



TellerScan® TS500 User Manual

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Table of Contents

Declaration of Conformity.....	4
About the TellerScan TS500	5
FCC - Class B	5
Industry Canada - Class B	5
TellerScan TS500 System Requirements	5
TellerScan TS500 Included Equipment.....	6
External View of the TellerScan TS500	7
Rear View of the TellerScan TS500.....	7
TellerScan TS500 Initial Setup.....	8
New User Notice	8
Cable Connections and Scanner Placement	8
Installing the Printer Ink Cartridge.....	9
Installing the Printer Ink Cartridge (continued).....	10
Testing the Scanner	11
Installing the Optional USB Driver.....	11
Installing the TS500 Test Software	11
LED Status Indicator and Smart Button Operation	12
LED Status Indicator and Smart Button Operation (continued)	13
AccuTrac™ Plus Feed System	13
Loading Items into the Scanner	14
ID Card Scanner	15
Magnetic Stripe Reader	15
Accessing the TellerScan TS500.....	16
Accessing the Internal Document Path	16
Accessing the Center Cover	16
TellerScan TS500 Routine Maintenance	17
TS500 Maintenance Overview	17
Inspecting the TS500 Document Track.....	17
Cleaning the TS500 Camera.....	17
Cleaning the TS500 Drive Rollers Using a Cleaning Card.....	18
Rotating and Replacing the Discriminator Pad	19

TellerScan TS500 Troubleshooting.....	20
Connectivity.....	20
Document Feeding Problems.....	20
Clearing Jams	20
Image Quality	20
MICR Errors	20
TellerScan TS500 Frequently Asked Questions	21
Is Using a Check Jogger Recommended?.....	21
What is the Typical Cleaning Interval?	21
What is the LED Status Light Sequence?	21
What About Avoiding Electromagnetic Interference?	21
How Long Does the Ink Cartridge Last?	21
What is the Entry Pocket Capacity?	21
What is the Exit Pocket Capacity?	21
How Many Checks Per Minute Should My TS500 Scan?	21
TellerScan TS500 User Replacement Parts and Accessories	22
TellerScan TS500 Specifications.....	23
Digital Check Contact Information	24

Declaration of Conformity

Declaration of Conformity

Application of Council Directive: 2014/30/EU**Standards To Which
Conformity Is Declared:**

EN55022: 2010 Class B

EN61000-3-2

EN61000-3-3

EN55024: 2010

EN61000-4-2

EN61000-4-3

EN61000-4-4

EN61000-4-5

EN61000-4-6

EN61000-4-8

EN61000-4-11

Manufacturer's Name:

Digital Check Corp

Manufacturer's Address:10231 Trademark Street
Rancho Cucamonga, CA 91730
909-945-5106**Equipment Description:**

Check Scanner

Equipment Class:

ITE - Class B

Model Numbers:

TELLERSCAN TS500

*I the undersigned, hereby declare that the equipment specified above,
conforms to the above Directive(s) and Standard(s).*

RANCHO CUCAMONGA, CA USA
Place:

[Signature]
Signature:

Glen EMBURY
Full Name:

EXEC V.P. - OPS
Position:

About the TellerScan TS500

The TellerScan TS500 is an easy-to-use, high-volume check scanner that automatically scans the front and/or back side of checks and reads the Magnetic Ink Character Recognition (MICR) code line. The images and data are then transmitted through a Universal Serial Bus (USB) interface to the PC. The TS500 has an automatic feeder that handles up to 100 items, features a 120-item exit pocket, and also features an ID card scan slot. The TS500 has an optional Magnetic Stripe Reader (MSR).

The TS500 is rated at up to 200 documents per minute (DPM) scanning speed. Speeds can vary based on the length of the documents being scanned, the application settings and the PC performance or configuration.

The TS500 features a smart button that is used for powering the unit on/off, pausing scanning, clearing errors, and starting/stopping the cleaning mode.

FCC - Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada - Class B

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus,” ICES-003 of the Department of Communications.

TellerScan TS500 System Requirements

Minimum	Recommended
2.4 GHz Dual-Core or faster processor 2 GB RAM	2.8 GHz Dual-Core or faster processor 4 GB RAM or more
2 GB free disk space	10 GB free disk space
Windows 7, 8, 8.1 or 10	Windows 7, 8.1 or 10 (64-bit)
USB 2.0 port	USB 2.0 port
DCC API 16.02	DCC API 16.02 or newer

TellerScan TS500 Included Equipment

The TellerScan TS500 includes the following equipment in the box:

- ✓ TellerScan TS500 check scanner



- ✓ External power supply and cord – Digital Check part number: 154021-01
100V-240V 50/60Hz voltage sensing



