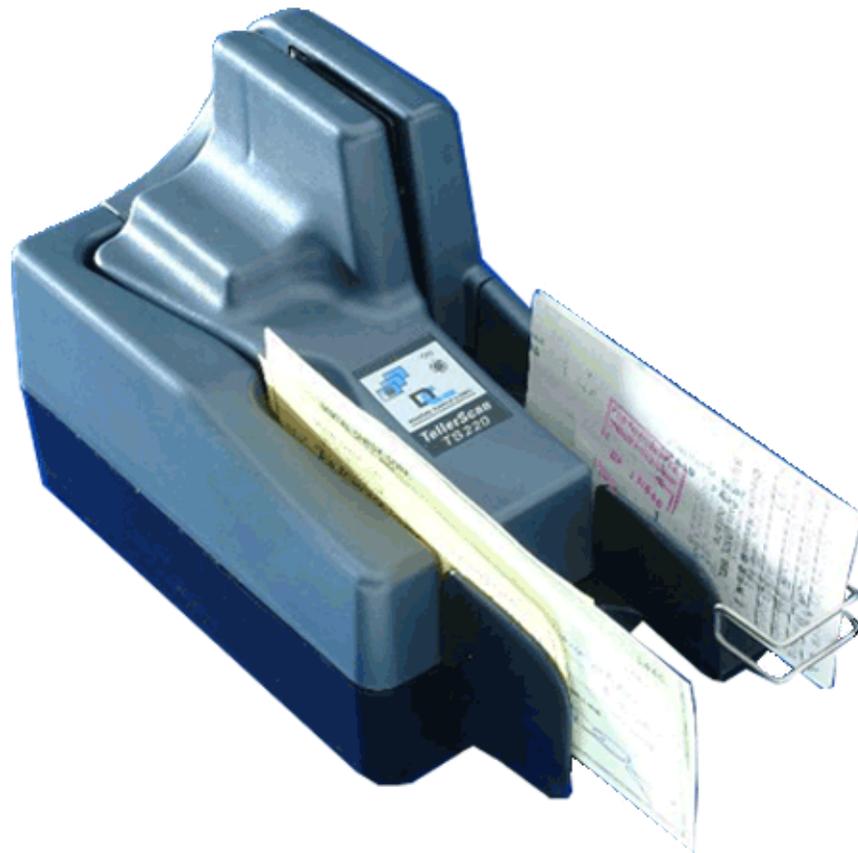




NCR 7728-215x/23xx (TS215/230)

Customer Installation and User Guide



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May 2006

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To maintain the quality of our publications, we need your comments on the accuracy, clarity, organization, and value of this book.

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Page No.	Remarks
All	New NCR edition, including service and repair options



Welcome to the Digital Check /NCR 7728 System

Digital Check is a leading provider of branch and teller scanners worldwide. DCC continues to introduce new check scanning products to meet the growing worldwide demand for distributed capture by integrating the best US and European technologies.

What comes with the Digital Check System?

The shipping box contains:

- Digital Check device
- a cable to connect the device to your PC
- a modular power supply for the device
- an Ink-Jet Cartridge (if the device includes a printer)
- support paperwork (see Support Paperwork below)

Caution: Please retain your shipping box for warranty returns.

If the Digital Check device uses a SCSI interface, you will receive a SCSI cable and a SCSI Interface card that will need to be installed in your PC. NCR provides an installation service if you require assistance. If the Digital Check device uses a USB interface, you will receive a USB cable.

Note: Additional User Guides are available from NCR Information Products Publishing. See <http://www.info.ncr.com/eHome.cfm> to obtain copies.

Support Paperwork

The shipping box may contain a Support Document from your Headquarters Bank Help Desk, or a Support Document from your Sales Organization. For telephone support you should first contact the Help Desk within your Headquarters Bank, or call the NCR Care Center at 1-800-262-7782.

