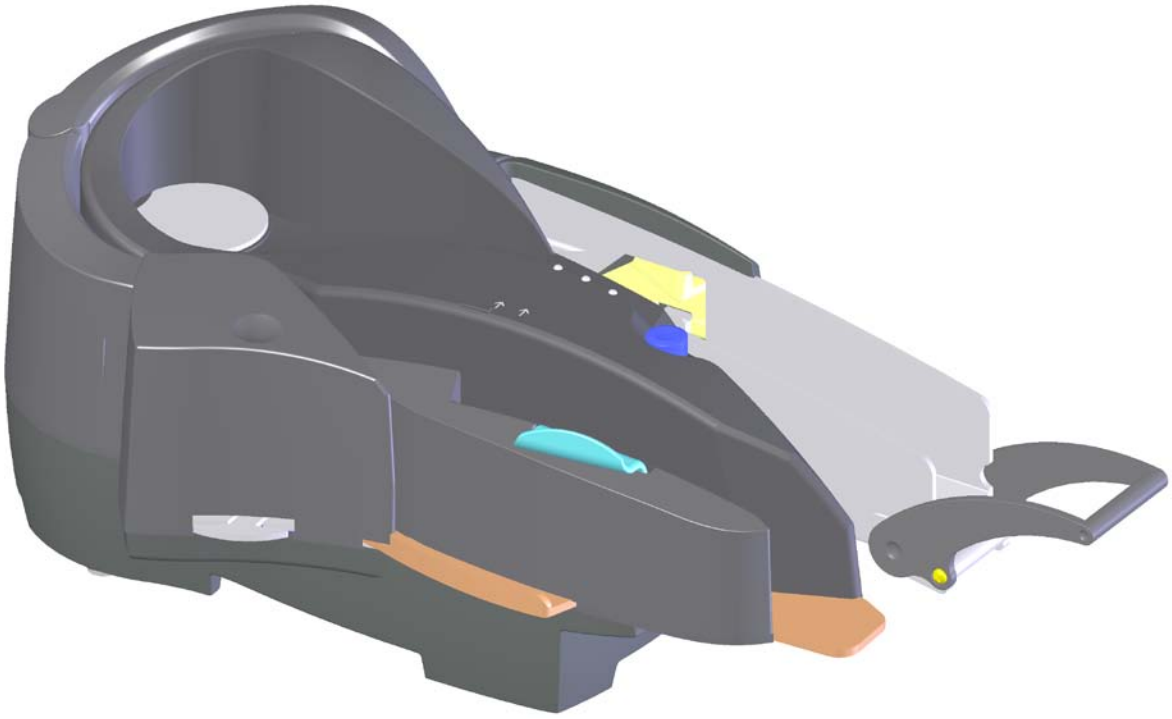
EXCELLA

MICR CHECK READER
AND DUAL-SIDED SCANNER
INSTALLATION AND OPERATION MANUAL



NOVEMBER 2009

Manual Part Number: 99875310-7

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THE TECHNOLOGY BEHIND THE TRANSACTION

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1701 Apollo Court
Seal Beach, CA 90740
Phone: (562) 546-6400
Technical Support: (651) 415-6800
www.magtek.com

REVISIONS

Rev Number	Date	Notes
1	12 Aug 04	Initial Release
2	22 Sep 04	Section 1, Specifications: changed hopper capacity to 70. Section 3, Operation, Multiple checks: Changed capacity to 70 Checks.
3	9 Nov 04	Throughout: removed access cover on six illustrations; Added loading zone mark, modified text, in Figs 1-1, 2-1, 2-2, 2-3, 2-6, 2-7, 2-8, 3-1, 3-3, 3-4, 3-6 and changed position of hand in Fig 3-3, and added callouts. Added Appendix C: License and Copyright.
4	17 Feb 05	Updated Figures 1-1, 2-1, 2-2, 2-3, 2-6, 2-7, 2-8, 3-1, 3-3, 3-4, 3-5, 3-6 and accompanying text to reflect new parts.
5	6 Jul 05	To all sections: changed illustrations where appropriate to reflect new configurations or for clarity Front Matter: added CE Standards to agency page. Added additional statement (ICES) to agency page Sec 1: to Features added JFIF and BMP, to USB 2.0 changed to add High Speed, deleted USB 1.1 compatible and added Ethernet, deleted Aux interface port Sec 2: Added two illustrations changed LED indicator section and closing the unit Sec 3: Changed operator button text, added closing the unit section, added illustration for cleaning the ink cartridge. Appendix A: newly added Appendix B: ewly added Other appendices renamed as C and D
6	9 Feb 05	Front Matter: Limited Warranty newly added. Appendix A: Updated; Appendix B: Removed reference to Demo API CD for USB Configuration Utility.
7	2 Nov 09	Front Cover: Image added and Technical support number changed; Limited Warranty updated; FCC Statement Page updated, Fig 1.1 moved to Section 1 Sec 1: Two Features added to Features list p. 2; Document Speeds added to Table 1.2 Appendix A: Screen Shots Updated; System Configuration added

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This equipment has been tested and was found to comply with the limits for a Class A digital device pursuant to Part 15 of 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 with 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.

FCC COMPLIANCE STATEMENT

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

CANADIAN DOC STATEMENT

This digital apparatus does not exceed the Class A limits for radio noise from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numériqué de la classe A est conformé à la norme NMB-003 du Canada.

CE STANDARDS

Testing for compliance with CE requirements was performed by an independent laboratory. The unit under test was found compliant with standards established for Class A devices.

UL/CSA

This product is recognized per Underwriter Laboratories and Canadian Underwriter Laboratories 1950.

RoHS STATEMENT

When ordered as RoHS compliant, this product meets the Electrical and Electronic Equipment (EEE) Reduction of Hazardous Substances (RoHS) European Directive 2002/95/EC. The marking is clearly recognizable, either as written words like "Pb-free", "lead-free", or as another clear symbol (Pb).

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SECTION 1. OVERVIEW

The Excella™ Check Reader is a MICR check reader (Magnetic Ink Character Recognition) and dual-sided scanner with endorsement printer. Checks can be entered into the Excella with an automatic feeder or by a separate manual feed for single checks. The Excella reads the MICR character set (E13B or CMC7 fonts) on the front face and bottom of a check and scans both sides of the check in a single pass, producing high-quality, grayscale or black/white images (color images are offered as an option) in the most common file formats used in the industry. The characters and the image are then transmitted to a Host device.

Excella will communicate with the Host system using a USB 2.0 or Ethernet interface.

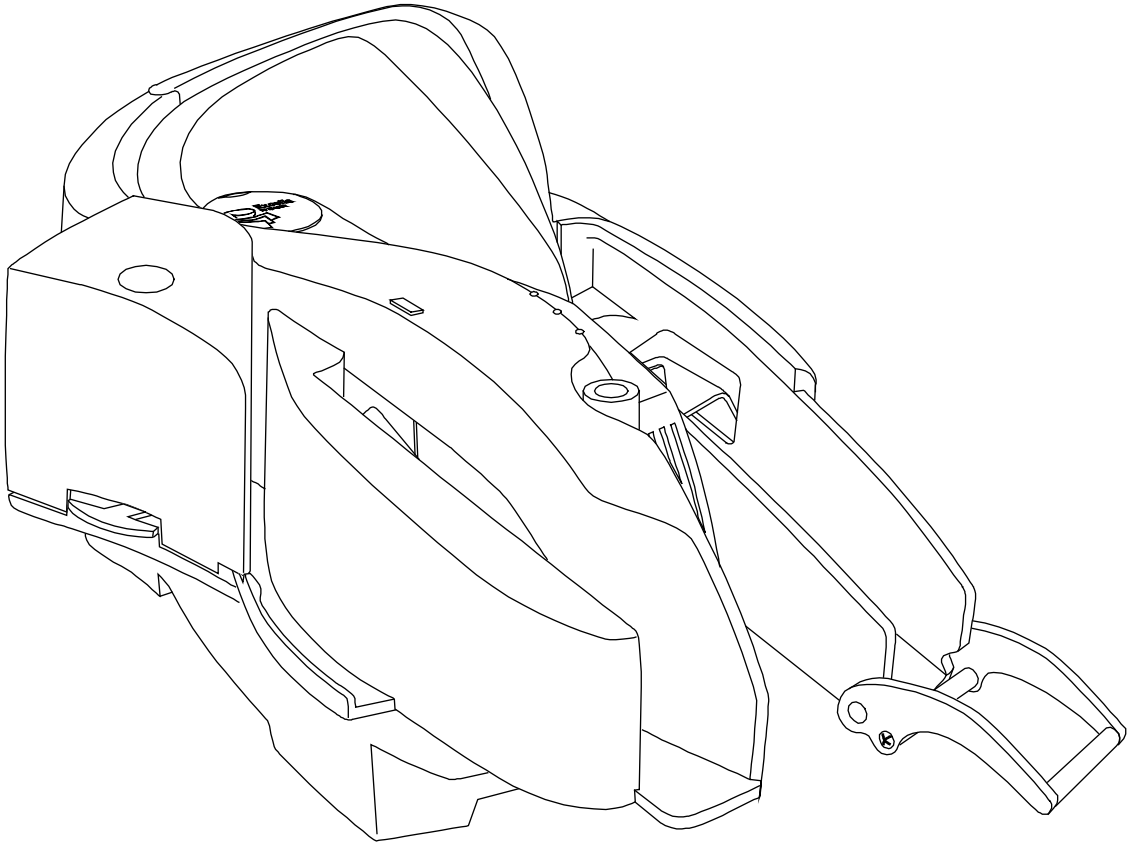


Figure 1-1. Excella Check Reader and Dual-Sided Scanner

CONFIGURATIONS

The current configuration is as follows:

Part Number	Description
22310102	MICR Excella, USB/Ethernet

FEATURES

The following is a list of features of the Excella Reader:

- Reads E13B and CMC7 MICR fonts
- Captures front and back images of check in a single pass
- Endorsement printer prints horizontal message on back of the check
- Endorsement message is programmable
- Message height: 1/8” consisting of 12 pixels
- Resolution: 200 dpi (scaling to 100 dpi); black/white and grayscale images
- Image compression: CCITT G4 or JPEG
- Image files: TIFF 6.0, JFIF with EXIF tags, BMP
- Optional image storage memory available with multi-media memory cards installed at the factory
- Manual feed - single check
- Automatic feeder with capacity for up to 70 documents
- Output hopper/stacker with capacity for up to 70 documents
- USB 2.0 High Speed (USB 1.1 compatible)
- Ethernet 10/100 Base-T
- Smart cable management
- Express Check Processing Mode (requires USB 2.0)
- Dynamic Virtual Endorsement

ACCESSORIES

Accessories available for the Excella Reader include:

- Host Interface Cable (See Table 1-1)
- Power Supply, 24 VDC Regulated, Switcher 5.5 x 2.1 mm, Right Angle Plug
- Sample Checks, Part Number 96530005
- Cleaning Swabs, P/N 97200078
- Print Cartridge, P/N 93600132

CABLES

The cables and power supply available are as follows:

Table 1-1. Excella Cables and Power Supply

Part Number	Description
22310301	Cable Assy, USB A – USB B Right Angle, 8’
22310302	Cable Assy, Ethernet RJ45P A/A, 8’
22310303	Cable Assy, RS232 PC DB9F–RJ6P Right Angle, 8’
22310304	Cable Assy, Ethernet (Crossover) RJ45P/RJ45P Right Angle 8'
71100001	Cable, Power Cord-AC, US 18/3 Blade Non-Polarized, IEC C7
64300098	Power Supply, 24 VDC Regulated, Switcher, 5.5 x 2.1 mm, Right Angle Plug

SPECIFICATIONS

Table 1-2 lists the specifications for the Excella Reader.

Table 1-2. Specifications

OPERATING	
Reference Standards	ANSI X9.27
Power Input	24 VDC, 2.5 Amps
Document Size	4"x 8.5" Maximum
Document Processing Speed	20 to 35 documents per minute (Variation depends on image format) 40 to 50 documents per minute (Express Mode)
Printer/Cartridge Image Resolution: Image compression:	 200 dpi (scaling to 100 dpi); Black/white and grayscale images (color images are offered as an option) CCITT G4 or JPEG
Check Feed and Hoppers:	Manual feed of a single check Automatic feeder with capacity for up to 70 documents Output hopper/stacker with capacity for up to 70 documents
MICR fonts supported	E13-B CMC-7
Interface Options	RS-232, USB 2.0, USB 1.1 compatible Ethernet 100 Base-T,
MECHANICAL	
Dimensions	L 13 ¼ inches x W 7 ½ inches; H 7 inches
Weight	3.59 lbs.

SECTION 2. INSTALLATION

The installation for the Excella Check Reader is described below.

