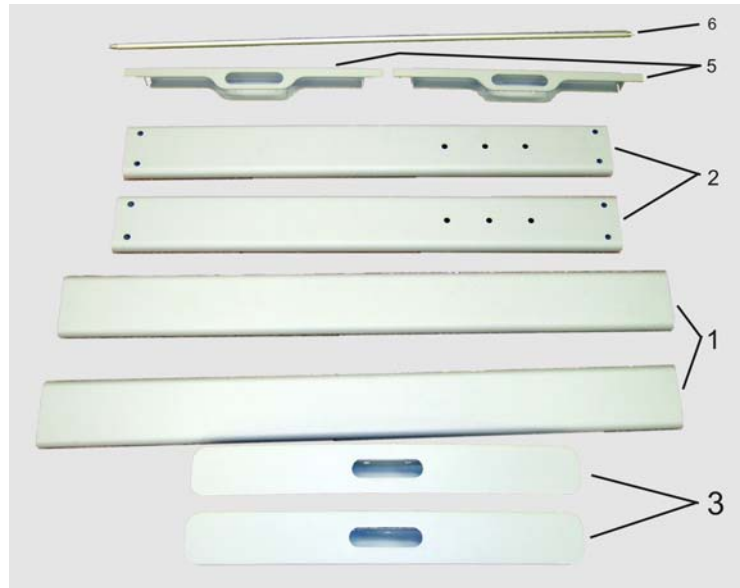
The floor stand is built out of five different components and one round rod.

| No | Qty | Description   |
|----|-----|---|
| 1  | 2   | Horizontal traverse. This part is used on the top as well as on the bottom. |
| 2  | 2   | Vertical leg. This part is used on the left as well as on the right side.   |
| 3  | 2   | Foot bracket. This preassembled part is used on the left and right side.    |
| 4  | 4   | Adjustable feet. These are preassembled to the foot bracket.                |
| 5  | 2   | Top bracket: This part is used on the left and right top side.              |
| 6  | 1   | Horizontal rod. This part supports the paper exit basket.                   |



## A.1.3 Parts of Floor Stand

Take all parts out of the box and place them as shown below and check for possible damages.



**Picture 5: Floor stand components**

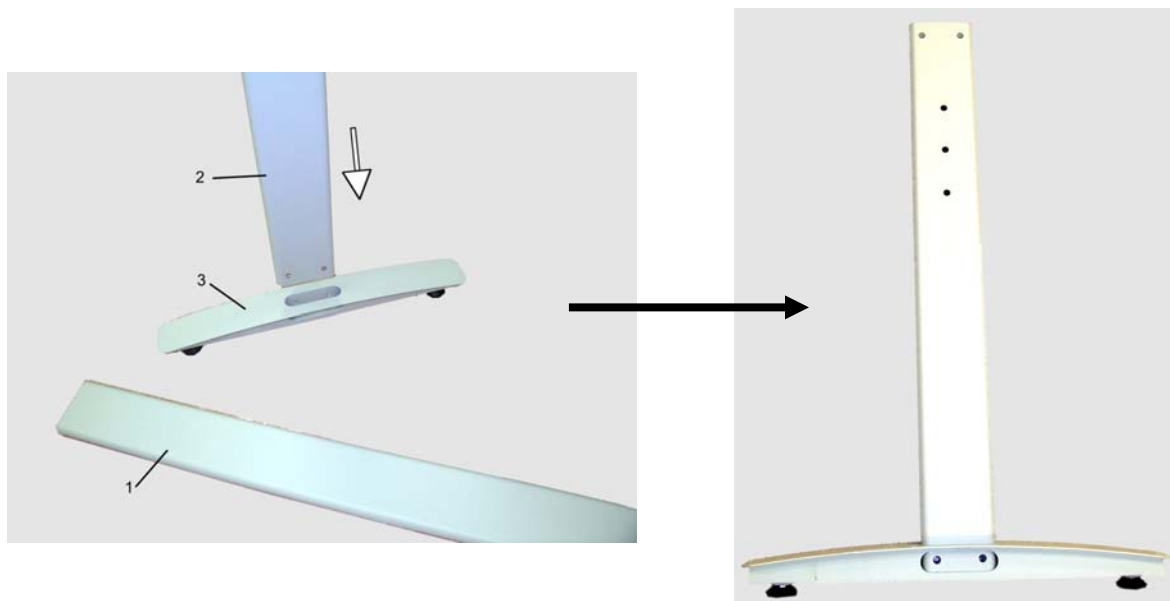
The numbers in the picture above correspond to the numbers in the technical drawing.

## A.2 Assembling the Floor Stand

Start with the foot profile (component #3), the side pillar (component #2), and the traverse (component #1).

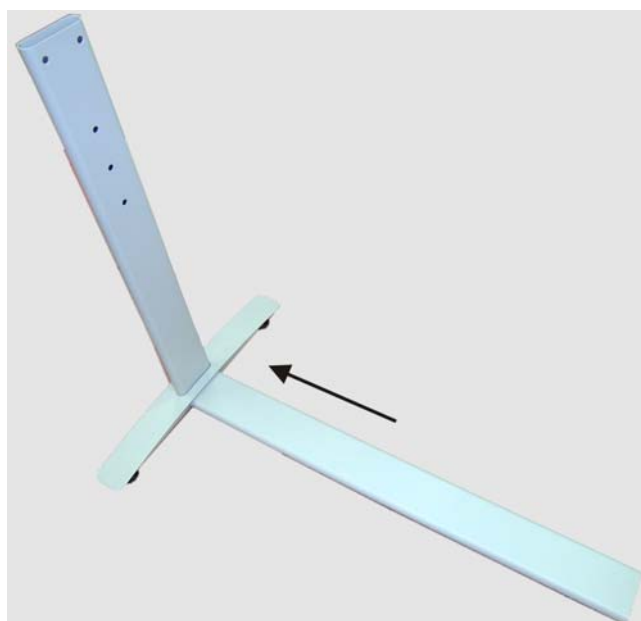
**Note:** The three boreholes on the vertical leg (part #2) that are only on one side must face to the inner side of the floor stand. They should also be in the upper part of the leg. The technical drawing illustrates the correct position.

First insert a vertical leg into a foot bracket. The brackets have a cutout for the traverse. The foot brackets are designed symmetrically, therefore either one fits left and right.



**Picture 6: Side pillar in foot profile**

Next, insert the traverse as shown in the picture below.



**Picture 7: Traverse inserted into foot bracket**

Fasten the three components with two screws ISO 4016 – M8x50x22-WS. Place a washer on each screw.



**Picture 8: Inserting screws with washer**

Tighten the screws with the combination wrench, size 13, which comes with the floor stand.

**Note:** All screws should only be hand-tightened at first. The components should have a little play until all parts are assembled.

Repeat the steps described above with the second foot bracket and the second vertical leg.

Upon completion, the floor stand should look as shown in the picture below.



**Picture 9: Bottom and side components assembled**

Place the top brackets on the vertical legs. The oval cut-out must face to the inner side.



**Picture 10: Top bracket on vertical leg**

Insert the second traverse between the side legs.



**Picture 11: Upper traverse inserted**

Assemble the traverse, the top brackets and the legs with two ISO 4016 – M8x50x22-WS screws and a washer on each side.

Tighten all screws on the floor stand with the combination wrench, size 13.

Finally, insert the rod between the side legs. This rod supports the paper output tray. It has three positions for varying tray positions.



Picture 12: Inserting the rod

## A.3 Combining Floor Stand and Scanner

After assembling the floor stand, the scanner can easily be placed on it in a safe position.

**Note:** For safety reasons and because of the scanner's weight, the scanner should be handled by two persons.

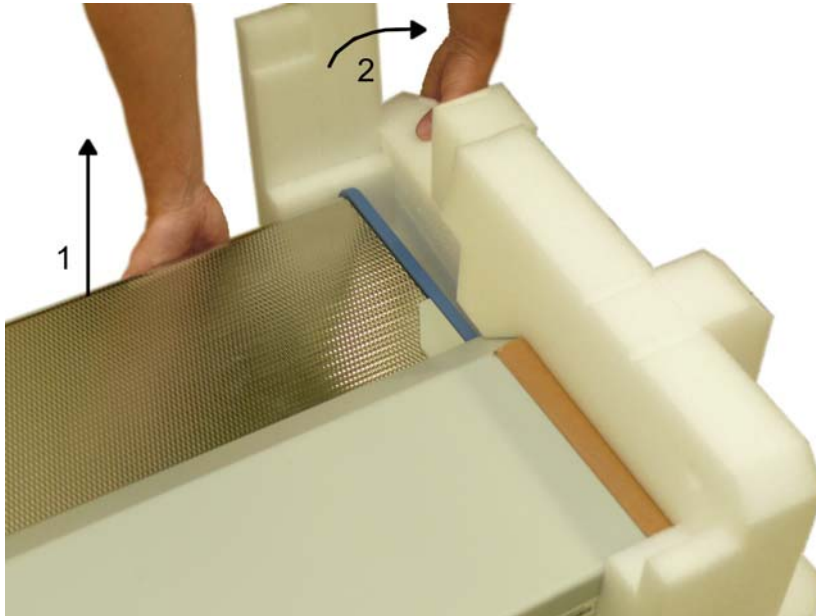
Seize the scanner at its wide sides and lift it out of the transport box. The foam rubber elements at the right and the left side will be pulled out together with the scanner.



Picture 13: Two persons lifting the scanner out of the transport box

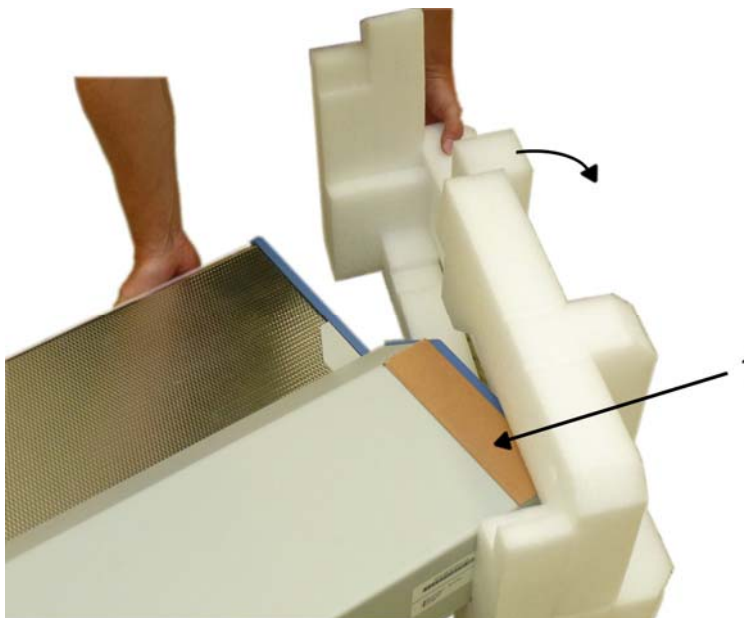
Place the scanner on the ground for the next steps.

To remove the foam rubber elements, lift the scanner on one of its small sides (Figure 1, Picture 14) and turn the foam rubber element sideward (Figure 2, Picture 14).



**Picture 14: Lift the scanner to remove the foam rubber element**

Turn the foam rubber element up to an angle of approximately 45°, then pull it out of the back side of the scanner.



**Picture 15: Removing foam rubber element and cardboard element**

Repeat this at the other side of the scanner. Finally remove the small cardboard elements (Picture 15, detail 1) at the left and right side between scanner cover and side elements.

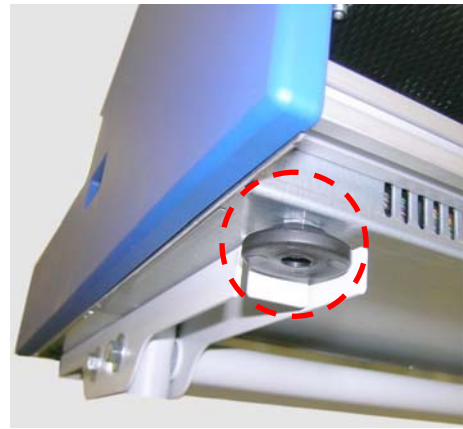


The scanner has four pre-mounted rubber feet on its bottom side. The position of the rubber feet corresponds to the cut-outs at the top of the longitudinal girders.

Place the scanner on the floor stand so that the rubber feet are inserted into the cut-outs.

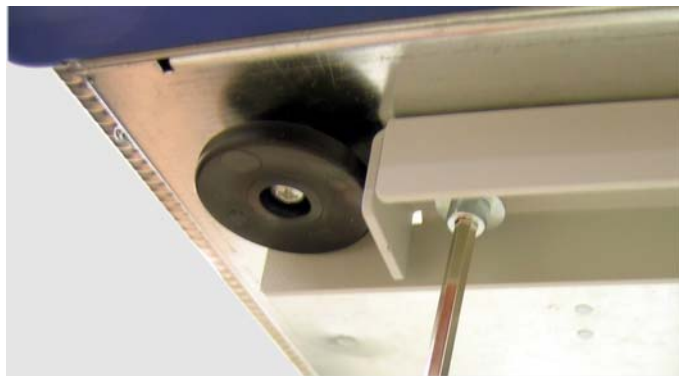


**Picture 16: Bottom side, front side left**



**Picture 17: Bottom side, back side left**

Finally, fasten the scanner onto the floor stand. The four screws DIN 912 M5x10 with washers are used to fix the scanner.



**Picture 18: Fastening the scanner onto the floor stand**

The floor stand has boreholes on each side directly beside the cut-outs for the rubber feet. Insert the screws and fasten them securely.

Use the Allen wrench to fasten the screws.

After fastening the scanner on the floor stand, insert the paper exit basket. It is recommended to insert the paper exit basket from the back of the scanner. Place it on the rod and fix it with the hooks on the rear side of the scanner.