Prior to calling, please write down any error codes or messages from your Digital Check device, as well as the NCR Model & Serial Number:

Digital Check Model	NCR Model Number	Digital Check Model	NCR Model Number
DCC TS 215	NCR 7728-2150	DCC TS 220E with Ink-Jet	NCR 7728-2203
DCC TS 230-65	NCR 7728-2360	DCC TS 300	NCR 7728-3000
DCC TS 230-100	NCR 7728-2310	DCC TS 300 with Ink-Jet	NCR 7728-3001
DCC TS 215 w/ Ink-Jet	NCR 7728-2151	DCC TS 350	NCR 7728-3500
DCC TS 230-65 w/ Ink-Jet	NCR 7728-2361	DCC TS 350 with Ink-Jet	NCR 7728-3501
DCC TS 230-100 w/ Ink-Jet	NCR 7728-2311	DCC TS 400	NCR 7728-4000
DCC TS 220 with Ink-Jet	NCR 7728-2201	DCC TS 400 with Ink-Jet	NCR 7728-4001

NCR Model Number _____ Serial Number _____

Thank you for your purchase of the Digital Check / NCR System

Overview

TellerScan[®] 215 / 230

The TellerScan[®] 215 / 230 Countertop Check Scanner is an easy-to-use, compact check scanner that connects to a personal computer (PC). It automatically scans the front and/or back of checks and also reads the MICR (Magnetic Ink Character Recognition) code line. The images and data are then transmitted through a Universal Bus Interface (USB) to the PC.

Options include:

- Ink-jet endorser – to print characters on the backside of checks



System Requirements

In order to operate the TellerScan[®] the requirements for your PC are:

Recommended	Minimum
2.4 GHz Pentium IV processor	1GHz Pentium III processor
512 MB RAM	128 MB RAM
1.5 GB free disk space	1.5 GB free disk space
Windows 2000 or XP Professional	Windows 2000 & XP Professional
USB 2.0 port	USB port 1.1

Equipment List

The TellerScan[®] package includes the following pieces:

- TellerScan[®] 215 or 230 scanner
- USB cable
- Modular power supply
- Ink Jet cartridge (if the optional printer is included)

Supplies

The TellerScan[®] uses the following supplies:

- Cleaning cards with alcohol, 25 per box, including 6 swabs, NCR order number 9418-0128.
- Cleaning cards with alcohol, no swabs, NCR order number 9418-0127.
- Ink-jet cartridge, HPC6602, NCR order number 203247 (red) or 203250 (black)

Radio Frequency Interference

The TellerScan[™] 215 & 230 generates, uses, and can radiate radio frequency energy. If the scanner is not installed and used properly; that is, in strict accordance with the instructions in this manual it may cause harmful interference to radio communications. It has been tested and found to comply with the limits for Class digital devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against harmful interference when operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference. The use of shielded cables is required when connecting this device to any/all peripheral or host devices. Failure to do so may violate FCC rules.