- ✓ USB 2.0 cable (10 ft) – Digital Check part number: CA0049

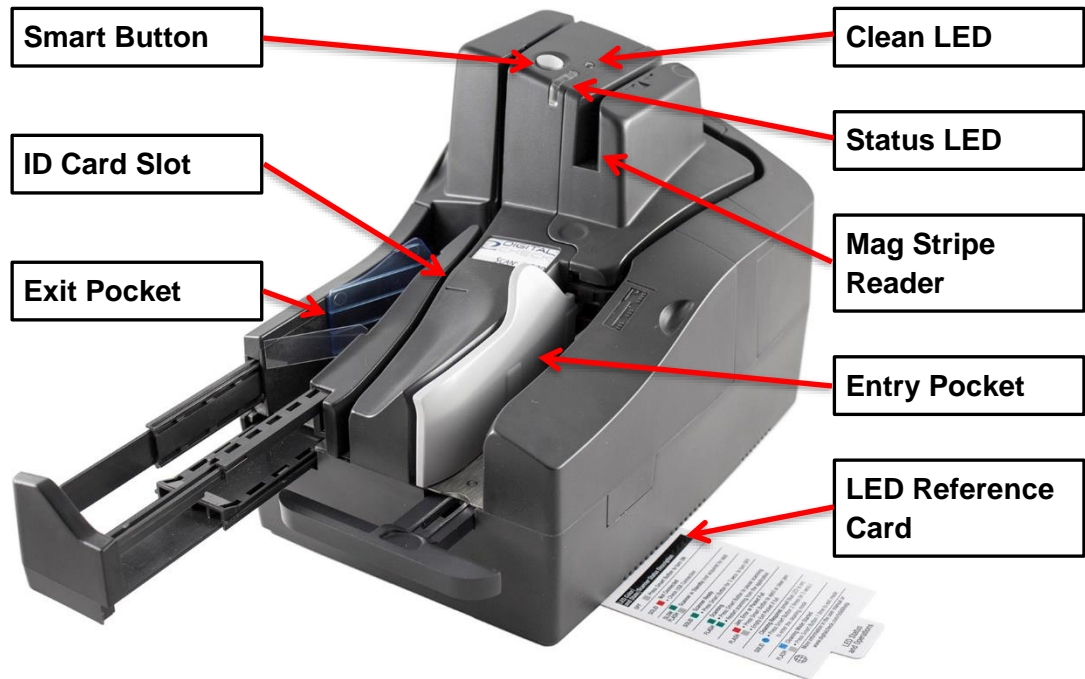


- ✓ Ink cartridge – Digital Check part number: MS0083

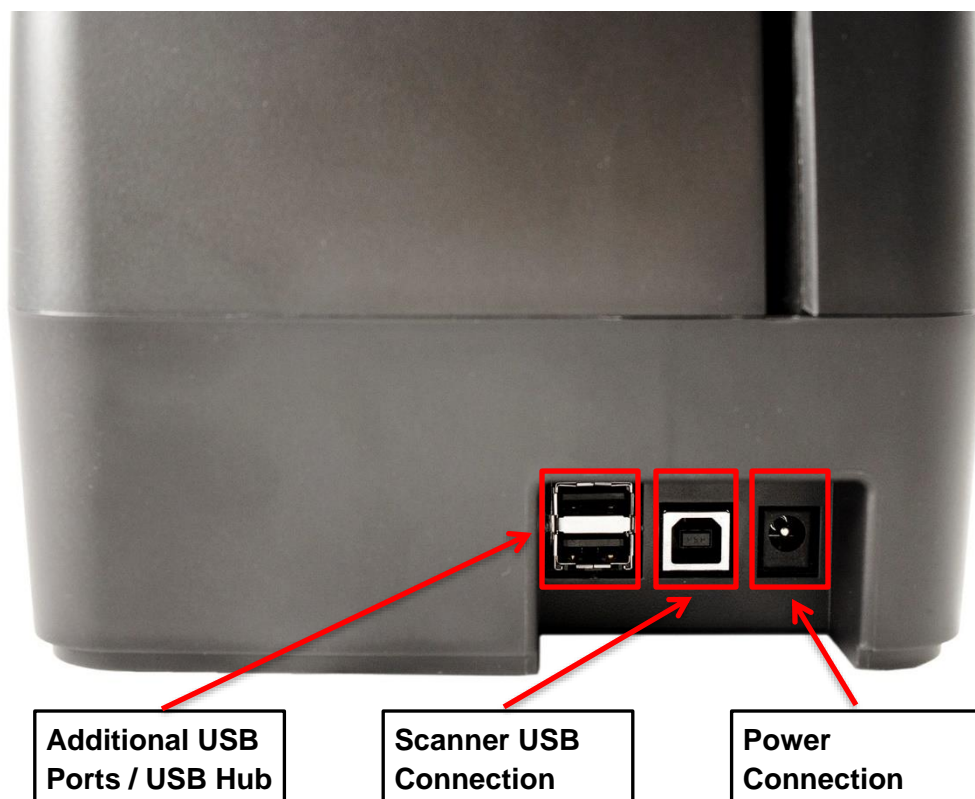


TellerScan TS500 Features

External View of the TellerScan TS500



Rear View of the TellerScan TS500



TellerScan TS500 Initial Setup

New User Notice

PLEASE NOTE: Digital Check does not provide scanning software. Do not connect the USB cable from the scanner to your PC prior to installing the drivers or the scanning application / software. Please contact your bank or other solution provider for further assistance with installing the driver or getting the scanning software set up or installed.

Digital Check only provides an optional driver installation utility and testing software. See the *Installing the Optional USB Driver* section or the *Installing the TS500 Test Software* section for additional information.

