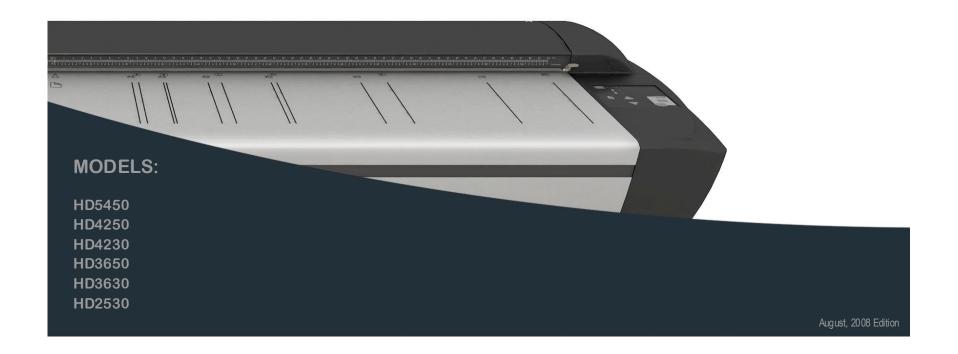
User's Guide

Wide Format Scanners



Contents

Table of Contents		Replacing the Glass-plate	44
About This Guide	2	Replacing the White-Background-Platen Replacing the Scanner Lamp-Unit	47 51
Installation	3	Replacing the Scanner Lamp-Onit Replacing the Dust-Filters	5 5
System requirements	3	Downloading New Firmware	54
Installation Steps	3	What is Firmware?	54
•	14	When do I need new firmware?	54
The Operator's Panel		How to identify the firmware version running in the scanner?	54
Turning Power ON/OFF – Wake/Sleep Modes	15	How to install new firmware?	5
Main Power ON/OFF	15	Setting the Scanner in Firmware BOOT Mode	56
The scanner's Self Test Procedure	15 15	Trouble Shooting Problems	57
Scanner ready to scan Wake and Sleep modes	16	Problems Related to Scanner Installation	57
Automatic Power ON/OFF functions	16	Problems Related to Operation of the Scanner	60
Timer Function – Scheduling ON/OFF Times	17	Problems Related to the Scanning Results	64
Automatic Shut Down After Idle Time	18	Appendix A: Quick Overview of the Operator's Panel	66
Loading Originals into the Scanner	19	The Panel and LED Indicators	60
Load, face down, at the scanner's center	19	Power Control – Buttons and LED Patterns	67
Automatic loading	19	Media Control – Buttons and LED Patterns	70
Manual loading	19	Application Control – One Touch Scan	75
Unloading the original after scan	20	Appendix B: Important Safety Instructions	76
Fast-loading	20	Appendix C: Regulations	77
Soft-handling	20	FCC Regulations	7
Setting the input size	20	CE Regulations	7
Scanning	21	VCCI Regulations	7
Software applications for scanning	21	Toxic or Hazardous Substances or Elements	78
Running applications from the scanner panel	21		
Batch scanning	21		
Monitoring your scanner with WIDEsystem	21		
Scanning Thick Media	23		
Manual Adjustment for Thick Media – Slider Controls	23		
Automatic Thick Media Adjustment	25		
When Scanning in Thick Media Positions	26		
Maintenance	27		
About scanner maintenance	27		
Cleaning the scan area	27		
Camera Alignment and Calibration	40		
Replacing Scanner Parts	43		

About This Guide 2

About This Guide

This guide explains how to operate and maintain your wide format scanner.

The guide assumes basic knowledge of your computer and operating system and does not repeat material from their documentation.

Be sure to refer to:

- The <u>Installation section</u> describes correct installation of your scanner drivers.
- The readme.htm file in the ws folder on the WIDEsystem TOOLS CD-ROM. Contains the most current installation and OS compatibility issues.
- WIDEsystem TOOLS Help After installing your drivers, open <u>WIDEsystem</u> and press F1. Contains information on using the WIDEsystem application and Scanner Maintenance software.

Identify your scanner model

This operator's guide covers several scanner models. There are topics that describe scanner functions that apply solely for specific models and topics that apply for all models. Generally, Operation of the 54, 42 and 36 inch models is the same while certain operations on the 25 inch model (HD2530) can differ in relation to the wider models.

Each topic will contain a "Scanner Models: " heading that indicates the models relevant for the topic.

This guide covers the following models:

Scanner Model	Description
HD5450	54" color scanner
HD4250	42" color scanner
HD4230	42" color scanner
HD3650	36" color scanner
HD3630	36" color scanner
HD2530	25" color scanner

IMPORTANT: Be sure to use the WIDEsystem TOOLS CD-ROM that came with your scanner or a newer version. Out-of-date versions of WIDEsystem software may not detect your scanner model.

NOTE: Windows Compatibility - Your scanner and drivers are tested and developed to support the most current active Microsoft Windows version OS systems. Drivers and interface support in regard to specific Windows versions will follow the Microsoft Support Lifecycle Policy. The compatibility specifications can therefore change accordingly. The most current OS compatibility specifications and drivers will be available on your manufacturer's website.

Installation

System requirements

- PC or supported workstation.
- Compatible Windows operating system View the ws/readme.htm file on the WIDEsystem TOOLS CD-ROM.
- PC with USB port or enabled FireWire Port.
- The WIDEsystem TOOLS CD supplied with your scanner.
- Scanning software or compatible third party software.
- Grounded power outlet.

Installation Steps

To get your scanner up and running, follow the steps below in their written order.



Set up the scan station

Your scanner should be placed either on the specially designed stand-alone floor stand or on a sturdy table. Make sure there is enough space behind the scanner to allow the media to run out.

IMPORTANT: DO NOT YET CONNECT THE SCANNER TO POWER OR PC.

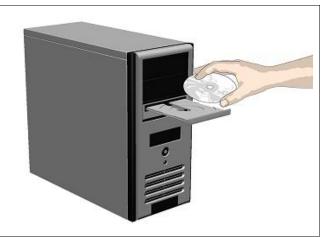
See also the Safety Instructions at the end of this operator's guide

2

Install drivers and tools on your PC

IMPORTANT: You must install your scanner's drivers and tools before you connect the scanner or install any scanner software applications.

- 1. Insert the WIDEsystem TOOLS CD-ROM into your PC. Normally the setup program interface will start automatically. If it does not, locate the setup.exe file on the CD and start it manually.
- 2. Install *WIDEsystem*. Follow the installation guide on your screen. You will be asked to select your language and other important system preferences.
- 3. Install *Scanner Maintenance*. Follow the installation guide on your screen. You will be asked to select your language.
- 4. Remove the CD-ROM when installation is complete.



3

Shut down the PC

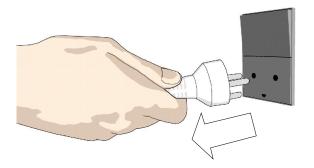
Your PC must be powered off before connection with the scanner.





Disconnect the PC power plug

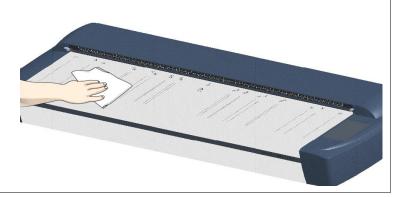
Caution: This step is to ensure your own personal safety and to help protect your device from potential damage.





Clean the scanner feeding bed

This is the flat surface in front of the insertion slot. Wipe with a dry cloth so dirt and dust are not dragged into the scan area with the original.

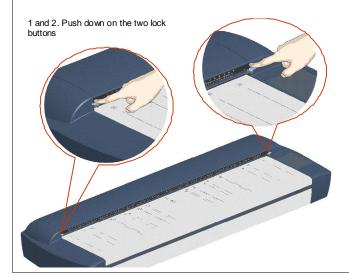


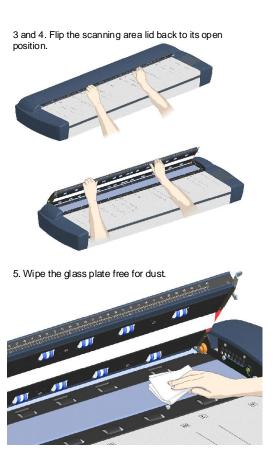


Wipe the glass plate

The internal scan area should be wiped clean for any dust accumulated during shipping and packaging.

- 1. Open the scan area lid Push down on the two lock buttons found near the insertion slot on each side of the lid.
- 2. The scanning area lid locking mechanism should now be disengaged.
- 3. Place your thumbs in the insertion slot and flip the scanning area lid back to its open position.
- 4. The glass plate is now exposed for cleaning.
- 5. Wipe the glass plate with a dry cloth to remove any dust.
- 6. Close the scanner lid. Make sure the locks reengage (click).







Connect interface cable to the scanner

The interface cable connectors are grouped in a Cable-Connector-Panel.

Regulatory Notice: Your scanner product has been tested to comply with the EMC Standards EN55022 and FCC, Part 15. To maintain compliance, only use the interface cables supplied with the scanner.

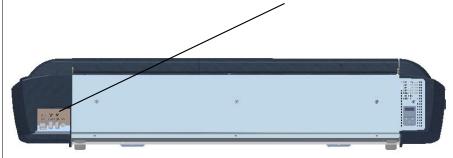
Accessing the interface connectors on scanner models: HD2530:

The cable-connector-panel is found on the underside of the scanner and accessed from the scanner's back. The HD2530 (25") scanner model supports both FireWire and USB connections.

USB connection: Connect the B-connector end (square shaped) end to a USB port on your computer.

Firewire connection: Connect the cable to a firewire port on your computer. **Do not** use the end marked "Scanner End" if such is specified on your cable.

HD2530: Cable-connector-panel is accessed from the scanner's backside.



Accessing the interface connectors on scanner models: HD5450, HD4250, HD4230, HD3650, HD3630:

The cable connector panel is behind the cover at scanner's right side. You have to remove the cover to connect the cable.

Insert your thumb in the slot at the top of the cable connector panel cover. Push down to snap the lid open.



Remove the cover with both hands.



Continues on next page...

Feed the interface cable's B-connector (square shaped) end through the opening in the back of the scanner until it emerges in front of the cable-connector-panel. Then

connect the B-connector to the USB connection socket on your scanner. Feed the interface cable through the hole in the back.... PUSHuntil it emerges in front of the cable connector panel. Connect the cable and close the cable connector panel cover. The cover must always be closed before you turn the scanner ON.

Connect the other end of the interface cable to the PC

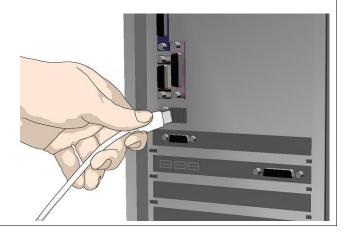
USB connection: Connect the A-connector end (flat end) to a USB port on your computer.

Firewire connection: Connect the cable to a firewire port on your computer. Use the end marked "Scanner End" if specified on your cable.



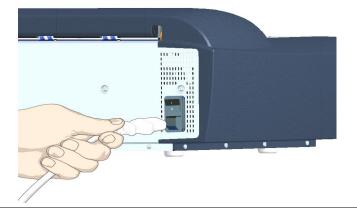
10

NOTE: Firewire interfacing s available on the HD2530 only.



Connect the power cable to the scanner

Connect the scanner power cable to the scanner's main power connection socket. The main power connection socket is at the scanner's backside.



11

Connect power to the wall outlet

Connect the other end of the scanner power cable to the power outlet.