Features of the TellerScan® 215 / 230

Figure 1 - Features of the TellerScan® 215 / 230

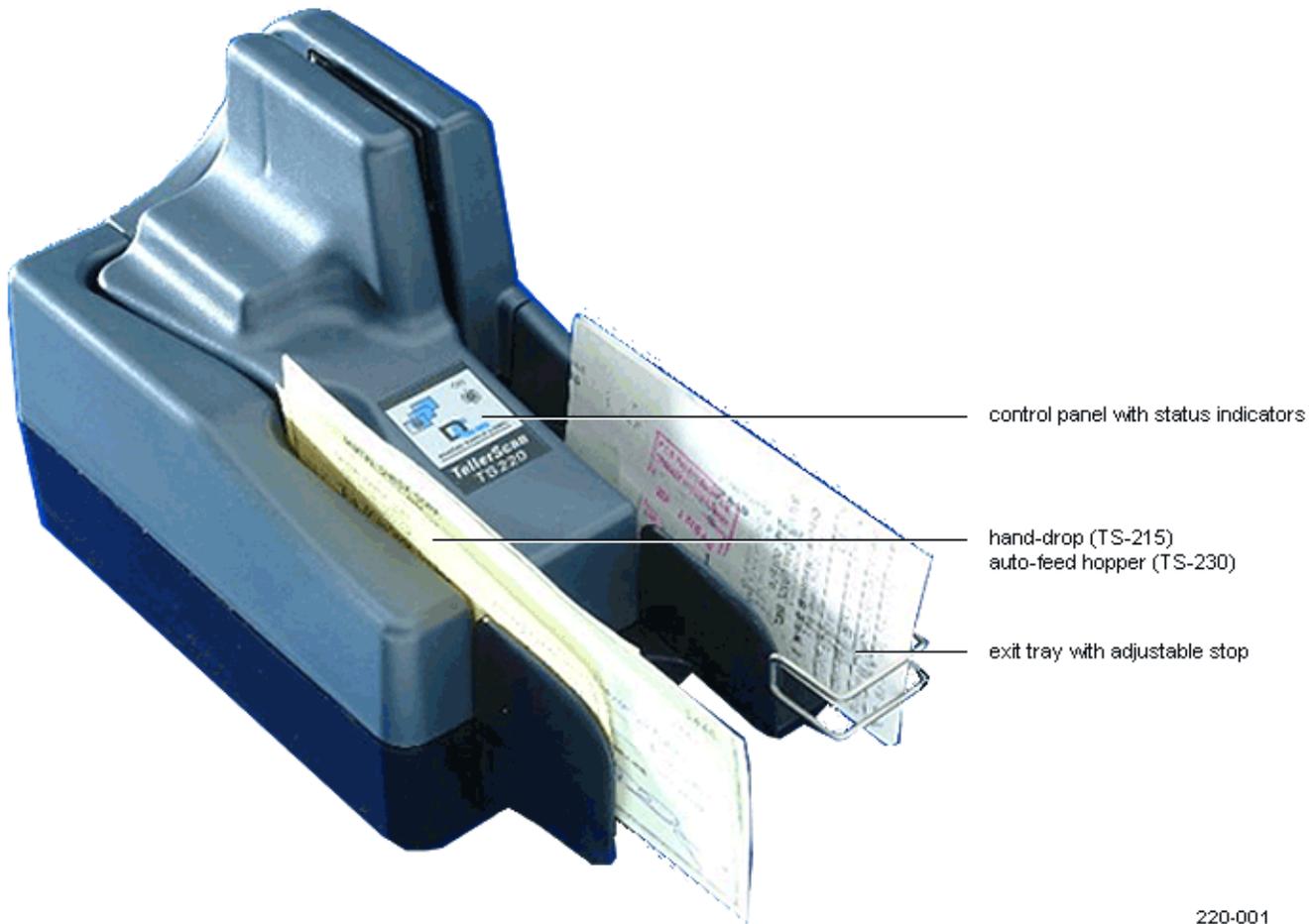
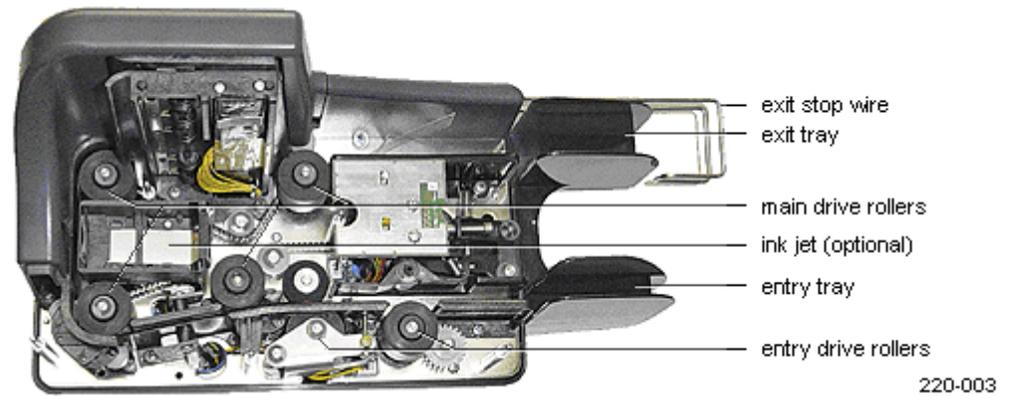


Figure 2 - Rear deck



Figure 3 - Inside the TellerScan



Specifications

Paper Size	H. min. 2.12” – max. 4.17” (54-106 mm.) L. min. 2.91” – max 11.81” (80-300 mm.)
Scanning Method	Concurrent two-sided Duplex Image Creation: 2 x 850 cell, 108mm CIS Light Source: Tricolor LED
Transport Speed	50 cm./sec
Image resolution	200 dpi
Image Format	B/W, 16 or 256 gray levels
MICR Recognition	MICR recognition firmware for E13B or CMC7 standards
Power-On Self Test	Automatic self-testing when switching on the scanner
Software Tools	API Toolkit 32 bit
Options	Ink jet printer (Rear endorse)
Product design	Useful life of 5.000.000 checks, MTTR: 15 minutes
Electrical Voltage	Consumption: 30 VA 230 VAC, 50 Hz. or 110 VAC, 60 Hz.
Temperature	Operating: 60° - 90° F Storage: 0° - 40° C
Humidity	Operating: 35-85% (non condensing)
Dimensions	H. 17 cm. – L. 21.7 cm. (27.9cm incl. I/O trays) – D. 13 cm. (6.6”x8.6”x5.1”)
Weight	4.4 lbs. (2 kg.)
Certifications	UL – FCC – CE

Note: Specifications are subject to change.