Cable Connections and Scanner Placement

Note: Do not connect the USB cable from the scanner to your PC before installing the drivers or the scanning application / software.

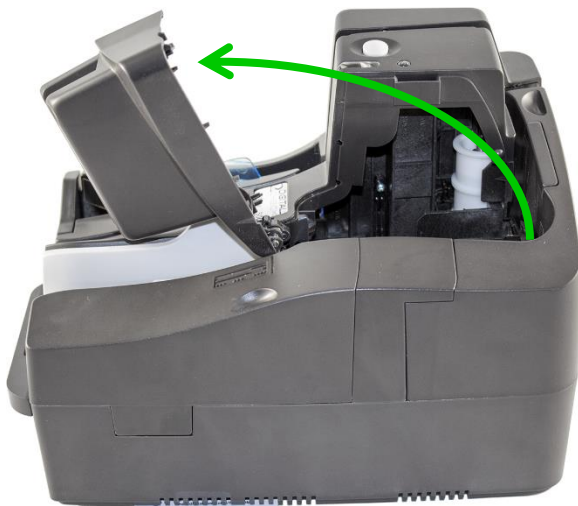
- ✓ When handling the TS500, grip it with two hands on the front and back of the scanner.
- ✓ Place the unit on a flat surface near the PC away from direct light sources such as spotlights or desk lamps. Place the scanner in a position that is at least 6 inches away from any power supply, other electronic devices, pneumatic tubes at the teller window, etc. to avoid magnetic interference with the MICR read head.
- ✓ Connect the power cord to the power supply, and then plug the connector into the rear power connection port on the scanner.
- ✓ Connect the USB cable by plugging it into the rear USB connection port.

Installing the Printer Ink Cartridge

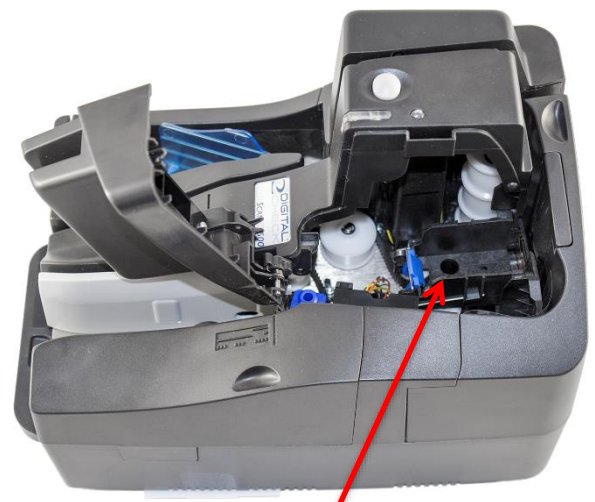
Note: Follow these instructions when installing the ink cartridge for the first time, or when replacing an empty cartridge.

Step 1: Power off the scanner by pressing and holding the Smart Button for 3 seconds.

Step 2: Open the center cover by lifting it up vertically and rotating it into the open position as shown. The hinge will keep the cover in place. Do not force the cover past the natural open position, lift off vertically by pulling up or on the cover or remove the cover.



Open Center
Cover



Ink Cartridge
Platform

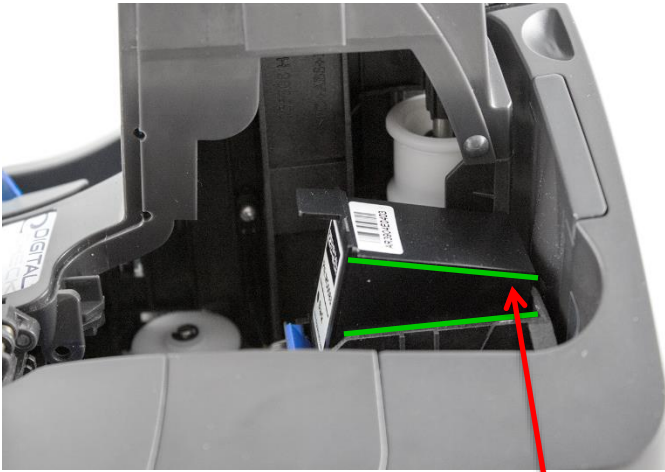
Step 3: Open the ink cartridge pouch and remove the protective tape covering the ink nozzles. Be careful not to touch the ink nozzle with your fingers or allow it to come in contact with anything else.



Remove Tape
Seal

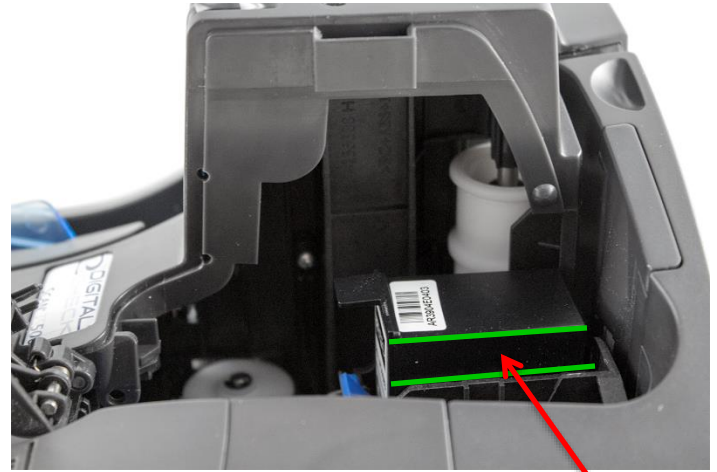
Installing the Printer Ink Cartridge (continued)

Step 4: Insert the nozzle end of the cartridge into the platform while keeping the end of the cartridge tilted slightly upward. Push down on the tab end side of the cartridge until it clicks twice and snaps into position.