Caution: The scanner is equipped with a three-wire (pin) grounding type plug. If you cannot insert the plug into your outlet, contact your electrician to replace the plug or outlet to ensure a grounded power connection. Do not try to defeat or ignore the purpose of the grounding-type plug.



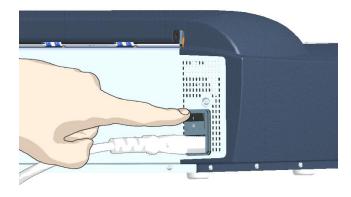






Turn on the scanner

Turn on the main power switch at the back of the scanner.

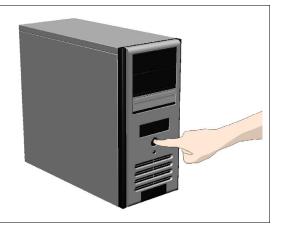


13

Turn on your PC and start Windows

Windows will detect the new hardware (scanner) during startup and the drivers you installed in step 2. will be recognized.

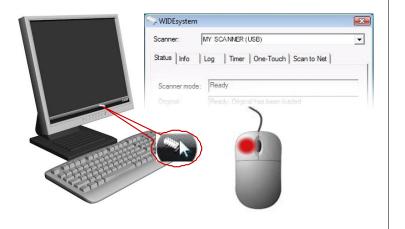
Follow Windows' hardware installation instructions should any appear on your screen.



14

Verify correct scanner installation

- 1. Locate the scanner icon on the Windows System Tray. This is the WIDEsystem program icon.
- 2. Left -double-click on the WIDEsystem program icon.
- 3. Your scanner is installed and detected if your scanner's name appears at the top of the WIDEsystem Status tab dialog.
- 4. If the scanner was not installed correctly, a message will inform you that your scanner could not be detected. If this is the case turn off power to all connected devices and repeat the installation steps.



15

Calibrate - Run scanner maintenance program

This step will ensure that your cameras are aligned.

- 1. Right click on the WIDEsystem scanner icon ***.
- 2. Select Launch Scanner Maintenance.
- 3. Follow the instructions on your screen.

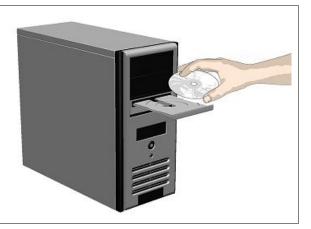
See also in this guide: Camera Alignment and Calibration.



16

Install scan or copy software (optional)

Install the scan and copy software you will use with the scanner. There are many scan and copy applications made specifically for your scanner and all its features. Many common imaging applications support TWAIN and WIA interfacing for simple scanning tasks. Read more in Software applications for scanning.



17

Share the scanner on the LAN (optional)

You can enable other PCs on the LAN to use the scanner. This is called "Sharing". You can setup the scanner as a "shared scanner" through WIDEsystem.

- 4. Left -double-click on the WIDEsystem program icon and select the Scan to Net tab.
- 5. Locate the option group Local scanner attached to this computer.
- 6. Select the option: Share your current scanner to allow others on the network to use it.
- 7. Press the OK button to accept the settings.

On most LAN systems, this is all you have to do. However, some systems will require *Advanced* settings, such as specific communication port numbers. Contact your LAN administrator for information regarding *Advanced* settings.

NOTE: Open WIDEsystem and press the <F1> key for viewing complete on-line help regarding the *Scan to Net* setup procedures and options.

NOTE: PCs on the LAN that will use the scanner must be installed with WIDEsystem and compatible scan/copy software.

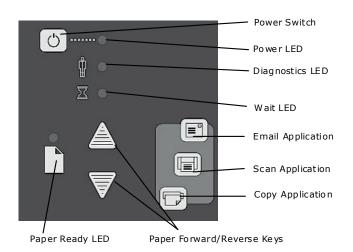


The Operator's Panel

The panel operator's consists of operation buttons and LED indicators. There are buttons for power ON/OFF, paper feeding, and triggering applications (one-touch). The LED indicator's function is to display scanner status in relation to its basic operations such as self-testing and media readiness. Operation of the buttons and interpretation of the LED indicator light patterns are described in the next user guide sections – Power ON/OFF, Loading the scanner, Scanning thick media.

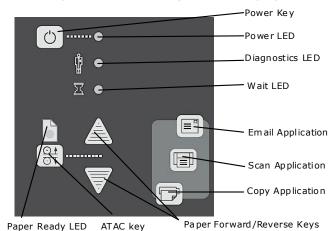
See Appendix A – Overview - Operator's Panel for a complete description of the panel's keys and the how to understand the panel LED lighting patterns.

Scanner Models: HD2530



Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

with ATAC (Automatic Thickness Adjustment Control) key

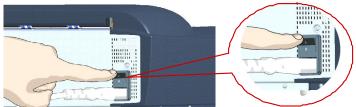


Turning Power ON/OFF - Wake/Sleep Modes

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

Main Power ON/OFF

The main power switch is at the back of the scanner. Press the upper half of the switch (marked "I") to turn the main power to ON. Press the lower half of the switch (marked "0") to turn the main power to OFF.



Main power switch is at the back of the scanner. Press "I" for ON and "0" for OFF.

The scanner's Self Test Procedure

When you connect the scanner to the power outlet and turn on the outlet switch at the back of the scanner, it starts up with a self-test procedure. The scanner's self-test procedure consists of two main steps –

1. **Init (Initialization) Sequence** – the scanner loads and tests internal parameters. Only initiated when you turn the main power ON. The panel's LEDs will be lit as shown in the next illustration:



Panel LEDs during the Init Sequence.

 Self-Adjustment - Adjustment of light profiles, stitching and black/white points. Starts after the Init Sequence when the scanner's main power switch is turned ON or right away when the scanner goes from sleep to wake mode. The panel's LEDs will be lit as shown below:



Panel LEDs during Self-Adjustment

Scanner ready to scan

You will know that the self-test procedures have completed and the scanner is **Ready** when the Power LED is lighted green and the other LEDs are off as shown below:



Wake and Sleep modes

With the main power switch ON, scanner power can be set in *Sleep mode* and *Wake mode*. *Sleep* mode is the energy saving mode. The scanner cannot scan when in the *Sleep* mode. *Wake* mode is the full power ON mode for scanner operation.

The scanner will go from Wake mode into Sleep mode:

- Automatically: after a set idle time (see Automatic Power functions).
- Automatically: with the Timer (see <u>Automatic Power functions</u>).
- Manually: when you hold the power button down for 3 seconds.

The scanner will go into wake mode:

- Automatically: with the Timer (see <u>Automatic Power functions</u>).
- When you feed a document into the scanner.
- When you press any button on the panel.





Sleep Mode (power





Wake Mode (power ON)

Advantages with using Wake-up and Sleep modes:

Ready faster: You turn the scanner OFF and ON (sleep/wake-up) by pressing the power key on the panel. The scanner skips its init sequence and is ready to scan sooner than with *Main Power OFF* to *ON*.

Convenience: When OFF (LED is red) the scanner can be powered up (Wake-up) easily by pressing the power key or just by inserting paper into the scanner, thereby indicating you wish to scan.

Timer function: Scanner power with **Wake-up and Sleep**, can be setup and controlled through the WIDEsystem software timer week schedule feature or through an idle time setting.

Save energy: Sleep mode runs at low power values.

Automatic Power ON/OFF functions

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

Automatic power management lets you schedule your scanner's up-time optimally and helps save energy.

You can set the scanner for automatic power OFF (Sleep) and power ON (Wake-up). Automatic power management functionality is set and controlled through your WIDEsystem software.

There are two automatic power functions:

- 1. **Timer** function
- 2. Enter Sleep mode automatically (after idle time) option.

In order to use automatic power management functionality: the scanner Main Power switch at the scanner's back must be turned ON.

The power LED on the operator's panel will light red when the scanner is in Sleep Mode (powered OFF) and green when in Wake Mode (powered ON).





Sleep Mode (power



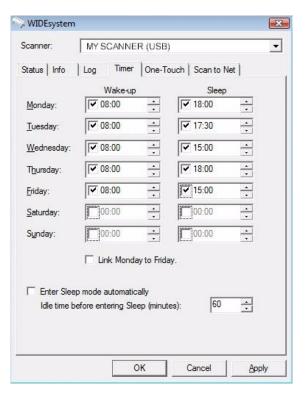


Wake Mode (power ON)

Timer Function - Scheduling ON/OFF Times

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

You can program your whole weekly schedule into the scanner so it powers ON and OFF (wake – sleep) on its own. You enter your schedule's wake-up and sleep times in WIDEsystem's *Timer* tab as shown in the example below.



To set the Timer:

 Open WIDEsystem - double-left-click the scanner icon in the system tray.



- 2. Select the Timer Tab.
- Click the checkmark fields for each day you want automatic wake-up and sleep actions.
- 4. Under the *Wake-up* column Click on the hour digits in the day's edit field to highlight them. Use the arrow box to increase or decrease the hour value or use your keyboard to write the value in the field.
- Move to the Wake-up column's minute digits for the same day Click on the minute digits in the day's edit field to highlight them. Use the arrow box to increase or decrease the hour value or use your keyboard to write the value in the field.
- 6. Repeat this process in the Sleep column for the same week-day.
- 7. Make settings for the other week-days in the same manner or....
- 8. You can use the Link Monday to Friday option to make your settings for Monday apply for the whole work-day-week.
- 9. **NOTE** that the *Idle time before sleep time* setting will still apply and may conflict with your *Timer* settings. Change or disable the *Idle time before sleep time* setting if it does.
- 10. When you have filled out the dialog, press *Apply* to download your settings into the scanner's memory.

When the Timer is active:

Your scanner will store and remember your settings so you have them after you turn off your PC and shutdown the WIDEsystem program. When you restart WIDEsystem, the *Timer* tab will display the values currently stored in the scanner.

If the scanner is being used, it will delay entry into *Sleep* mode. The power LED on the panel will blink just before entry into a scheduled sleep mode. You can cancel entry into Sleep mode by pressing the power button.

Automatic Shut Down After Idle Time

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630. HD2530

On delivery, the scanner is set for automatic entry into sleep mode after a preset default *idle* time, i.e. the length of time the scanner is not active. You can prolong or shorten the idle time value to match your normal workflow.

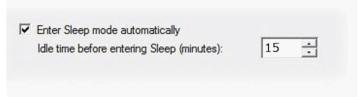
To change/set the sleep mode options:

 Open WIDEsystem - double-left-click the scanner icon in the system tray.



- Select the Timer Tab.
- 3. Select or deselect the Enter Sleep mode automatically option.

- 4. If you do not select the *Enter Sleep mode automatically* option, you will need to use the manual method for entering sleep mode by holding the power button down for 3 seconds.
- 5. If you do select *Enter Sleep mode automatically* option, proceed to the next step to set the *Idle time* value.
- Set the value *Idle time before entering sleep*. This is the number of minutes the scanner can stand idle before entering the sleep mode on its own.
- 7. Press *Apply* to download your settings into the scanner's memory.



Sleep Mode options in the WIDEsystem program – Timer tab

NOTE: With the scanner main power ON, the scanner can be also be brought into Wake-up and Sleep modes manually even while the *Enter sleep mode automatically* option is selected.

- Wake by pressing any button on the panel or inserting a document for scanning.
- Sleep by pressing and holding down the power button for 3 seconds.

You can choose to disable automatic entry into *Sleep mode* entirely if you want only manual activation of the sleep mode or, you can leave it enabled and retain both manual and automatic functions.