**Picture 19: WideTEK 42 with optional table placed on floor stand**



## A.4 Connecting to the Power Source

Before connecting the scanner to the wall outlet check the following items:



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



Inspect the power cable and ensure that it is undamaged.  
Use only the power cable delivered with the scanner.



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



Turn the device off before plugging or unplugging any cable.



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

### A.4.1 Connectors at the Scanner

The connectors are positioned at the left side of the housing, seen from the operators view (i.e. from the front of the scanner).



Picture 20: Connectors at Scanner

- 1: Power connector
- 2: Foot pedal connector
- 3: Network cable connector
- 4: Main power switch

## A.5 Powering up the Scanner

The main power switch is found beside the power connector.

Picture 20 shows the position of power connector and main power switch.

After connecting the scanner to the electrical outlet, switch the main power switch to position I. When the main power switch is in position I, the scanner is in stand-by mode.

**Note:** While using the scanner in work conditions, it should **only be switched on and off by the touch panel!**



## A.6 The Touch Panel

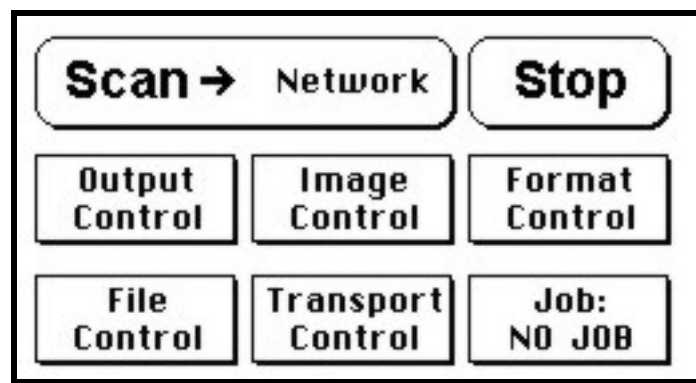
The scanner parameters can be set and modified with the integrated touch panel. It shows an easy-to-use menu and helps the user to control all scanner parameters with the touch of a finger.

When the unit is powered up by using the main power switch, the touch panel is illuminated in a dimmed mode and shows the stand-by screen. The stand-by screen shows the Image Access logo and the blinking message **Touch screen to power up.**

### A.6.1 Starting the Scanner from Stand-By Mode

When the scanner is in stand-by mode, it can be started by tapping the touch panel on any arbitrary position. The touch panel lights up and a rotating hourglass indicates that the start sequence is running.

When the start-up sequence is finished, the touch panel shows the start menu screen.



Picture 21: Start menu screen

## A.6.2 Turning-off the Scanner

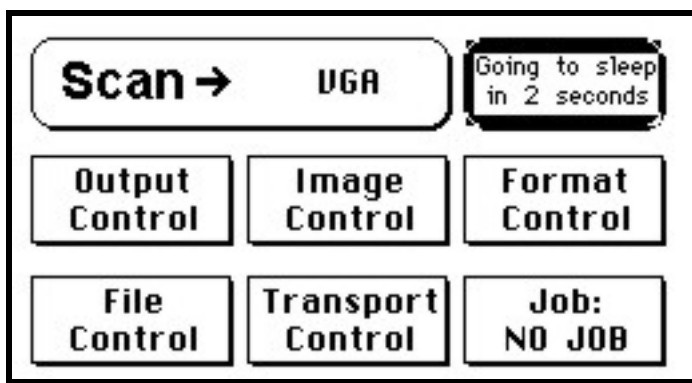
**Note:** **Always** turn off the scanner with the **Stop** button on the touch panel!

The main power switch should only be used when the scanner is in stand-by mode and **before** it is disconnected from the electrical outlet.



To turn the scanner off, press and hold the **Stop** button on the touch panel.

While the **Stop** button is held, a counter in the button shows the remaining time until it is powered down. → “Going to sleep in x seconds”



Picture 22: Touch panel while shut down in progress



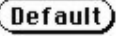
At the end of the power-down sequence the display will be dimmed.



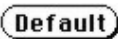
## A.6.3 The Help Function

To support the user when working with the scanner, a help function is integrated into the touch panel menus. A **Question Mark** (?) symbol in the lower right corner of the screen activates the help function.

After touching the question mark, all controls in the screen start blinking. To get the corresponding help text, the appropriate control must be touched. To return to the respective screen, the screen must be touched again on any arbitrary place.

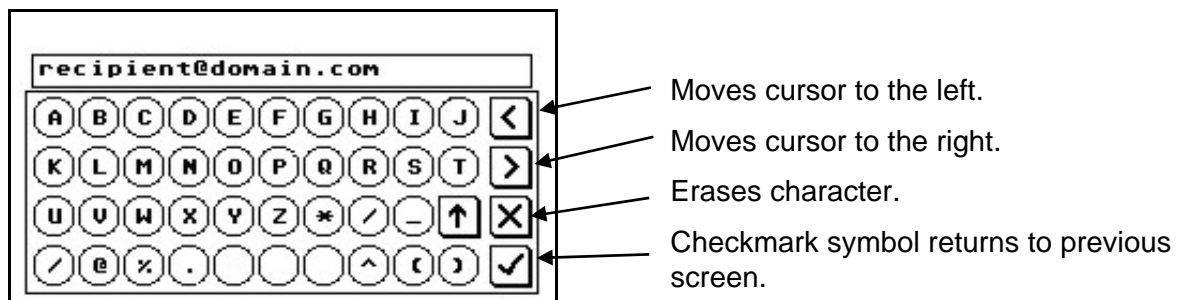
## A.7 Navigating through the Screens

Some of the screens show on the bottom line the buttons   

-  Returns to the former screen. Sometimes only the symbol < is displayed.
-  Switches to the next logical screen, e.g. from **Format Control 1** to **Format Control 2**. Sometimes only the symbol > is displayed.
-  Resets all values in the respective screen to default value.


### A.7.1 How to Enter or Change Values

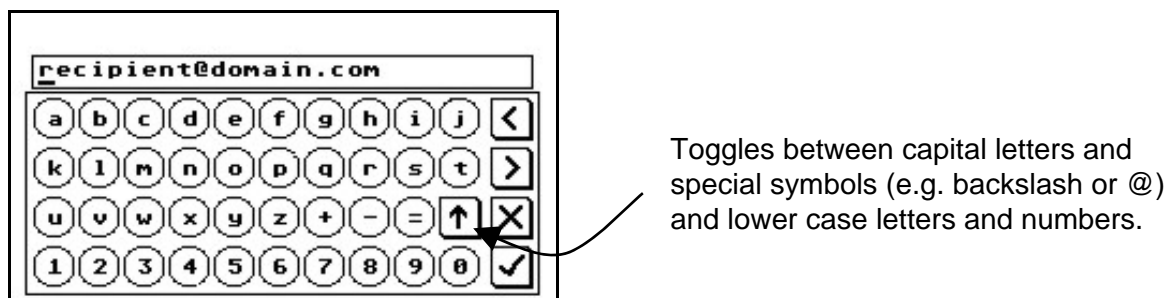
To enter new values or change existing values, the corresponding field or line in the screen must be touched. If a parameter requires an alphanumeric value, the touch panel display changes and shows a keyboard with which text and numeric values can be entered.



Picture 23: Keyboard with capital letters

The keyboard enables the user to enter capital letters, lower case letters, special characters as well as numbers.

The content of the keys is switched with this key: 



Picture 24: Keyboard with lower case letters

## A.8 IP Address Setup

Controlling of the scanner is based on the Scan2Net technology.

That means, access onto the scanner and the integrated Scan2Net user interface occurs by using a network connection. For this connection, every browser software can be used.

IP address at delivery: **192.168.1.50**

This IP address is also active after a “Reset to Factory Defaults”.

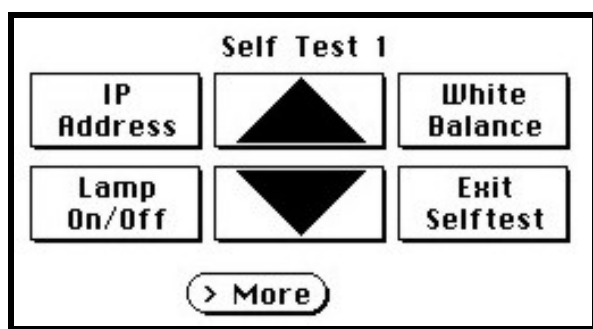
To integrate the scanner into an existing network structure all network parameters can be defined and/or modified by using the touch panel as well as the integrated Scan2Net user interface.

The following chapter describes how to setup the network parameters of the scanner by using the touch panel. The setup of the network parameters in the Scan2Net user interface is described in chapter B.3.1

### A.8.1 IP Address Setup by Touch Panel

Start the scanner from stand-by mode by tapping on the touch panel.

While the start sequence is running tapping on the touch panel **at least three times** switches the scanner to setup mode. After the start sequence is finished, the touch panel shows the **Self Test 1** screen.



Picture 25: Self Test 1 menu

Touch the control field **IP Address**. The touch panel changes to a mask where IP Address, Gateway, and Netmask can be entered. Also the DHCP mode can be selected.

**Network setup**

|         |               |
|---------|---------------|
| Address | 192.168.1.50  |
| Gateway | 192.168.1.50  |
| Netmask | 255.255.255.0 |
| DHCP    | No            |

Back Save Default

**Picture 26: Network setup**

Touch on the line to be changed, e.g. the **Address** line. The touch panel shows:

192.168.1.50

|   |   |   |   |
|---|---|---|---|
| 7 | 8 | 9 | < |
| 4 | 5 | 6 | > |
| 1 | 2 | 3 | X |
| 0 | . |   | ✓ |

**Picture 27: Numeric key pad**

Enter the new values. The < and > keys move the cursor, the X key deletes the number at the cursor position.

To finalize the input tap on the checkmark key. ✓

If entries have been changed, a screen opens where the changes must be confirmed. **Yes** confirms the changes, **No** discards the changes.

**Network setup**

Save changes ?

Yes No

**Picture 28: Confirm changes**

After the changes have been saved, the touch panel shows the **Self test 1** menu again.

## A.9 Optical Adjustment

Whenever the device is setup for the first time, moved to a different location, cleaned or serviced and/or after a software update; some adjustments have to be performed to guarantee maximum quality and accuracy.

### A.9.1 White Balance

The white balance function is the most important function for consistent image quality.

To ensure optimal performance, the Scanner should be calibrated in regular intervals to compensate for light degradation, variations in the paper quality of the documents to be scanned, and other long term effects;

#### A.9.1.1 Helpful information about the white balance adjustment

The scanner has built-in light sources of known and stable quality consisting of state-of-the-art white LEDs.

In the first step, the overall sensitivity of the scanner is adjusted in such a way that the brightest area results in an almost saturated output signal. This assures that the largest density range possible is used. After this adjustment is done, the uneven light distribution on the CCD caused by the imbalance of the lamps, the ambient light introduced, the imperfections of the lens and other factors has to be compensated for.

This measurement results in a correction function which levels the brightness over the complete scan width.

The quality of the test target is of utmost importance to the result of the white balance. The test target is on reflective paper which diffuses the light. If the test target has dirt, wrinkles or anything visible to the human eye on it, the CCD will also see this and will overcompensate in these areas. Although the internal software has been programmed to eliminate these imperfections to a certain degree, it still leads to unreliable results if the target is not of the defined quality.

If the target is of defined quality, the scanner will calibrate successfully. Calibration means that the “white” of the test target in the given illumination situation produces a “white” output in the digital domain. Consequently, all scans of white paper having different properties than the test target results in brightness and possibly color shifts.

Periodically performing the white balance adjustment is recommended to ensure consistent best scan results.

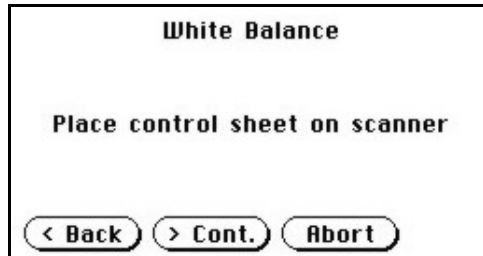


### A.9.1.2 Performing the White Balance Adjustment

Start the scanner as described in chapter A.6.1. While the start sequence is running, tap on the touch panel at least **three times successively**.

At the end of the start sequence the touch panel shows the menu **Self Test 1** (Picture 25).

Tap on the field **White Balance** to activate the adjustment process.



**< Back** Returns to the former screen.

**> Cont.** Starts the measurement.

**Abort** Stops the measurement and the display returns to the former screen.

Picture 29: White Balance screen

Place the white balance test target WT48-Z-02-A in the document input. The test target covers the complete width.

Now tap on **> Cont.**



While the white balance adjustment is running, the touch panel shows a progress indicator.

Picture 30: Progress indicator



At the end of the measurement the result will be displayed in the touch panel.

Tap on the field **Finish** to return to the menu **Self Test 1**.