REQUIREMENTS

The following items are required for the Installation:

- Excella, Check Reader and Dual-Sided Scanner, P/N 22310001
- USB Interface Cable (see Cabling below) and/or
- Ethernet Interface Cable (see Cabling below)
- Power Supply, 24 VDC Regulated, Switcher, 5.5 x 2.1 mm, Right Angle Plug, P/N 64300098 (see Cabling below)
- Customer Supplied Checks or MagTek's Sample Checks, P/N 96530005

DEVICE DESCRIPTION

Figure 2-1 shows the top view of Excella and lists features used for installation and operation.

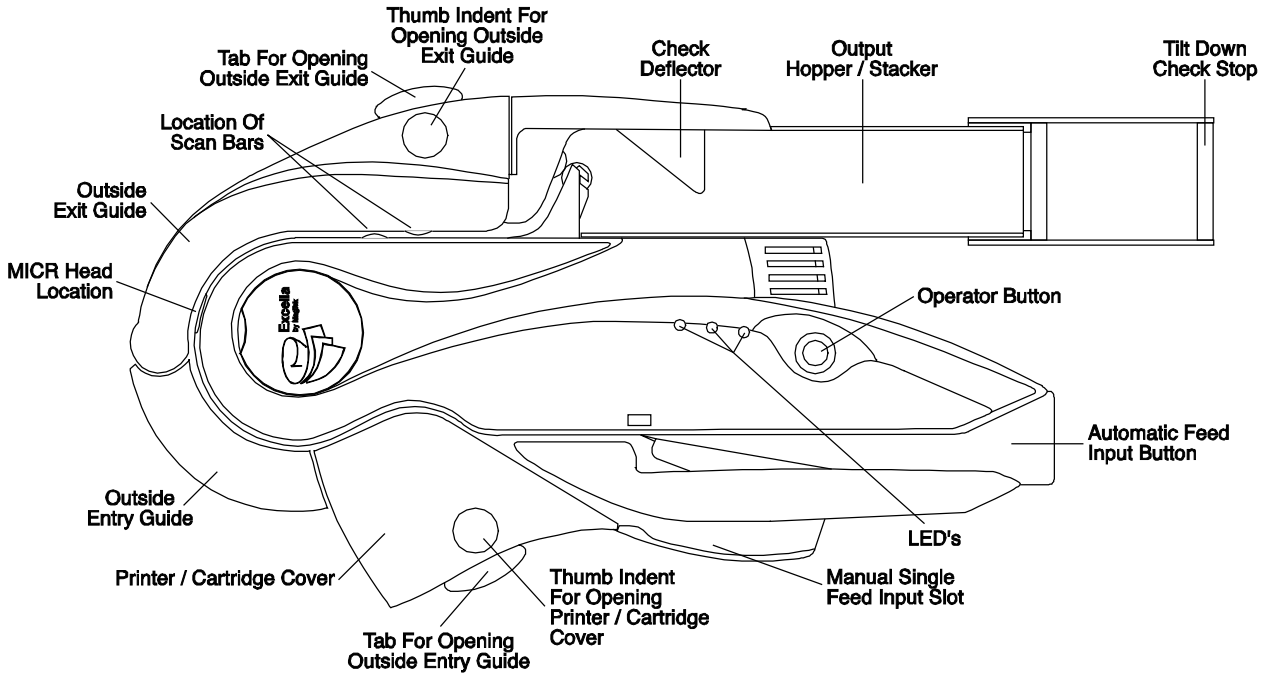


Figure 2-1. Top View, Excella Features

INSTALLATION SUMMARY

This is a summary of the major installation steps for Excella:

1. Unpack Excella
2. Install ink cartridge (the cartridge is shipped uninstalled)
3. Install API/Demo software (CD provided by MagTek)
4. Connect interface cable (USB or Ethernet) and power cable to Excella
5. Connect power cord to AC wall outlet
6. Connect interface cable to PC

Note
For more details see additional information in this section.

UNPACKING

Check the list under "Requirements" above and the packing sheet to insure all items have been received.

The Printer/Cartridge is shipped separately and must be unpacked. Remove all packing material (such as tape and tabs), and prepare to install the Printer/Cartridge first.

INSTALLING OR REPLACING THE PRINTER/CARTRIDGE

To install or replace the **Printer/Cartridge**, refer to Figure 2-2.

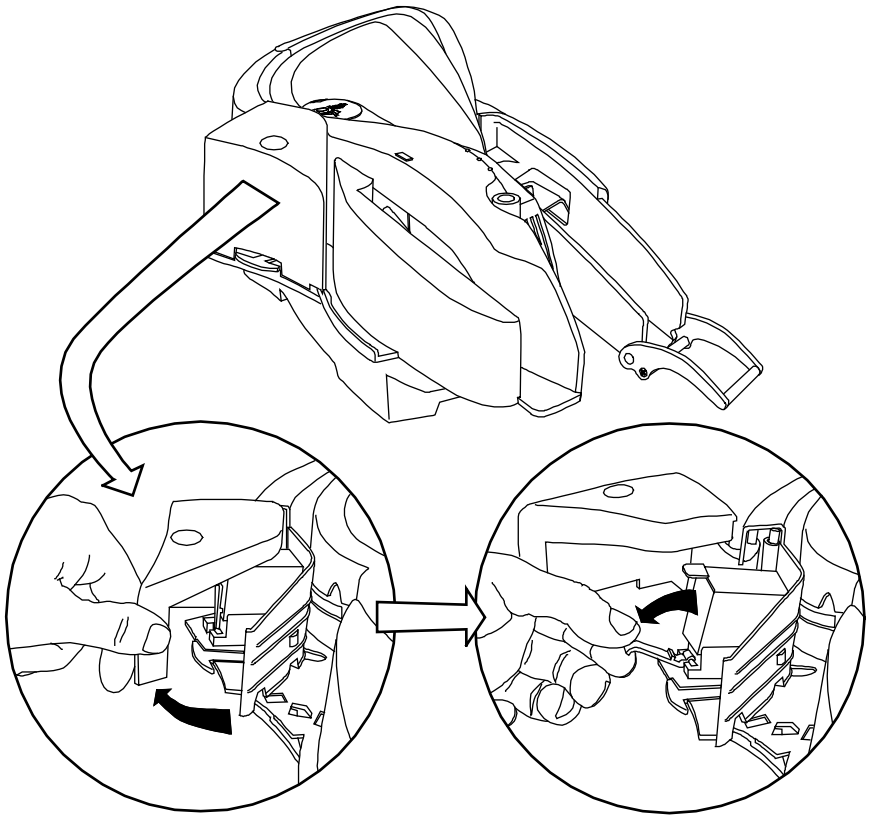


Figure 2-2. Installing or Replacing the Printer/Cartridge

1. Pull the **Printer/Cartridge** cover open to expose the **Printer/Cartridge** as shown in the left bubble.

2. Push the **Printer/Cartridge Tab** down as indicated in the right bubble.

5. Remove the cartridge by pulling the handle on the **Printer/Cartridge** up.

6. Replace the **Printer/Cartridge** by inserting it into position shown in the illustration.

7. Close the **Tab** holding the **Printer/Cartridge** in position.

8. Close the **Printer/Cartridge** cover.

OPENING THE UNIT

The **Outside Entry Guide**, the **Outside Exit Guide** and the **Printer/Cartridge Cover,** shown in Figure 2-1, can be opened to provide access to the check path and both scan bars. Open the unit as described below:

1. Open the **Outside Entry Guide** by placing the thumb on the **Indent** and the finger(s) on the **Tab** as shown in Figure 2-3 and squeezing, and then gently pull the Guide open.

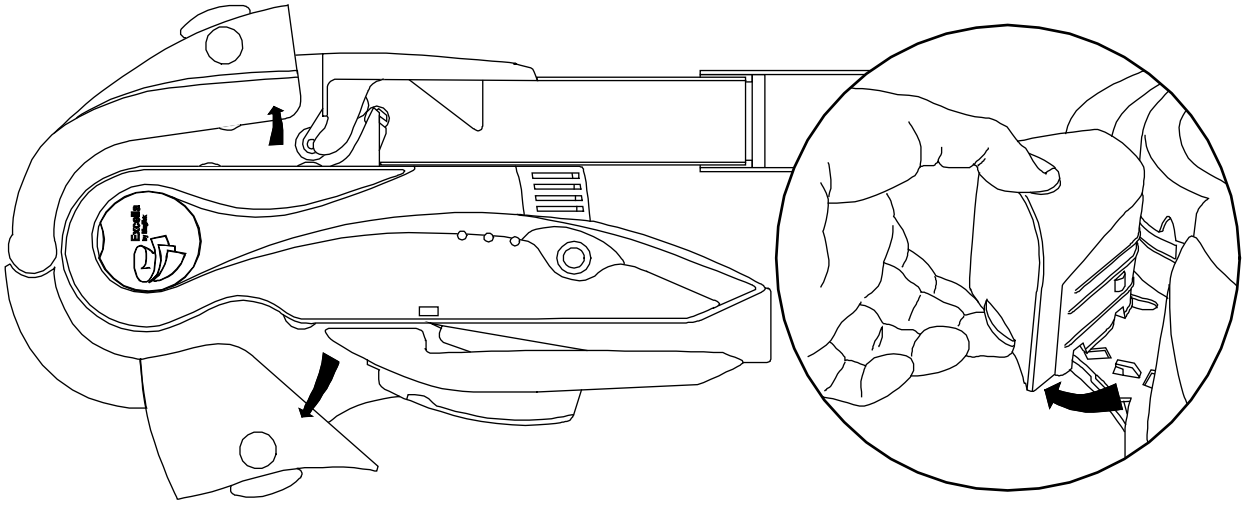


Figure 2-3. Opening the Entry and Exit Guides

2. Open the **Outside Exit Guide**, in the same manner, by placing the thumb on the **Indent** and the finger(s) on the **Tab**, and squeezing and then gently pull the Guide open.

3. Open the **Printer/Cartridge Cover** by pulling the Cover from the Inside Guide as shown in Figure 2-4.

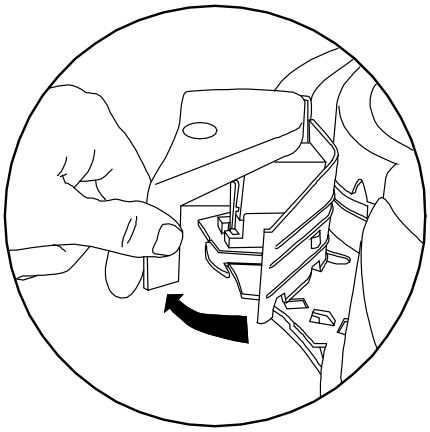


Figure 2-4. Separating the Cover from the Outside Entry Guide

CLOSING THE UNIT

If the Entry Access Guide or the Exit Access Guide has been opened, close the access guide as described below:

1. Push to close the access guide (Entry Access Guide or Exit Access Guide) to its normal operating position (as show in Figure 2-5).
2. If the printer cover is open on the Entry Access Guide, first close the printer cover and then close the access guide as described in step 1 above.
3. Push down on the tab of the access guide (as shown in Figure 2-5). If the tab was not latched, a “click” sound will be heard as feedback to indicate the access guide is securely closed.
4. The LED indicator will flash if the access guide is improperly closed (see Table 2-4).

Note

Improperly closed access guides can affect MICR reading and image quality.

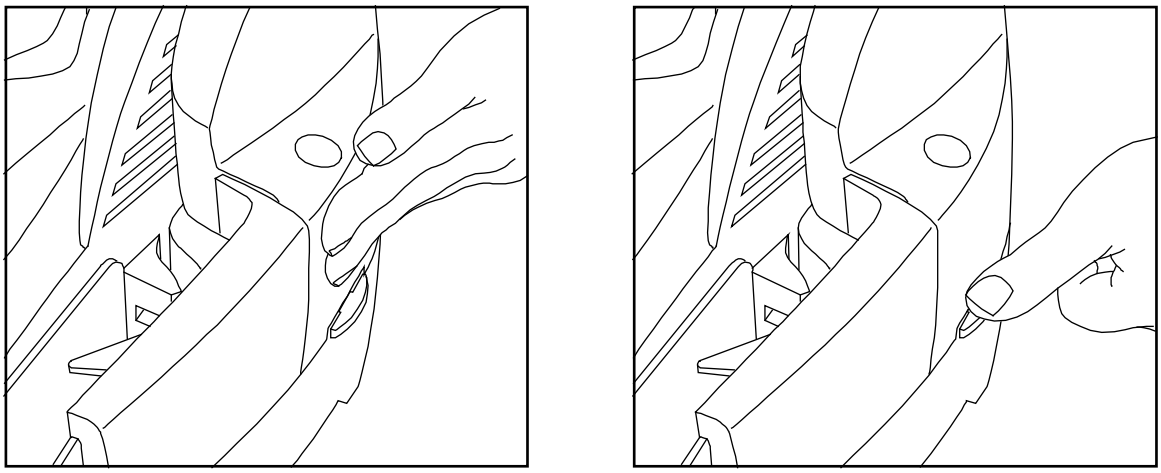


Figure 2-5. Closing the Unit

CABLE CONNECTIONS

The cable connections are shown in Figure 2-6.