Insert the ink cartridge at a slight angle

Nozzle end at a slight angle



Push down on the cartridge to fully seat

Correctly inserted

Step 5: Verify that the cartridge is properly installed. The cartridge should be at a parallel angle with the platform when fully seated and in position.

Step 6: Close the center cover by pressing down on both the front and back of the cover at the finger indents.



Testing the Scanner

Installing the Optional USB Driver

PLEASE NOTE: Digital Check does not provide the check scanning or bank deposit software. Do not connect the USB cable from the scanner to your PC prior to installing the drivers or the scanning application / software. Please contact your IT department, solution provider or the bank's helpdesk for further assistance with installing the driver or getting the scanning software set up or installed.

Digital Check provides only an optional driver installation utility and testing software that can be used for troubleshooting, verifying the connection to the PC and to test the various scanner functions.

Note: The USB driver and test software for the TS500 need to be acquired from Digital Check support. Please call support at: (1) 847-446-2285 or email: support@digitalcheck.com

Once you have the USB driver, use the following steps to complete the installation.

Step 1: Do not connect the USB or power supply cables yet. Download or run the TellerScan USB Driver installation file from the link provided by Digital Check support.

Step 2: Once downloaded / saved to a local drive, double-click on the TellerScanDriver.exe file to start the installation sequence. Follow the on-screen steps to complete the installation.

Step 3: Connect the scanner to the PC using the USB cable, and plug in the power supply to the scanner and electrical outlet.

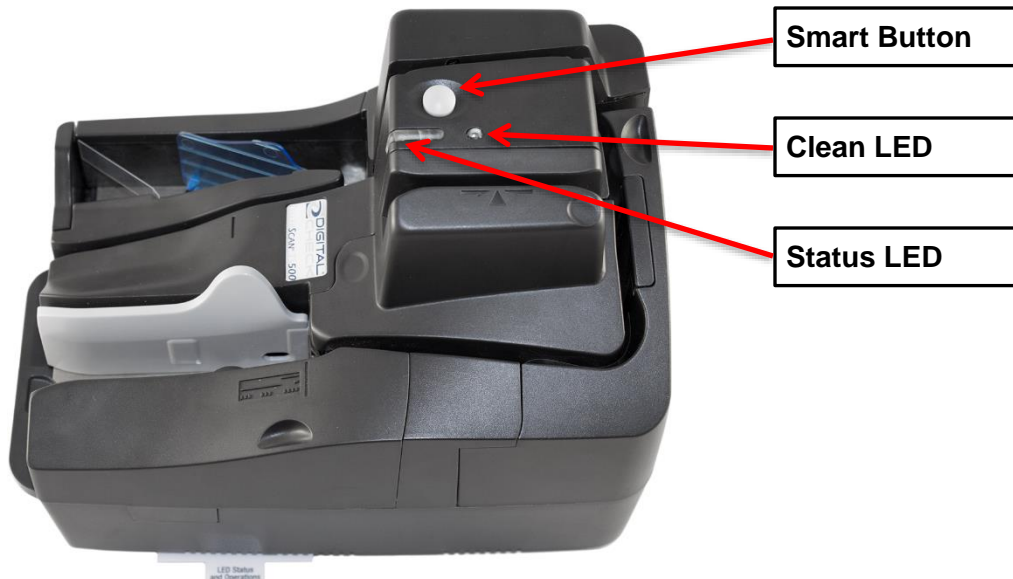
- ✓ Windows should now detect a new hardware device.
- ✓ The scanner is ready to be used with a scanning application or a Digital Check test software.

Installing the TS500 Test Software

The Digital Check test software ("ScanLiteENG") is a basic utility that allows the user to scan and view images, test the various scanner functions, verify the sensor status and more.

Note: Please call support at: (1) 847-446-2285 or email: support@digitalcheck.com to acquire the ScanLiteENG test software. The instructions for installing and enabling the test software will be included with the installation file.

LED Status Indicator and Smart Button Operation



Off or No LED: Press Smart Button once to turn on.

Note: To turn off, press and hold the Smart Button.



Solid Red LED: Scanner is not connected to computer. Check and reinsert both ends of the USB cable connecting to the PC and into the scanner, and verify that the PC is turned on.



Slowly Flashing Green LED: Scanner is in standby mode. This is the default state when an application is not controlling the scanner or has not yet acquired the scanner.



Solid Green LED: The scanning application has successfully acquired the scanner and is ready to be used.



Solid Orange LED: An item is in the entry pocket and waiting for the scanning process to begin.



LED Status Indicator and Smart Button Operation (continued)

Flashing Green LED: Scanning in progress.