Picture 31: White balance result

## B Software Setup

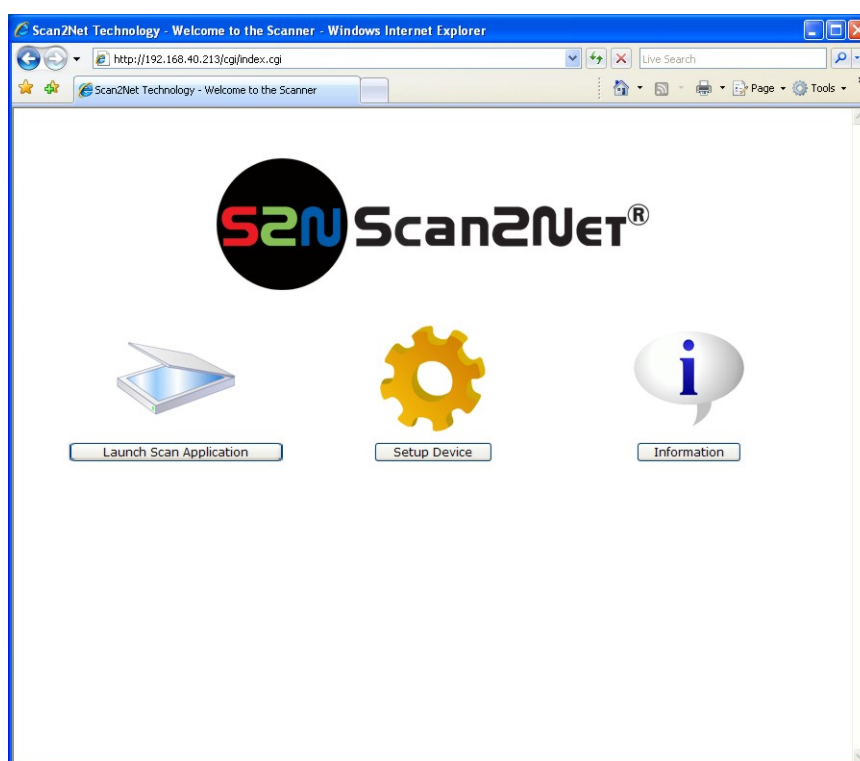
Essentially, the scanner is a web server and comes with its own HTML-based user interface. To access a Scan2Net scanner, any standard web browser can be utilized.

### B.1 Start Screen of the Scan2Net User Interface

Start your browser.

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

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



Picture 32: Start screen

The start screen shows three symbols, which lead to the main categories of the Scan2Net user interface.

**Launch Scan Application** changes to the main screen of the scanner interface.

**Setup Device** changes to the setup menu. Starting with the following chapter, the basics of the scanner configuration will be described.

**Information** shows a list of basic information about the scanner, e.g. serial number, the firmware version, the IP address and many more.

## B.2 Setup Menu

Click in the start screen on the button **Setup Device** .

The next screen shows three buttons to select the login level. The access to the levels **Poweruser** and **Admin** are password protected.



Picture 33: Login level screen

### B.2.1 Selecting the Login Level

**User** This level allows the user to get some status information of the scanner. This are e.g. the firmware version, the remaining lamp operating time, system information, and many more. Furthermore it allows to set a few basic parameters.

**Poweruser** Password protected level. Allows to set an extended range of system parameters and to execute some adjustments.

**Admin** Password protected. Allows to set a wide range of system parameters and to configure the scanner in detail.

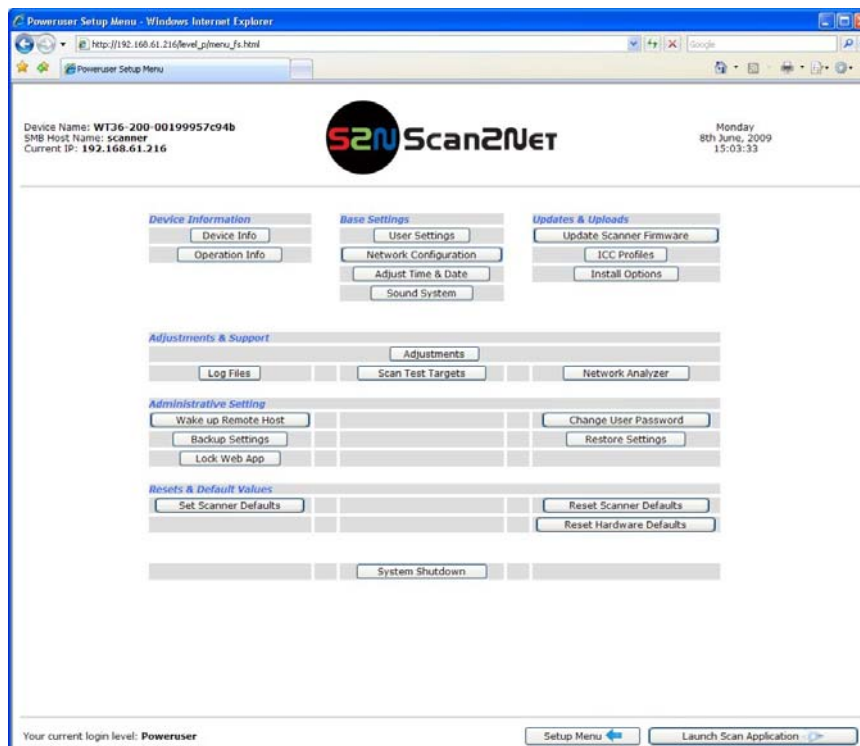
Access to the **Admin** level is limited for trained technicians.

## B.3 Poweruser Login Level

For the following setup steps choose the login level **Poweruser**.

Default user name and default password for this login level are "Poweruser".

**Note:** Please consider that both the user name and the password are case-sensitive and that the first letter of both the user name and password are upper case.



Picture 34: Poweruser main menu

The person having access to this level can change the password and thereby limit access to normal operators.

The main menu screen for the **Poweruser** level opens. The main menu is separated in several sections.

The subsequently described settings broaden the functionality of the scanner or activate additional functions.

**Note:** For a detailed description of the User Settings see the Operation Manual, chapter **Setup Menu**.

### B.3.1 Setup Network IP Address

In the **Poweruser** main menu find the section **Base Settings** and click on the **Network Configuration** button.

Poweruser Setup Menu - Mozilla Firefox

Device Name: WT36-200-00199917d116  
SMB Host Name: 00199917d116  
Current IP: 192.168.43.215

Tuesday  
2th September, 2008  
10:53:22

Network Configuration (IPv4)

IP Configuration Method: Manual

**Manual** Note: A change of the IP Address will result in a loss of connectivity to the Browser.  
Shown values do not represent the current configuration if you have switched from "DHCP" to "Manual" just now.

Host Name: WT36-200-00199917d116  
IP Address: 192.168.43.215  
Subnet Mask: 255.255.0.0  
Default Gateway: 192.168.43.215  
Network: 192.168.0.0  
Broadcast: 192.168.255.255

Domain Name:   
Primary DNS Server: 10.40.0.254  
Secondary DNS Server: 10.40.0.254

SMB Hostname: 00199917d116  
SMB Workgroup: scan2net

Apply Back to Main Menu

Your current login level: Poweruser Setup Menu Launch Scan Application

wt36\_pwr-usr5xx\_003.jpg

**Picture 35: Network parameters of the scanner**

Now change the IP address, subnet mask and gateway to a valid address in your network or select DHCP to obtain an IP address automatically.

When the IP address has been changed, click on the **Apply** button. The new values will be transferred and the scanner is accessible with its new IP address.

**Note:** Depending on the browser it is necessary to delete the browser cache before the scanner is accessible.

Now enter the new IP address and open the login level **Poweruser** as described above (chapter B.2 / B.3)

### B.3.2 Adjust Time & Date

In the **Poweruser** main menu screen (Picture 34) locate the section **Base Settings**. Click on the button **Adjust Time & Date**.

Poweruser Setup Menu - Mozilla Firefox

Device Name: WT36-200-00199917d116  
SMB Host Name: 00199917d116  
Current IP: 192.168.43.215

Scan2Net®

Tuesday  
2th September, 2008  
10:53:54

Adjust Time & Date

Time Format: 24h

NTP Server

Adjust time at system start? No

NTP Server: 127.0.0.1

NTP Port: 123

Time Zone & Daylight Saving

Time Zone: GMT+1 hour (Amsterdam, Berlin, Rome)

Daylight Saving: Yes No

Manual Adjustment

Day (dd): 02

Month: September

Year (YYYY): 2008

Time (hh:mm): 10:53

Adjust time now: Manually via NTP Back to Main Menu

Your current login level: Poweruser

Setup Menu Launch Scan Application

Picture 36: Adjust Time and Date Screen

Select the time format.

Enter in section **NTP Server** all parameters for the communication with a NTP server.

Select the time zone and the daylight saving function.

Manually set the time and the date.

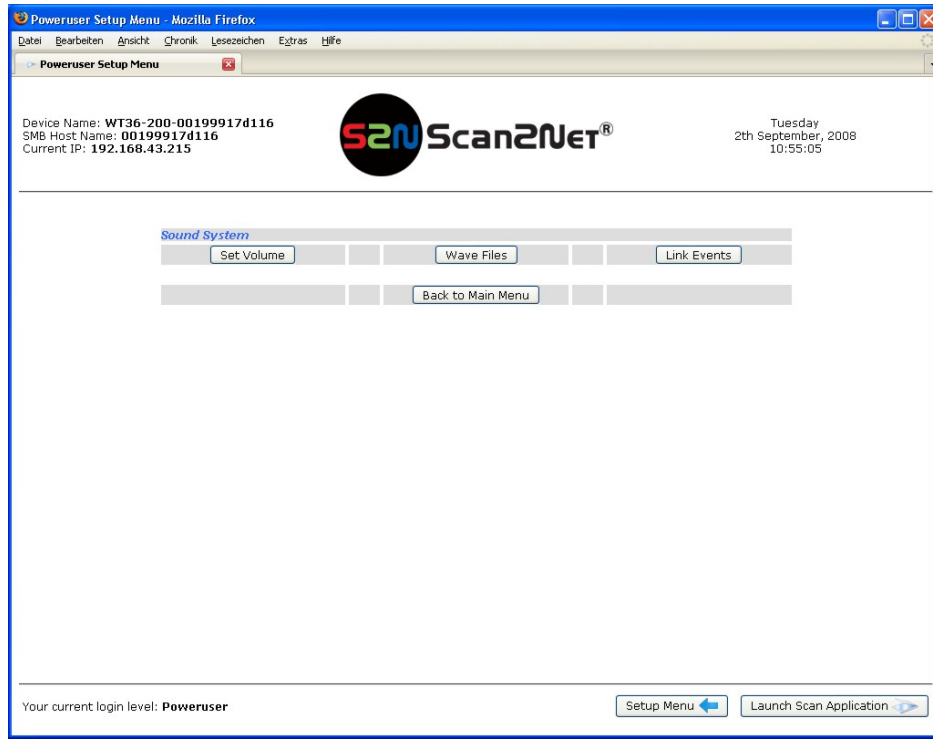
Click the button **Manually** to refresh all above modified data.

Click the button **via NTP** to connect to the above defined NTP server.

**Note:** By default, the name of a scanned image contains the scan time and date, therefore synchronizing the internal clock can be of some value.

### B.3.3 Sound Control

Locate the section **Base Settings** in the **Poweruser** main menu screen and click the **Sound System** button.



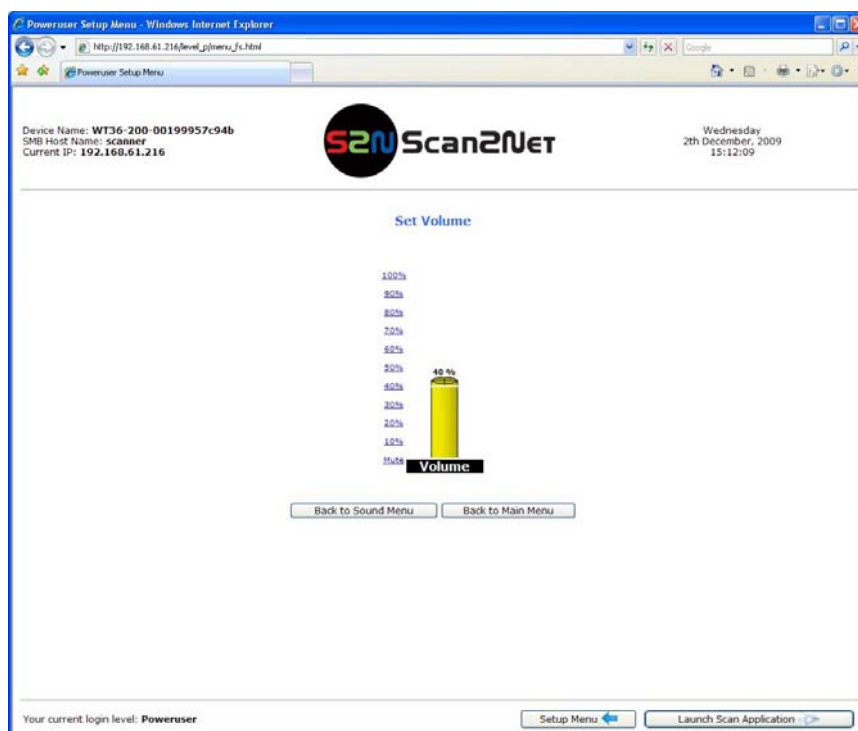
Picture 37: Sound System screen

This menu allows to

- set the volume,
- upload additional sound files to the scanner,
- link events to sound files.

### B.3.3.1 Set Volume

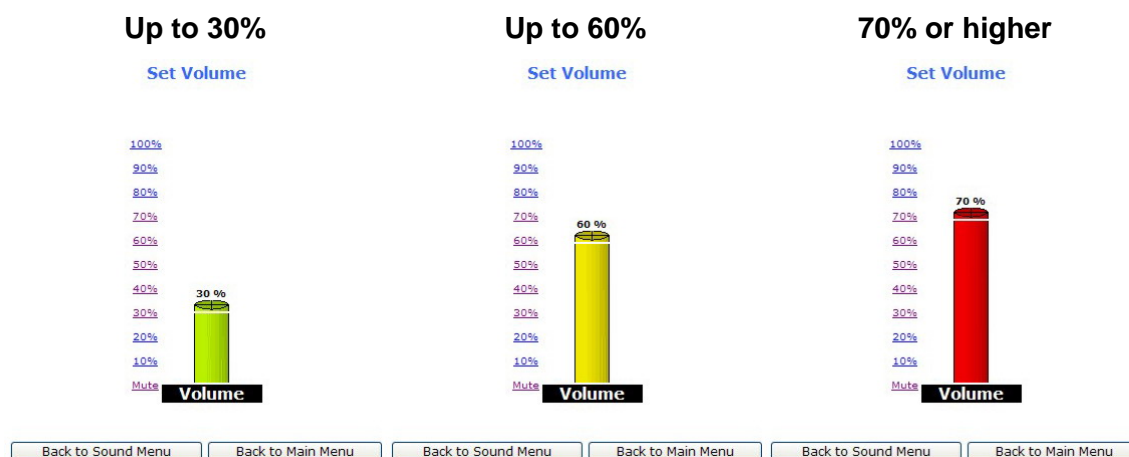
Click on the button **Set Volume**.