Note: Trademarks and registered trademarks are property of their respective owners

Installing the Scanner

Warning: Before connecting the scanner to a power outlet, make sure that the scanner power supply input rating (as shown on label) corresponds to the voltage at your location.

- 1 Unpack the scanner:
 - a Open the box top.
 - b Lift out the ink-jet cartridge.



- c Pop the packaging corners away from the scanner.



Installing the Scanner

- d Lift the protective bag (and scanner) out of the shipping box.



- e Remove the scanner from the protective bag.
 - 2 Locate the scanner on a flat surface near PC and away from direct light.
 - 3 Verify that the modular power supply rating corresponds to the voltage of your power source.
 - 4 Connect the power cord from the modular power supply to the power connector on the scanner rear deck. (See Figure 2).
 - 5 Locate the modular power supply in a ventilated area several feet away from the scanner and connect to an appropriate source of power.
 - 6 Make sure the TellerScan[®] is turned off. Verify that the green power indicator on the Control Panel is **not** lit; the power switch is on the rear deck. (See Figure 2).
 - 7 Connect the USB cable to the scanner port on the rear deck.
 - 8 Connect the USB cable to a 2.0 USB port on the PC.
- Note:** While the scanner will run on a USB 1.1 port, it is recommended that a USB 2.0 port be used to provide better overall performance.
- 9 If an ink-jet printer is present, install the print cartridge (see Page 9).
 - 10 Leave the scanner power turned off for now.

Installing the Driver Files

Driver files are included with NCR software; these drivers support the Windows 2000 & XP operating systems.

- 1 With the scanner turned off, install the NCR control software.
- 2 If NCR software is not available for the scanner, you can download the TS215 / 230 Driver file from the web site:
http://www.digitalcheck.com/l2_ss_downloads.html
 - Unzip the file and run the driver auto install program. This will automatically install the files on your PC.
- 3 Turn ON the scanner.
 - a Windows detects a new hardware device.
 - b Select the request for the installation of the best driver.
 - c It should find the TS2xx.inf file. Select it and continue until finished.
 - Under XP, the USB device will install and then the TS215 / 230 will install.
- 4 Both LEDs on the control panel should now be lit.

Installing the Scanner

Testing the Scanner

Your scanner will normally operate under an application program provided by your vendor. The following test operation uses a demo program that is also useful for operator maintenance. The demo program is not suitable for real financial work; you will need additional application software.

The demo software is a basic scan program that allows you to operate the scanner, change different scanner settings, view images, and store them on your PC's hard disk.

- 1 Download the demo program from the Digital Check web site)
http://www.digitalcheck.com/l2_ss_downloads.html
- 2 Unzip the demo file.
- 3 Launch **scandemo.exe** to open the demo application.
- 4 Set up the demo program to view images, then feed documents into the entry tray.
- 5 Check the images for clarity.

Scanner Cleaning Software

ScanLite is an easy-to-use demo program that is recommended for use when cleaning the scanner. To install ScanLite:

- 1 Create a sub-directory on the PC (i.e., "scanlite")
- 2 Download the ScanLite program from the Digital Check web site)
http://www.digitalcheck.com/l2_ss_downloads.html
- 3 Copy the scanlite files into the directory.
- 4 Launch scanlite.exe to open the demo application.

LED Status Indicators

Note: Both the power cable and both ends of the USB cable must be plugged in for the red LED light to come on. If the red LED does not come on, check the power and reseal both the power and the end of the USB cable going into the PC and into the scanner.

The standard sequence for the two top cover LEDs is:

- 1 When the scanner is powered on, the ON LED will light up 'red'. This indicates initial power to the scanner.



- 2 Once the application launches and acquires the scanner, the ON LED turns 'green'.
- 3 Once the scanner is synchronized with the application, the left LED is used to signal the presence of documents in the entry pocket.

How to Load Checks

Load checks into the Automatic Feeder in transactions of up to 50 items.

- 1 Remove all rubber bands, staples, paper clips, pins, etc.