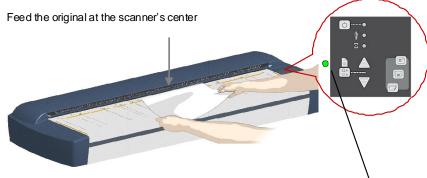
Loading 19

Loading Originals into the Scanner

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

Load, face down, at the scanner's center

Load your document with the image side facing **downwards**. Align the center of the document with the center arrow marking on the scanner bed. Use the standard size markings to help align the document for a straight scan path.



Paper ready LED lights green when paper is engaged.

Load the paper, face down. Hold with both hands and align the document's center with the scanner center marking.

You can use <u>automatic loading</u> or <u>manual loading</u>. These 2 loading options are selected in the scan/copy application dialogs on your PC. Read the instructions about *Automatic* and *Manual* loading n the next sections.

NOTE: The availability of the automatic and manual loading options will depend on your scan/copy software and its level of compatibility with the scanner model.

NOTE: See also this guide's section on <u>Scanning Thick Media</u> for instructions on loading thick media originals.

Automatic loading

With **automatic loading**, the scanner takes the original as soon as you insert it in the paper slot. Automatic loading is reliable for most jobs and especially useful for batch scanning jobs.

- 1. Make sure the Paper handling option "Auto load" is set in your scanning application.
- Align the center of the document with the center arrow marking on the scanner bed.
- 3. Push the original into the insertion slot until you feel it contact the rollers and the Paper Ready LED lights green (yellow for thick media).
- 4. The scanner will grab the original automatically and move it into startscan position.
- 5. A delay factor can be set in the scanning application. The delay will give you time to control straight positioning of the document in cases where the scanner is grabbing the original too fast.

Manual loading

- 1. Make sure the Paper handling option "Manual" is set in your scanning application.
- 2. Align the center of the document with the center arrow marking on the scanner bed.
- Push the original into the insertion slot until you feel it contact the rollers and the Paper Ready LED lights green (yellow for thick media).
- While holding the original in place with one hand, use the other hand to press and hold down the Paper Forward button on the scanner.
- 5. The original moves into the start-scan position.



Press paper forward button

Loading 20

Unloading the original after scan

 Press the Paper Reverse button to eject the original back to the scanner feeding bed.



Press the Paper Forward button if you wish to eject the original out the back of the scanner.



Fast-loading

Fast-loading is a time-saving loading option designed for batch scanning. The fast-loading option can be selected in the scanning application.

NOTE: The availability of the fast loading option will depend on your scan/copy software and its level of compatibility with the scanner model.

What is Fast-loading? – With normal (default) loading, i.e. without the Fast-load option selected, the original is pulled all the way into the drive system, past both roller axles, and then reversed to start-scan position in order to ensure precise detection of the original's placement in the scanner. With the Fast-load option selected, the original is pulled only under the first roller axle and scanning will start from there. The Fast-load option is

convenient for batch scanning of originals with robust edges that feed easily. Normally, with batch scanning, you would use the Fast-load option in conjunction with automatic loading however you can also use manual loading to feed the original into start-scan position.

Soft-handling

The *Soft-handling* option is selected in your scan application. Soft-handling means that feeding and scanning are slowed down. You can use the option with both Manual and Automatic loading.

NOTE: The availability of the soft handling load option depends on your <u>scan/copy software</u> and its level of compatibility with the scanner model.

Use Soft-handling with

- Old, curled or creased originals that trigger a paper jam. See <u>Trouble Shooting Paper Jam error</u> for correcting a paper jam error.
- 2. Fragile originals you want passed delicately through the drive system.

Setting the input size

The *Input size* defines the scan area. You enter the input size in your application's input size dialogs.

NOTE: The availability of the *Input size* options described below will depend on your scan/copy software and its level of compatibility with the scanner model.

3 ways to set find and set the input size:

- Use automatic size detection The scanner will detect the edges of the document and calculate the input size for you.
- Set a standard size common standard sizes are marked on the scanner bed. Use these markings to determine which standard size matches the original and then select that size in the application's input size dialog.
- 3. Set the size manually for irregular sizes. To measure your document use the scanner's ruler just above the insertion slot. Enter your width measurement in the width setting field in your application's input size setup dialog. You can measure and set a length value or choose automatic length detection.

Scanning

Software applications for scanning

Your scanner is controlled through scan, copy or imaging software installed on your PC.

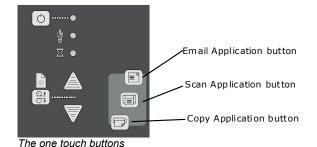
Optimal full featured scanning functionality is obtainable through scan and copy software specifically developed for compatibility with your scanner model. See the scanner manufacturer's website for information on scanner software and compatible third-party applications.

Simple scanning functionality - Many common imaging applications support TWAIN and WIA interfacing and will thereby support simple scanning tasks through a limited range of settings and control options.

Running applications from the scanner panel

Normally you would control the scanner from your PC through your scan software user interface. However, your scanner also supports one-touch buttons that enable you to trigger your software from the scanner panel. When a button is pressed, a scan is initiated and the result is loaded into the application triggered. You configure your one-touch buttons through WIDEsystem and your compatible scanning software. Please refer to the on-line help in these applications for instructions.

NOTE: See Appendix A – Overview of the Operator's Panel - Application Control – One Touch Scan for additional information.



Batch scanning

Batch scanning involves jobs where you want to feed and scan a whole set of originals that require equal scan settings. The basic steps are:

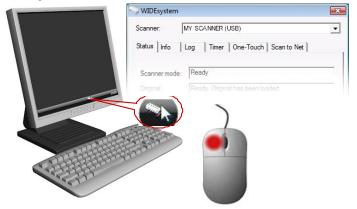
- 1. Set your scan settings (size, type, image adjustments..) for the batch. Your settings will apply to ALL the documents in the batch.
- Set the scan software into Batch Mode. This will tell the scanner to start scanning as soon as the document is fed so you don't need to trigger the scan.
- 3. Choose <u>Automatic loading</u> (optional) for fast and effective loading. Read you scan software's on-line help pages for specific information on batch scanning with the application.

NOTE: The availability of Batch scanning options will depend on your scan/copy software and its level of compatibility with the scanner model.

Monitoring your scanner with WIDEsystem

You installed WIDEsystem with the scanner drivers. WIDEsystem contains an application that monitors the scanner and reports on its functionality.

Double left click the system tray's scanner icon by to open the WIDEsystem control interface.



Scanning

With WIDEsystem you can:

View the scanner's status. Move the mouse over the scanner icon on the system tray. Status messages include whether or not the scanner is detected, connection and runtime errors and readiness for scanning.



Scanner status message on Windows system tray

View Error messages and logs. Runtime errors are reported immediately on your screen. You can also open the *Status* tab and *Log* tab for viewing error messages.

View information about the scanner device in relation to firmware and hardware revisions. Open the *Info* tab.

Install new firmware – You download new firmware to a folder on your machine. Then right click on the scanner icon, select *Advanced Options* > *Update Scanner Firmware* to install it on your scanner.

Initiate a scan of the system's hardware bus for re-establishing the interface. Right click on the scanner icon, select *Advanced Options* > *Rescan Hardware Bus*.

Assign/reassign applications to the scanner's one-touch-scan buttons, or disable the one-touch-scan buttons altogether. Open the *One-Touch* tab to make settings.

Set Automatic Power functions. <u>Timer and Enter Sleep mode</u> automatically (after idle time) options.

Set up your scanner so it can be shared by user PC's on the network. Open the *Scan to Net* tab to make settings.

Set up your scan software so it can access shared scanners on the network. Open the *Scan to Net* tab to make settings. See also <u>Installation</u> - <u>Share the scanner on the LAN</u>.

Launch the scanner maintenance program. Right click on the scanner icon, select *Launch Scanner Maintenance*.

Launch the WIDEsystem on-line help. To find instructions on trouble shooting and using WIDEsystem with your scanner. Open WIDEsystem and press the F1 key.



WIDEsystem program control interface

Scanning Thick Media

Scanning Thick Media

You may need to scan documents and drawings printed or pasted on thick media such as cardboard, foamboards, gatorboards etc. To do so, you will need to fit the insertion slot to the thickness of your original. This is done by raising the pressure-platen to the exact correct height.

Manual Adjustment for Thick Media – Slider Controls

Scanner Models: HD2530

On these scanners you change the insertion slot size (pressure-platen height) manually. Adjustments can be made in the range 2mm to 15mm (up to 0.6") so you can fit the slot to the thickness of your original. Originals up to 2mm thick should be scanned with the *Normal* (2mm) setting. Thicker originals will require adjustment for thick media.

There are 2 methods for manual adjustment for thick media:

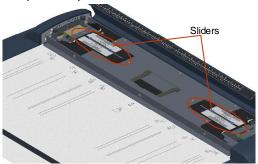
- 1. The **normal method** for all thick original types
- The quick method for stiff thick originals only.

Normal Method - with all thick original types:

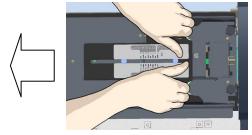
- 1. Measure the thickness of your original to find the right setting.
- Insert your fingers in the insertion slot and lift to open the scanning area lid.



The thickness adjustment sliders are on right and left sides of the pressure-platen.

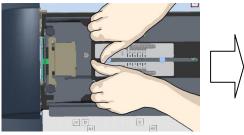


- 4. A slider is divided into a *Normal* position and *Extended* positions.
- 5. The *Extended* settings are marked in inches and millimeters. Each step marks an interval, i.e., the 4 setting means documents from 2mm to 4mm thick, the 6 setting from 4mm to 6 mm thick, etcetera.
- The round metal button indicates the current setting (see the illustration titled *Thickness Adjustment Slider* on the next page). For paper thin originals the button will be at the 2mm (0.08") setting – also called the "Normal" setting.
- Press down on the right slider. Place your fingers in the green slots and pull the slider towards middle of scanner to the correct thickness setting.



8. Press down on the left slider. Place your fingers in the green slots and pull the slider towards middle of scanner to the same thickness setting as above. It is important that both sliders are set to the same value.

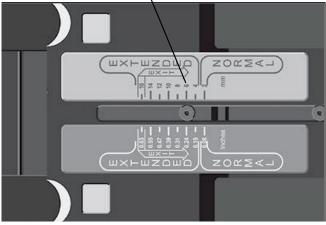
Scanning Thick Media



- 9. Close the scanning area lid.
- Feed your thick original. The Paper Ready key will turn yellow (stop blinking) when the pressure-platen is positioned correctly and is ready to scan your thick original.

Thickness Adjustment Slider

In this example, the button position shows the slider set for an original that is 6mm. (0.24") thick.



Quick Method - stiff and thick original types only.

You can use the following Quick method for stiff and hard surface originals. This method is not recommended for soft or flexible media such as originals mounted on foam boards, as there is a high risk for creating an over-tight insertion slot and causing damage to the original.

- Insert your fingers in the insertion slot and lift to open the scanning area lid.
- 2. Press down on the right slider and move inwards (towards middle of scanner) to the highest setting 16mm (0.63").
- 3. Repeat with the left slider. Your pressure platen is now fully raised to it maximum height.
- 4. Slide the original into the insertion slot and under the fully raised pressure-platen.
- 5. With both hands, press down gently on each side of the pressureplaten until you feel it contacts the original underneath.
- 6. The sliders will move and adjust themselves to the proper height.
- 7. Be sure to control that both sliders (on each side) are set to the same thickness value. If not, adjust one side so they are equal.
- 8. The *Paper Ready* key will turn yellow (stop blinking) when the pressure-platen is positioned correctly and is ready for thick media scanning. If it keeps blinking, press the paper reverse key to feed out the thick original and then reinsert for scanning.