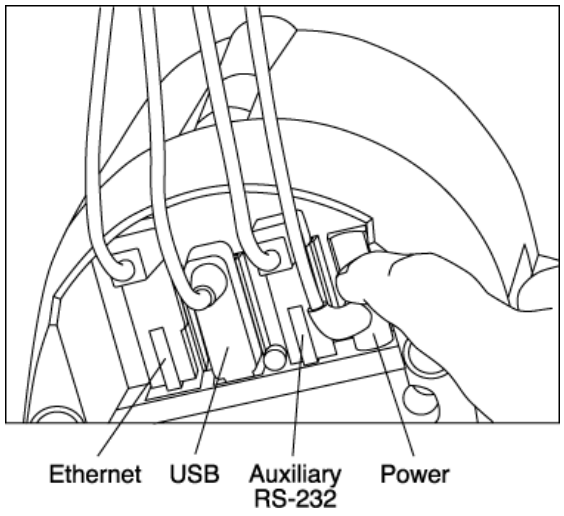


Figure 2-6. Cable Connections

CABLING

Available cabling is as follows:

- USB – A-plug, 4-pin, right angle, P/N 22310301 shown in Figure 2-7 with pin list in Table 2-1
- Ethernet – RJ 45P, 8-pin, right angle, P/N 22310302 shown in Figure 2-8 with pin list in Table 2-2
- Ethernet Cross-Over – RJ 45P, 8-pin, right angle, P/N 22310304 shown in Figure 2-8 with pin list in Table 2-3
- Power Supply and Cords – Power Supply, Input 100-240 VAC, 1.5A, 60-50 Hz, P/N 64300098 and
  Power Cord-AC – US 3 Blade Non-Pol, IEC C7, P/N 71100001 shown in Figure 2-9

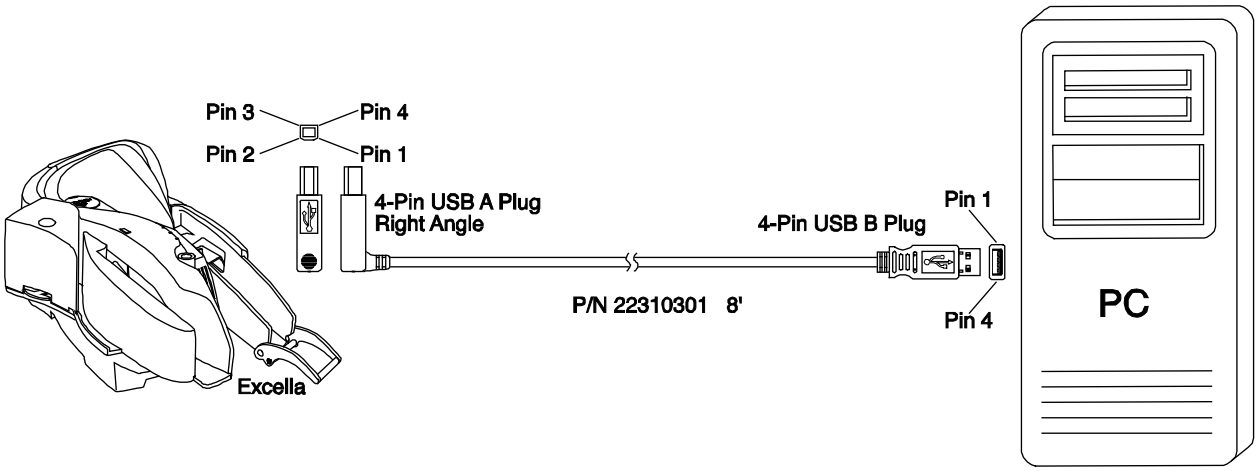


Figure 2-7. Cabling, USB, 4-pin, Right Angle, P/N 22310301

Table 2-1. USB Pin List

USB Cable Pin List		
USB B Plug, Right Angle	Signal Name	USB A Plug
1	5V	1
2	- Data	2
3	+ Data	3
4	Gnd	4
Shell (Braid Shield)		Shell (Braid Shield)

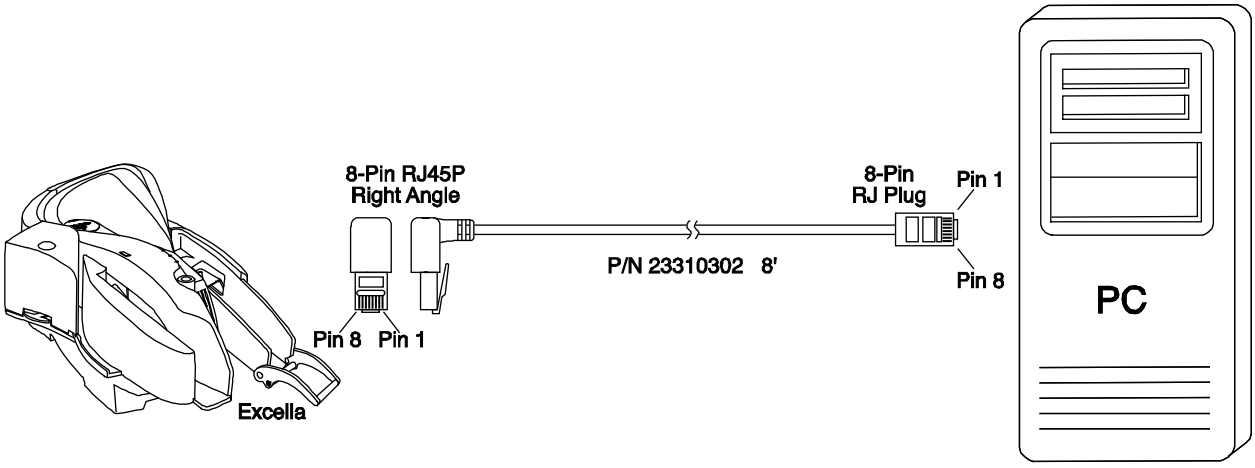


Figure 2-8. Cabling, Ethernet, 8-pin RJ45P, Right Angle, P/N 22310302 or 22310304

Table 2-2. Ethernet Cable Pin List, P/N 22310302

Ethernet Pin List		
8-pin RJ Plug, Right Angle	**Signal Name**	**8-Pin RJ Plug**
1	Transmit +	1
2	Transmit -	2
3	Receive +	3
4 NC	NC	4 NC
5 NC	NC	5 NC
6	Receive -	6
7 NC	NC	7 NC
8 NC	NC	8 NC

NC = No Connection

Table 2-3. Ethernet Crossover Cable Pin List, P/N 22310304

Ethernet Pin List		
8-pin RJ Plug, Right Angle	**Signal Name**	**8-Pin RJ Plug**
1	Transmit +	3
2	Transmit -	6
3	Receive +	1
4 NC	NC	4 NC
5 NC	NC	5 NC
6	Receive -	2
7 NC	NC	7 NC
8 NC	NC	8 NC

NC = No Connection

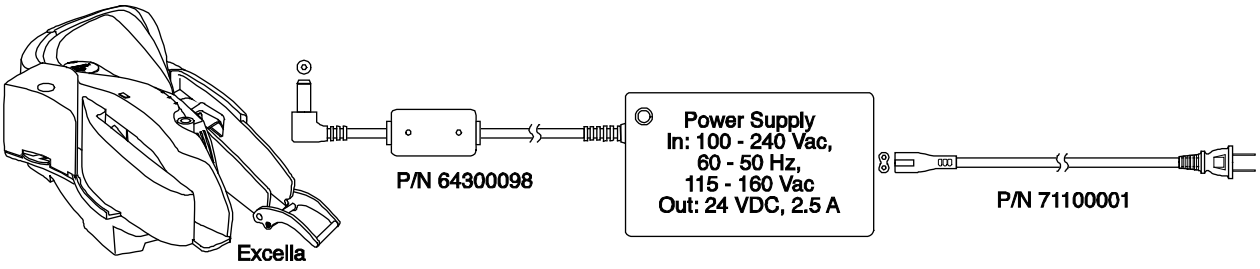


Figure 2-9. Power Supply and Cords. P/N 64300098 and 71100001

LED INDICATORS

The LED indicators are shown in Figure 2-10. All three LEDs are able to show three colors: green, red, or amber.

Each LED indicator has been assigned a specific reporting function (see Table 2-4 below):

- Front LED: reports MICR read status
- Middle LED: reports path status
- Rear LED: reports unit status

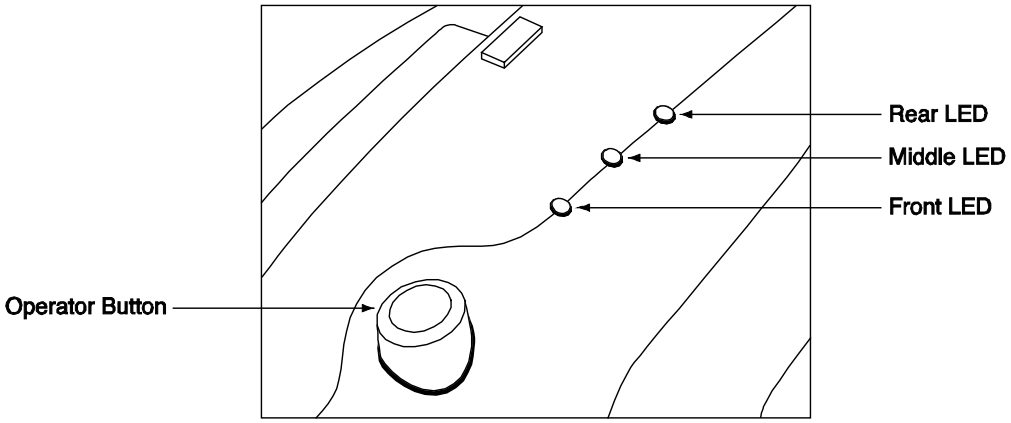


Figure 2-10. LED Indicators

Table 2-4. LED Indicators

Front LED (MICR status)	Middle LED (Path status)	Rear LED (Unit Status)	Description
Amber	Amber	Amber	Unit is initializing
Green	Green	Green	Power on, everything is OK
X	X	Flash amber	Initializing network connection
Flash red	X	X	After check read: MICR read error
Flash green	X	X	After check read: good MICR read
Flash red/green	X	X	MICR noise detected (if enabled): relocate unit
X	Amber	X	Entry or Exit access guide unlatched (if feature is installed): close and latch access guides
X	Flash red	X	Paper jam: remove jam and hit operator button to clear

SECTION 3. OPERATION AND MAINTENANCE

This section contains powering, operating, and maintenance procedures. Ensure the Excella is installed and cabling and power are connected as described in Section 2.

POWER UP

Plug the power supply, P/N 64300098P/N, and cord 71100001, into wall power, and press the start button. The green LED closest to the front of the unit should light.

TILT-DOWN CHECK STOP

The **Tilt-Down Check Stop**, shown in Figure 2-1, is used for both single and multiple check feed. For business size checks (long), place the Tilt Stop in the down position. For personal size checks (short), place the Tilt Stop in the up position. (See Appendix B for check sizes.)

OPERATOR BUTTON

The **Operator Button** is commonly used to communicate to the PC application that an unexpected condition or error has been cleared and Excella is ready to go again. For example, if there is paper jam, the Middle LED will flash red. After the paper jam is cleared, the user must press the **Operator Button** to resume the check reading/scanning operation.

OPERATION

Checks may be entered manually (one check at a time) or automatically (up to 70 checks at a time). Consult Section 2, Figure 2-1, for locations of the components described here.

Single Check – Manual Feed

For single checks perform the following steps:

1. With the front of the check facing the center of the unit and the MICR line closer to the bottom, feed the check into the **Manual Single Feed Input Slot**, as shown in Figure 3-1.