Note: Checks must be jogged properly in order to feed correctly. The bottom and left leading edges of the transaction stack must align to one another.



- 2 Load the items into the Automatic Feeder with the front of the items facing away from the scanner.



- 3 Slide the items, as a block, into the automatic-feeder until the left LED light illuminates.

Caution: DO NOT force the items into the automatic-feeder after the light illuminates, as this may increase jam rates.

Operator Maintenance

Cleaning the Scanner

Ink, dirt, dust and small particles can get onto the rollers and into the track area between the front and rear scan heads. Using the ScanLite demo software, clean this area as follows:

Note: In order to launch ScanLite, the other applications must be shut down.

- 1 Remove center cover and check the entire track area from beginning to end. A flashlight will greatly facilitate the visual inspection between the scan heads.
- 2 Remove any staples, paper clips, and rubber bands that may have accumulated during use.
- 3 If there appears to be dust or small debris in the path area, use a can of compressed air to blow out the path.
- 4 Regularly use a cleaning card from the Cleaning Kit (NCR order number 9418-0128). Run several scan cycles using Scanlite while holding the card to scrub the entry rollers, flipping the card in between cycles.
- 5 When the entry rollers no longer deposit dirt onto the card, scan the card through the entire path. Run it through several times while flipping the card end-to-end and top-to-bottom.

Note: Use the swabs once every three cleaning to scrub the four drive rollers under the center cover.

- 6 Drive rollers can be wiped with the swabs or you can hold the cleaning card at several places in the track and use the scandemo program to run the **eject** function. This runs the rollers at a reduced speed and will scrub surfaces while you hold the card in place.

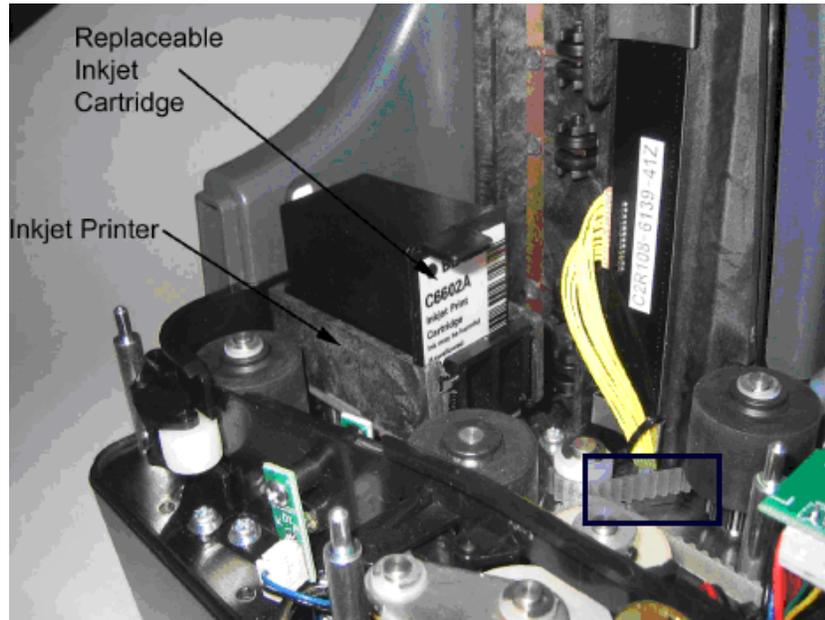
Replacing the Ink-jet Cartridge

This scanner uses a Hewlett Packard ink-jet cartridge – NCR order number 203250 (black) or 203247 (red).

When the endorsement print becomes light and difficult to read, replace the ink-jet cartridge:

- 1 Turn off the power to the scanner.
- 2 Lift off the center cover.

- 3 Grasp the ink-jet cartridge by the tab, then lift it up and out of its holder.



- 4 Discard the used cartridge.
- 5 Take the new cartridge out of its packaging.
Note: Be certain to read the instructions included with the cartridge
- 6 Remove the protective tape from the cartridge.

Caution: Do not touch the metal foil (contacts and print head) or the cartridge could be damaged.

- 7 Place the front of the cartridge down and into its holder.
 - Two pins on the cartridge fit into holes in the holder.
- 8 Push down on the cartridge tab until the cartridge snaps into place.
- 9 Replace the center cover.