Scanning Thick Media

Automatic Thick Media Adjustment

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

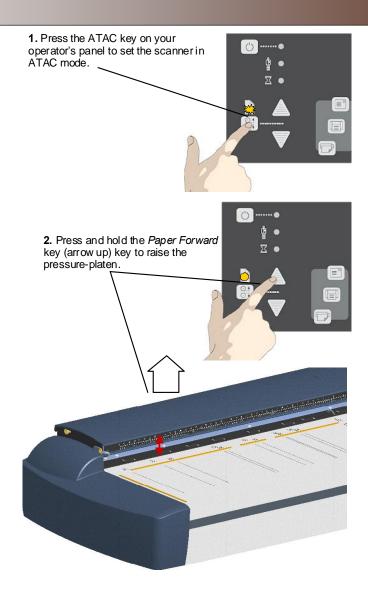
Scanners with Automatic Thickness Adjustment Control (ATAC) have an ATAC key on the operator's panel. You use the key to raise and lower the pressure-platen. You can change the insertion slot size (pressure-platen height) on your scanner from 2mm to 15 mm (up to 0.6"). Originals up to 2mm thick should be scanned with the pressure all the way down (normal position). Thicker originals will require you use the ATAC key to adjust for thick media.



The ATAC key on the operator panel.

To adjust the insertion slot for thick media with ATAC:

- Press the ATAC key on your operator's panel to set the scanner in ATAC mode.
- The Paper Ready Indicator blinks yellow indicating the scanner is in ATAC mode but not yet ready, i.e., the pressure-platen is not yet positioned for the thick original.
- 3. Press and hold the *Paper Forward* key (arrow up) key to raise the pressure-platen until there is room to insert the thick original.
- 4. Insert the thick original evenly for a straight scan path.
- 5. Press and hold the *Paper Reverse* (arrow down) key to lower the pressure-platen until the pressure-platen stops on its own.
- The Paper Ready indicator will stop blinking and remain yellow when the pressure-platen is positioned correctly and is ready for thick media scanning.
- 7. The scanner will automatically leave the ATAC mode, which means that the *Paper Forward* and *Paper Reverse* keys will return to their normal functionality for moving the original forwards and backwards.



When Scanning in Thick Media Positions

On all Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

Below are some additional guidelines and facts related to scanning thick originals.

Remember to return to the *Normal* position so the scanner and run Auto-Self-Adjustment

The scanner employs an automatic self-adjustment procedure (light profile, stitching etc.) that can only activate itself when the scanner is in the *Normal* position. With prolonged scanning in extended thickness settings, you should from time to time return the scanner to its *Normal* position to allow it to self-adjust. This will ensure refreshed self-adjustment and optimal performance of your scanner. Make a habit of always setting the scanner in the *Normal* position when shutting down, so it can auto-self-adjust the next time you turn it ON.

Supporting Thick Originals

To avoid bending and ensure a stabile scan: It is important to help support large thick originals during scanning. Hold the end of the original and support it as it feeds.

Scanning speed is reduced when scanning thick originals

The scanner runs at its optimal speed in the *Normal* position. To allow stabile drive handling, scanning speed is automatically reduced when the scanner is in the extended thickness positions.

Modifying Stitching Parameters

Thick stiff originals will rest on top of the scanner rollers and thus raise a small distance over the glass-plate. This can lead to irregularities in relation to "stitching" of the image at points between the cameras (overlapping pixels). In such cases, the stitching parameters will need to be modified. You can modify stitching parameters through your scanning application in the following way:

- 1. Insert your thick original in the scanner and scan the image using your scanning application.
- Check the result in the viewer for overlapping or missing pixels in the camera transition areas.
- 3. Adjust the stitching values in the application's scanner setup dialogs.
- 4. Repeat scanning and adjustment until the effect is minimized.

Treating Edge Distortion

Scanning thick originals can give distortions when the front edge meets the exit rollers or the trailing edge leaves the entry rollers. To omit this, the leading and trailing edges are by default skipped when in an extended thickness position. Leading/trailing edge skipping can be turned off through the scanning application's setup dialogs.

Maintenance 27

Maintenance

About scanner maintenance

Scanner maintenance will ensure optimal performance of your scanner. There are three basic maintenance tasks:

1. Cleaning

Keep your scanner clean – the next section describes how to thoroughly clean the internal scan area. How often you need to clean the scanner will depend on how often and the types of media you scan. If your work primarily involves scanning newspapers and old blueprints you may need to clean more often than users who only scan brochures and new drawings.

Be sure to clean the scanner when results are not optimal. Particles of dust in the scan area can often be the cause of streaks in the end result.

See more under the section Cleaning the scan area

2. Calibration and camera alignment

Scanner Calibration is easy to perform and most of it is completely automatic. Scanner calibration includes camera alignment and calibration of B&W and color parameters. To run, you insert a Calibration Sheet, and start the Scanner Maintenance program. Be sure to calibrate if your output is not optimal. Make sure the scanner is clean before calibrating.

See more under the section Camera alignment and Calibration.

3. Replacing worn parts

This should be carried out when you get a warning on your screen or when a worn part affects your results. Replaceable parts are:

- a. the glass plate
- b. the lamp
- c. the white background platen
- d. the dust filters

See more under the section Replacing scanner parts.

NOTE: Parts are not replaceable on HD2530 models.

Cleaning the scan area

Follow the steps below for thoroughly cleaning the scanner and scan area. Be sure to clean the scan area when results are not optimal. These could be streaks in your scan image due to dust particles in the scan area.

You must clean the following scanner parts/areas:

- 1. The scanner bed
- 2. Glass plate
- 3. White background
- 4. Transport rollers

Caution: do not use abrasives, acetone, benzene or fluids that contain these chemicals. Do not spray liquids directly onto the scanner glass-plate or anywhere else in the scanner.

Caution: Before cleaning the scan area, be sure to turn the scanner power off and disconnect the power plug.



Instructions on cleaning the scan area follow on the next page.

Cleaning the Scan Area

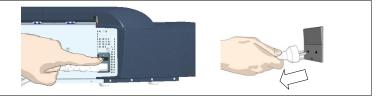
Scanner Models: HD2530

In order to access the scan area for cleaning on the 25" models, you have to detach the pressure-platen. Follow the instructions below.



Turn scanner power off

Press the main power switch (scanner back) to OFF and disconnect the power plug.





Open the scanner's lid

Place your fingers in the insertion slot and flip open the scanning area lid.

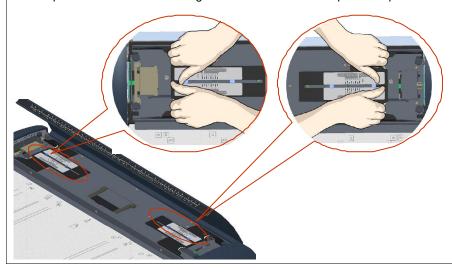


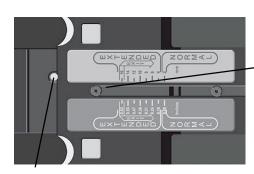
Maintenance 29



Access the scan area – Free the pressure platen

- Move the pressure platen sliders to unlock the pressure platen. The sliders are on each side of the scanner.
- Place both hands on a slider push down and move the slider all the way towards the scanner's middle (Exit Position) while maintaining pressure until the metal button pops up.
- 3. Repeat this on both left and right side sliders to free the pressure-platen.





The slider is pushed all the way towards the scanner's middle.

Exit position:

The metal button pops up.



Remove the pressure platen

On the topside of the pressure-platen you will find a hinged handle.

- 1. Flip up the handle.
- 2. Grip the handle and lift out the pressure-platen





Clean the glass-plate

With the pressure platen removed, the glass-plate will be exposed for cleaning.

- 1. Clean the glass with a lint-free cloth and a mild, streak-free, glass cleaner. Aplly the cleaner to cloth and then wipe the glas
- 2. Dry the glass completely using a separate clean, dry lint-free cloth like the one provided with the maintenance kit.



Caution: Do not spray liquids directly onto the scanner glass-plate.

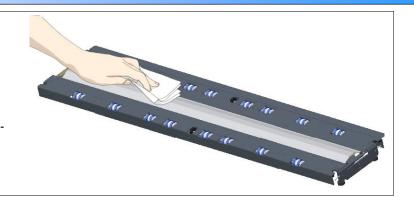




Clean the white-background platen and rollers

The white-background-platen is on the backside of the pressure-platen you removed in step 4.

- 1. Flip the pressure-platen over to clean the white background.
- 2. Wipe the white area and the transport rollers with a lint-free cloth and a mild, streak-free, glass cleaner. Apply the cleaner to the cloth and first wipe the platen's white area and then the transport roller's surface.
- 3. Dry the pressure-platen and rollers completely using separate clean, dry lint-free cloths.

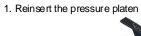


Maintenance 32



Reinsert the pressure platen and close the lid

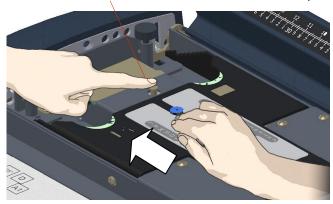
- 1. Lift the Pressure platen by its handle and reinsert it into the scanner.
- 2. On each end, you will need to press down the metal button with one hand, and with the other hand, push the slider back from the Exit position to its Normal position.
- 3. Push the sliders away from the scanner middle until they reach the edge (Normal position).



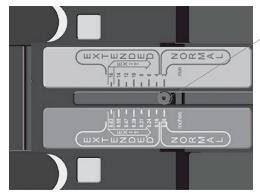


2. and 3.

Push down on the button so the slider can move back into its normal position.



The slider back in its Normal position





Close the scanning area lid.

Grip the lid's edge and pull it down so it closes.





Clean the scanner feed area surface

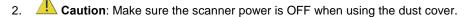
1. Clean also the scanner surface so dirt and dust are not dragged into the scan area with the original.

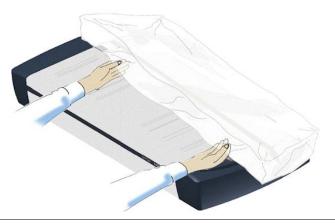


10

Cover when not in use

1. Cover the scanner with its plastic dust cover when not in use.





Cleaning the Scan Area

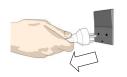
Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

You only need to open the lid to access the scan area when cleaning these models. Follow the instructions below.



Turn scanner power off
Press the main power switch (scanner back) to OFF and disconnect the power plug.

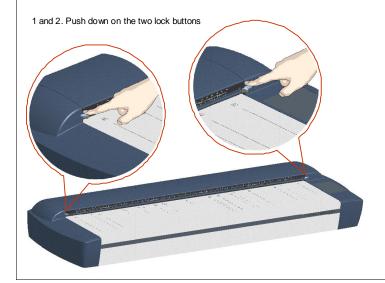




2

Open the scanner's lid

- 1. Open the scan area lid Push down on the two lock buttons found near the insertion slot on each side of the lid.
- 2. The scanning area lid locking mechanism should now be disengaged.
- 3. Place your thumbs in the insertion slot and flip the scanning area lid back to its open position.







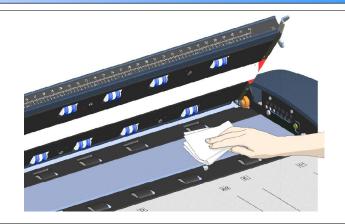
Clean the glass-plate

The glass-plate is now exposed for cleaning.

- 1. Clean the glass with a lint-free cloth and a mild, streak-free, glass cleaner, Apply the cleaner to cloth and wipe the glass-plate.
- 2. Dry the glass completely using a separate clean, dry lint-free cloth like the one provided with the maintenance kit.