Picture 38: Volume level displayed

To set the volume level, click on the desired percentage value in the list left beside the graphic symbol.

The symbol color changes depending on the selected value.



**Back to Sound Menu** returns to the former menu.

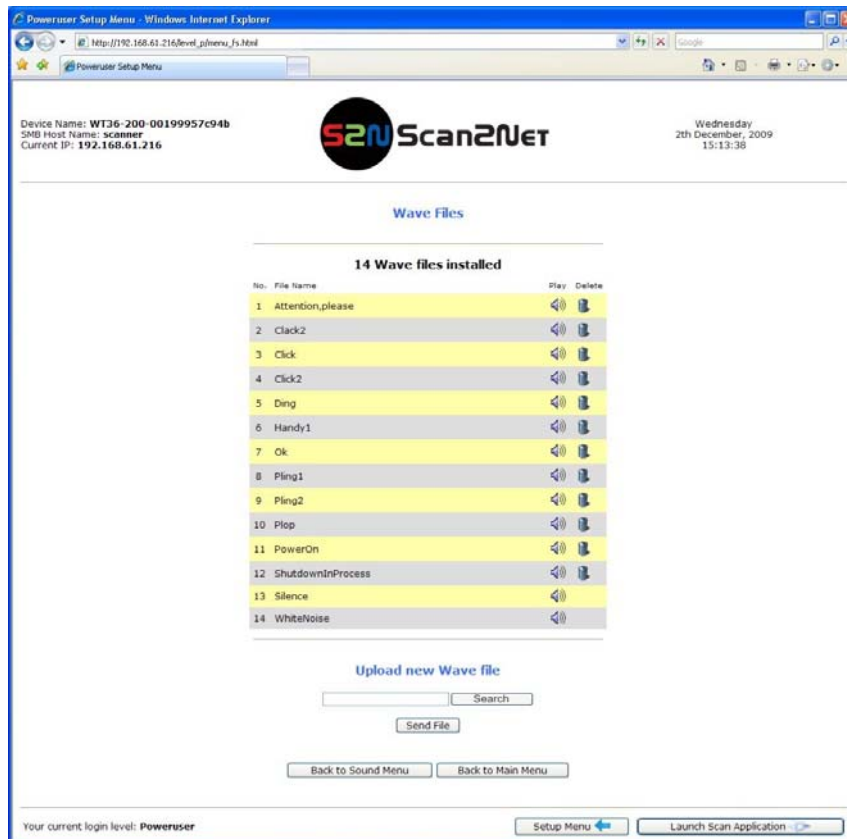
**Back to Main Menu** returns to **Poweruser** main menu (Picture 34).



**B.3.3.2 Wave Files**

Additionally sound files can be uploaded to the already installed sound files. The data format of the sound files is WAV.

Click on the button **Wave Files**.



**Picture 39: List of sound files**

The list of the installed sound files will be displayed.

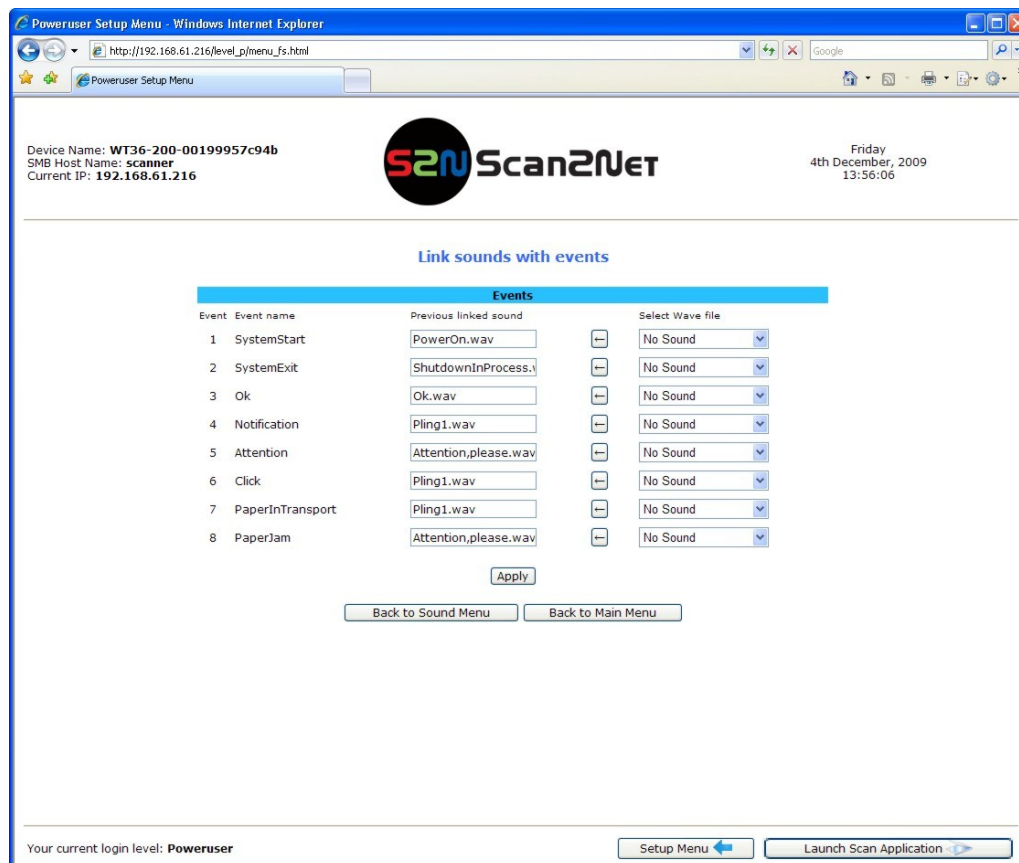
Click on the button **Search** to search for the desired WAV sound files.

Click on the button **Send** to upload the files to the scanner.

### B.3.3.3 Link Events

A sound can be assigned to various action items. This will be played every time the condition occurs. The default setting can be overwritten.


Click on the button **Link Events**



Picture 40: Link Sounds to Events screen

The list shows the event and the sound name which is linked to it.

The sound that should replace the current sound can be selected in the next row. Click on the selection arrow to open the list of available sounds.

The selected sound will be linked to the event by clicking the  symbol.

Click on the button **Apply** to transfer the changes to the scanner.

**Back to Sound Menu** returns to the former menu.

**Back to Main Menu** returns to **Poweruser** main menu (Picture 34).

### B.3.4 Firmware Update

The Image Access Customer Service Portal at <http://service.imageaccess.de> offers downloads of firmware updates for every Scan2Net scanner. As a registered user, login with your personal login name and password.

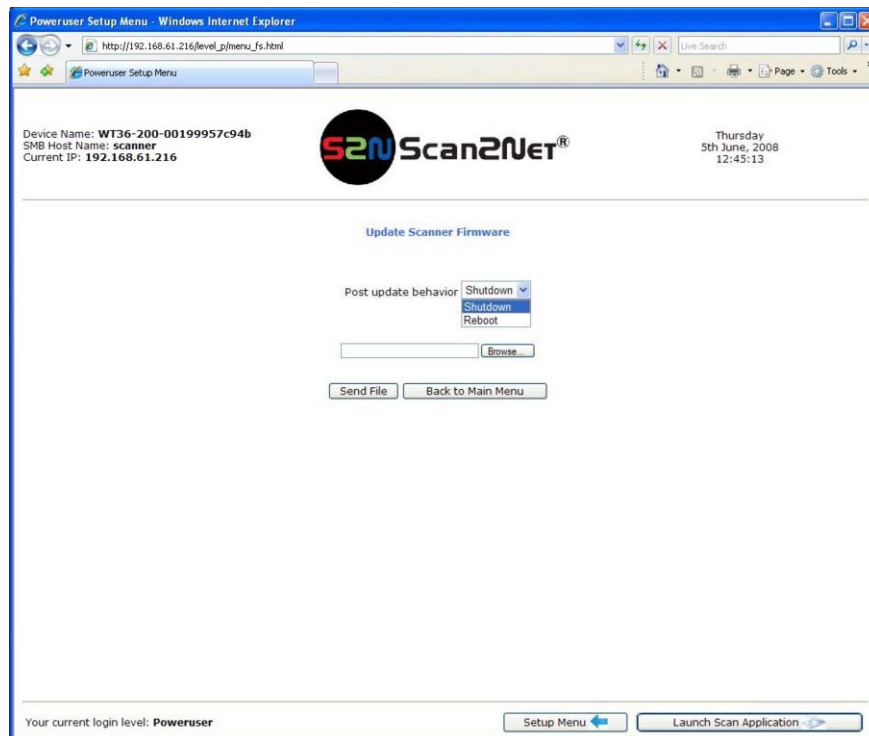
Select **Actions S2N Device Updates** to download the current firmware version. Enter the serial number of your scanner and the version number of the firmware installed on the scanner.

Download the current firmware version to your local PC.

Start the scanner. Select **Setup Device** and go to the login level **Poweruser**.

In the main menu screen, locate the section **Updates & Uploads** and click the **Update Scanner Firmware** button.

Browse your local PC and select the previously downloaded firmware update file.



Picture 41: Firmware Update

After the firmware update is complete the scanner must be rebooted to activate the new firmware.

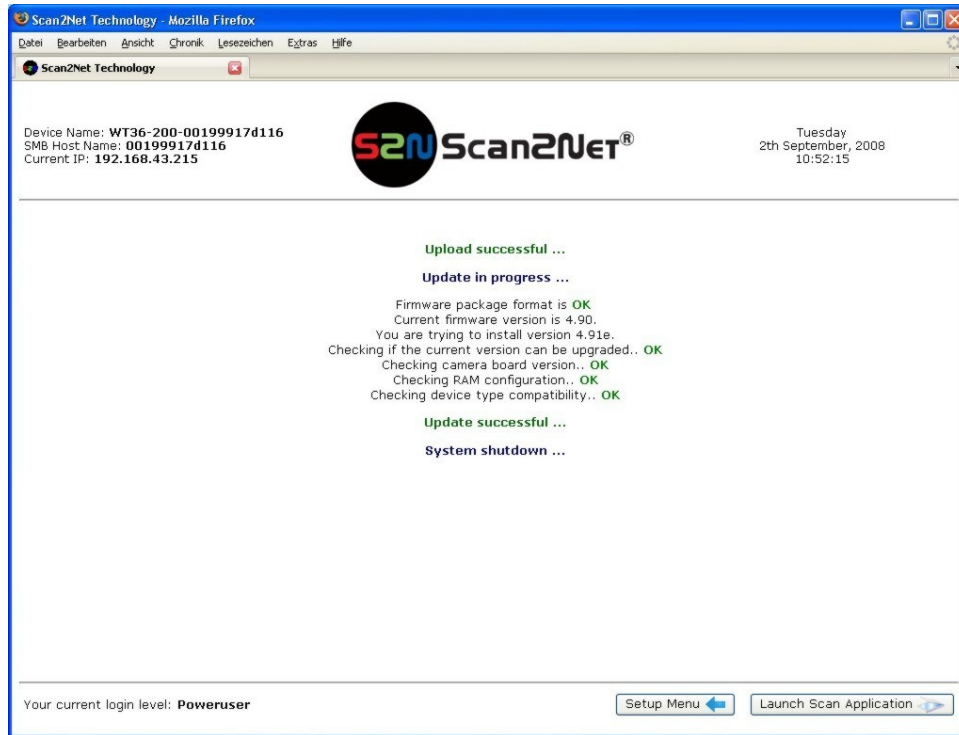
Select "Reboot" in the line **Post update behavior** to reboot automatically after the updating the firmware.

Click the button **Send File** to update the scanner's firmware.

**Important:** Do not switch off the scanner while executing the firmware update!

The update sequence can last a few minutes. When the update is running, no messages will be displayed on the screen.

After the firmware is successfully updated, the screen displays a summary.