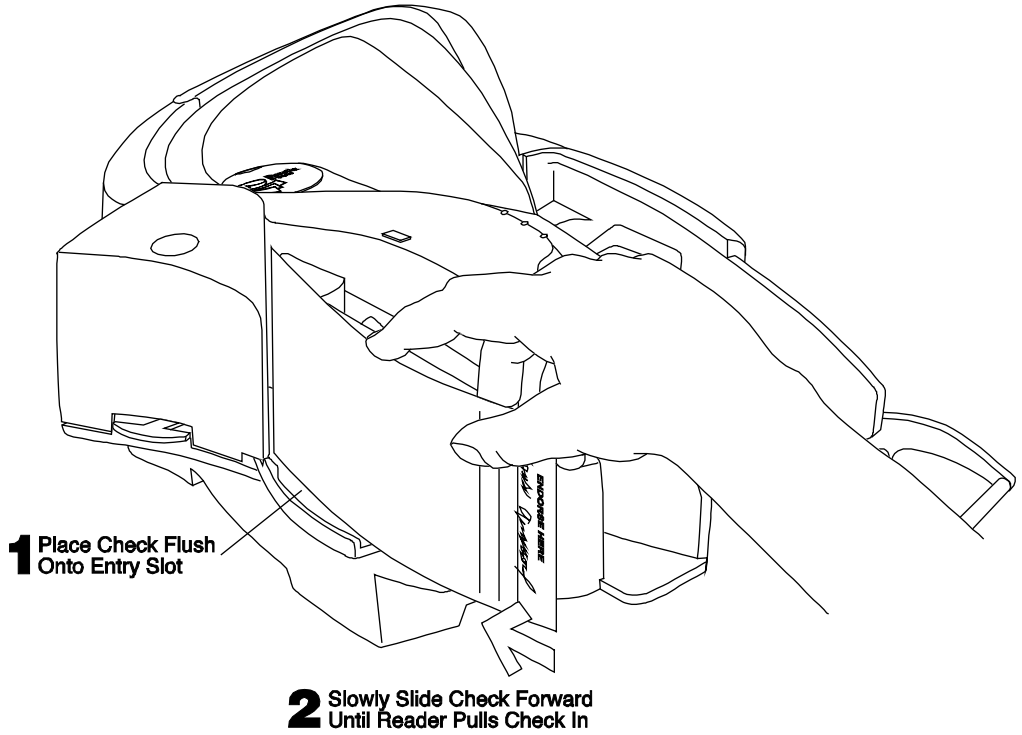


Figure 3-1. Check Orientation - Insertion

2. The check then winds around the **Printer/Cartridge** where a programmable endorsement is printed horizontally on the check.

3. The face and back of the check are then scanned at the two **Scan Bars**.

4. Next, the **Check Deflector** guides the check into the Exit Hopper.

Multiple Checks – Automatic Feed

The **Automatic Feed Input Hopper** can hold up to 70 checks. Separate the checks by fanning as indicated in Figure 3-2 and stack as shown in Figure 3-3.

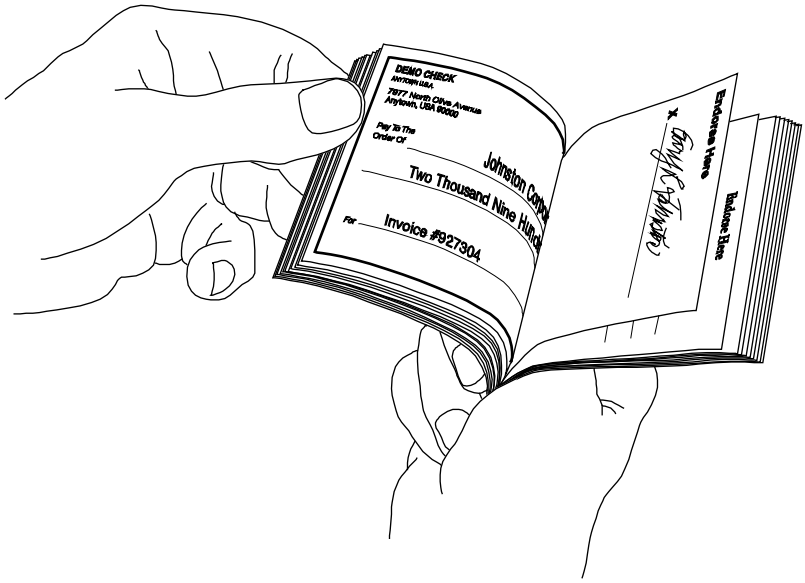


Figure 3-2. Separate Checks by Fanning

Proceed as follows:

1. Stack the checks in the **Automatic Feed Input Hopper** as shown in Figure 3-3.

2. Slide the deck forward to the **Loading Zone Marker** so that all leading edges are within the length of the loading zone as shown in Figure 3-3.

3. The checks will follow the same path as the single (manually entered) checks.

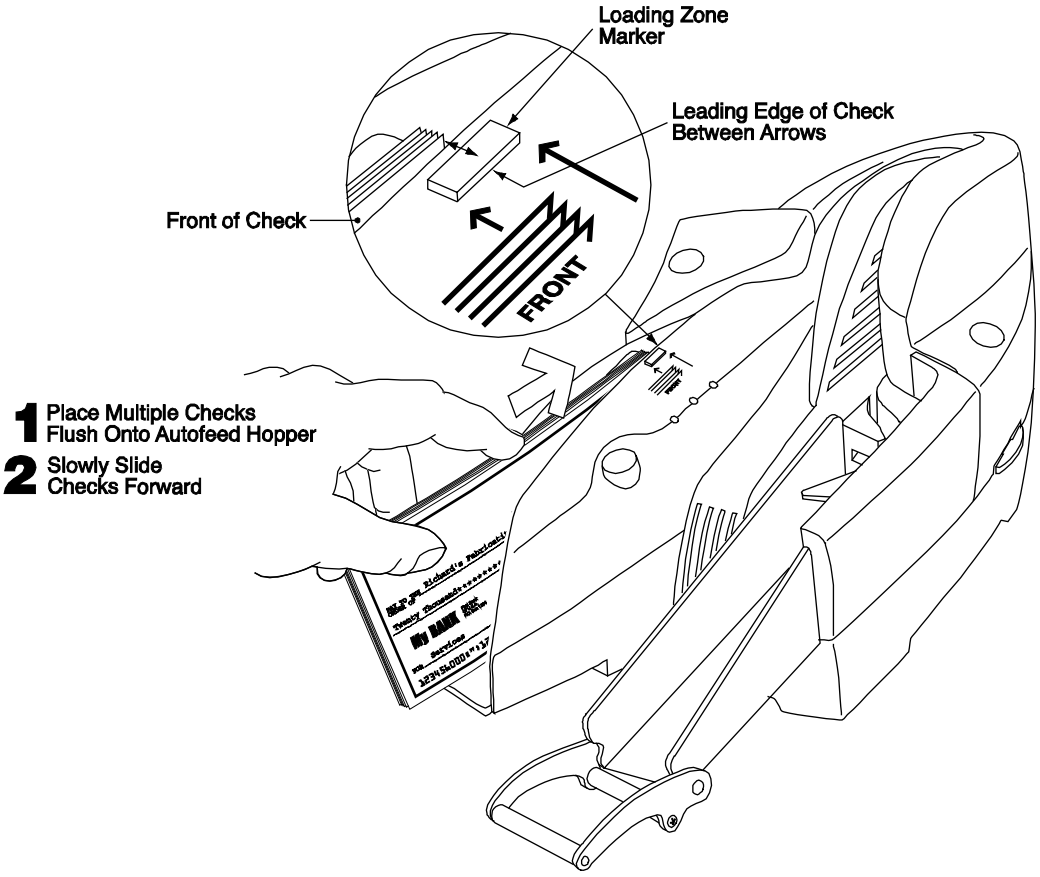


Figure 3-3. Stacking Checks in Input Hopper

CLEANING

Consult Section 2, Figure 2-1, for locations of the components described here.

Clean the outside of the Excella Reader unit with a soft, damp cloth and wipe with a dry cloth. Open the unit. When the unit is open, as shown in Figure 3-4, check the path for debris. Clean with a soft, damp cloth and wipe with a dry cloth.

Caution

To avoid damaging the read head, do not get the inside of the check path wet.

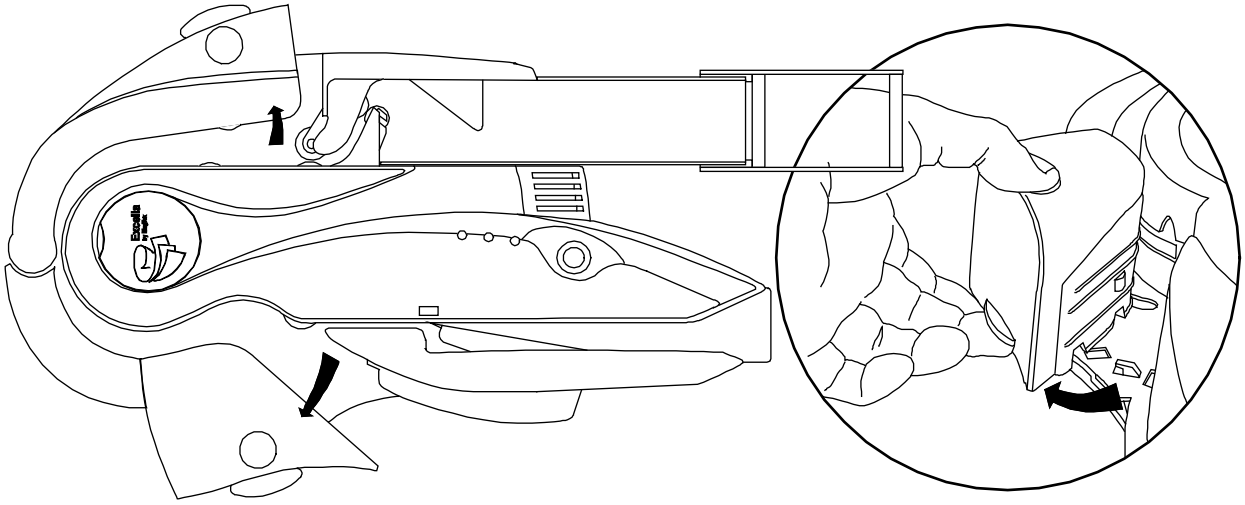


Figure 3-4. Opening the Unit for Cleaning

Printer

The **Printer**/**Cartridge** should be taken out when cleaned. See Section 2, Installing or Replacing the **Printer/Cartridge**. There are two methods of cleaning the nozzles on the **Printer/Cartridge**, dry wiping and damp wiping. Use the dry wiping method first, and if more cleaning is required, use the damp wiping method. Figure 3-5 shows the Ink Cartridge.

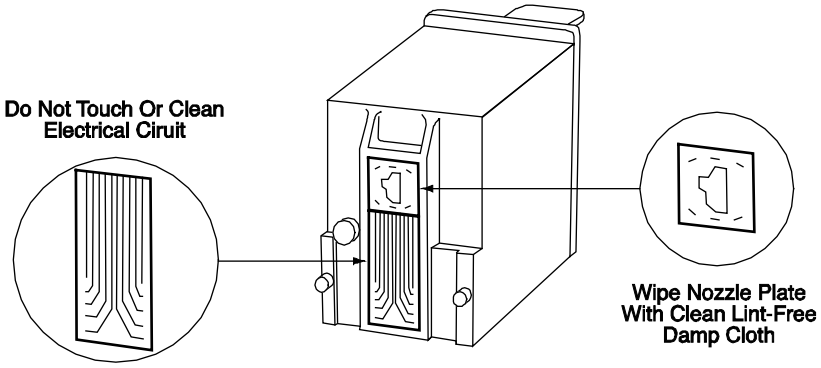


Figure 3-5. Cleaning the Ink Cartridge

Dry Wiping Nozzles

Gently wipe the nozzle plate area with a clean, lint-free cloth.

Caution

Do not wipe ink over the electrical contact area.

Damp Wiping Nozzles

Perform the following steps:

1. Dampen a clean, lint-free cloth with water.

2. Hold the dampened cloth or tissue in contact with the nozzles for a few seconds.

3. Then gently wipe the nozzle plate.

Caution
Do not wipe the electrical contact area.

4. If ink remains on the nozzle plate, wipe again with a clean dry cloth.

Scan Bars and Card Path

Check the Excella paper path to ensure there is no build-up of ink or paper debris, and clean. To clean the **Scan Bars**, use the Cleaning Swab, P/N 97200078, as shown in Figure 3-6.