Caution: Do not spray liquids directly onto the scanner glass-plate.



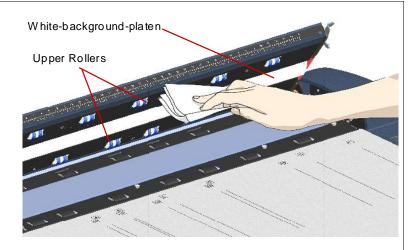
Clean the white-background platen and upper rollers

The white-background-platen (white metal area) is fixed in the scanning area lid. The upper rollers are aligned in 2 rows on each side of the white-background-platen.

- 1. Hold/support the lid in its open position for support as you clean.
- 2. Use a lint-free cloth and a mild, streak-free, glass cleaner. Apply the cleaner to cloth and wipe the white-background-platen.
- 3. After wiping clean the whole white background platen, wipe all the upper rollers in both rows.
- Dry the platen and rollers completely using separate clean, dry lint-free cloths.



Caution: Do not spray liquids directly onto the scan area.





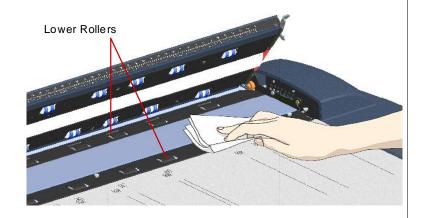
Clean the lower rollers

The lower rollers are the black rubber rollers aligned in 2 rows on each side of the glass-platen.

- 1. Use a lint-free cloth and a mild, streak-free, glass cleaner. Apply the cleaner to cloth and wipe the lower rollers in both rows.
- 2. Dry the lower rollers completely using a separate clean, dry lint-free cloth.



Caution: Do not spray liquids directly onto the scan area.





Close the scanning area lid.

- 1. Pull down and close the scanning area lid when finished.
- 2. Press gently down on the cover top to make sure the locks reengage (click).





Clean the scanner feed area surface

Clean also the scanner surface so dirt and dust are not dragged into the scan area with the original.

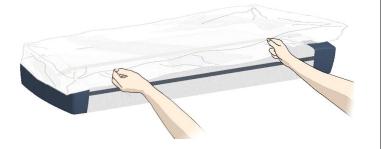




Cover when not in use

- 1. Cover the scanner with its plastic dust cover when not in use.
- 2.

Caution: Make sure the scanner power is OFF when using the dust cover.



Camera Alignment and Calibration

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

Scanner calibration is very easy to perform with the *Scanner Maintenance* program you installed with your drivers. After manually cleaning the scan area, you just insert a calibration sheet, start the *Scanner Maintenance* program and let the wizard take over.

NOTE: Cleaning and calibration are tied together. Cleaning the scanner creates the need for renewed calibration and correct calibration will always require a clean scan area.



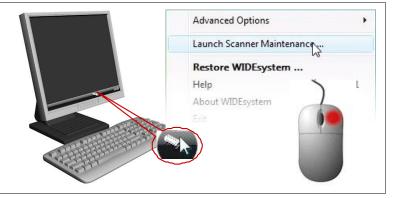
Turn the scanner power ON

Make sure that the scanner has been turned ON for at least **5 minutes** prior to camera alignment and calibration. The short warm-up time will ensure that light conditions and camera heights have stabilized.



Launch the scanner maintenance program

- 1. On your PC Right click on the WIDEsystem scanner icon.
- Select Launch Scanner Maintenance to open the program's welcome dialog.





Follow the steps described by the wizard

The scanner maintenance wizard will guide you through the alignment and calibration steps.

Click the Next button in the welcome dialog to proceed.





Insert the calibration sheet

During the process, the wizard will ask you to insert the *Calibration Sheet* that came with your scanner. **The sheet's printed side must be inserted face down**. Align the sheet's midpoint arrow with the scanner's midpoint arrow and feed the sheet into the scanner.

Click the wizard's Next button to continue.

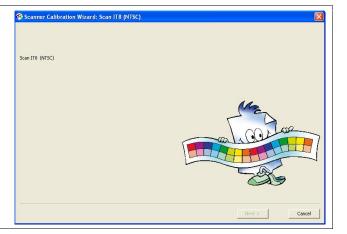




The program aligns and calibrates the scanner

The program works in steps to analyze and correct the alignment and stitching status of the cameras, calibrate black and white values and calibrate color. The calibration sheet will be rescanned a number of times as the program processes data.

Let the program complete all alignment and calibration steps.





Finished

The wizard will tell you when the process is finished.

- 1. Remove the Scanner Calibration Sheet from the scanner.
- 2. Return the Scanner Calibration Sheet to its protective cover and then place it in the storage folder. Store the folder in a dry place and out of direct light.



Replacing Scanner Parts

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

This section describes how to replace those scanner parts that are liable to wear down over long-term use. Changing parts will renew your scanner and reestablish optimal results. WIDEsystem monitors scanner usage and will warn you when it is time for a replacement.

NOTE: Regarding the 25" MODEL HS2520: There are no replaceable parts on the 25" scanner model HD2520. Contact your service technician for replacing parts.

NOTE: Regarding WIDEsystem WARNING FLAG - glass plate and White background platen replacement: After receiving a warning by WIDEsystem and replacing the part, be sure to reset the part replacement warning flag though WIDEsystem's "Status" tab.

NOTE: Regarding RECALIBRATION - glass plate, White background platen, lamp unit replacement: Replacing these parts will change conditions in the scan area. Therefore, it is recommended to recalibrate right after changing and cleaning these parts.

Important Safety Instruction: Before replacing any parts, be sure to turn the scanner power off and disconnect the power plug.

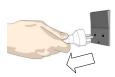


Replacing the Glass-plate

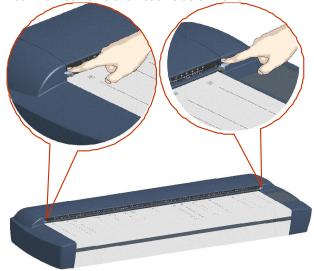
Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

1. Land the scanner power off and disconnect the power plug.





Open the scan area lid - Push down on the two lever buttons found near the insertion slot on each side of the lid.



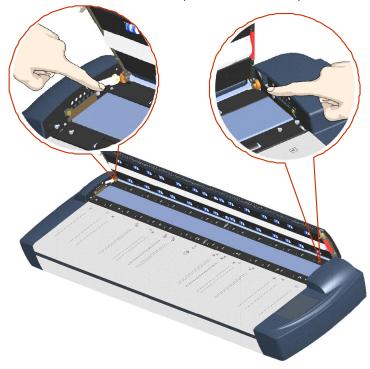
3. The scanning area lid locking mechanism should now be disengaged.

4. Place your thumbs in the insertion slot and flip the scanning area lid back to its open position.

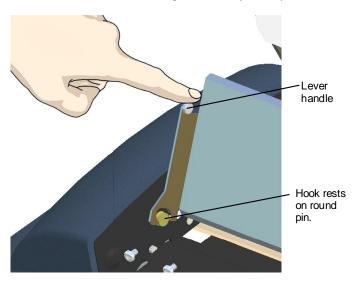


5. The glass-plate will be exposed and accessible.

6. On each side of the glass-plate there is a small lever with a round lever-handle on its end. Place a finger under both round lever handles on each side of the scanner (see illustration below).



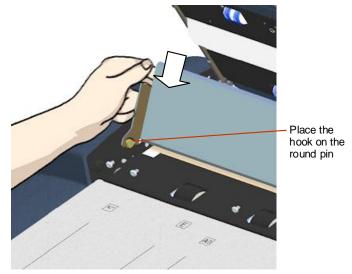
 With both arms, pull simultaneously on the left and right levers to flip the glass-plate towards your body so it tilts upwards and is fee from the scan area bed. Pull back on the levers to tilt the glass towards your body:



8. Each lever is attached to the scanner chassis with a small hook that rests on a round pin. As you hold the glass-plate on both its edges, lift it upwards to detach both lever's hooks from the pins and thus free the glass-plate from the scanner.



 Reverse the above operations to reinsert a new glass-plate – Carefully set the new glass plate down into the scan area. Fit the new glassplate's lever hooks on to the round pins on each side of the scanner as shown below.



- While supporting the glass-plate with fingers on the lever handles, carefully ease the glass-plate down backwards (away from your body) so it falls into place.
- 11. Close the scan area lid.

NOTE: It is recommended to clean the new glass-plate after inserting it in the scanner and before scanning.

NOTE: It is recommended to recalibrate after changing the glass-plate.

Replacing the White-Background-Platen

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

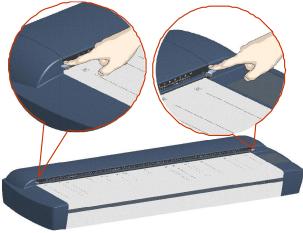
Your white-background-platen can become worn and discolored after long periods of use and in such cases; replacement with a fresh white-background-platen is recommended. WIDEsystem monitors scanner usage and will warn you when it is time for a replacement.

1. Turn the scanner power off and disconnect the power plug.





2. Open the scan area lid - Push down on the two lever buttons found near the insertion slot on each side of the lid.

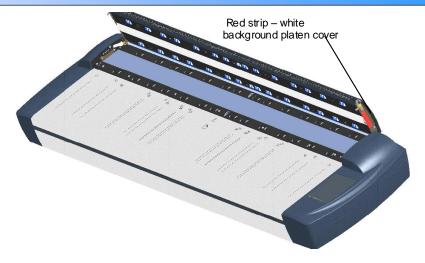


3. The scanning area lid locking mechanism should now be disengaged.

4. Place your thumbs in the insertion slot and flip the scanning area lid back to its open position.



5. On the lid's left edge, you will find a red strip. This is the white platen cover.



Grip the top (flexible) edge of the red strip with your fingers.



Remove the red strip to expose the edge of the white-backgroundplaten.



7. Grip the edge of the white-background-platen with your fingers and pull to slide it out of the scanner.



8. Reverse the steps to insert your new white-background-platen. Carefully slide in a new white-background-platen while taking care not to bend it.



9. Reattach the red strip.



10. Close the scanning area lid so the locking mechanism reengages.



NOTE: It is recommended to recalibrate after changing the white-background-platen.

Replacing the Scanner Lamp-Unit

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

The lamp's effectiveness can gradually weaken over time and this can effect the quality of your scans. A new lamp-unit (lamp, reflector, power connectors) can be obtained through your dealer. WIDEsystem monitors lamp usage and will warn you when it is time for a replacement.

Turn the scanner power off and disconnect the power plug.



2. The lamp cover is on the top right side of the scanner.



3. Grasp the cover on each side with both hands and pull back to detach.

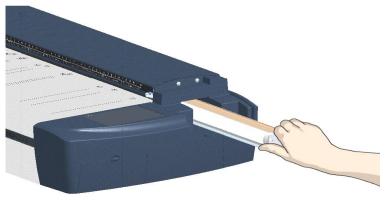


4. Lift the cover upwards to free it from the scanner.

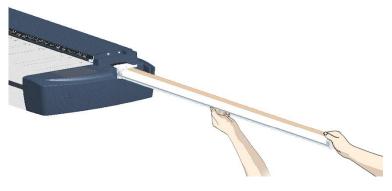


5. You must remove the whole lamp-unit. A lamp-unit consists of a lamp mounted in a reflector brace and fixed power connectors.

Grasp the edge of the old lamp-unit and carefully pull it out of the scanner.