Flashing Red LED: Indicates that the exit pocket is full, a scanning error has occurred, or that an item has stopped in the path



Solid Blue Clean LED: Cleaning is required. A Digital Check cleaning card is needed to clean the scanner. See the [Cleaning the TS500 Drive Rollers Using a Cleaning Card](#) section for additional information on how to clean the TS500 scanner.

Press the Smart Button 3 times in a span of 3 seconds to start the scanner's cleaning mode.



AccuTrac™ Plus Feed System

Note: Only for scanners that have the factory installed AccuTrac Plus feed system.

AccuTrac Plus can be turned on and off. Changing this setting requires that the TS500 is currently connected to a scanning application – Digital Check's test software or the user's banking software. Ensure that the entry pocket is empty before adjusting this setting.

- **Enable:** Press the Smart Button twice. The LED light will blink orange.
- **Disable:** Press the Smart Button twice. The LED light will blink green.

Loading Items into the Scanner

The TS500's automatic feeder can handle up to 100 items at a time. Please follow the steps below to ensure proper feeding.

Step 1: Slide out the entry and exit trays to expand the length of the trays to accommodate larger or business size checks. Remove all rubber bands, staples, paper clips, etc. Straighten any bent corners or excessively wrinkled documents.

Step 2: Align / jog the items to prepare them for scanning.



Step 3: The leading and bottom edges of items should be aligned. Place the items by sliding them into the entry pocket with the front of the item facing out and away from the scanner. Slide the items forward until they reach the line indicated on the scanner cover and the status LED turns orange.



ID Card Scanner

ID Cards: ID cards should be inserted into the ID card slot facing the exit pocket. Insert the ID card into the scanner and up to the indicated line on the cover and then begin the ID scan process.



Correctly inserted

Magnetic Stripe Reader

Magnetic Stripe: Swipe the card with the magnetic stripe facing the arrow towards the reader.