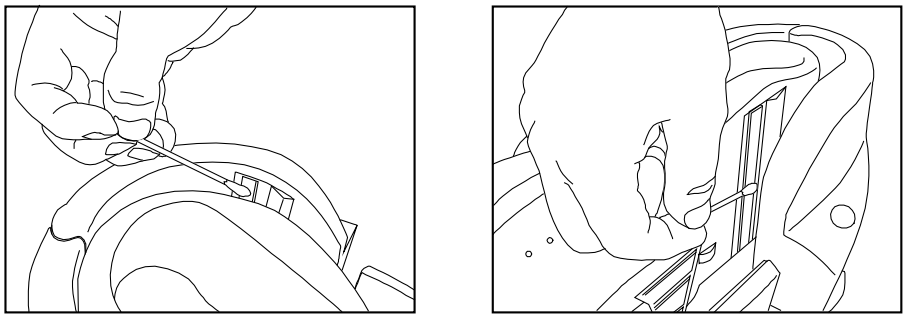


Figure 3-6. Cleaning Scan Bars

Clearing the Check Path

Clear debris or remove a check from the path as follows:

1. Open both **Outside Entry and Exit Guides** as shown in Figure 3-7.

2. Clear debris or pull out the checks from the path.

3. Examine the check path to ensure there is no additional debris, dust or other extraneous material in the path.

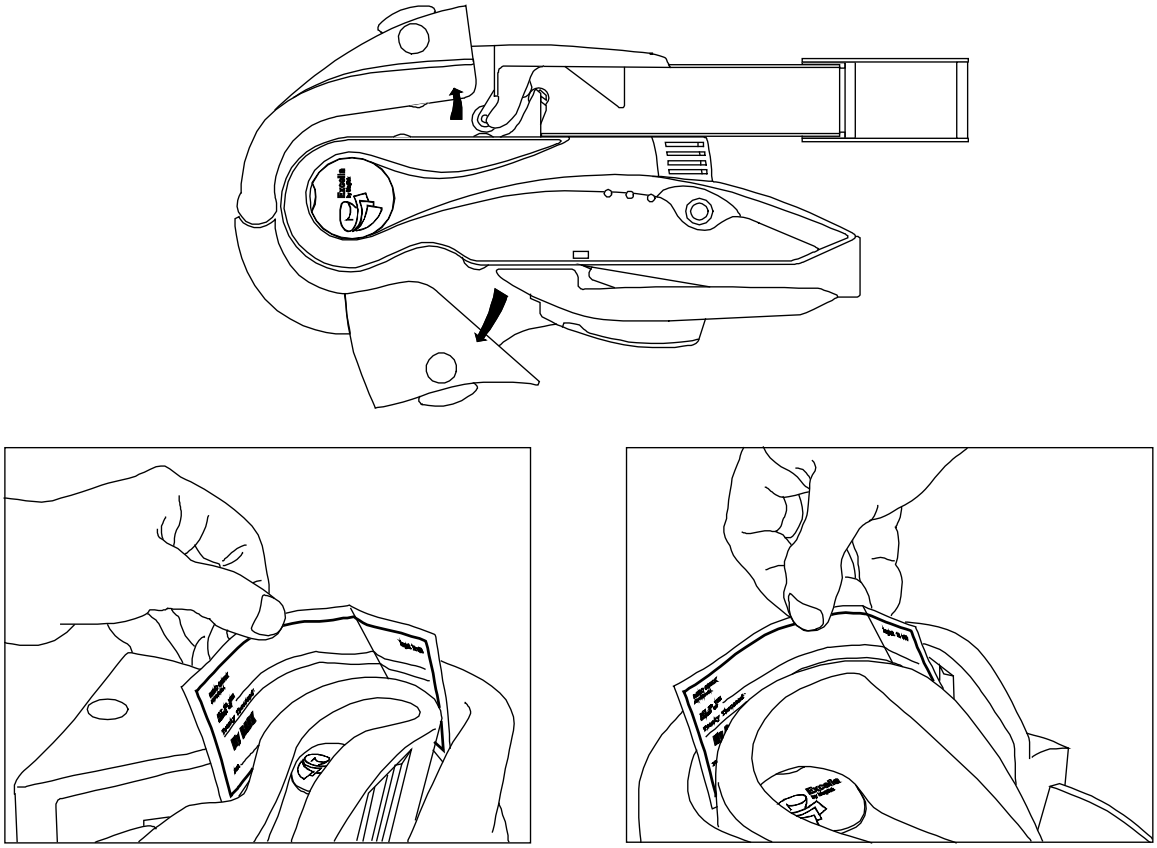


Figure 3-7. Clearing Debris or Removing Checks

APPENDIX A. BUILT-IN WEB PAGE

OVERVIEW

Excella is a web appliance and it offers several functions and features in a built-in Web page accessible through a Web browser. For example, if Excella's active device IP address is 192.168.1.2, type the "http://192.168.1.2" in your web browser to access Excella's web page.

This appendix provides a general description of the Web page and the available functions and features.

STATUS

The Status Page, Figure A-1, provides device information plus operational statistics.

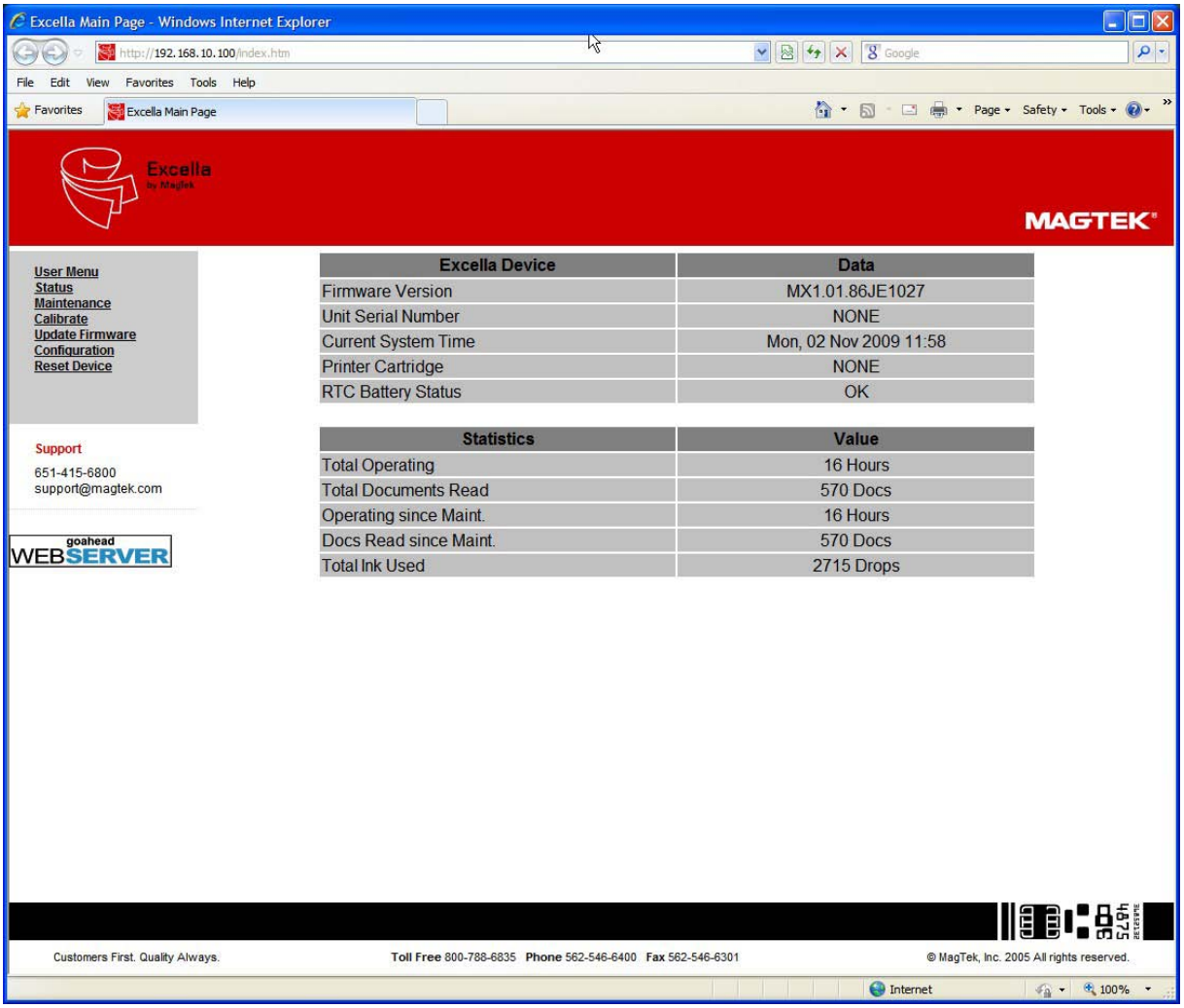


Figure A-1. Excella Status Page

MAINTENANCE

The Maintenance Page, Figure A-2, provides status and counters that can be useful to define maintenance service programs for Excella. Also, the device's clock can be set on this page.

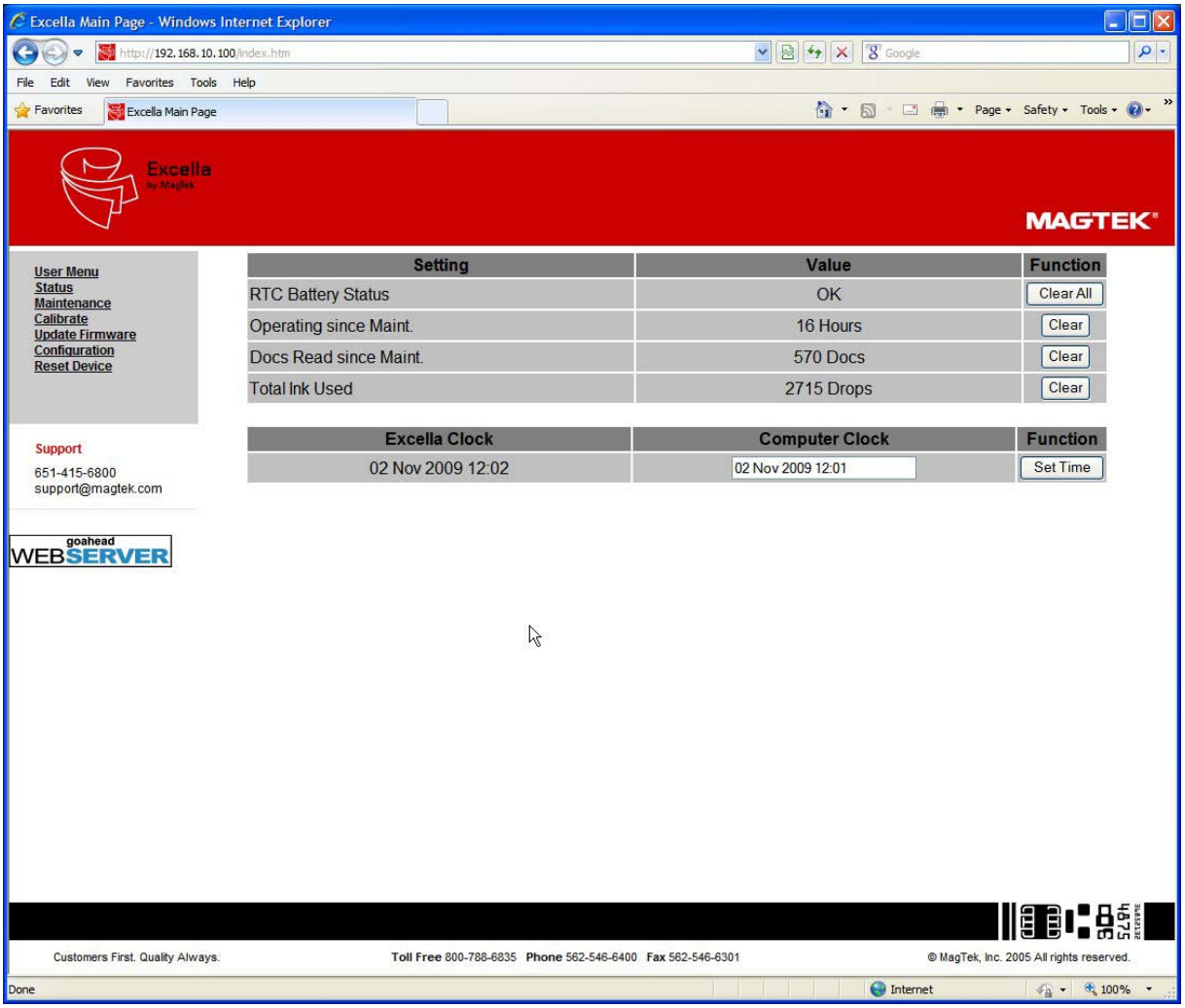


Figure A-2. Maintenance Page

CALIBRATE

Scanner calibration is performed at the factory, and subsequent calibrations are NOT required under normal operating conditions. For rare situations where calibration may be required, please call the Help Desk for assistance to perform calibration using the Calibrate Page.

UPDATE FIRMWARE

The Update Firmware Page, Figure A-3, is used to download new firmware to the Excella device. Firmware for Excella is provided in a file with the ".mef" extension.