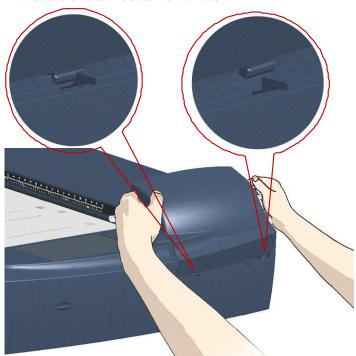
7. Reinsert the new lamp-unit. Rest the power-connector side on the slider and carefully push the lamp-unit into the scanner.



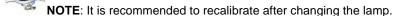
8. Insert the lamp-unit all the way so the internal power connections engage with the connections on the lamp-unit.

 Replace the lamp cover on the scanner - fit the bottom notches in the holes and snap the cover shut. The cover must always be closed before turning scanner power ON.

Fit the cover's bottom notches into the holes



- 10. Test the replacement by turning power and scanner on to see if the lamp lights.
- 11. Reset the part replacement warning flag though WIDEsystem's "Status" tab. Click on the lamp replacement message link to reset.

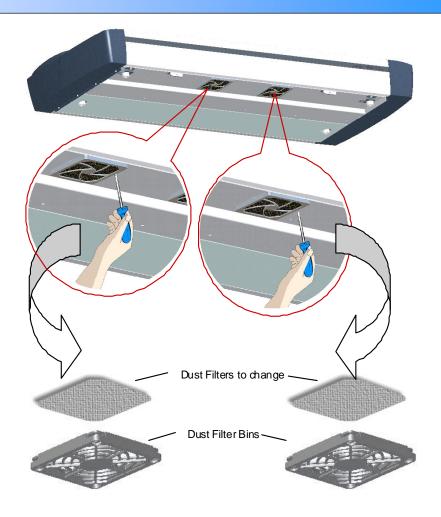


Replacing the Dust-Filters

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

The dust filters protect your scanner's air-cooling vents. Fresh dust filters can reduce the amount of time spent on cleaning and calibration ad help protect the scanner's glass plate. WIDEsystem monitors usage and will warn you when it is time for a replacement.

- 1. Larn the scanner power off and disconnect the power plug.
- Locate the 2 square-shaped dust filter bins on the underside of the scanner.
- 3. Insert a screw-driver or other sharp tool under one of the bin's edges to snap it down and detach it from its frame.
- 4. The filter (soft material) is inside the bin. Remove the old filter and place a fresh one in the bin.
- 5. Reattach (click on) the bin to its frame on the underside of the scanner.
- 6. Repeat the process with the second filter.



Downloading New Firmware

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

What is Firmware?

Like a computer, your scanner needs an operating system in order to work. This operating system is called "Firmware". Firmware runs inside the scanner and links its processors with the PC applications running the scanner.

When do I need new firmware?

Your scanner is shipped with the latest firmware available. You can afterwards upgrade your original firmware with newer firmware and continue to do so as they are released. Firmware upgrades can be downloaded from your manufacture's website or obtained through your dealer.

Upgrade your firmware when:

- One or more new features are released or other improvements are made to the scanner though its firmware.
- An error is discovered in the firmware version you have in the scanner and your manufacturer recommends installation of new firmware in which the error is corrected.

NOTE: Your manufacture's website specifies improvements for every new firmware release.

How to identify the firmware version running in the scanner?

1. Start WIDEsystem -Left-click on the system tray's scanner icon.



- Select the *Info* tab.
- 3. The Info tab displays useful data about your scanner firmware.
- 4. Firmware release Upgradeable firmware version.
- Firmware download time The date/time the current firmware was downloaded.

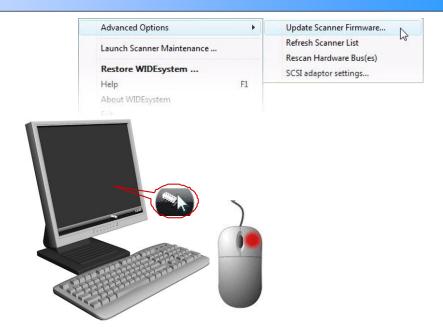
You can upgrade your firmware if the *Firmware Release* number is lower than the newest firmware version number on your manufacture's website.

How to install new firmware?

New firmware is installed by opening the firmware .exe file. The firmware .exe file must first reside on your machine. Select the Save target (or Save Link) option if downloading from the web.

To install the firmware file on your scanner:

- Go to your manufacture's website and locate the new firmware for your scanner.
- 2. Download/save the firmware .exe file in a folder on your machine.
- Start WIDEsystem's Quick menu Right-click the scanner icon in the system tray.
- 4. Select Advanced Options.
- 5. Select (left-click) Update Scanner Firmware



- 6. Browse the folders on your machine and find the firmware .exe file you wish to apply.
- Select the firmware file and select OK to install. Installation can take up to 1 minute depending on the scanner model and firmware version. The WIDEsystem scanner icon on your system tray blinks red during the download process.
- 8. Follow the instructions on your screen.
- 9. If there were errors or power failures during firmware installation, set the scanner in Firmware Boot mode and reinstall the firmware.

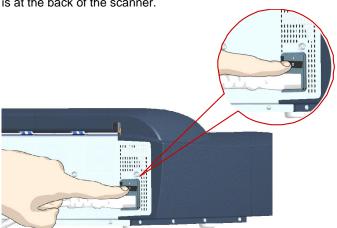
Setting the Scanner in Firmware BOOT Mode Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

You can force the scanner to firmware boot mode. This is useful if an error or power-failure occurred during a firmware update and you need to restart the firmware update process. A scanner will not run correctly after an interrupted firmware update process.

To force the scanner to firmware boot mode:

If restarting after a power-failure interrupted your firmware update, the scanner should start up in boot mode. If not, you can use the following panel function to force the scanner into boot mode.

1. Turn the scanner's main power switch to OFF. The main power switch is at the back of the scanner.

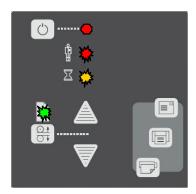


- 2. Press and hold down the Power button on the operator's panel.
- As you hold down the power button with one hand, reach to the scanner's back with your other hand and flip the Main Power switch to ON.



Invoke Firmware Boot Mode - Press and hold down the Power Key as you *flip the main power switch to On*.

 When the Power LED turns red and the other LEDs blink as shown below, the scanner is in Firmware Boot mode and you can reapply the Firmware.



Trouble Shooting Problems

This section describes trouble-shooting procedures for the most common problems that can arise with your scanner. Please look for a problem description that matches your actual situation. If found, perform the trouble-shooting procedures before requesting a service call.

Problems Related to Scanner Installation

Problem	Possible Causes and Remedies				
"Unknown device is found" message.	1. Your interface is not enabled on the PC or set up correctly. Go through the installation steps for your interface board and its driver and control that the Windows device manager lists the interface option.				
	 WIDEsystem drivers were not installed before connecting the scanner. Shut down the scanner and PC, unplug the connections and restart the installation from step 1 as described above. If you continued installation before installing WIDEsystem, see the troubleshooting instructions below. 				
	3. Loose interface connection – on both ends, unplug and then firmly plug-in the interface cable.				
	4. Smart Card not inserted correctly. Control that the smart card contact side faces downwards and the card is inserted all the way in its slot.				
	5. System needs rebooting - shut down the scanner and PC, unplug the connections. Then plug in the interface connections, turn on the PC and when Windows is loaded, turn on the scanner.				
Need to reinstall. I got the "Unknown device is found" message and continued installation of the	If you connected and tried to install the scanner before installing WIDEsystem, the unknown device found message will appear. If you continued to step through the dialogs from there, the scanner will be entered on the system as a new device without functional drivers. If this is the case, the scanner will be displayed in the Windows Device Manager with a yellow error icon. The scanner entry must be removed from the Device manager before re-installing correctly.				
scanner. Now the scanner appears as	1. In the Device Manager - remove the scanner entry.				
incorrectly installed on my system.	2. Shut-down the PC, shut down and unplug the scanner, disconnect the scanner from the PC.				
	3. Reboot the PC and install WIDEsystem and Maintenance software				
	4. Refer to the installation instructions for your interface type in this guide.				
WIDEsystem does not detect the scanner.	The WIDEsystem driver version installed on your PC is older than your scanner model. Install the WIDEsystem drivers form the WIDEsystem TOOLS CD-ROM that came with your scanner. If not available, download the newest version from your manufacturer's website or contact your dealer to obtain the right WIDEsystem version.				
	2. WIDEsystem drivers were not installed before connecting the scanner . Shut down the scanner and PC, unplug the connections and restart the installation from step 1 as described above.				
	3. Loose interface connection – on both end, unplug and then firmly plug-in the interface cable.				
	4. System needs rebooting - shut down the scanner and PC, unplug the connections. Then plug in the interface connections, turn on the PC and when Windows is loaded, turn on the scanner.				

I purchased a smart card upgrade kit. How do I use it to upgrade the scanner?

You need to insert your new smart card into the scanner to upgrade its functionality.



Be sure that the scanner is turned off when removing and inserting a Smart Card or accessing the Smart Card area.

Accessing the smart card on scanner models: HD2530: In the small drawer labeled "PUSH" behind the scanner front streamer (slide the streamer towards the left to access the drawer).

Smart Card Drawer is behind the streamer



Accessing the smart card on scanner models: HD5450, HD4250, HD4230, HD3650, HD3630:

Remove the scanner's right side cover. The Smart Card is placed in the card insertion slot above the scanner interface

Insert your thumb in the slot at the top of the interface cover. Push $% \left(1\right) =\left(1\right) \left(1$

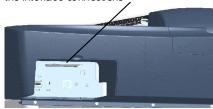


connectors.

Remove the interface cover with both hands.



Smart Card is inserted in its slot above the interface connections





The cover must always be closed before you turn the scanner ON.

Problems Related to Operation of the Scanner

Problem	Possible Causes and Remedies
Wait light flashes, diagnostics light is off Wait LED goes on during calibration	 The scanner needs to run Self-Adjustment but cannot. Self-Adjustment cannot run with a raised pressure platen or with media in the scanner. Self-Adjustment is necessary for maintaining optimal and stabile internal conditions. Remedy: Any original in the scanner should be removed, and the pressure-platen should be set to the <i>Normal</i> position (i.e., not a thick media setting). When Self-Adjustment becomes possible, the Wait LED stops flashing, but continues to be on until Self-Adjustment is completed. If the error doesn't disappear turn the scanner off and then on. If the error persists, you can reinitialize all settings by unplugging the scanner and waiting a few minutes before turning power on again.
Diagnostics LED flashes	during the Calibration procedure. All panel input is prevented during basic calibration. 1. An Error was detected during the scanner's Self-Test. Open WIDEsystem (scanner icon on your system tray) and select the Status tab to view additional information about the error.

Both wait and diagnostics LEDs flash [0] 1. The scanning area needs cleaning and the cameras need to be calibrated. Run through the scanner maintenance steps described in this guide. \mathbf{X} 2. If the Diagnostic and the Wait LEDs continue to flash after scanner maintenance, then there may be camera position errors that require help for your technical service provider. Paper Ready lights RED (O) 1. The pressure-platen is in a thick media setting (a raised pressure-platen) but the scanner does not detect the media. If you 0 are scanning thick media, insert the thick media into the scanner. 0 0 2. If the problem persists with thick media in the scanner, control that the pressure-platen level is correct. Repeat the steps for correct adjustment for thick media as described in this guide. You know a Paper jam error has occurred when the scanner stops scanning and the Paper-Ready key shuts OFF (from blinking) Error message: Paper Jam while the original is still engaged in the drive system. Your scanning application and WIDEsystem's Status tab will report the Paper Jam error. To remedy: [0] 1. Remove the original from the scanner. Use the Paper-Back or Paper-Forward keys. 0 $\underline{\Sigma}$ If the original does not respond to the Paper Forward, Paper-Back keys perform the following action depending on your scanner model: a. 25" Models: HD2530: Open the lid and remove the pressure-platen as described under the section Maintenance – Cleaning (for models HD2530) and take the original out of the scanning area. Replace the pressure-platen and close the lid. b. 54", 42", 36" Models: Open the lid by pressing the lid lock buttons as described under the section Maintenance – Cleaning (for models HD5450, HD4250, HD4230, HD3650, HD3630) and take the original out of the scanning area. Close the lid. 3. Select the Soft-handling option in your scanning application. Feed the document again to scan.