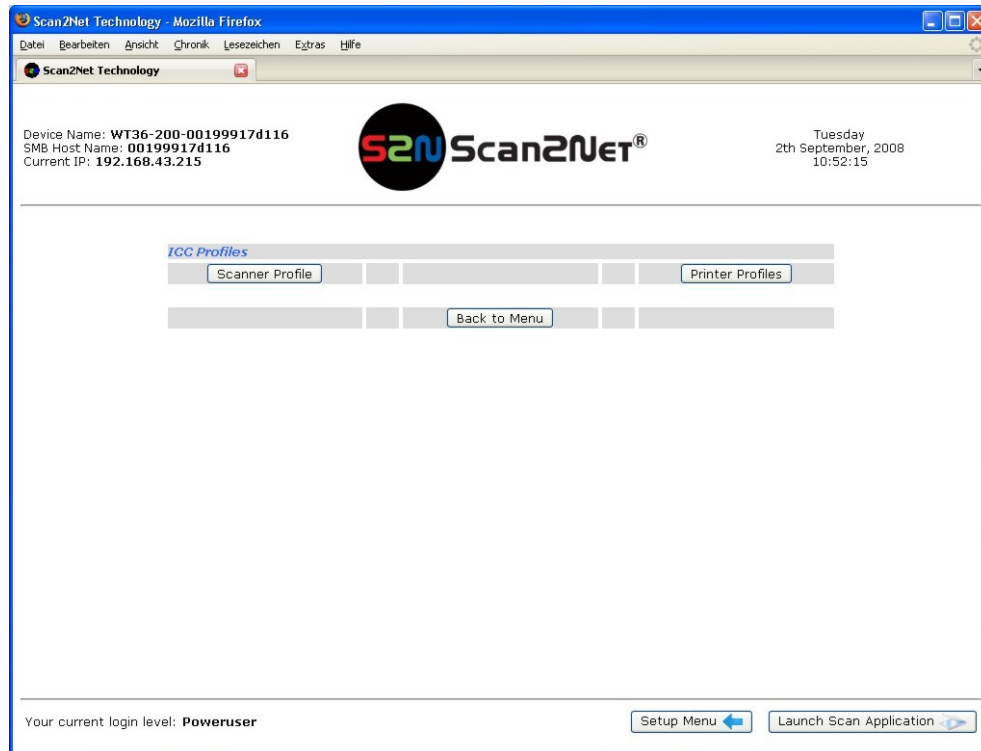
**Picture 42: Summary of successful firmware update**

The scanner reboots now with factory default settings.

### B.3.5 Install ICC Profiles

Find the section **Updates and Uploads** in the Poweruser main menu screen and go to **ICC Profile**.

Select either **Scanner Profile** or **Printer Profile**.

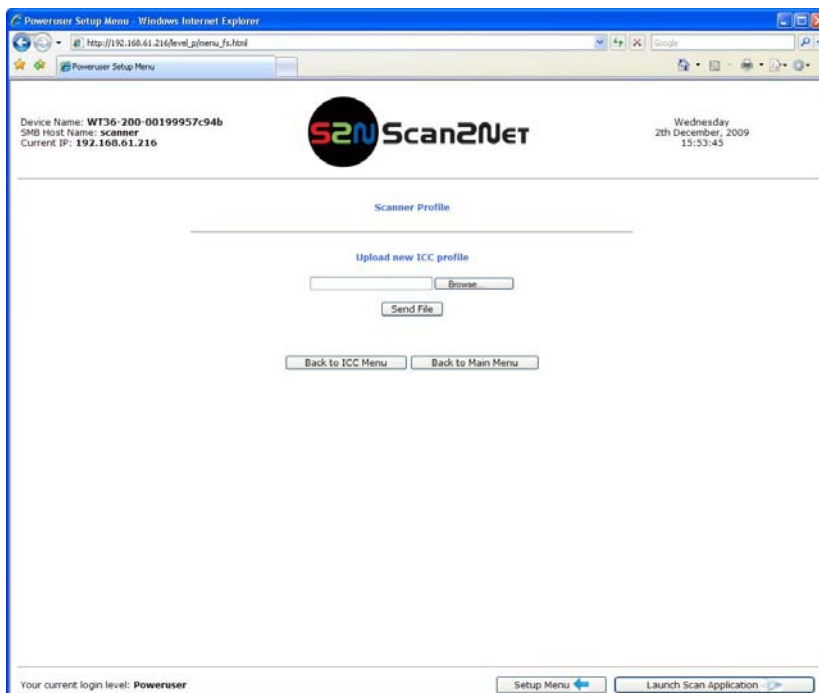


**Picture 43: ICC Profile screen**

ICC profiles will be integrated in the image file data. ICC profiles adapt the color space between scanner and image editing software or between scanner and printer.

By using an ICC profile a color-true reproduction of the scanned documents can be provided.

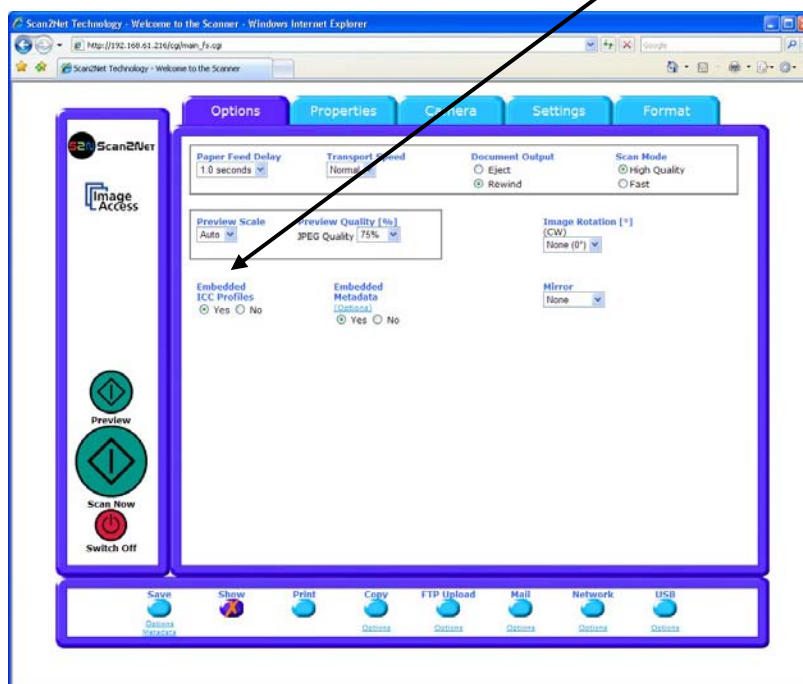
Browse for a new ICC profile and select it. If another ICC profile is already installed, it will be displayed. Selecting another profile will replace the previous file.



Picture 44: Upload ICC Profile screen

Click on **Browse** to select the desired ICC profile.

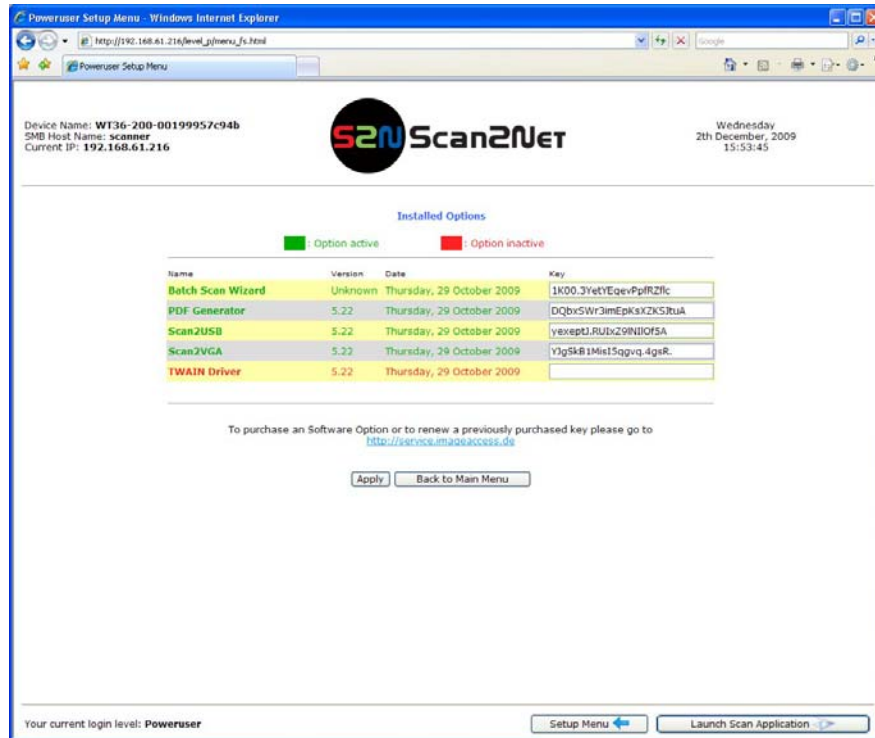
Click on **Send file** to upload the selected profile. To activate the ICC profile click in the Scan2Net user interface in the section **Options** on **Embedded ICC Profiles**.



Picture 45: Embed ICC profile

### B.3.6 Install Option

In the main menu screen, locate the section **Updates and Uploads** and go to **Install Options**. All option keys that are displayed in green are valid and installed. A new key must be entered completely without blanks or spaces followed by the **Apply** button. If it does not turn green, the key is invalid or does not belong to this specific scanner or option.



Picture 46: Install Option screen

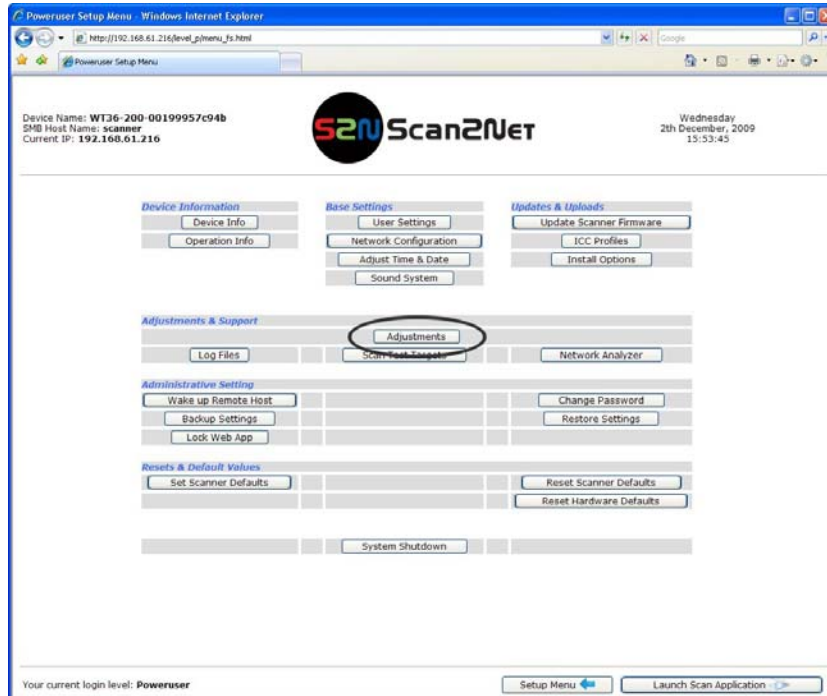
**Note:** Option keys are valid only for one option on a specific scanner denoted by its serial number.

If a key is accidentally deleted it can always be obtained again at the Image Access Customer Service portal <http://service.imageaccess.de> at no extra cost.

### B.3.7 White Balance

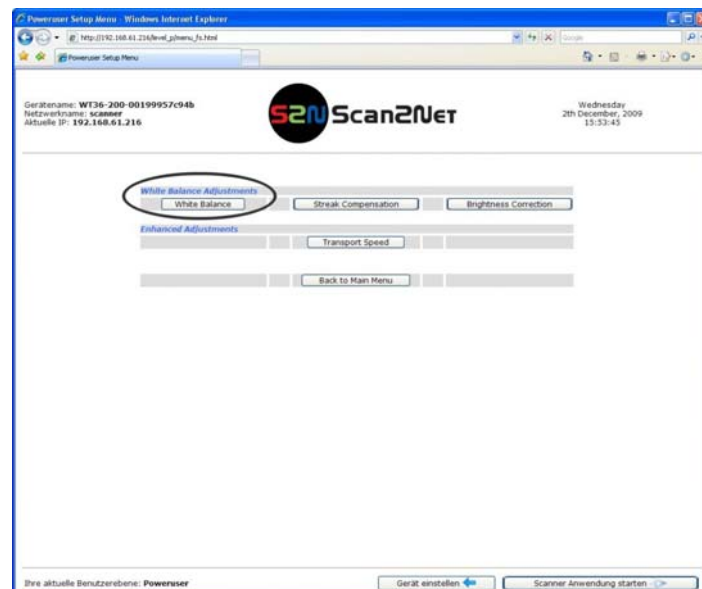
In the Poweruser main menu screen, locate the section **Adjustments & Support**.

Click the button **Adjustments**.



Picture 47: Click the marked button

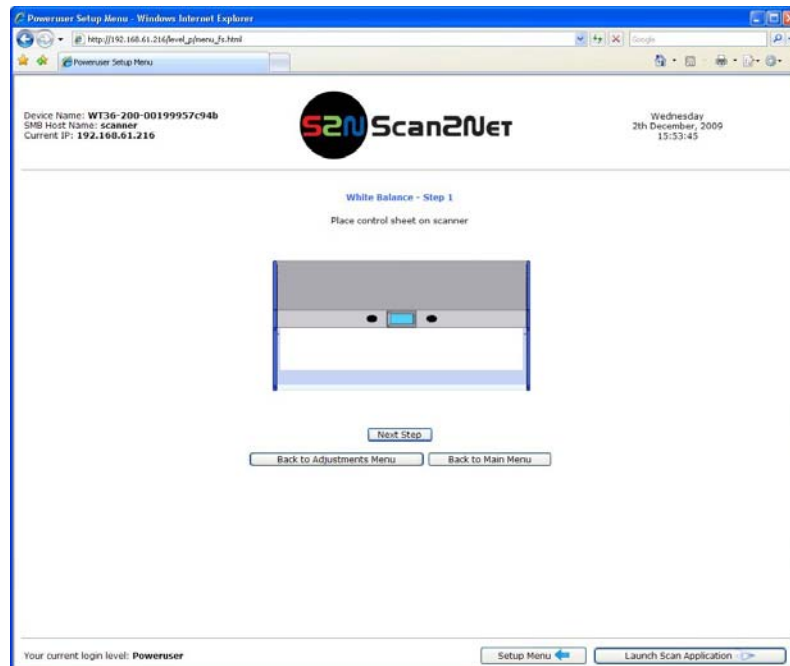
In the next screen, locate the section **White Balance Adjustments**. In this section click on the button **White Balance**.



Picture 48: Select „White Balance“



The next screen shows how to place the White Reference Target WT36-Z-02-A on the document table.



wt36\_setup\_eng\_020\_b.jpg

**Picture 49: White Reference Target on document table**

Click on **Next Step** to start the White Balance Adjustment sequence.