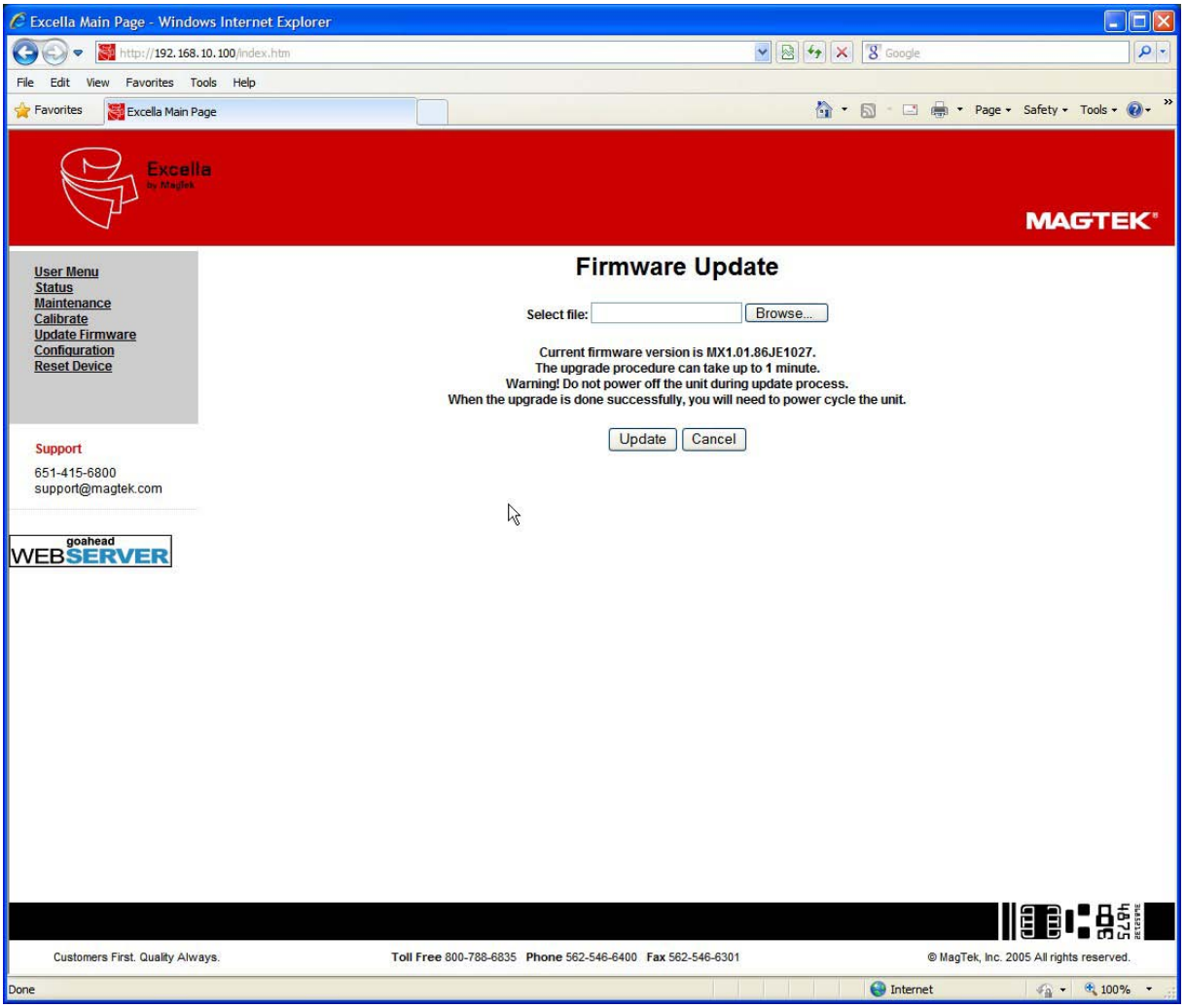


Figure A-3. Update Firmware Page

Using the Update Firmware page, Figure A-3, follow these instructions to download new firmware:

1. Click on the "Browse" button to locate and select the firmware file (e.g., mx160j.mef).
2. Click on the "Update" button.

3. The update process will take several minutes (watch progress bar at the bottom of the screen).

Caution

Do not turn off power to Excella during the update process. If power is turned off, Excella will hang up and the unit may have to be returned to the factory.

4. When completed, the "Firmware Update" message will appear with information as follows:

   Filename = mx160j.mef
   Size = 413816 bytes
   Upgrade completed

5. At this time, cycle the power of Excella (Off/On).

CONFIGURATION

The Configuration Pages, Figures A-4, A-5, A-6 and A-7 offer options to setup the Network, Ethernet, and USB configurations. Additionally, an option is provided to save and restore device (Figure A-8) configurations. A general description for all the options follows.

Network Configuration Tab

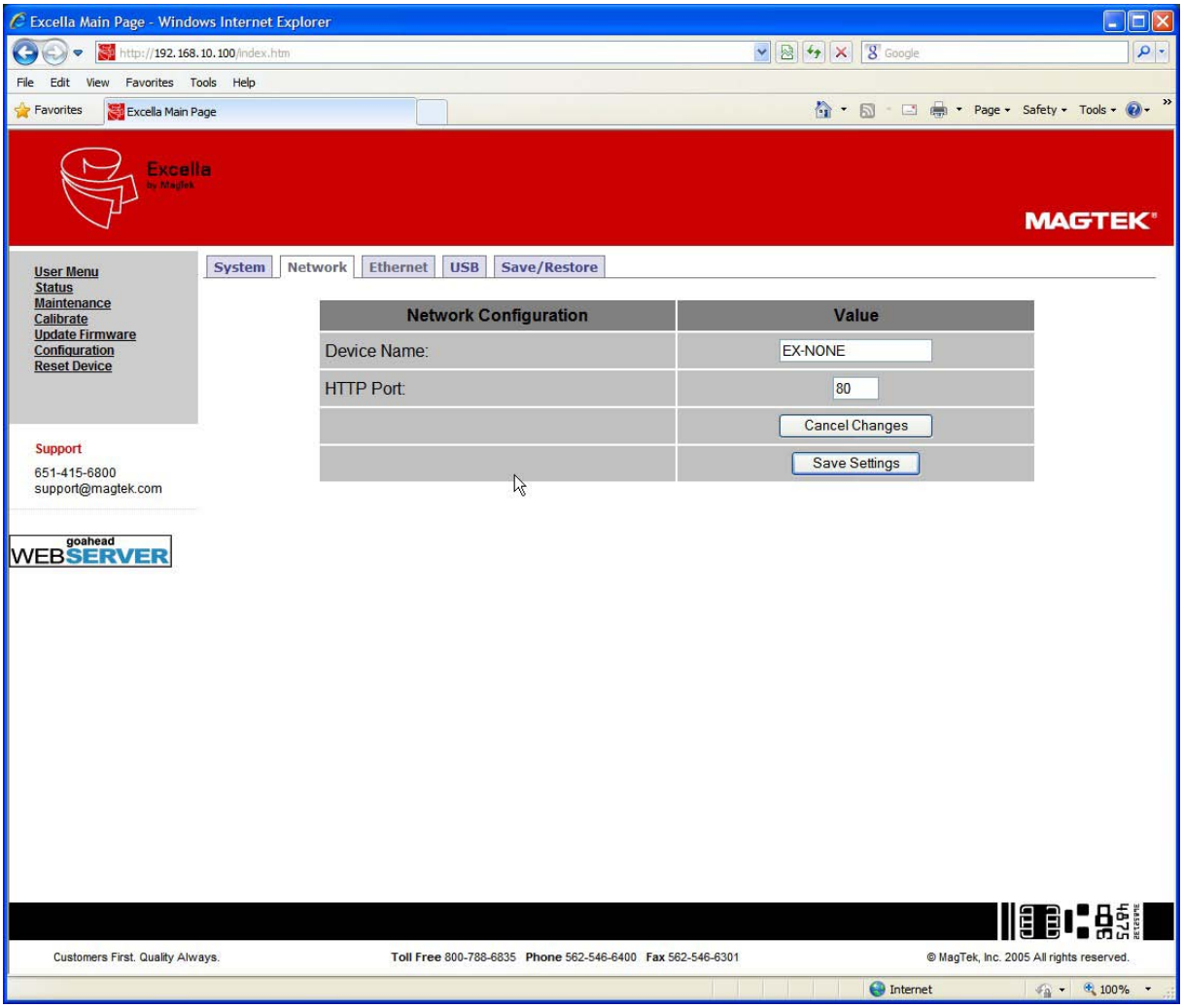


Figure A-4. Network Configuration Tab

Device Name

The Excella device name provided to the DHCP server (the network server must be setup appropriately to use this option). This name must be unique for each Excella device on the network. The default factory value is “EX” followed by the unit’s S/N (e.g. EX-A03LEY9).

HTTP Port

The default value is “80”. Use this option to change the HTTP port value.

“Cancel Changes” Button

Click on this button to cancel the current settings being displayed on this page.

“Save Settings” Button

Click on this button to save the current settings to the Excella device.

Ethernet Configuration Tab

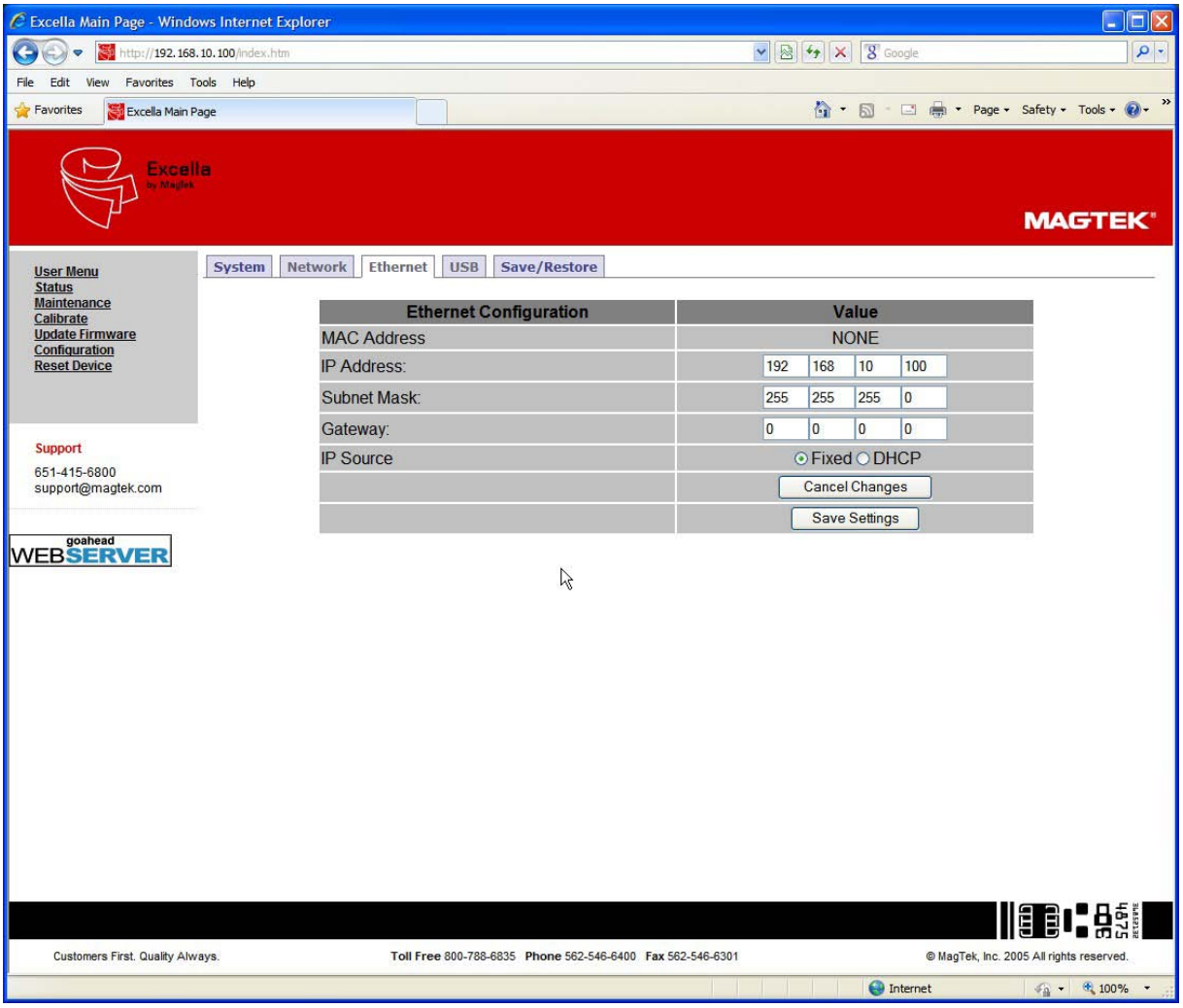


Figure A-5. Ethernet Configuration Tab

MAC Address

The MAC (Media Access Control) address uniquely identifies each Excella device. This number is assigned at the factory and cannot be changed.

IP Address

This is Excella's device IP address on the network. Use this option to change the IP address value. The default factory value is 192.168.10.100.

Subnet Mask

Use this option to change the Subnet Mask value. The default factory value is 255.255.255.0.

Gateway

Use this option to change the Gateway value. The default factory value is 0.0.0.0

IP Source

- Select the "Fixed" option if the values will be set manually using this page.
- Select the "DHCP" option if the Network server will dynamically assign these values (i.e. the values on this page will be ignored). The server must be configured appropriately to use DHCP.

"Cancel Changes" Button

Click on this button to cancel the current settings being displayed on this page.