Troubleshooting

The TellerScan[®] transport is designed to scan millions of items without trouble. On board diagnostics, power-on self-testing and an easy-to-service modular design ensure reliable, problem-free operation. However, here are some troubleshooting tips in case you do have problems.

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 your application program. In case the document does not move, you can grab the document with both hands and carefully wiggle it back and forth as you lift it vertically:

- 1 Remove the central cover, if needed to remove the document.
- 2 Clear the path of any jammed document and make sure that the rollers are free of paper and debris. Rotate the mechanism, if necessary, by manually turning the main drive roller located on the right side (See Figure 3).
- 3 Close the cover. Some models have an interlock switch under the center cover so be sure that cover is fully seated.

LED Status Indicators

When you turn the power on, observe the LED sequence and compare it with the standard sequence. This can help to identify the problem area.

Document Feeding Problems

The TellerScan[®] transport does not have any user-available adjustments. If you experience feeding problems, make sure to check the documents for bent or folded edges and to check for debris in the path. If you still have feeding problems, check that the entry rollers have been cleaned using the cleaning cards and the procedures described above.

Check Image Has Streaks or Fades

If you notice that the check image have streaks or faded areas, clean the Scanheads. See Figure 6 below for details.

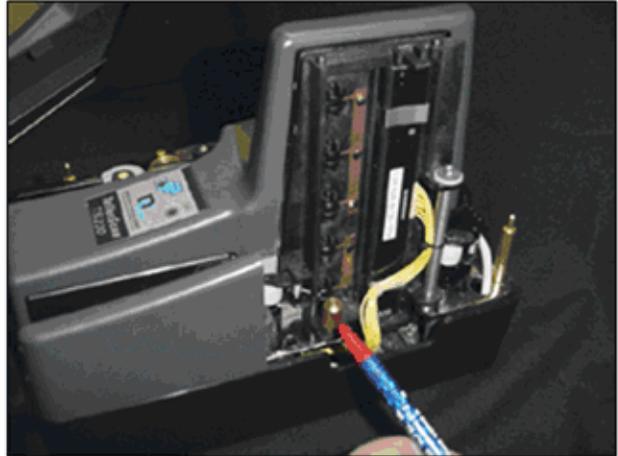
If after cleaning, items are still not scanned properly, contact your qualified service technician.

Figure 6 - Cleaning the Scanheads

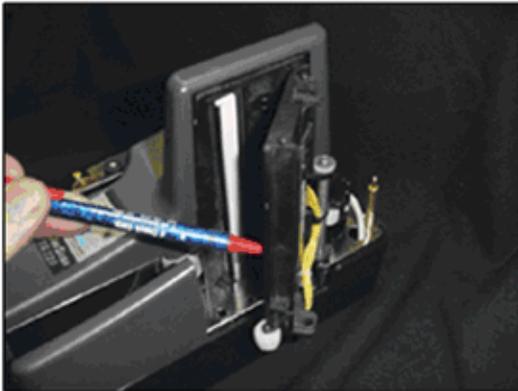


#1 - Remove power to the unit. Pull out the wire exit stop and remove the left side cover & the rear right side cover from the scanner and set aside.

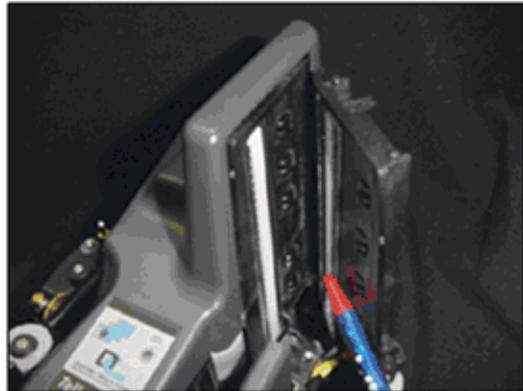
Scanhead Assembly - Cleaning



#2 - Unscrew the large brass thumb screw indicated by the pointer.



#3 - Carefully swing open the outer scanhead in the direction indicated by the pointer. The scanhead will open to about a 45 degree angle, but do not force it further than that or damage to the head assembly could occur.



#4 - The front & rear optics are the white vertical bars shown in the picture. Clean off or remove any dirt or debris from the optics and scanhead area. A clean tissue can be used to wipe down the optics to remove any build up.

Power On Self Test (POST)

At power-up, the scanner automatically runs a self test to verify that various components of the electronics on the main CPU board are working properly. If something fails, the ERROR LED on the control panel starts flashing.