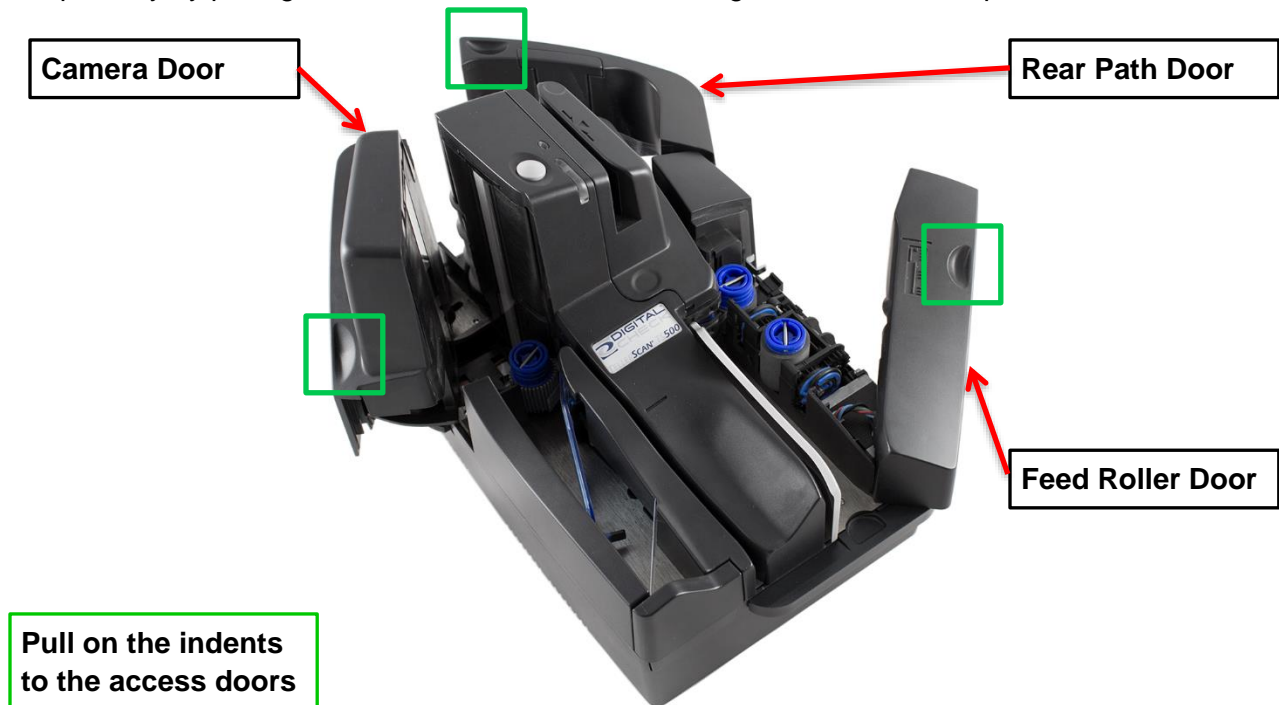


Magnetic stripe
should face the arrow

Accessing the TellerScan TS500

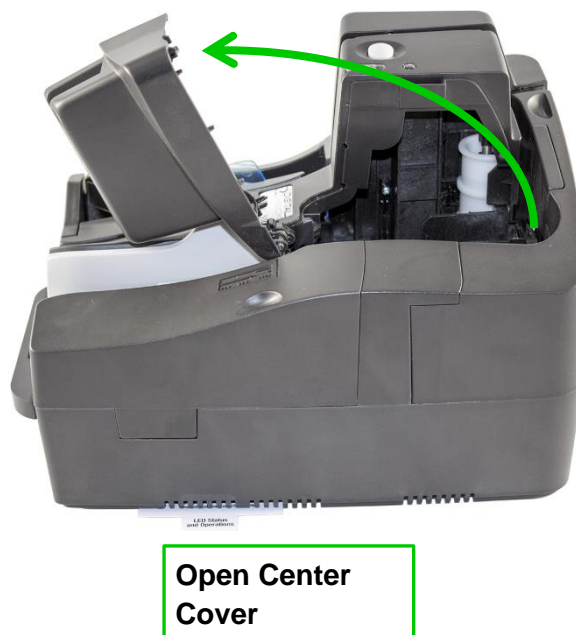
Accessing the Internal Document Path

The TS500 has three access doors: the camera door, rear path door, and feed roller door. These can be opened separately by pulling on the indent on each door. This gives access to the path.



Accessing the Center Cover

The TS500 center cover can be lifted up and hinged towards the front of the scanner. This gives access to the ink cartridge platform and discriminator pad.



TellerScan TS500 Routine Maintenance

TS500 Maintenance Overview

Over time, ink, dirt and dust particles will collect on the scanner rollers and in the document track. Therefore, it is necessary to clean these areas to ensure reliable performance.

The Clean LED on the scanner will light up blue when the typical cleaning interval is reached. Use a Digital Check cleaning card to clean the scanner rollers. See the [Cleaning Process](#) section for additional information.

Inspect the quality of the captured images on a regular basis. If the image is affected by lines, streaks, or smudges etc., the camera glass should be cleaned.

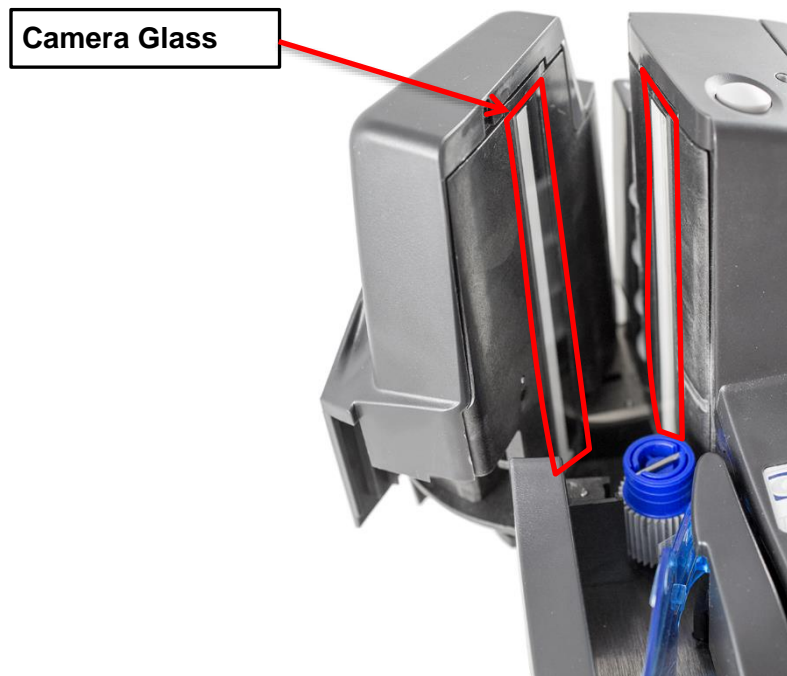
Inspecting the TS500 Document Track

In addition to routine drive roller cleaning, a periodic inspection of the entire document track area is also recommended. Remove any staples, paperclips, debris etc. that might have accumulated during use.

Use a can of compressed air to blow out the document track on a regular basis. Starting from the center of the path by the ink cartridge platform, blow the dust out toward the entry and exit pockets

Cleaning the TS500 Camera

To clean the cameras, use a Digital Check cleaning swab or a clean, lint free cloth dampened with water to clean the camera glass. Avoid using paper towels or napkins that leave dust particles on the glass. Be careful not to scratch the glass when cleaning or accessing the camera.



Cleaning the TS500 Drive Rollers Using a Cleaning Card

Use the Digital Check scanner cleaning cards (PN: IS0033 - available at store.digitalcheck.com) for routine cleaning maintenance.

Note: In order to maintain optimum performance, it is recommended to use a cleaning card after every 10,000 item scans. This process takes less than two minutes to complete. It is advised to work out a schedule that allows regular cleanings to be performed.

Step 1: Press the Smart Button three times in a span of three seconds to start the scanner's cleaning mode.

Step 2: Slide the cleaning card forward until it reaches the line indicated on the scanner cover. The scanner will begin the automated cleaning process.



Step 3: The scanner will automatically scrub the feed rollers against the cleaning card and then feed the card through the scanner. Once fed through, remove the cleaning card from the exit pocket and place it back in the entry pocket. The scanner will repeat this step two more times. This is one complete cycle, and the scanner will run through three complete cycles before finishing.