"Save Settings" Button

Click on this button to save the current settings to the Excella device.

USB Configuration Tab

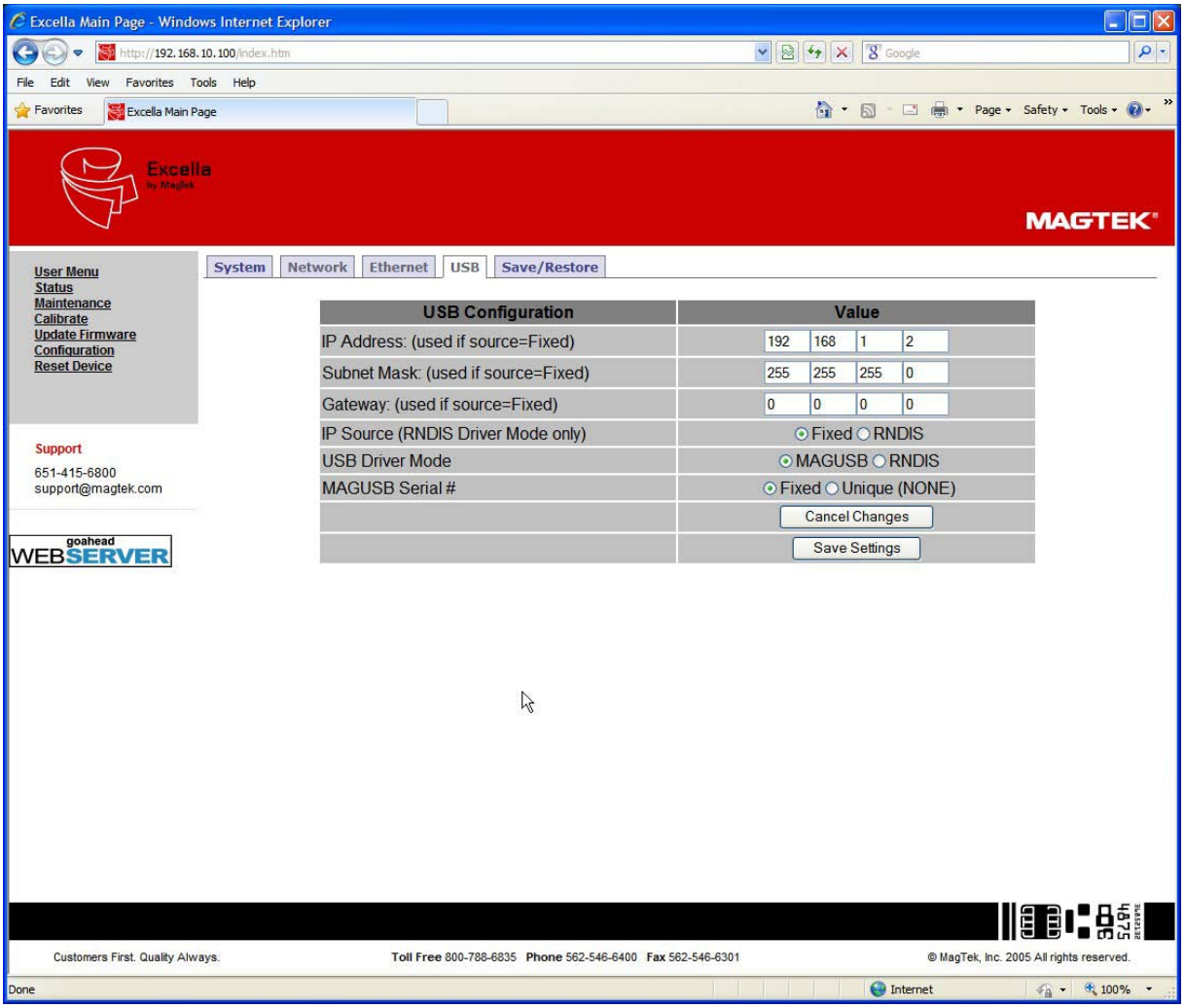


Figure A-6. USB Configuration Tab

IP Address

This is Excella's device IP address. Use this option to change the IP address value. The default factory value is 192.168.1.2.

Subnet Mask

Use this option to change the Subnet Mask value. The default factory value is 255.255.255.0.

Gateway

Use this option to change the Gateway value. The default factory value is 0.0.0.0

IP Source

- Select “RNDIS”, the default option, if the values will be provided by the PC to which Excella is being connected to (i.e., the values on this page will be ignored). It is recommended to run the “ExcellaUSBConfig” utility (See Appendix B) on the PC to set these values when the “RNDIS” option is selected.
- Select the “Fixed” option if the values will be set manually using this page.

“Cancel Changes” Button

Click on this button to cancel the current settings being displayed on this page.

“Save Settings” Button

Click on this button to save the current settings to the Excella device.

System Configuration Tab

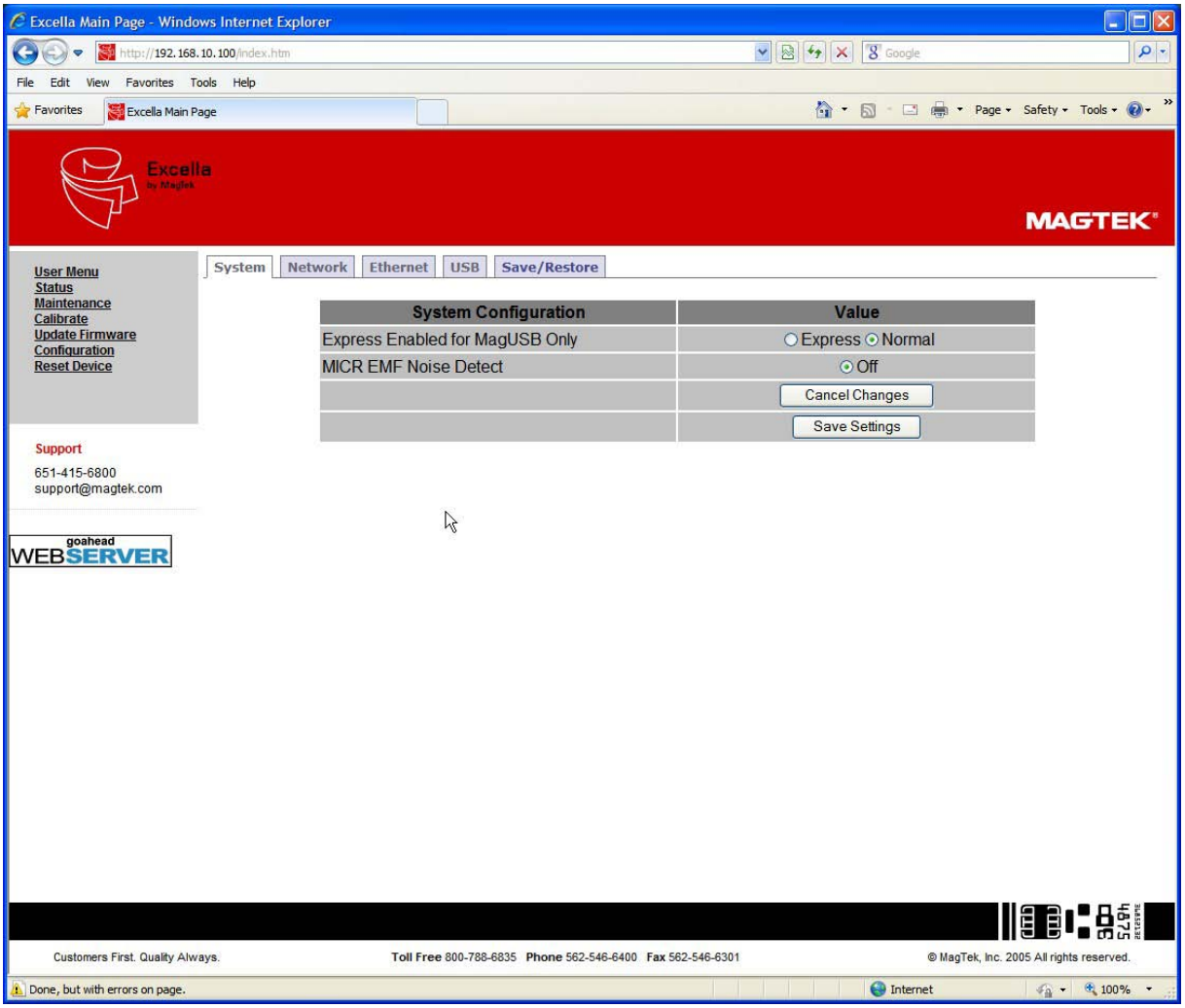


Figure A-7. System Configuration Tab

Express Enabled for MagUSB Only

Use this option to toggle between the Normal and Gateway Express Check Mode

Note: When the Express Mode is enabled, greater throughput (approximately 45 documents per minute) is possible. However, dynamic check printing is not available when this mode is utilized.

MICR EMF Noise Detect

This option should always be off.

Save/Restore Configuration Tab

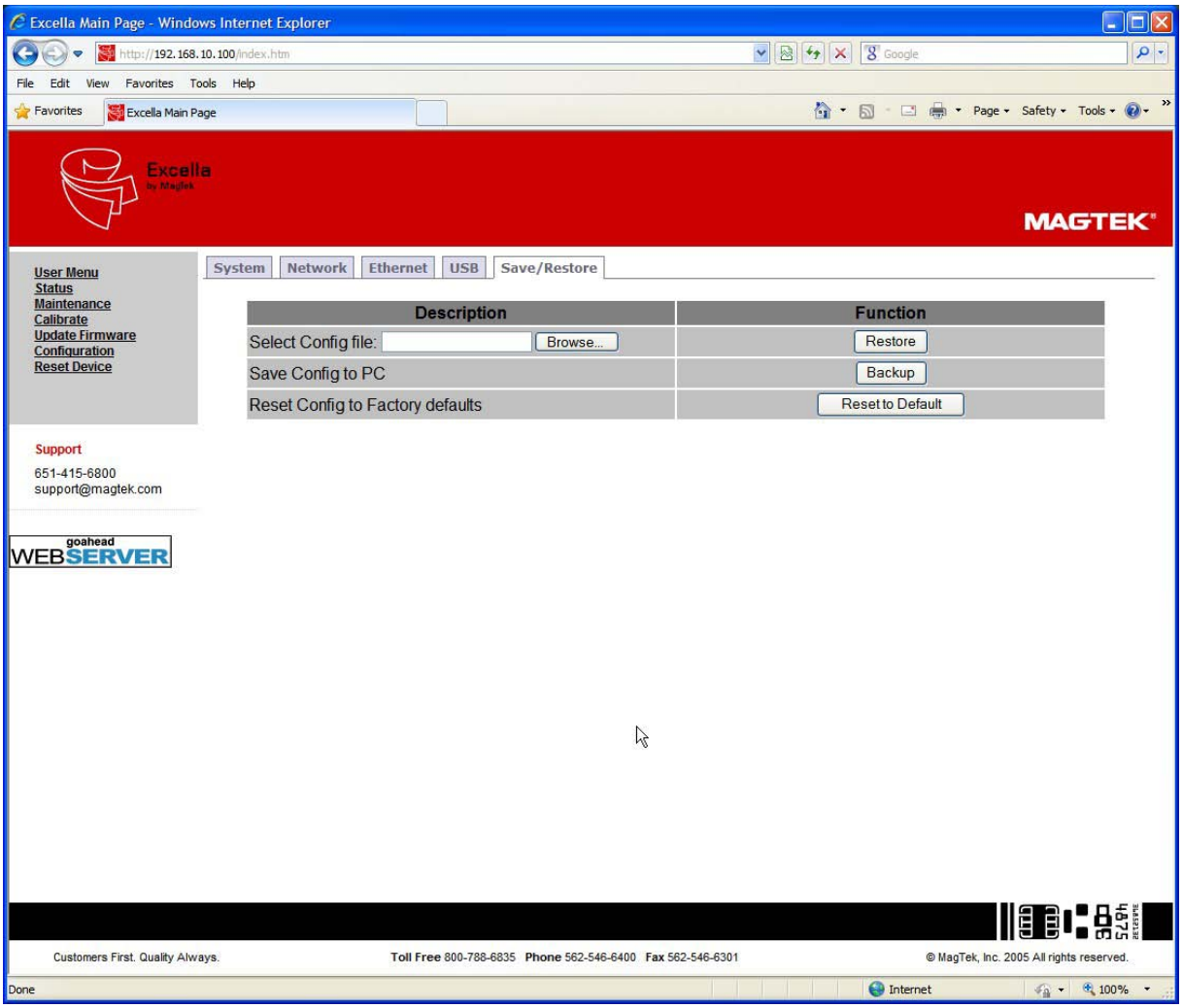


Figure A-8. Save/Restore Configuration Tab

"Select Config File" Box

This option is used in conjunction with the "Restore" button. Use the "Browse" button to locate and select a previously saved config file, then click on "Restore" to activate the options saved in the Config file.