After the White Balance Adjustment has finished, the results will be displayed in a status screen.

Positive status will be displayed in green color.

Error message will be displayed in red color, followed by some explanatory remarks.

### B.3.8 Brightness Correction

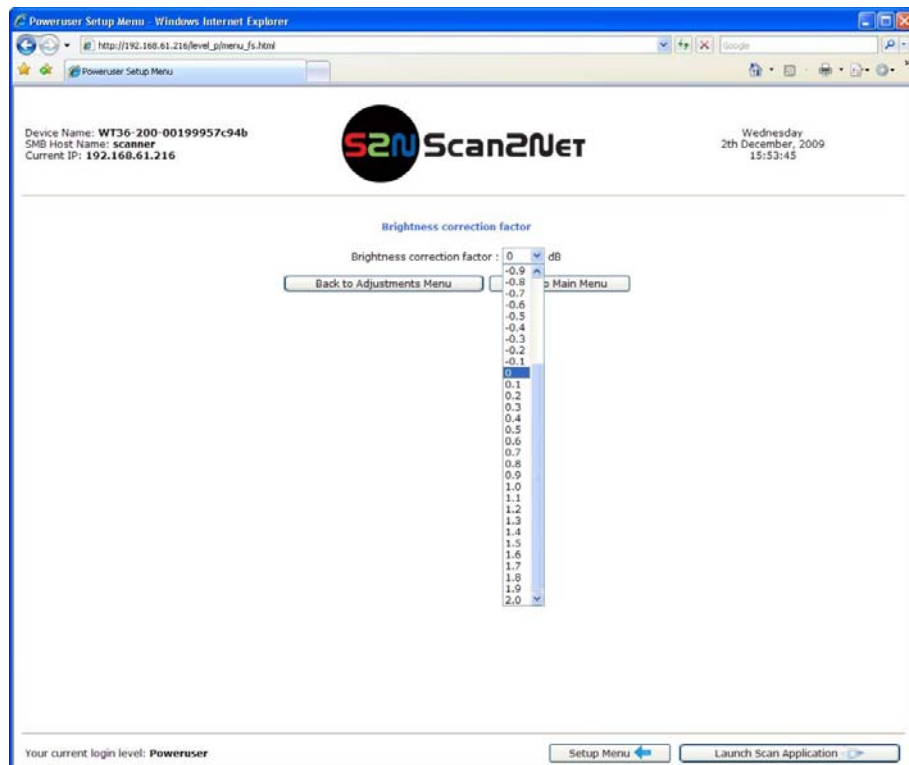
This function enables the user to change the gains settings up to  $\pm 2$  dB, while positive values make the scan look brighter.

To set the Brightness Correction, click the button **Brightness Correction** in the section **White Balance Adjustments**.



Picture 50: Selecting “Brightness Correction”

This will open a screen in which the desired value can be selected from a list.



Picture 51: Selecting the correction factor

## C Cleaning, Test and Troubleshooting

Although the scanner is constructed with the focus on a minimum of cleaning requirement, it is needful to clean some parts after a period of using.

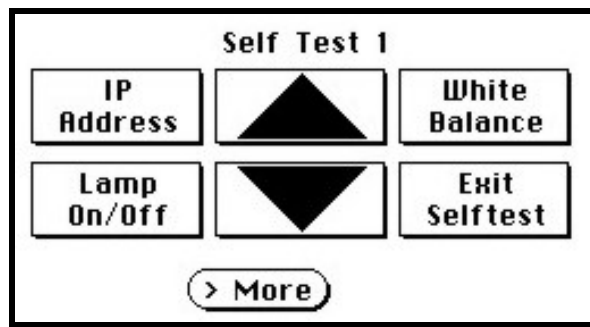
### C.1 Cleaning the Transport Drums

When scanning documents the print color on the paper will soil the rubber material of the transport drums. This can result in some cases in stripes on the paper of the scanned document.

To avoid those stripes it is recommended to clean the transport drums in regular intervals. Cleaning the drums is done very easily.

When the scanner is in stand-by mode, start it by tapping the touch panel on any arbitrary position. The touch panel lights up and a rotating hourglass indicates that the start sequence is running.

While the start sequence is running the scanner can be switched to Self Test mode. Tapping on the touch panel at least three times switches to the setup mode. After the start sequence is finished, the touch panel shows the first Self Test 1 screen.

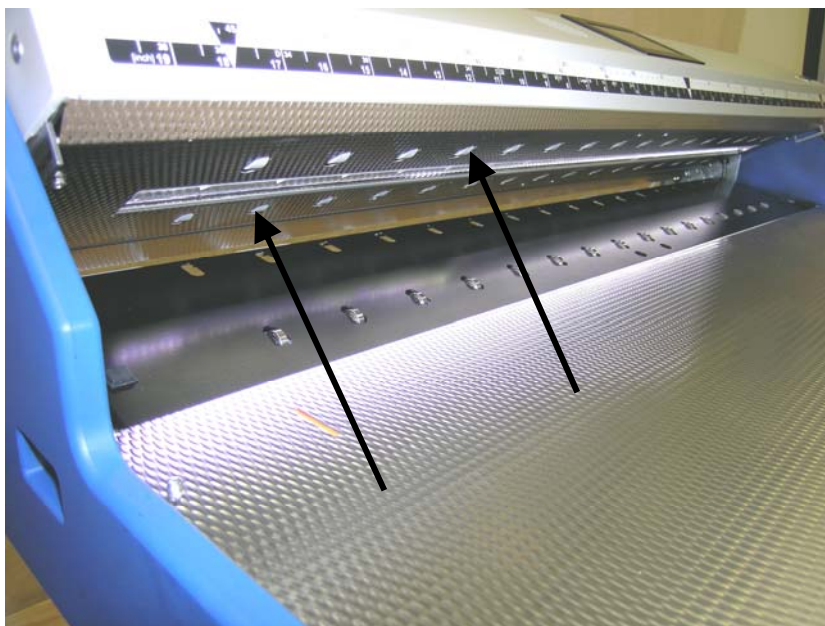


Picture 52: Self Test 1

The triangle arrows in the middle of the screen control the motor for the transport drum.

To clean the transport drums use a microfiber cleaning cloth and some drops of a cleaning fluid, e.g. isopropyl alcohol.

Open the upper unit by clicking the locking lashes at the left and right side of the housing. Both transport drum are now visible.



**Picture 53: Transport drums at front and back**

Press and hold one of the triangle arrows on the display to start rotating the transport drums.

Press the microfiber cloth at the transport drums.

Repeat this for each element of the transport drums.

Use a dry and fluff-free cloth to wipe off any remaining cleaning fluid from the transport drums.

## C.2 Cleaning the Glass Plate

To clean the glass plate open the upper unit by clicking the locking lashes at the left and right side of the housing.

Use the microfiber cloth which is delivered with the scanner or a fluff-free cloth to clean the glass plate.

**Note:** Because of the coating of the glass plate use only a few drops of a mild cleaning fluid with the microfiber cloth.

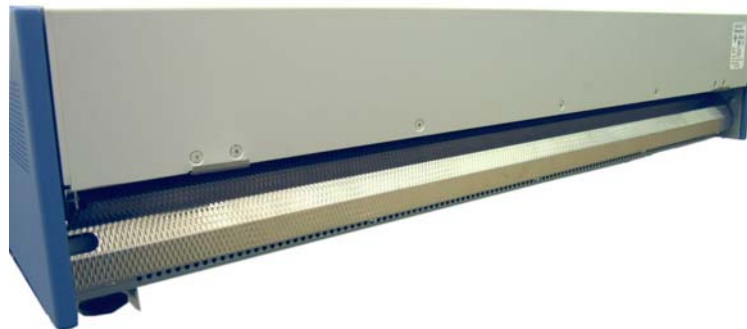
## C.3 Replacing the Glass Plate

If the glass plate is scratched it can be replaced as one part including the glass plate rack.

The following tools are needed:

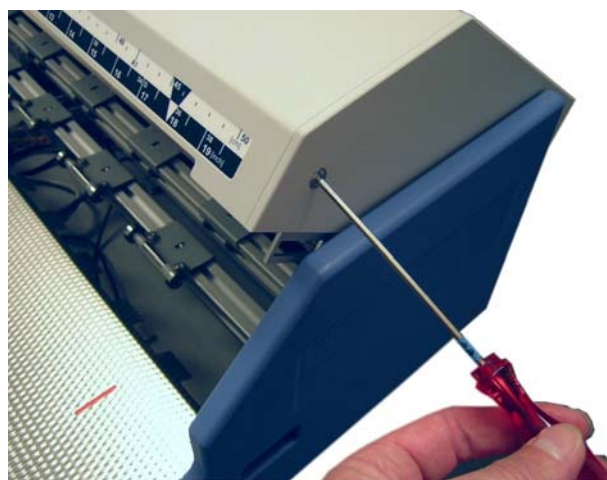
- Hexagon ball shaped head screwdriver, size 2,5 mm and 3 mm
- Allen wrench, size 2,5 mm

At first the main cover has to be removed. The main cover has seven hexagon head screws at the back side



Picture 54: Hexagon screws at scanner's backside

and one hexagon screw on the left and the right side of the housing respectively.



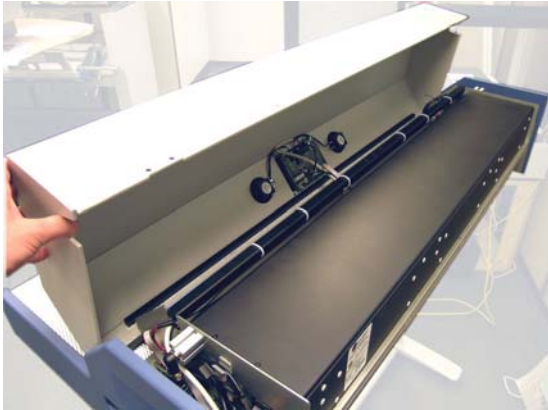
Picture 55: Hexagon head screw at left side of housing



After removing the screws the main cover can be lifted.

**Note:** Lifting of the main cover must be done carefully because of the cable which connect the TFT display with the mainboard.

Picture 57 shows, how the main cover should be placed on the document table.

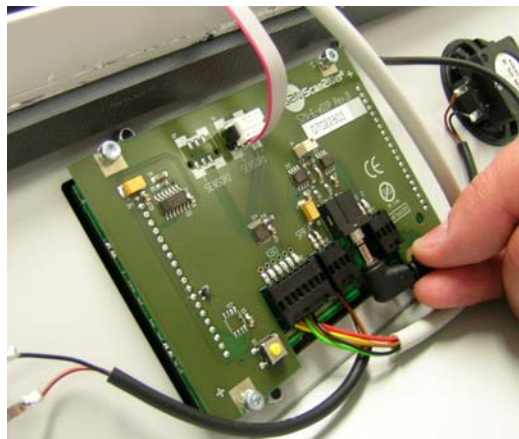


**Picture 56: Lifting the main cover**

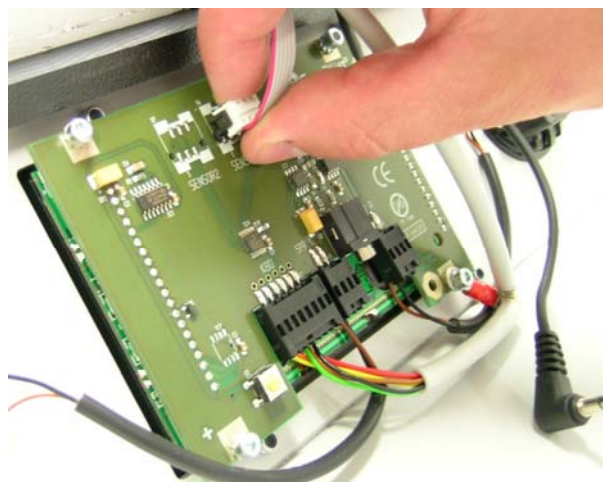


**Picture 57: Placing the main cover**

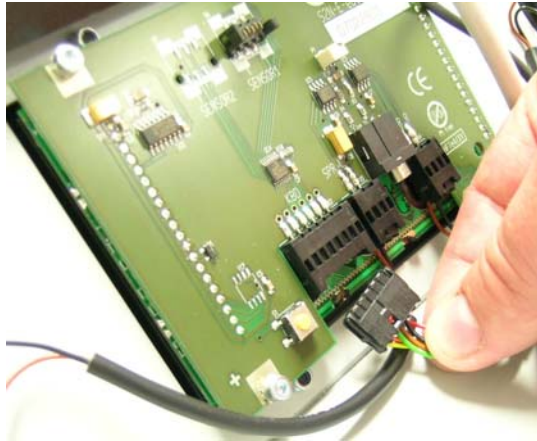
In the next step disconnect the cables from the connectors at the TFT display.



**Picture 58: Audio connector**



**Picture 59: Sensor connector**

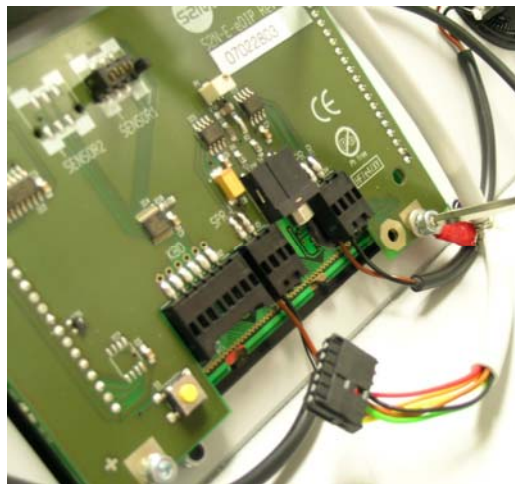


**Picture 60: Controller connector**

To open the last connector a hexagon ball shaped head screwdriver, size 2,5 mm, must be used.