Error message: Correction of Camera X (A, B, C, or D) failed	1.	. Your scanner is continuously monitoring its cameras. This error message often appears when the internal glass pla white background platen is dirty or smudged. Clean the scanning area, reboot the scanner and then complete maintenance steps (alignment and calibration) as described in the section <i>Maintenance</i> in this guide.				
	2.	If the problem persists after cleaning the scanner area - The problem could be caused by a loose object in the optical path. Remove any torn pieces of paper or other loose objects from the scanning area. Even the smallest loose objects will disturb the scanner's adjustment function.				
	3.	Summon your technical service provider if the problem persists.				
Error message: Stitching of Camera X/Y (A/B or B/C or C/D) failed	1.	Your scanner is continuously monitoring its cameras. This error message often appears when the internal glass plate or white background platen is dirty or smudged. Clean the scanning area, reboot the scanner and then complete the maintenance steps (alignment and calibration) as described in the section <i>Maintenance</i> in this guide.				
	2.	If the problem persists after cleaning the scanner area - The problem could be caused by a loose object in the optical path. Remove any torn pieces of paper or other loose objects from the scanning area. Even the smallest loose objects will disturb the scanner's adjustment function.				
	3.	Summon your technical service provider if the problem persists.				
Error message: Invalid Smart Card for this scanner type. Error message: No Smart Card found.	1.	Control that a Smart Card is in the Smart Card slot. See the section <i>Smart Card</i> in this guide for instructions on locating your scanner's Smart Card slot. Smart Card not inserted correctly. Control that the smart card contact side faces downwards and the card is inserted all the way in its slot. Shut down scanner power and restart to initialize with the smart card data.				
Error message: Unable to Adjust Camera	1.	Control that the scanner is set for <i>Normal</i> (lowest) media thickness. The scanner's pressure-platen must not be raised. Lower the original guide plate on both sides to let the scanner make its adjustments.				
	2.	If the thickness setting is/was Normal - there could be a loose object in the optical path. Remove any torn pieces of paper or other loose objects from the scanning area. Even the smallest loose objects will disturb the scanner's adjustment function.				
	3.	If the problem persists after controlling for loose objects in the optical path – the problem is often caused by an unclean or smudged internal glass plate or white background platen. Clean the scanning area, reboot the scanner and then complete the maintenance steps (alignment and calibration) as described in the section <i>Maintenance</i> in this guide.				
	4.	If the problem persists after cleaning the scanner area and all above possibilities have been attempted - summon your technical service provider.				

Check the One Touch setup entries in WIDEsystem. Click on the scanner icon to open WIDEsystem and select the One Application control keys (one touch) do not Touch tab. View WIDEsystem Help for instructions. work Check that the applications defined in the WIDEsystem One Touch setup entries are installed on your PC Make sure that the applications defined in the WIDEsystem One Touch setup entries are actually designed to work with (compatible with) your scanner's application control keys. See the application's documentation or contact the application software dealer. A power failure could interrupt an ongoing firmware upgrade process. The scanner will not run correctly after an interrupted Can't operate or contact scanner after firmware update process. Only part of the intended firmware may be loaded, rending the scanner inaccessible. You need Firmware upgrade failure. bring the scanner into firmware boot mode to reapply the firmware. 2. Restart the scanner. The scanner should start up in boot mode. If not, you can use the following panel function to force the scanner into boot mode. Turn the scanner ON so it starts its Init-Sequence (all LEDs on). Towards the end of Init-Sequence, the Power LED lights green while the other LEDs remain lighted, signaling that you can interrupt the self-test to force Firmware Boot mode. (o) • † o Σ 🔾 You have to activate the boot mode before the scanner moves into self-adjustment. Self-adjustment is started when the Wait LED lights yellow, the Power LED still lights green and all the other LEDs are off.) To activate boot mode, press and hold down the Power key. When the Power LED turns red and the other LEDs flash (see below), the scanner is in Firmware Boot mode and you can reapply the Firmware. (O) Ŷ * * Σ

Problems Related to the Scanning Results

Problem	Possible Causes and Remedies			
Not whole image scanned	 Check in your scanning application that your size settings are either for Auto detection or correspond to the size of the whole original. Check in your scanning application that you are loading the original correctly in relation to your choice of Center-loading or Side-loading. If you selected Side-loading in your application then the original must be fed into the side of the scanner starting from the 0 marking on the top ruler. If Center-loading was selected in the application then align the center of the original with the scanner's center arrow marking. 			
Stitching problems – Image sections misaligned (at points between the cameras - overlapping pixels)	 If scanning normal paper thin media – Remove the original from the scanner, turn power off and then on to reboot so the scanner runs its self-test procedure. The self-test includes camera-stitching correction. If scanning normal paper thin media and above procedure does not correct the problem – Remove the original from the scanner and run full scanner maintenance. If scanning thick media, thick stiff originals will rest on top of the scanner rollers and thus raise a small distance over the glass-plate. This can lead to stitching irregularities. In such cases, the stitching parameters will need to be modified. You can modify stitching parameters through your scanning application. See the section When Scanning in Thick Media Positions in this guide. Summon your technical service provider if the problem persists. 			
Edge distortion with thick originals	 Scanning thick stiff originals can give distortions when the front edge meets the exit rollers or the trailing edge leaves the entry rollers. To omit this, the leading and trailing edges are by default skipped when in one of the extended media thickness positions. Leading/trailing edge skipping can be turned off/on through the scanning application's setup dialogs. If you encounter edge distortion, control that the Leading/trailing edge skipping option is set in your application. 			

One or more thin vertical lines (in the direction of paper feeding) on the scan result, but not on the original drawing.

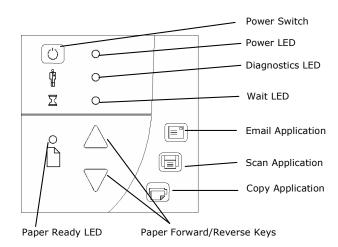
1. This is often caused by an unclean glass plate or unclean white background platen. Even a single spec of dirt in the wrong spot on the glass plate or background plate can apply a streak through your entire scan. To remedy, run a full scanner maintenance session – cleaning, alignment and calibration. The last two maintenance steps are also vital, as the scanner will have memorized dirt specs in previous calibrations and self-adjustments and you need to reset after dirt-removal.

Appendix A: Quick Overview of the Operator's Panel

The Panel and LED Indicators

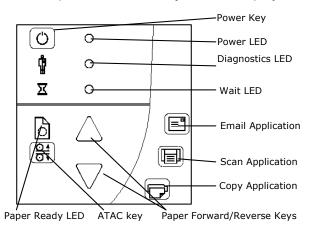
The panel consists of operation buttons and LED indicators. There are buttons for power ON/OFF, paper feeding, and triggering applications (one-touch). The LED indicator's function is to display scanner status in relation to its basic operations such as self-testing and media readiness. Operation of the buttons and interpretation of the LED indicator light patterns are described in this section.

Scanner Models: HD2530



Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

with ATAC (Automatic Thickness Adjustment Control) key



Power Control - Buttons and LED Patterns

The following table describes the panel's LED light patterns and what they mean. The illustrations marked "startup – phase 1 (2,3,4)" show how the Operator's panel will look (LED lighting patterns) starting from when you turn the Main power switch ON, through the self-test procedures and until the scanner is ready to scan.

NOTE: For simplicity, the illustrations below display a *Standard Panel* i.e., without an ATAC key. The LED behavior of the Power LED, Diagnostics LED and Wait LED, are identical for Standard and ATAC operator's panels

How it looks on scanner	What it means Turn the scanner power ON – First Time – Main Power ON		
	At back of the scanner, plug in the power cable and flip the main power switch to ON. The scanner starts the self-test procedure which starts with the Init Sequence (see next).		
(O) •	Init Sequence (startup phase 1)		
⊕	When you turn main power On, the scanner runs it initialization sequence. <i>ALL</i> the LEDs are lighted as shown in the illustration on the left.		
	At this point, panel input is disabled and you cannot begin scanning.		
	NOTE : When you power up through <i>Wake-up</i> , (by pressing the power key), this initialization sequence is skipped and the scanner goes directly to Self-Adjustment (startup-phase 3).		
0	Power LED Green (startup – phase 2)		
	Towards the end of Init Sequence, the Power LED will change to green while the other LEDs remain unchanged (lighted).		
	From here the scanner moves on to Self Adjustment (startup phase 3).		

	Self-Adjustment (startup –phase 3)
	On completion of the Init Sequence, the power LED (green) and the Wait LED (yellow) remain lighted while the others LEDs turn off. This indicates that the scanner is running its Self-Adjustment of light profiles, stitching and black/white points.
	NOTE: To maintain optimal conditions, the scanner runs new Self-adjustment procedures periodically during the day (without lighting the wait LED). If the Wait indicator blinks, the scanner needs to run Self-Adjustment but cannot (see below).
	Scanner Ready (startup – phase 4)
	When the Wait LED turns off, and only the Power LED is ON and lights green, self-adjustment is completed and the scanner is ready to scan.
	Wake-up / Sleep - Turn power ON/OFF with power key – normal use (with main power switch always ON)
(<u>(</u>)	With the outlet switch always ON, use the Power key to control scanner power. Hold down on the Power key to toggle power into Wakeup and Sleep modes.
Power ON (Wakeup)	The Power LED lights green when the scanner is ON (Wake-up) and red when power is OFF (Sleep). When you turn the scanner ON in this manner, it skips the init sequence and starts with Self-Adjustment as described above for startup phase 3.
	When in the power Wake-up/Sleep mode:
	The scanner can be manually powered up and down (wake and sleep) by pressing and holding down the power button or inserting a document for scanning. See Power , Wake/sleep and Adjustment.
Power OFF (Sleep)	The scanner can automatically be powered up and down (wake-up/sleep) by WIDEsystem's timer or idle time setting. See <u>Automatic Power functions</u>
0 *	Green Power LED blinking
	The green power LED will blink just before the scanner automatically powers off because its defined automatic Sleep time (in WIDEsystem) has been reached in the timer.
	If you are still using the scanner and want to cancel the timer controlled Sleep mode, press the power key until the LED stops blinking.
	You can at any time disable or change timer settings in WIDEsystem (see WIDEsystem on-line help for details).