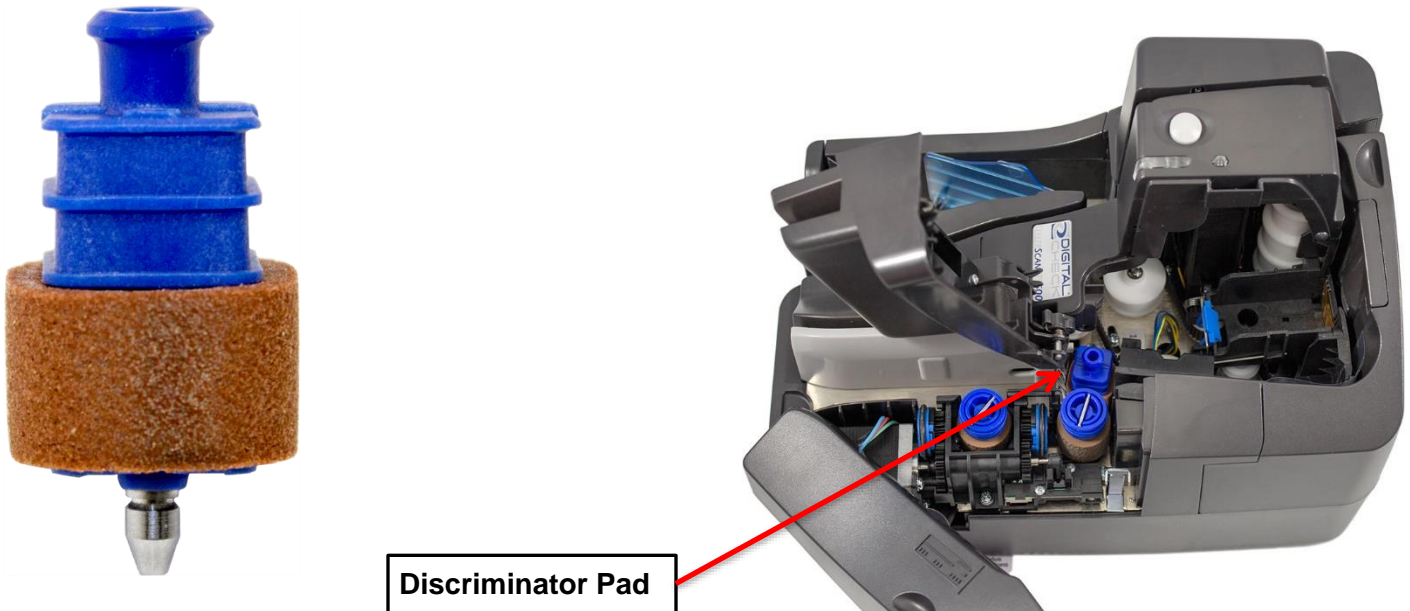
Step 4: Press the Smart Button one time to exit the cleaning mode and wait 60 seconds for the cleaning for the cleaning fluid to dry from the scanner and for the Clean LED to turn off.

Rotating and Replacing the Discriminator Pad

Note: The discriminator pad is user replaceable. If the pad is worn on one surface, it can be rotated to an unworn side. If all sides of the pad are worn, it can be replaced. This is typically only needed for scanners that have been in service for longer periods of time, or for teller windows and higher-volume remote deposit settings. (PN: 155177-01 - available at store.digitalcheck.com)

Step 1: Open the center cover and the feed roller door to provide access to the discriminator pad. See the [Accessing the TellerScan TS500](#) section for additional information.

Step 2: Lift or pull up on the discriminator pad to remove. There are no tools required for removal.



Step 3: Rotate the pad to an unworn side. If all sides of the pad are worn replace it with a new discriminator pad. Reinsert the pad into the scanner, push down completely, and close the center cover and feed roller door.



TellerScan TS500 Troubleshooting

Connectivity

Status LED is not lit:

- Check for a green light on the power supply. Reseat all power connectors. Press the Smart Button on the scanner to turn on.

Status LED is solid red:

- The USB cable is not connected to the PC, or the port is powered off. Unplug and reconnect the USB cable or try a different USB port on the PC.

Status LED is slowly flashing green:

- Scanner is in standby mode waiting to be acquired by the application. If the application is unable to acquire the scanner, check the status of the USB driver.
- Device driver problem – Open Windows Device Manager and look at the “Universal Serial Bus Controllers” section.
 - If no driver is found it will show “USB 2.0 Hub” as the device.
 - If an older Digital Check driver is found, it will show “USB 2.0 Hub” and under “Other Devices” it will show “TS500”.
 - If the correct driver is found it will show “TellerScan”.

Document Feeding Problems

The TS500 features an auto-feeder and does not require any user adjustments. If feeding problems occur, check the documents for bent or folded edges, and debris in the scanner document track. Ensure that all items have been properly jogged / aligned and inserted correctly. If feeding problems are still experienced, try cleaning the drive rollers. See the [*Cleaning the TS500 Drive Rollers*](#) section for additional information.

It might also be necessary to rotate the discriminator feed pad and retest.

Clearing Jams

If a jam occurs, the paper path must be cleared. To do this, try to advance the jammed document by pressing the “Eject” button in the scanning application, if available. If the document does not exit the track, grab the document with both hands and carefully wiggle the document back and forth while lifting up on it. See the [*Accessing the TellerScan TS500*](#) section for additional information on how to open and access the scanner.