Notice the order of the elements on the screw: Lock washer → Cable connector → lock washer.

This order must be the same when reconnecting the cables to the TFT display.



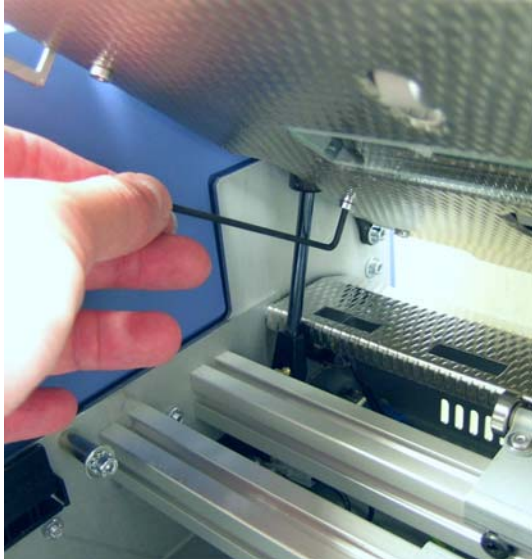
**Picture 61: Cable connector**

When all cables are disconnected, the main cover can be removed from the document table.

For the following step use an Allen wrench, size 2,5 mm.

The upper unit must be opened to reach the four screws which hold the glass plate rack.

It is recommended to begin with the two screws at the back. The next two pictures show the position of the screws at the glass plate rack back.

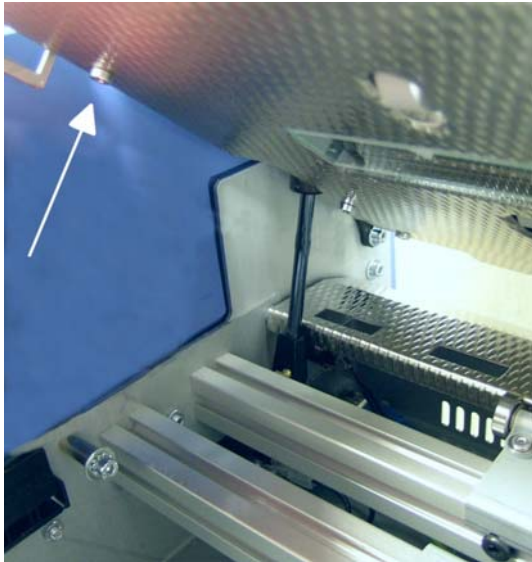


**Picture 62: Screw at back, left side**

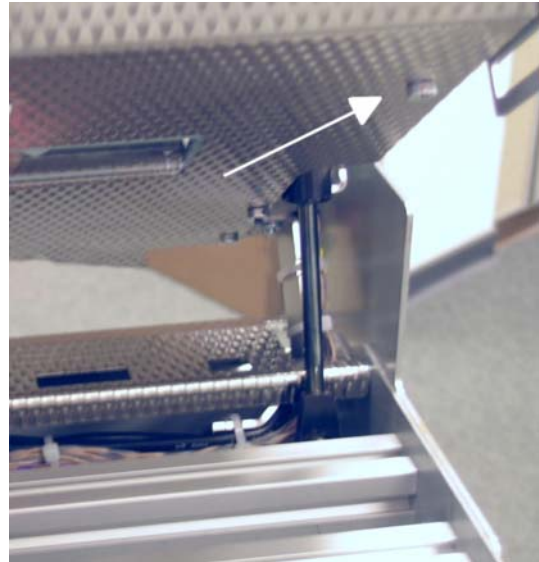


**Picture 63: Screw at back, right side**

At next remove the screws on the front side of the glass plate rack.



**Picture 64: Screw at front, left side**



**Picture 65: Screw at front, right side**

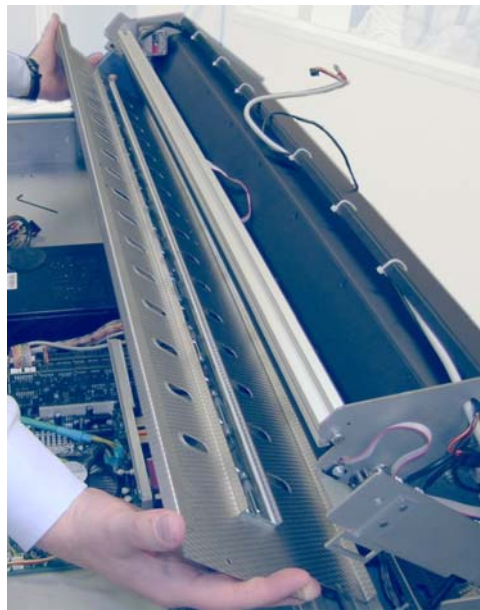


After removing the front screws, the glass plate rack hangs in the upper crossbeam. Hold it at its external ends and lift it a little upwards.



**Picture 66: Holding the glass plate rack**

Then it can be removed in direction of the document table.



**Picture 67: Removing the glass plate rack**

The new glass plate rack will be mounted in reverse order. Ensure that all cables are properly connected to the TFT display. Fasten the screw on the TFT display which holds the cable connector only hand-screwed.

## C.4 Scan Test Targets

With the help of this function, the user can scan either a CSTT target or an IT8 target. The targets are used to analyze specific features of the scanner's camera and internal parameters.

Some CSTT test target are delivered with the scanner.

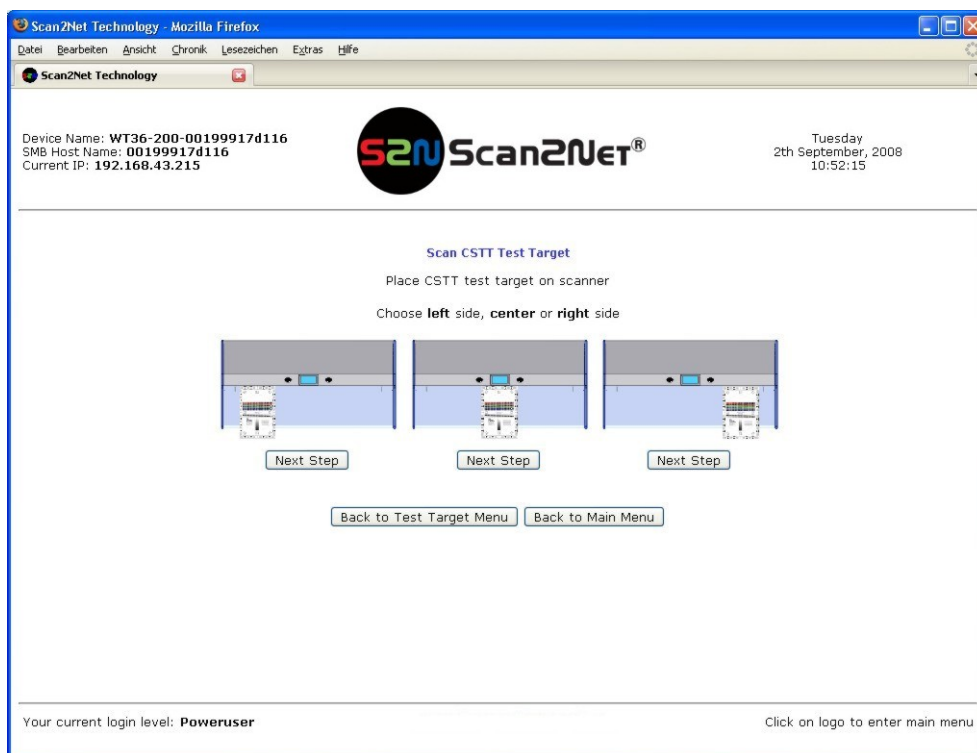
In the Poweruser main menu screen find the section **Adjustments & Support**. Select here **Scan Test Targets**. Another screen opens.

Select here either **Scan CSTT Test Target** or **Scan IT8 Test Target**.

### C.4.1 Scan CSTT Test Target

When **Scan CSTT Test Target** is selected, the next screen shows how to position the target on the document table.

The CSTT test target can be placed at three position. Select a position corresponding to the picture on the screen. Click on **Next Step** to start the test sequence

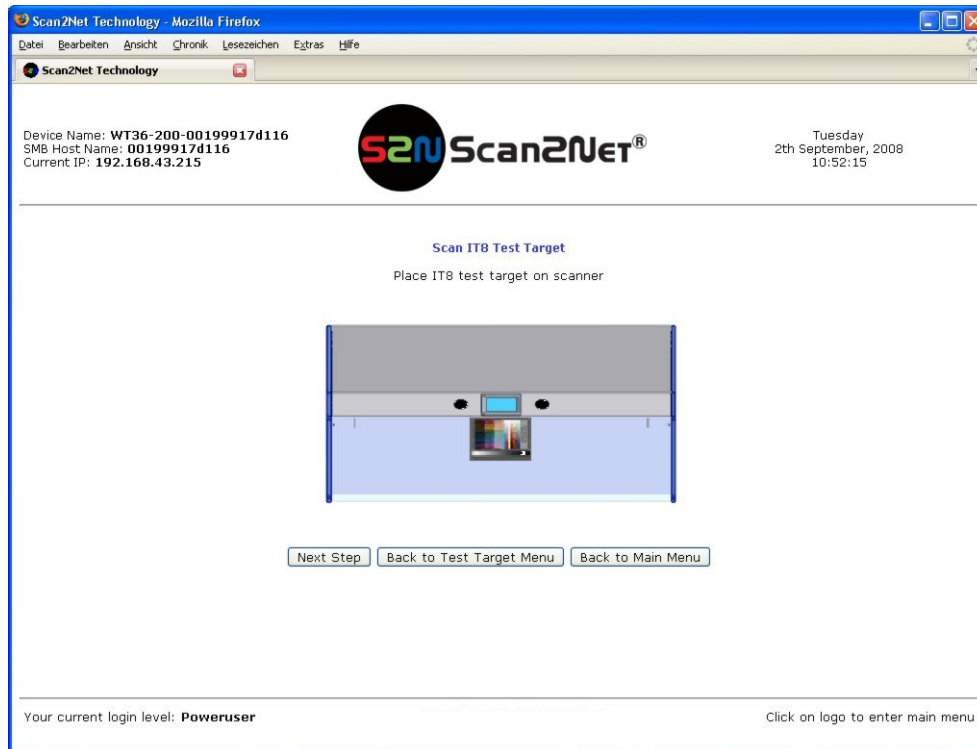


**Picture 68: Position of CSTT target on the document table**

The test target will be scanned and the image will be saved to a directory which is defined by the user. The saved image can be used for support purposes.

### C.4.2 Scan IT8 Test Target

When **Scan IT8 Test Target** is selected, the next screen shows how to position the target on the document table.



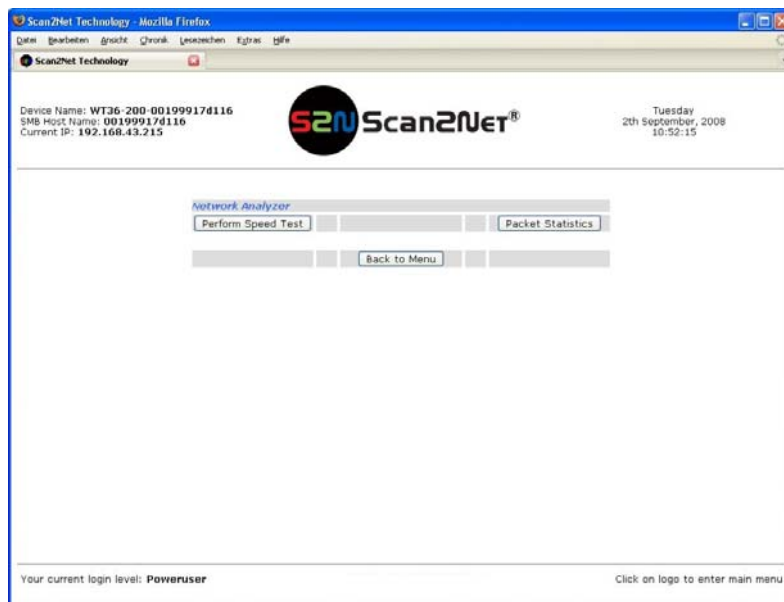
**Picture 69: Position of IT8 test target on the glass plate**

The test target will be scanned and the image will be saved to a directory which is defined by the user. The saved image can be used for support purposes.

## C.5 Network Analyzer

This function provides information about the data transfer speed of the network where the Scan2Net scanner is installed.

Locate the section **Adjustments & Support** in the Poweruser main menu screen and click the **Network Analyzer** button.

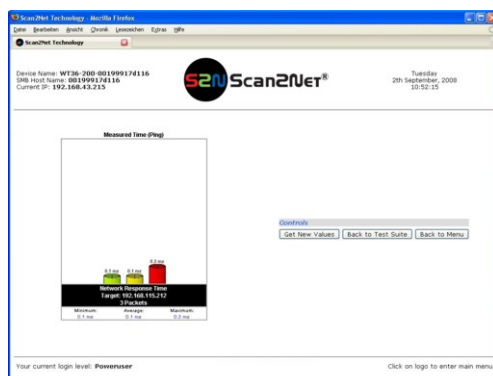


Picture 70: Network Analyzer screen

Click on the **Perform Speed Test** button and enter the IP address of the device which should be the target for the test. Also enter the number of packets that should be sent for testing. Click the **Perform Test** button to start the test.



Picture 71: IP address for testing



The test results will be displayed in a diagram.

## C.6 Recovery Function

The recovery function helps to set all device parameters to factory defaults after a fatal system breakdown.

The recovery key is necessary to invoke the recovery procedure.