	Wait LED blinking - Self-Adjustment required but not possible
ů O	If the Wait LED blinks (and the Diagnostics LED is off) the scanner needs to run Self-Adjustment but cannot. Self-Adjustment is necessary for maintaining optimal and stabile internal conditions.
	To solve this, any original in the scanner should be removed, and the pressure-platen should be set to the <i>Normal</i> position (i.e., not a thick media setting). A scan may be issued, but the quality will be compromised. When Self-Adjustment is again possible, the Wait LED stops blinking, but continues to be on until Self-Adjustment is completed. The scanner should be left alone while Self-adjustment is running.
	During Calibration – Wait LED lights
	This is normal. The Wait LED is on during Calibration to indicate that the original should not be removed or moved during the Calibration procedure.
\square \square	All panel input is prevented during basic calibration.
0	Diagnostics LED blinking – Error detected during Self-Test
	The Diagnostics LED shows the scanner's Self-Test result status. An unlit Diagnostics LED means that the scanner's Self-Test procedures encountered no errors.
	If the Diagnostics LED blinks, an error was discovered during Self-Test. Open WIDEsystem (double-click the scanner icon on your system tray) and select the Status tab to view additional information about the error.
	Both Diagnostic LED and Wait LED blinking – Maintenance needed
	Simultaneous blinking by both the Diagnostic LED and the Wait LED may mean that the scanning area needs cleaning and the cameras calibrated. See the section on "Maintenance" for instructions.
	If the Diagnostic and the Wait LEDs continue to blink after scanner maintenance, there may be camera position errors that require professional technical service.
V / P	

Media Control - Buttons and LED Patterns

Your panel contains LEDs and buttons for controlling the media you insert for scanning. The following basic functionality applies on all models:

- 1. The Paper Ready LED lights up when the media is inserted into the original's insertion slot and correctly positioned for feeding on a straight path. It lights green for normal documents and yellow for thick media scanning.
 - NOTE: See also this guide's sections on loading originals and Scanning Thick Media.
- 2. The media can then be moved into the start-scan position by pressing the Paper Forward Key or through automatic loading.
- 3. The Paper Ready LED will blink during scanning.
- 4. The media can be moved back for ejection by pressing the Paper Reverse key.

The following illustrations show the panel's media controls and LED patterns. The **HD2530** scanners and the **HD5450**, **HD4250**, **HD4250**, **HD4230**, **HD3650**, **HD3650**, **HD3630**, **HD2530** scanners differ slightly in relation to their panel media controls and are therefore described separately.

Scanner Models: HD2530

How it looks on scanner	Vhat it means		
\wedge	Paper Forward and Paper Reverse Keys		
	The Paper Forward Key will move the document into the start-scan position when manual loading is set in the scan application (see section on <i>Loading</i>).		
	If Auto-Load is set in your scan application, loading will occur automatically (without pressing the key) when the original enters the insertion slot.		
	Pressing the <i>Paper Forward Key</i> during scanning will stop the scanning process and continuously feed the original through the scanner for as long as the key is held down.		
	The Paper Reverse Key stops the current scanning process and reverses the original. The original will be fed backwards through the scanner for as long as the key is held down.		
	Paper Ready LED Green - Ready for Normal media		
	The Paper Ready LED lights green when normal thin media is positioned correctly in the insertion slot and stays green when the media is moved to the start-scan position.		
	From there, scanning can be controlled from the computer.		
	Paper Ready LED Yellow - Ready for Thick media		
	The Paper Ready LED lights yellow when thick media is positioned correctly in the adjusted insertion slot and stays yellow when the media is moved to the start-scan position.		
	From there, scanning can be controlled from the computer.		

	Paper Ready LED Blinks – (green or yellow) – Document is being scanned
	The Paper Ready LED blinks during scanning.
Z O	On completion of the scan, the Paper Ready LED will stop blinking. Scanning can then be repeated from the computer or terminated by ejecting the document from the scanner.
	The above behavior applies for both thin media scanning (green blinking) and thick media scanning (yellow blinking).
	Paper Ready LED Red – No Thick media detected
	The paper ready indicator will light red if the scanner is in a thick media setting (a raised pressure-platen) but the scanner does not detect the document.

Scanner Models: HD5450, HD4250, HD4230, HD3650, HD3630

These scanner models support Automatic Thickness Adjustment Control (ATAC). ATAC enables easy adjustment of the pressure-platen level for scanning thick media.



See also this guides section: Automatic Thick media adjustment.

Automatic Thickness Adjustment Control (ATAC) key

For both thin and thick media, the Paper Ready LED lights up when the media is inserted into the original's insertion slot and correctly positioned. The media can then be moved into the start-scan position by pressing the Paper Forward Key or through automatic loading. The Paper Ready LED will blink during scanning.

How it looks on scanner	What it means	
	Paper Forward and Paper Reverse Keys	
	The Paper Forward Key moves the drawing into the start-scan position for manual loading (see section on <i>Loading</i>).	
	If Auto-Load is set, loading will occur automatically (without pressing the key) when the original enters the insertion slot.	
	Pressing the <i>Paper Forward Key</i> during scanning will stop the scanning process and feed the original through the scanner while the key is held down.	
	The Paper Reverse Key stops the current scanning process and reverses the original. The original will be fed backwards through the scanner while the key is held down.	
	When the scanner is in Automatic Thickness Adjustment Control (ATAC) mode the paper forward and paper reverse keys become "pressure-platen up" and "pressure-platen Down" keys (see below).	
0	Paper Ready LED Green - Ready for Normal media	
• •	The Paper Ready LED lights green when normal thin media is positioned correctly in the insertion slot and stays green when the media is moved to the start-scan position.	
<u> </u>	From there, scanning can be controlled from the computer.	

0 •	Paper Ready LED blinks Yellow – Scanner in ATAC mode
<u>*</u> O <u> </u>	ATAC key
	When you press the ATAC key, you set the scanner in ATAC mode. The Paper Ready Key blinks yellow to indicate ATAC mode.
	The Paper Forward and Paper Reverse keys become "Pressure-platen Up" and "Pressure-platen Down" keys.
	Paper Forward and Paper reverse Keys become Up/Down keys
(O) •	Paper Ready LED Yellow - Ready for Thick media
	The Paper Ready LED lights yellow when the scanner is ready to scan thick media. The pressure-platen has been lowered and the media is positioned correctly in the scanner.
	The scanner goes automatically out of ATAC mode. The Paper Forward and Paper Reverse keys resume their normal functionality so you can move the thick original forwards and backwards in the scanner.
	Scanning can be controlled from the computer.
0	Paper Ready LED blinks – (green or yellow) – Media is being scanned The Paper Ready LED blinks during scanning.
	On completion of the scan, the Paper Ready LED will stop blinking. Scanning can then be repeated from the computer or terminated by ejecting the media from the scanner.
	The above behavior applies for both thin media scanning (green blinking) and thick media scanning (yellow
	blinking).
0	Paper Ready LED Red – No Thick media detected
	The paper ready indicator will light red if the pressure-platen is in a thick media setting (a raised pressure-platen) but no media is detected in the scanner.

Application Control – One Touch Scan

Scanners: HD5450, HD4250, HD4230, HD3650, HD3630, HD2530

You must install *WIDEsystem* software, scan applications and setup button definitions before the one-touch buttons can become active. Your PC must be turned on and running.

Descriptions of the key's intentional functionality follow below. You can however, assign applications with other functions to any of the Application Control buttons. Refer to WIDEsystem help for instructions on configuring the buttons.



Email Application

This key is for activating an application that scans and prepares images for sending via E-mail from the scanner.



Scan Application

Key for activating the scanning application installed on your PC so as to trigger a scan of the document currently loaded in the scanner.



Copy Application

This key is for activating a scan-to-copy application installed on your PC.

Applications you can use with the buttons

The applications you wish to use with the buttons must be designed to recognize your scanner device and the signals sent from its buttons so that when a button is pressed, a scan is initiated and the result is loaded into the application triggered. Any application you assign to a button must be specially programmed in order to work in this manner. Check your application's documentation to verify its functionality with your scanner's one-touch-scan buttons.

Compatible applications will normally be scan/copy application developed by your scanner manufacturer. However, you can also find third party applications that will work with the scanner one-touch-scan buttons. See your scanner manufacturer's website for Information on its own and party scan/copy applications.

B: Safety Instructions

Appendix B: Important Safety Instructions

Read all of these instructions and save them for later use. Follow all warnings and instructions marked on the scanner.

- **A.** Do not place the scanner on an unstable surface, stand, cart or table. Serious damage can be caused if the unit falls.
- B. For cleaning, do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- C. Before cleaning or replacing any user-replaceable parts, be sure to turn the scanner power off and disconnect the power plug.
- **D.** The scanner should be operated from the power source type indicated on the marking label. If you are unsure of the type of power available, consult your dealer or local power company.
- **E.** The scanner is intended for use on IT, TT and TN power distribution systems, and is equipped with a three-wire grounding type plug. This plug will fit only into a grounding-type power outlet. This is a safety feature which relies on building installation. If you are unable to insert the plug into the outlet contact your electrician to replace your obsolete outlet. Do not defeat or ignore the purpose of the grounding-type plug.
- F. Do not allow anything to rest on the power cord. Do not locate the scanner where persons will walk on the cord.
- **G.** If an extension cord is used with the scanner, make sure that the total ampere ratings of the products plugged into the extension cord does not exceed the extension card ampere rating. Make sure that the total rating of all products plugged into the wall outlet does not exceed 15 amperes.
- H. Slots or openings in the cabinet at the back or bottom are provided for ventilation. This ensures reliable operation of the product and protects it from overheating. These openings must never be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar soft surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
- I. Never push objects of any kind into the scanner through cabinet slots since they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock. Avoid any possibility of spilling liquid of any kind on the scanner.
- **J.** Do not attempt to service the scanner yourself. Opening or removing those covers requiring tools may expose you to dangerous voltage points or other risks. Refer all servicing in those compartments to authorized service personnel.
- K. Unplug the scanner from the wall outlet and refer servicing to authorized service personnel under the following conditions:
 - When the power cord or plug is damaged or frayed.
 - If liquid has been spilled into the scanner.
 - If the scanner has been exposed to rain or water.
 - If the scanner does not operate normally when operating instructions are followed then adjust only those controls covered by the instructions in this manual. Improper adjustment of controls other than those mentioned in this manual may result in permanent damage and will at best require extensive work by a qualified technician to restore this product to its normal operation.
 - If the scanner has been dropped or the cabinet has been damaged.
 - If the scanner exhibits a distinct change in performance, indicating a need for service.

C: Regulations

Appendix C: Regulations

FCC Regulations

USA

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution: Pursuant to Part 15.21 of the FCC Rules, any changes or modifications not expressly approved by the manufacturer may cause harmful interference and void the use's authority to operate the equipment.

CE Regulations

EU

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

VCCI Regulations

Japan

This equipment has been tested and found to comply with the limits for a Class A product according to Agreement of VCCI:2008 (CISPR 22).

C: Regulations

Toxic or Hazardous Substances or Elements

Part Name Lead (Pb) 铅	dous Substances and Elements 有毒有害物质或元素				
	Mercury (Hg) 汞	Cadmium (Cd) 镉	Hexavalent Chromium (Cr (VI)) 六价铬	Polybrominated biphenyls (PBB) 多溴联苯	Polybrominated diphenyl ethers (PBDE) 多溴二苯醚
0	Х	0	0	0	0
_	Lead (Pb) 铅	Lead Mercury (Pb) (Hg) 汞	Lead Mercury Cadmium (Pb) (Hg) (Cd) 镉	Lead (Pb) Mercury (Hg) Cadmium (Cd) Hexavalent Chromium (Cr (VI)) 铅 汞 镉 **\frac{1}{2} \frac{1}{2}	Lead (Pb) Mercury (Hg) Cadmium (Cd) Hexavalent Chromium (Cr (VI)) Polybrominated biphenyls (PBB) 铅 汞 (Gr (VI)) 六价铬 多溴联苯

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.

表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006标准规定的限量要求。

(Enterprises may further provide in this box technical explanation for marking "X" based on their actual conditions.

企业可在此处根据实际情况对上表中打"X"的技术原因进行进一步说明。)