Image Quality

If you notice either streaking or fading on the images, the camera glass might require cleaning. See the [*Cleaning the TS500 Cameras*](#) section for additional information.

MICR Errors

Confirm that the document has known working MICR ink/toner. If MICR errors are still occurring, verify that the TS500 power supply or another device’s power supply is 6 or more inches away from the scanner. Next, inspect the MICR assembly for debris, particularly metal objects. If no debris is found, inspect the assembly itself for damage or incorrect position or wiring.

Drive-up teller pneumatic tubes and static buildup can also cause MICR errors; verify that the scanner is at least 6 inches away from these types of devices as well.

TellerScan TS500 Frequently Asked Questions

Is Using a Check Jogger Recommended?

Yes, to provide consistent alignment of documents, increase productivity and to reduce operator fatigue. Digital Check recommends using our MJ1000 Check Jogger. (PN: 130600 – available at store.digitalcheck.com)

What is the Typical Cleaning Interval?

The recommended cleaning interval for the TS500 is approximately every 10,000 item scans. See the *[Cleaning the TS500 Drive Rollers](#)* section for additional information.

What is the LED Status Light Sequence?

The proper LED sequence is for the LED to turn red when the power supply and USB cables are connected to the scanner and to an outlet and the PC. This is followed by the LED turning green once the application or scanning software is running and detects the scanner. If the LED does not turn red, check the USB and power supply cable connections and the power source.

What About Avoiding Electromagnetic Interference?

Keep the TS500 power supply and others, small desk fans, pneumatic tubes at teller windows or similar devices 6-12 inches away from the scanner to keep them from interfering with the (MICR) magnetic read head.

How Long Does the Ink Cartridge Last?

Once opened, the practical life of the ink cartridge is 6-12 months depending on usage and environment. However, the rated character yield on the ink cartridge is between 5-7 million characters. Do not shake or drop the cartridge; this can cause printing to fail. Digital Check recommends keeping a spare cartridge available.

What is the Entry Pocket Capacity?

The entry pocket can accept up to 100 standard checks in good condition at a time.

What is the Exit Pocket Capacity?

Up to 120 standard checks in good condition at a time can be stacked in the exit pocket.

How Many Checks Per Minute Should My TS500 Scan?

The TS500 has a rated throughput speed of up to 200 documents per minute (DPM). If the AccuTrac Plus feed system is enabled, then speeds up to 110 DPM can be achieved. Actual throughput will vary depending on the PC configuration, physical size of the items being scanned, simple or complex endorsement and the speed of the application.

TellerScan TS500 User Replacement Parts and Accessories

DESCRIPTION	PART NUMBER	
Feed Roller	155102-03	
Discriminator Pad	155117-01	
Ink Cartridge	MS0083	
USB 2.0 Cable (10 ft)	CA0049	
Power Supply	154021-01	
Cleaning Cards	IS0033	

TellerScan TS500 Specifications

Unit Size:

Height: 7.45" 18.92 cm)
Width: 6.59" (16.73 cm)
Length: 9.64" (24.48 cm)
Weight: 6.10 lbs. (2.76 kg)

Document Capacity:

Entry Pocket (Check Feeder): Up to 100 items
Exit Pocket: Up to 150 items

Document Handling:

Document Height: 2.0" - 6.0" (50.8 - 152.4 mm)
Image Capture Height: Up to 4.17" (106 mm)
Document Length: 3.25" - 9.5" (82.55 - 241.3 mm)
(Up to 35.0" in Paper Tape Mode using DCC API)
Document Weight: 16 - 28 lb. bond (60 - 105 gsm)
Document Thickness: 0.0032" - 0.0058" (0.081 - 0.147 mm)
ID Cards must conform to ISO/IEC 7810 standard
(ID-1 Size and NON-Embossed)

In-Line MICR Recognition:

(Magnetic Ink Character Recognition) for E13B
(North America) and CMC7 (Europe)
Optical Character Recognition to enhance MICR
Read, further enhanced using DCC's Best Read™
API function

Throughput:

Up to 200 documents per minute

Standard Interface: Standard USB 2.0

DCC API Requirements:

DCC API 16.02 or newer

Supported Operating Systems:

Windows® XP, Windows Vista® (32/64 bit),
Windows 7® (32/64 bit), Windows 8® (32/64 bit),
Windows 10® (32/64 bit)
Mac OS (Contact Digital Check Technical Support
for specific versions supported)
Linux (Contact Digital Check Technical Support for
specific versions supported)

Electrical: Power consumption: 60 Watts

Input Voltage: 100 to 240 VAC, 50/60 Hz

Separate Standard Power Supply: Auto sensing
for voltage

Product Warranty: 1 year

Mean Time To Repair (MTTR): 15 minutes

Environmental:

Operating Temperature: 60° - 90° F (15° - 32° C)

Operating Humidity: 35 - 85% non-condensing

Certifications:

Safety: UL, cUL, CE

FCC: Class B

Industry Canada: Class B

EMC: IEC CE

Efficiency: CEC IV 115V - Power Supply

RoHS Compliant

Digital Check Contact Information

Digital Check Corp.

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Visit us at
www.digitalcheck.com

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- ✓ **Additional Product Information**
- ✓ **Technical Support and More**