After performing the POST, the scanner drives the motor in order to eject any document that may be present in the path

Note: See the following pages for Out-of-Box Failure procedures or Repair options.

Service Options

NCR provides depot service for this scanner, meaning that you send your scanner to a repair depot, as opposed to having NCR repair it on-site.

For warranty repairs during the first 90 days, NCR will expedite your scanner repair and return.

For repairs during and after the Warranty period, you may purchase different levels of maintenance service, depending on how quickly you need repairs completed.

You start the repair process by obtaining the model number and serial number of your scanner. Use this table to determine the NCR model number:

Digital Check Model	NCR Model Number
DCC TS 215	NCR 7728-2150
DCC TS 215 with Ink-Jet	NCR 7728-2151
DCC TS 230-65	NCR 7728-2360
DCC TS 230-65 w/ Ink-Jet	NCR 7728-2361
DCC TS 230-100	NCR 7728-2310
DCC TS 230-100 w/ Ink-Jet	NCR 7728-2311

NCR Model Number 7728-_____ Serial Number _____

Call NCR

Call the NCR Care Center at 1-800-262-7782. Tell the agent if you need Warranty repair, or if you need repair service.

The following charts show how these services work:



New or Warranty Failure Process

Customer is unable to make hardware operational on receipt, or has determined there is a problem during the Warranty period. Customer then records the symptoms and / or error messages, and obtains the class, model and serial number of the unit.

Example:
 Class - Model: 7728-2200
 And
 Serial Number: XXXXXXXX

Customer Calls The NCR Care Center at **1-800-262-7782** and reports the warranty failure.

NCR verifies the Class, Model and Ink Jet option with customer

NCR assigns a Work Order number and verifies the customer address.

Customer packs the scanner in the original packaging, inserts the problem details and return address, records the Work Order Number on the outside of the box, then returns the defective scanner to:

NCR Corporation
 Attention: 7728 Repair
 405 Edison Way
 Reno, Nevada 89502 USA

Phone: 1-775-856-1832

Customer retains the scanner serial number, work order number and shipment tracking number for enquiry purposes; E-mail to Service.WDC@NCR.Com

NCR arranges the Warranty repair and closes the Work Order. NCR then ships the scanner to the return address, by prepaid next-day air.



Repair and Return Service (USA Only)

Customer has determined there is a problem not solved by operator maintenance. Customer records the details and / or error codes, then obtains complete class, model and serial number of the defective scanner.

Example:
Class - Model: 7728-2200
And
Serial Number: XXXXXXXX

Customer Calls The NCR Care Center at **1-800-262-7782** and reports the failure.

NCR verifies the Class, Model and Ink Jet option with customer

NCR assigns a Work Order number and verifies the customer address.

Customer packs the scanner in the original packaging, inserts the problem details and return address, records the Work Order Number on the outside of the box, then ships the defective scanner, prepaid, to:

NCR Corporation
Attention: 7728 Repair
405 Edison Way
Reno, Nevada 89502 USA

Phone: 1-775-856-1832

Customer retains the scanner serial number, work order number and shipment tracking number for enquiry purposes; E-mail to Service.WDC@NCR.Com

NCR repairs the defective scanner and closes the Work Order. NCR then ships the scanner to the return address, by prepaid next-day air.



Advance Exchange Service (USA Only)

Customer has determined there is a problem not solved by operator maintenance. Customer records the details and / or error codes, then obtains complete class, model and serial number of the defective scanner.

Example:
 Class - Model: 7728-2200
 And
 Serial Number: XXXXXXXXX

Customer Calls The NCR Care Center at **1-800-262-7782** and reports the failure.

NCR verifies the Class, Model and Ink Jet option with customer

NCR assigns a Work Order number and verifies the customer address.

NCR ships the replacement hardware by next-day air.

Customer exchanges the defective equipment

Customer packs the scanner in the original packaging, inserts the problem details and RMA form, records the Work Order Number on the outside of the box, then ships the defective scanner to:

NCR Corporation
 Attention: 7728 Repair
 405 Edson Way
 Reno, Nevada 89502 USA

Phone: 1-775-856-1832

Customer retains the scanner serial number, work order number and shipment tracking number for enquiry purposes; E-mail to Service.WDC@NCR.Com

NCR repairs the defective equipment and closes the Work Order. NCR then stores the repaired equipment for the next customer exchange.

Service Options