A recovery key is delivered with every device, it is marked with the label **Recovery**.

Picture 72: Recovery Key

**Important:** The recovery function resets the IP address to the factory default value of 192.168.1.50. It may be necessary to use the crossover cable and change the network settings on the local computer.

### C.6.1 Important Notes Before Recovering to Factory Defaults

The steps described in the following should **only** be executed after a fatal system breakdown!

Write down the values for the IP address, subnet mask and gateway of the device before starting the recovery sequence.

After recovering to the factory default values, a **firmware update** has to be executed! Make sure an update file is available on the local computer.

After recovering to the factory defaults, all **adjustment procedures** described in the previous sections have to be executed again!

## C.6.2 How to Recover to Factory Defaults

1. Power the device down with the stop button.
2. Remove the metal compensator. This is down within a few steps easily.

At first open the upper unit by clicking the locking lashes at the left and right side of the housing.



**Picture 73: Position of gap on right side**

Then find a gap at the right side of the compensators plate



**Picture 74: Position of gap on left side**

and a gap at the left side of the compensators plate where you can pull the compensator plate upwards.



**Picture 75: Moving the compensator plate upwards**

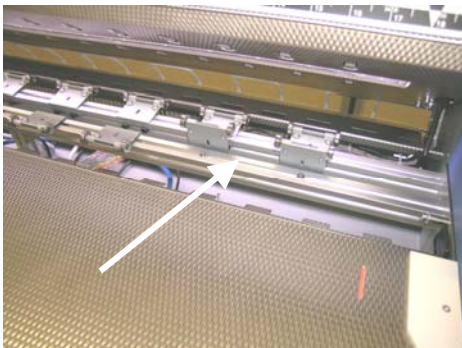
Pull the compensator plate slowly backwards to the document table





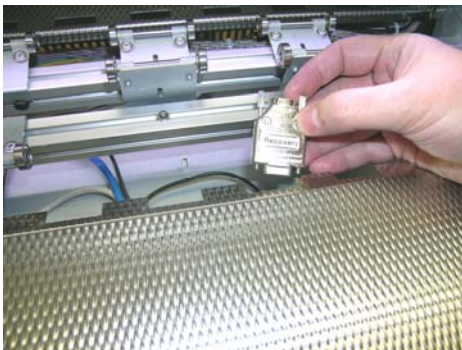
**Picture 76: Compensator plate on document table**

and place it on the document table.



**Picture 77: Compensators lifted**

In the next step, lift up two of the compensators at the right side. Because of the elastic rubber elements in the compensator it could be necessary to fasten them temporarily.



**Picture 78: Inserting recovery key**

Now the recovery key can be inserted.



**Picture 79: Connectors on rear panel**

Plug the recovery key into the serial port at the connectors panel.

3. Power the device up via the start button.

The device will start and, after it has found the recovery key to be present in the serial port, it will automatically execute the recovery sequence. All viable system data will be restored and necessary repair steps will be taken without the need of any user interaction.

**Note:** The recovery sequence can last some minutes. While the recovery sequence is running, **no message** will be displayed.

4. When the recovery sequence has finished, the device will power down automatically.

**Important:** Do not switch off the device at any time during the recovery procedure!

5. Unplug the recovery key after the device has powered down.
6. Set the compensator into its basic position and insert the compensator plate.
7. Power up the device and launch the scan application in your browser.

The IP address of the device will have the factory default value: 192.168.1.50

8. Change the network parameters to the values which were used before running the recovery sequence.

Select **Setup Device** → **Poweruser**. Locate the section **S2N Base Settings** and click the button **Network**. Enter the values for IP address, subnet mask, and default gateway.

Click the **Apply** button. Confirm the following message by clicking the **OK** button.

In the next screen, click the **Reboot** button.

Reconnect to the device using the new IP address.

9. Select **Setup Device** → **Poweruser**. Locate the section **Updates & Uploads** and click the button **Update Firmware**. Perform a firmware update.

10. After the firmware update, all software adjustments for the device must be performed.

Select **Setup Device** → **Poweruser**. Locate the section **Adjustments & Support** and click the button **Adjustments**. Perform the adjustments by clicking the appropriate buttons.



## C.7 Error Codes

The scanner does report error conditions on the display and through the API. Some errors are only sent to the API.

White background of the problem description indicates that the message is information only.

A problem description with **green background** signals that operation of the scanner is still possible although the error will have an influence on the behavior or quality of the scanner.

**Note:** Problem description text with a **red background** indicates a critical error.

The device will be stopped and further scanning is inhibited.

| Error # | Error message shown in the display | Error message sent to application            | Problem description  |
|---------|------------------------------------|--|--|
| 1       |                                    | Scanner in use.                              | An attempt to access the scanner was made from a different application.  |
| 2       |                                    | Invalid session ID.                          | An attempt to access the scanner with an invalid session ID was made.  |
| 4       |                                    | Invalid password                             | An attempt to access the scanner with an invalid password was made.  |
| 5       | E05 S2N BOARD                      | S2N board failure                            | The S2N board is either not found or found defective. Make sure board is sitting correctly on the motherboard.       |
| 6       | E06 POWER SUPPLY FAILED            | Power supply failed                          | A problem with the internal power supply was detected. Operation is not possible.                                    |
| 7       | USER BREAK                         | Stop button pressed.                         | The stop button was pressed during the operation.  |
| 8       |                                    | User timeout                                 | The function ended because of a time out   |
| 9       |                                    | Warming up                                   | The device is still warming up and cannot be used.   |
| 10      |                                    | Invalid setting value.                       | The value sent to the device is invalid.   |
| 11      |                                    | Setting does not exist.                      | The settings does not exist.   |
| 12      |                                    | Invalid user docsize.                        | The size of the user format is invalid.  |
| 14      |                                    | Invalid resolution or color mode.            | Either the resolution or the color mode is invalid.  |
| 15      | Document feeding error.            | Document feeding error.                      | The document is not inserted correctly. Please insert the document again. Using "Transport speed" = "slow" may help. |
| 16      | Paper over exit sensor             | Paper over exit sensor.                      | Paper is found in the exit sensor region. Pull paper out of the device.  |
| 17      | Paper in transport                 | Paper in transport<br>Please clear transport | Paper is found in the transport. Clean transport first.  |
| 18      | Paper jam                          | Paper jam<br>Please clear transport.         | Paper jam occurred. Clear transport first.   |

## Error codes, part 2

| Error # | Error message shown in the display    | Error message sent to application   | Problem description  |
|---------|---------------------------------------|---|--|
| 30      |                                       | File format not supported.  | The specified file format is not supported or it is invalid in combination with the color mode.  |
| 31      |                                       | Preview not possible.   | The application specified an invalid preview scale. Not all scale factors are allowed with all image sizes.  |
| 32      |                                       | The application specified an invalid preview scale. Not all scale factors are allowed with all image sizes. | The application changed the color depth between scanning and image transfer and a conversion between these modes is not possible. Example: scan in binary, then changed color mode to truecolor. |
| 33      |                                       | No image available  | The application attempted to get an image from the scanner and there was no scan since the device was turned on.   |
| 55      | Error 55: Wrong S2N Board (CCD Ports) | Wrong S2N board detected (not enough CCD ports)   | The S2N board found is not the right one for this device. Error can occur after a repair/exchange. Exchange with correct board.  |
| 56      | Error 56: S2N Board: wrong revision   | Wrong S2N Board detected (Revision not OK)  | The S2N board found is not the right one for this device. Error can occur after a repair/exchange. Exchange with correct board.  |
| 60      | Error 60: General camera error        | General camera error.   | General error on the CCD camera board. Check power, cables and S2N-PCI board.  |
| 61      | Error 61: Loading camera 1 failed     | Load camera 1 failed.   | Initializing of camera 1 failed. Check power, cables and S2N-PCI board.  |
| 62      | Error 62: Loading camera 2 failed     | Load camera 2 failed.   | Initializing of camera 2 failed. Check power, cables and S2N-PCI board.  |
| 63      | Error 63: Loading camera 3 failed     | Load camera 3 failed.   | Initializing of camera 3 failed. Check power, cables and S2N-PCI board.  |
| 64      | Error 64: Loading camera 4 failed     | Load camera 4 failed.   | Initializing of camera 4 failed. Check power, cables and S2N-PCI board.  |

### Error codes, part 3

| Error # | Error message shown in the display            | Error message sent to application | Problem description  |
|---------|---|-----------------------------------|--|
| 65      | Error 65: Camera 1 data bus error             | Camera 1 data bus error.          | Test data transfer to camera failed. Check cables / connectors to camera 1 and S2N-PCI board.      |
| 66      | Error 66: Camera 2 data bus error             | Camera 2 data bus error.          | Test data transfer to camera failed. Check cables / connectors to camera 2 and S2N-PCI board.      |
| 67      | Error 67: Camera 3 data bus error             | Camera 3 data bus error.          | Test data transfer to camera failed. Check cables / connectors to camera 3 and S2N-PCI board.      |
| 68      | Error 68: Camera 4 data bus error             | Camera 4 data bus error.          | Test data transfer to camera failed. Check cables / connectors to camera 4 and S2N-PCI board.      |
| 69      | Error 69: ADC error camera 1                  | Camera 1 adc error.               | Test data transfer through analog digital converter failed. Check cables / connectors to camera 1. |
| 70      | Error 70: ADC error camera 2                  | Camera 2 adc error.               | Test data transfer through analog digital converter failed. Check cables / connectors to camera 2. |
| 71      | Error 71: ADC error camera 3                  | Camera 3 adc error.               | Test data transfer through analog digital converter failed. Check cables / connectors to camera 3. |
| 72      | Error 72: ADC error camera 4                  | Camera 4 adc error.               | Test data transfer through analog digital converter failed. Check cables / connectors to camera 4. |
| 75      |   | General keyboard error            | General keyboard error. Check keyboard and cables.   |
| 82      | Bad scan background<br>Please clear transport | Bad Scan background               | Automatic measurement can not be executed. Remove documents from the transport section.            |
| 99      |   | Internal error.                   | The firmware has detected an internal error of unknown cause.                                      |

## C.8 Warnings

| Warning # | Warning shown in the display | Warning sent to application                       | Problem description   |
|-----------|------------------------------|---|---|
| 83        | Scan background was changed  | Scan background was changed                       | The background was changed. Repeat scan sequence to correct the measured value. Warning will disappear. |
| 144       |                              | Light level is low                                | The light level is found to be low during the white balance function.                                   |
| 145       | Camera adjustment required   | Camera adjustment required                        | General information about the camera adjustment. Check for details and readjust.                        |
| 160       | W160 NO WHITE BALANCE DATA   | No white balance data                             | No white balance data was found. Perform white balance.   |
| 180       |                              | Deskew failed                                     | The deskew function failed. Reposition document.  |
| 181       |                              | Stitching2D: out of memory. Using fixed stitching | There is not enough memory available to complete the stitching function.                                |
| 182       |                              | Stitching2D: bad matching. Using fixed stitching  | 2D stitching can not deliver a matching result. Switch to "Fixed" stitching.                            |

## C.9 Information

| Information # | Information shown in the display | Information sent to application | Description   |
|---------------|----------------------------------|---------------------------------|---|
| 200           | CREATING RECOVERY PART..         | Creating Recovery Partition     | While creating the recovery partition, the scanner can not be accessed. |

## D Technical Data

### D.1 Scanner Specifications

#### Optical System

|                        |   |
|------------------------|---|
| Maximum Document Width | 50 inch / 1270 mm                                       |
| Scan Width:            | Minimum. 42 inch / 1067 mm<br>Maximum 48 inch / 1220 mm |
| Optical Resolution     | 600 dpi   |
| Sensor Type:           | Four color CCDs, encapsulated and dust-proof            |
|                        | 12bit grayscale (internal resolution)                   |
|                        | 36bit color (internal resolution)                       |
| Sensor Resolution:     | 91.200 pixels (4x 22.800)                               |
| Scan Modes:            | 1bit Black/White  |
|                        | 8bit Grayscale  |
|                        | 24bit Color, 8bit indexed                               |

#### Illumination:

|                         |                                    |
|-------------------------|------------------------------------|
| Light Source:           | Two lamps with 196 white LEDs each |
| Warm-up Time:           | None                               |
| Temperature Dependence: | None                               |
| UV / IR Emission        | None                               |
| Lifetime                | 50.000 hours scanning time         |

### D.2 Ambient Conditions

|                       |   |
|-----------------------|---|
| Operating Temperature | +5 to +40° Celsius                              |
| Storage Temperature   | 0 to +60 °Celsius                               |
| Relative Humidity     | 20 to 80% (non-condensing)                      |
| Noise Level           | < 35 dB(A) (Operating)<br>< 25 dB(A) (Stand-by) |

## D.3 Electrical Specifications

This device is Energy Star compliant.



|           |             |
|-----------|-------------|
| Voltage   | 100–240V AC |
| Frequency | 50/60 Hz    |

### Power Consumption

|                          |       |
|--------------------------|-------|
| Stand-by                 | 6 W   |
| Start Procedure          | 210 W |
| Ready to scan, lamps off | 115 W |
| Scanning                 | 210 W |

## D.4 Dimensions and Weight

|   |                                  |
|---|----------------------------------|
| Scanner outer dimensions  | 220 x 1399 x 555 mm (H x W x D)  |
| Scanner outer dimensions (incl. floor stand)  | 1070 x 1399 x 555 mm (H x W x D) |
| Weight of Scanner   | 55,6 kg                          |
| Weight of Floor Stand / incl. Paper Output Tray   | 19 kg / 21,2 kg                  |
| Weight of Transport Box   | 37 kg                            |
| Dimensions of fully packed Transport Box<br>(contains scanner, floor stand and assembling material) | 1560 x 475 x 715mm (W x H x D)   |
| Total shipping weight   | 118,5 kg                         |