Save Config to PC

Click on the “Backup” button to save ALL current configuration options to a Config file on the PC. The default filename is “excella_config.ecg”.

Reset Config to Factory Defaults

Click on the “Reset to Default” button to restore ALL default factory settings.

RESET DEVICE

This option is a quick and convenient way to reset the device. A device reset must be performed for new configurations to take effect and become active. During the reset operation, the device is not available and the standard message “The page cannot be displayed” will be shown. This message can be ignored.

APPENDIX B. USB CONFIGURATION UTILITY

OVERVIEW

MagTek's "ExcellaUSBConfig" utility (Figure B-1) is used to configure Excella for the USB interface ONLY. The utility will automatically select and configure IP address for the PC and Excella.

Note
ExcellaUSBConfig must be run to establish a connection between the PC and Excella.

After Excella API/Demo has been installed, ExcellaUSBConfig can be found on the following directory: C:\Program Files\Magtek\Excella Demo.

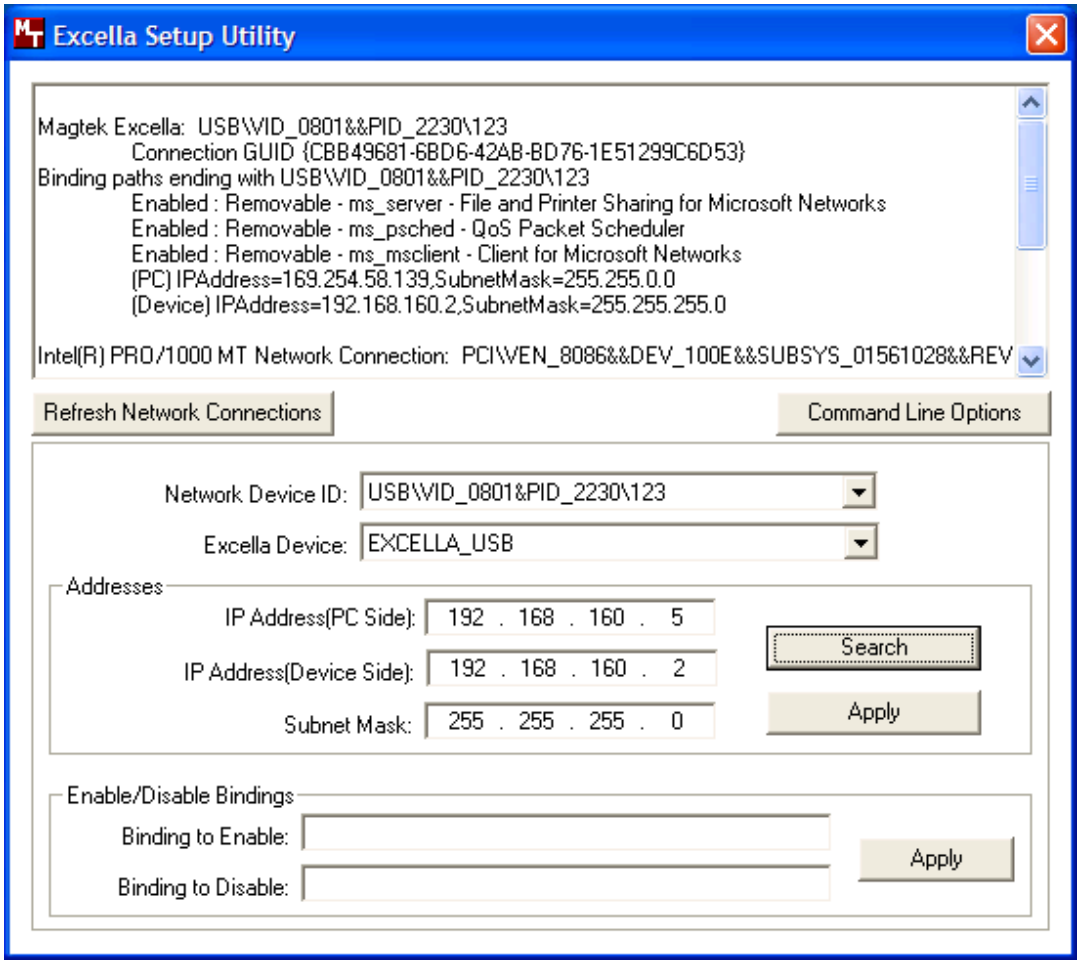


Figure B-1. ExcellaUSBConfig Utility Screen

IP ADDRESS SETUP

To run the ExcellaUSBConfig utility and setup the necessary IP addresses, use the following instructions:

1. Run the “ExcellaUSBConfig” utility.

2. For “Network Device ID”, use the default “USB\VID_0801&PID_2230\123”.

3. For “Excella Device”, use the default “EXCELLA_USB”.

4. Click on the “Search” button to automatically assign a valid IP address for the PC Side and Device Side; the boxes for these IP addresses will be automatically filled in.

5. For “Subnet Mask”, enter a new Subnet Mask or use the default: 255.255.255.0.

7. Click on “Apply”.

8. Click on “OK”.

9. Close the utility.

Note

For most applications, ignore the options “Display Network Binding Information” and “Command Line Options”.

APPENDIX C. CHECK READING

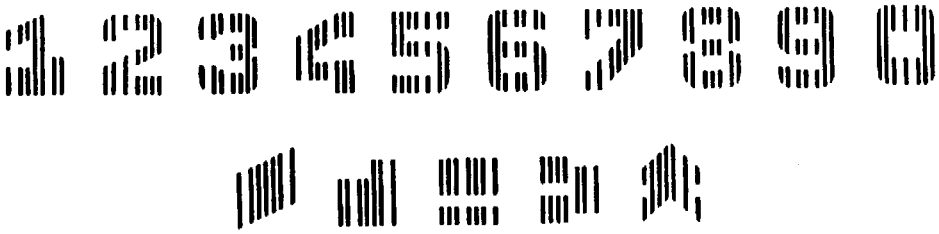
The characters printed on the bottom line of commercial and personal checks are special. They are printed with magnetic ink to meet specific standards. These characters can be read by a Excella Reader at higher speeds and with more accuracy than manual data entry. Two MICR character sets are used worldwide; they are: E13-B and CMC-7. The E13-B set is used in the US, Canada, Australia, United Kingdom, Japan, India, Mexico, Venezuela, Colombia, and the Far East. The CMC-7 set is used in France, Spain, other Mediterranean countries, and most South American countries.

E13-B CHARACTER SET

The MICR font character set E13-B includes digits 0 through 9 and four symbols. The numbers found on U.S. checks are of the E13-B character set. The numbers and symbols of E13-B are as follows:

CMC-7 CHARACTER SET

The numbers and symbols of the CMC-7 character set are as follows:



SI SII SIII SIV S5

The nonnumeric CMC-7 characters are translated by the Excella Reader as shown in Table C-1.

Table C-1. CMC-7 Nonnumeric Characters

CMC-7 Character	MICRImage Reader Output
SI	A
SII	B
SIII	C
SIV	D
SV	E

CHECK LAYOUTS

Personal checks with MICR fields are shown in Figure C-1. Business checks are shown in Figure C-2. The digits 1 through 4 in the illustrations are described below under MICR Fields.

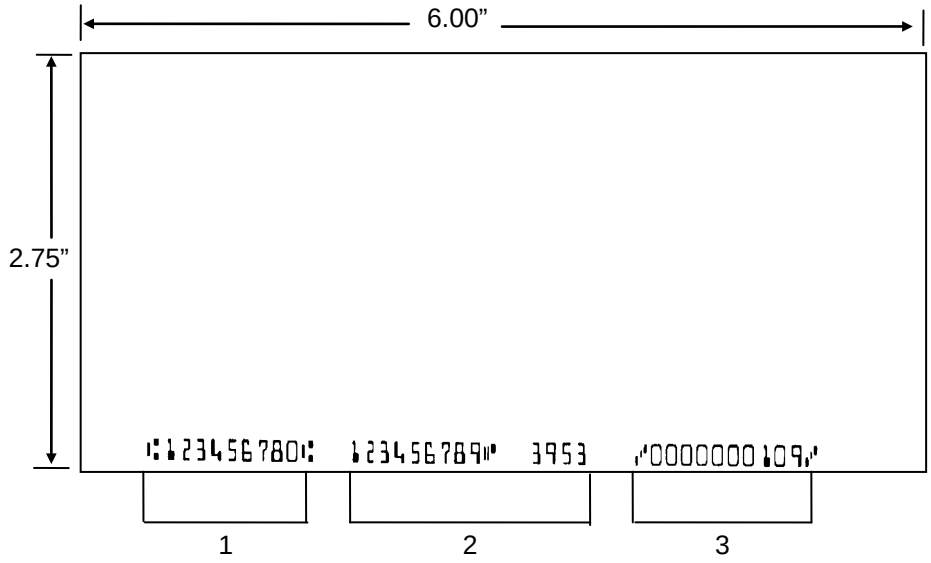


Figure C-1. Personal Checks

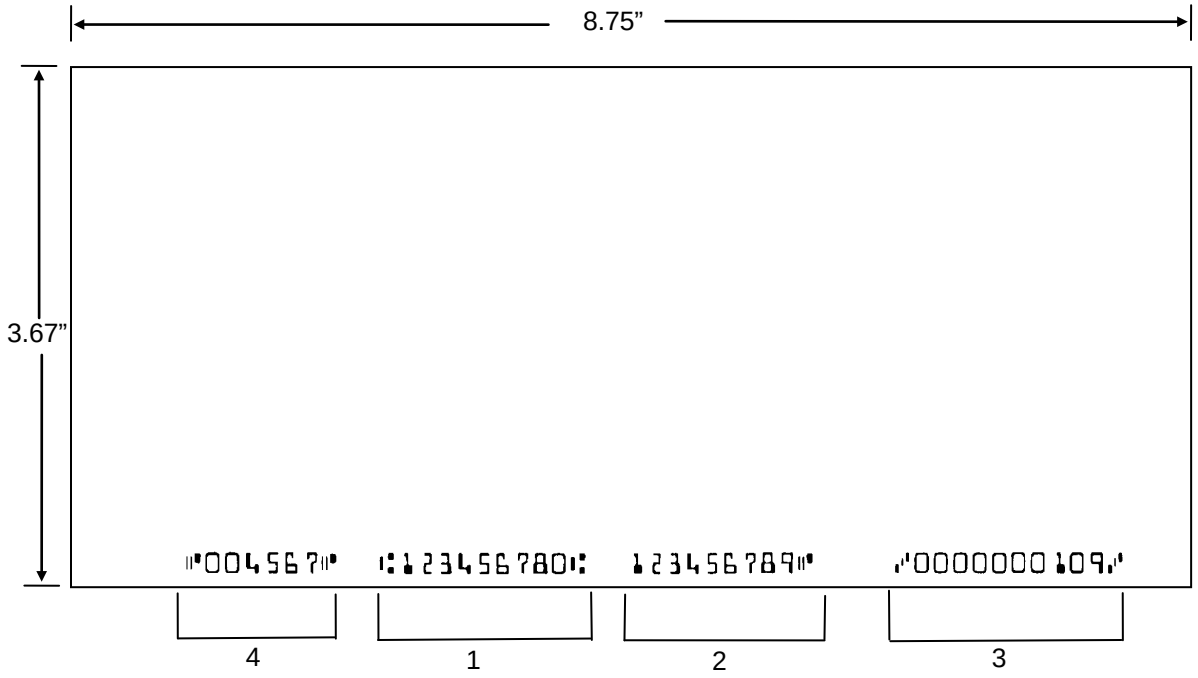


Figure C-2. Business Checks

MICR FIELDS

The numbers 1 through 4 refer to the numbers below the checks on the illustration and represent the 4 MICR fields.

1-Transit Field

The Transit field is a 9-digit field bracketed by two Transit symbols. The field is subdivided as follows:

- Digits 1-4 Federal Reserve Routing Number
- Digits 5-8 Bank ID Number (American Banking Association)
- Digit 9 Check Digit

2-On-Us Field

The On-Us field is variable, up to 19 characters (including symbols). Valid characters are digits, spaces, dashes, and On-Us symbols. The On-Us field contains the account number and may also contain a serial number (Check number) and/or a transaction code. Note that an On-Us symbol must always appear to the right of the account number.

3-Amount Field

The Amount field is a 10-digit field bracketed by Amount symbols. The field is always zero-filled to the left.

4-Auxiliary On-Us Field

The Auxiliary On-Us field is variable, 4-10 digits, bracketed by two On-Us symbols. This field is not present on personal checks. On business checks, this field contains the check serial number.

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Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

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The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

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>
> <signature of Ty Coon>, 1 April 1989
> Ty Coon, President of Vice

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Notes: