Executive Summary	What It Is

Executive Summary

During our hands-on testing of Lexmark's MS812de monochrome laser printer, we evaluated all aspects of performance, from installation and set-up, to image quality, productivity, and ease of use:

Enterprise-Level Capabilities

Enterprise capabilities include Markvision Enterprise fleet-management solution, enterprise-level security, broad operating support, and, with its incorporation of Lexmark's Embedded Solutions Framework (eSF), standard print-on-demand and other applications from the touch screen.

High-volume printing is supported with very fast tested print speeds (up to 72 ppm in testing), generous 650-sheet paper capacity that can be expanded into a very substantial 4,400-sheet capacity, Extra High Yield toner cartridge that yields up to 45,000 pages (and imaging unit good for 100,000 pages), as well as recommended monthly volume of up to 300,000 pages.

Tested Productivity
Tested print speeds using our proprietary suite of test originals were very fast:

- Tested print speeds were up to 70.04 ppm printing color graphics and text (Adobe Acrobat file) and up to 69.59 ppm printing black text (Microsoft Word files), virtually matching Lexmark's rated print speed of 70 ppm.
- Tested duplex print speed of 42.17 ppm printing a black text Microsoft Word file.

Ease of Use
Exceptionally easy to use 7" e-Task touch screen that is well-laid out, features audible feedback, and large, easy to read text.

Image Quality
Overall business-quality image quality was competitive, with sharp, laser-quality black text quality readable down to 5 pt. font size. Output also displayed good resolution and fine-line reproduction. No image anomalies such as mis-registration, poor fill, broken text, banding, etc. were observed.

Installation
Hardware set up was fast at approximately 8 minutes, and both toner cartridge and photoconductor are pre-installed, which made setup exceptionally easy. Software and network installation was also quick at just 8 minutes. In total, we had the MS812de up and running in just 16 minutes.

Build Quality
Sturdy build quality.

Maintenance
Both toner cartridge and imaging unit are easily accessed, removed, and replaced from the front of the printer.

The 621X Extra High Yield Return Program Toner Cartridge yields up to 45,000 pages for longer, uninterrupted operation. The MS812de also

What It Is

Lexmark MS812de

"It was a pleasure testing Lexmark's MS812de. Everything from the unboxing, setup and software/network installation, to the ease of use, ergonomics, software, and performance was first rate. The MS812de's fast tested print speeds of up to 72 ppm, low Cost per Page and Total Cost of Ownership, expandability, and versatility make this printer a wonder to behold. Bravo Lexmark, you really know your stuff and other vendors should beware." - *Terry Wirth, President, Wirth Consulting.*

Imaging Technology: Monochrome Laser
Functions: Print
Maximum Monthly Volume: 300,000 pages
Recommended Monthly Volume: 5000 – 50,000 pages
Web Price: $1,949.00
Availability: Web, authorized dealers.
Introduction Date: October 2012

Part of the MS810 series, the MS812de is designed for large workgroups with its 70-ppm rated print speed, 660-sheet standard paper capacity expandable to 4,400 sheets, Gigabit Ethernet networking, and maximum monthly volume of up to 300,000 pages.

ships with a toner cartridge rated to yield a substantial 10,000 pages, which is considerably more than that of most starter "ship with" toner cartridges in this class. It also features a long-life imaging unit that is good for up to 100,000 pages.

Reliability - During our evaluation, printed output was neatly stacked and functions worked correctly the first time. The newly-designed media throughput system performed flawlessly, that is no misfeeds or double feeds occurred.

Cost per Page and Total Cost of Ownership - Very low cost per page of just 1.2¢ using Lexmark 621X Extra High Yield Return Program Toner Cartridge and 520Z Return Program Imaging Unit. Competitive desktop laser printers' cost per page can range as high as 2¢ to 3¢.

Recommendation – The MS812de is a dominating desktop laser printer, with strong advantages including:

- Complete redesign of the print engine, from the ground up, with particular improvements made to the imaging system and media input and output.
- Blazing-fast print speeds – up to 72 ppm in testing - especially for this price point ($1,949.00).
- Cost per page as low as 1.2¢, as well as very competitive monthly supply costs and Total Cost of Ownership.
- Strong enterprise-class management with Markvision Enterprise, strong security suite, and very broad operating support.
- Print-on-demand via Lexmark Solutions, and the ability to add optional security and workflow solutions.
- Solid, business-class build quality.
- Easy hardware setup, and no-brainer, very easy maintenance.
- Exemplary performance in testing from start-to-finish – hardware and software installation was easy, software worked correctly the first time and throughout, no misfeeds occurred, etc.

Lexmark's MS812de sets a new standard for desktop A4/letter-size office printing with its 70-ppm print speeds, very low cost per page, print-on-demand capability, advanced security, Markvision Enterprise fleet-management, extensive hardware and software expandability, and faultless performance throughout testing. Consequently, this remarkable printer is an *Outstanding* choice for use in companies, large workgroups, and enterprises.

IMAGE QUALITY

TESTED IMAGE QUALITY
In order to evaluate image quality, Wirth Consulting uses:
1. The highest image-quality settings.
2. ImageXpert™ Printer 600 dpi Target Version 5.1.
3. ImageXpert Test Target EP-PSv1.
4. Northlight Images UK Grayscale Linearization Test Chart.
5. Synthetic (photographic) test images derived from ISO Internal Standard 12640 Graphic Technology (Prepress Digital-Data Exchange – CYMK Standard Color Image Data [CYMK/SCID]).
6. Hammermill 100/112+ Euro Bright, 28 lb. Color Copy Paper.
7. Hammermill 20-lb. Copy Plus with ColorLok technology.

NOTE: Image-quality samples contained in this report are raw TIFF, non-compressed photos that have been recorded using a high-end digital camera. They are intended to provide readers with our best approximation of image quality. However, all Wirth Consulting comments on image-quality are based on a visual examination of the actual printed image-quality samples themselves, not on the photographs.

Imaging Technology: Monochrome laser
Maximum Print Resolution: 2,400 dpi

STRENGTHS
- Overall business-class image quality was competitive, with image-quality samples displaying sharp, laser-quality black text quality that was readable down to 5 pt. font size. Output also displayed good resolution and fine-line reproduction.
- No image anomalies such as mis-registration, poor fill, broken text, banding, etc. were observed.

LIMITATIONS
- None.

What You Should Know
Hands-On Test Report
Lexmark MS812de

Wirth
Consulting
Before you buy . . .

PRINT-MODE IMAGE QUALITY SAMPLES (RAW TIFF DIGITAL PHOTOS)


Image-quality originals used by Wirth Consulting when evaluating a device's image quality.

Raw TIFF photo of the test target printed on Bright White Paper (plain paper). Overall the photo has an attractive appearance. While upon very close examination, there is some graininess, photo quality will be most acceptable for most office-imaging applications.
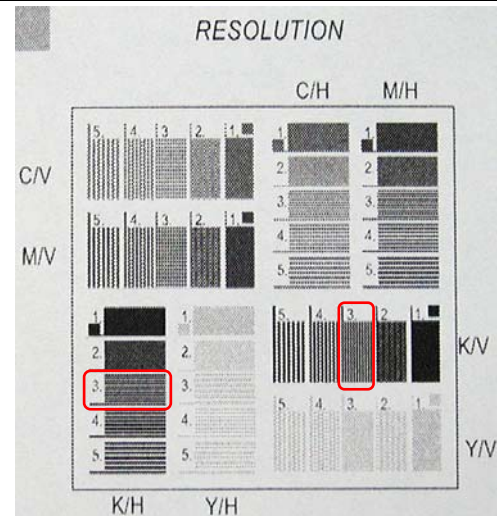
When printing the test target that evaluates resolution, the MS812de was able to produce black horizontal and vertical lines (circled in red) as thin as 3 pt. size, which is very good. It produced cyan and magenta lines down to 3 pt. size, and yellow lines down to 4 pt. size, which is good.
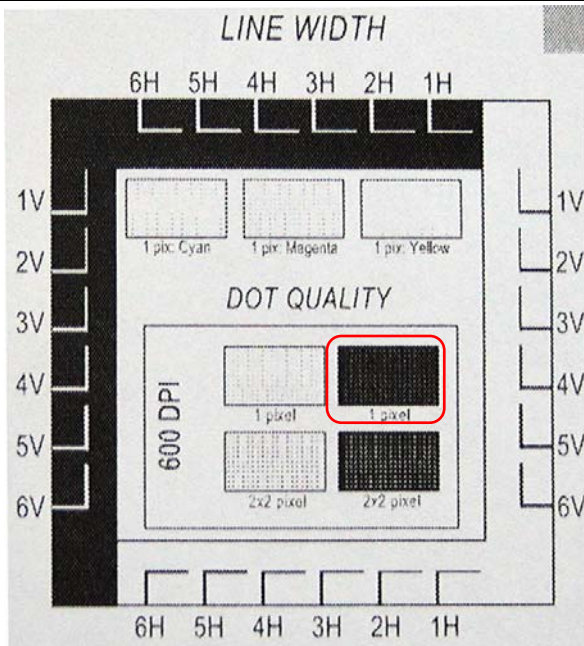
In the test target to the left, the MS812de was able to produce both positive and negative horizontal and vertical lines down to 1 pt., which is very good.

In the Dot (Pixel) Quality measurement, the printer performed well:

It produced approximately 80% of pixels correctly in the 2x2 positive and negative black pixel boxes
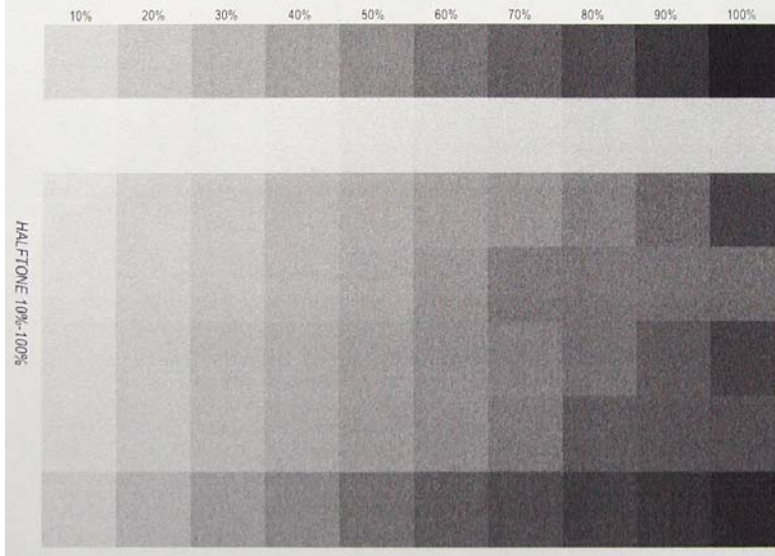
In the negative 1 pixel black box, it produced approximately 70 percent of pixels correctly, but fill was somewhat light in the positive 1 pixel black box.

Fill was somewhat light in the cyan, magenta, and yellow pixel boxes.

Wirth **C**onsulting
Before you buy . . .

The first row of the halftone chart shows the MS812de's ability to produce grayscale images. The printer was able to perfectly produce all 10 shades correctly in distinct 10 percent steps, indicating it will be able to produce grayscale images very well, although there is some slight graininess.

The MS812de also produced clear, readable black text down to 5 pt. font size—the smallest font size most office users will ever require, and down to 4 pt. font size for negative text. Overall, text was sharp and compared well with text produced by other office-imaging printers and All-in-Ones tested by Wirth Consulting.

PRINT

STRENGTHS

- Very fast tested print speeds of up to 70.04 ppm printing color graphics and text (Adobe Acrobat) and up to 69.59 ppm printing black test (Microsoft Word), virtually matching Lexmark's rated print speed of 70 ppm.
- Very fast tested duplex print speed of 42.17 ppm (black text; Microsoft Word).
- First Page Out Times as fast as 6.25 seconds (Lexmark's internal testing shows that "driverless" printing applications can produce the first page in as little as 4 seconds).
- Extremely broad operating system – from many flavors of Microsoft Windows, to Novell, Linux, Citrix MetaFrame, etc.
- Extensive security, including user authentication and auditing, hard-drive encryption and wiping, network security protocols, etc.

LIMITATIONS

- None.

Operating Systems Supported
Microsoft Windows: XP, Server 2003, XP x64, Server 2003 running Terminal Services, Server 2003 x64, Server 2003 x64 running Terminal Services, Vista, Vista x64, Server 2008, Server 2008 x64, Server 2008 running Terminal Services, Server 2008 x64 running Terminal Services, Windows 7, Windows 7 x64, Server 2008 R2, Server 2008 R2 running Terminal Services.
Apple Mac: OS X (10.5, 10.6, 10.7, 10.8).
Novell: NetWare 6.5 Open Enterprise Server, NetWare 5.1(SP 6+), 6.0(SP 3+) with Novell Distributed Print Services (NDPS), Open Enterprise Server on SUSE Linux Enterprise Server.
Linux: SUSE Linux Enterprise Server 10, 11;SUSE Linux Enterprise Desktop 10, 11;Red Flag Linux Desktop 6.0; Linpus Linux Desktop 9.6; Debian GNU/Linux 5.0, 6.0;Red Hat Enterprise Linux WS 4.0, 5.0, 6.0;Ubuntu 11.04, 11.10, 12.04;openSUSE 11.3, 11.4, 12.1;PCLinuxOS 2011.9; Mint 9, 10, 11, 12;Fedora 14, 15.

Print Speed (Ltr):	70 ppm	Bluetooth:	No
Duplex Print Speed (Ltr):	42 ppm	USB Host Port:	2.0
Std./Max. Mem.	512/2560 MB	USB Memory Port:	Yes
Media Card Slots:	No	PictBridge Port:	No
Wireless Networking:	Optional	Mobile Printing:	Yes
Remote Printing:	No	Hard Drive:	Opt. 80 GB

Ethernet Networking: Gigabit Ethernet

CPU: 800 MHz dual-core processor

First Page Out Time: 4.0 seconds

Printer Languages: PCL 5e Emulation, PCL 6 Emulation, Personal Printer Data Stream (PPDS), PostScript 3 Emulation, Direct Image, Microsoft XPS (XML Paper Specification), PDF 1.7 emulation; supports Lexmark Universal Print Driver

Optional Local Ports: Internal RS-232C serial, Internal 1284-B Bidirectional Parallel

Optional Network Interface: Internal MarkNet N8350 802.11b/g/n Wireless (USB)

TEST PLATFORM: Microsoft Office 2010; 32-bit Microsoft Windows 7 Enterprise SP1; Adobe Acrobat 9.5.2.

TESTED PRINT PERFORMANCE GDI (XL) PRINT DRIVER (LETTER - 8.5"X11" MEDIA)

FIRST PAGE OUT TIME (SECONDS)

Test Document	
1-Page Photo	24.03
1-Page Adobe Acrobat Color	6.25
1-Page Adobe Acrobat Text	6.31
1-Page Power Point Color	9.53
1-Page B/W Word Text	10.03
1-Page B/W Word Duplex	13.34

UNIX: Sun Solaris SPARC 9, 10; HP-UX 11.11, 11.23, 11.31; Sun Solaris x86 10, 11; IBM AIX 5.3, 6.1, 7.1.
Citrix MetaFrame: Microsoft Windows Server 2003 running Terminal Services with Citrix Presentation Server 3.0, 4.0, 4.5; Microsoft Windows Server 2003 x64 running Terminal Services with Citrix Presentation Server 4.0 x64, 4.5 x64; Microsoft Windows Server 2003 and 2003 X64 Edition with Citrix XenApp 5.0; Microsoft Windows Server 2008 and 2008 X64 Edition with Citrix XenApp 5.0; Microsoft Windows Server 2008 R2 with Citrix XenApp 6.0, 6.5.

Network Protocols Supported
TCP/IP IPv4, AppleTalk, TCP/IP IPv6, TCP, UDP.

Network Security
LPR/LPD; Direct IP (Port 9100); Enhanced IP (Port 9400), FTP, TFTP, ThinPrint .print integration, Telnet, IPP 1.0, 1.1, 2.0 (Internet Printing Protocol)

JOB TIME

Test Document	FPOT (sec.)	Job Time (sec.)	PPM
1-Page Photo	24.03	24.03	2.5
10-Page Adobe Acrobat Color	10.57	18.28	70.04
10-Page Adobe Acrobat Text	9.46	17.38	68.18
10-Page Power Point Color	12.09	24.03	45.23
10-Page B/W Word Text	11.12	18.88	69.59
10-Page B/W Word Duplex	17.71	27.67	42.17

PRINT-FILE SIZES (MB)

Test Document	Native File Size	Print File Size
1-Page Photo	2.79	12.8
10-Page Adobe Acrobat Color	0.45	1.58
10-Page Adobe Acrobat Text	0.14	0.51
10-Page Power Point Color	14.50	27.4
10-Page B/W Word Text	0.21	0.35
10-Page B/W Word Duplex	0.21	0.35

LEXMARK SOLUTIONS

The MS812de features the following three standard Lexmark Solutions. Additional Lexmark Solutions for security and document workflow may be added.

Forms & Favorites and Bookmarks: Create links to documents and images that reside on a server anywhere on the Internet (Web sites and FTP sites) or in network folders (Forms & Favorites only), and print them on demand at any time. Files can be PIN-protected, and user authentication can be applied (Forms & Favorites only).

Change Language: From the touch screen's home screen, users can quickly change the language displayed by the touch screen.

Eco Settings: Configure and set eco-friendly settings such as automatic duplex printing and standby/sleep-mode activation.

STRENGTHS

- **Bookmarks** provide print-on-demand capability—at the touch screen, users can print (optionally) password-protected files, such as a company map or patient questionnaire, without using a PC workstation.
- With **Forms & Favorites**, Administrators can additionally link to files store in a network folder and apply various forms of user authentication. Also, a user's personal Forms & Favorites can travel with them and their Forms & Favorites appear on the control panel when logging in at another similarly featured Lexmark device. At the touch screen, we found it easy to retrieve files stored remotely or in network folders. In practice, this eliminates having to pre-print and inventory pre-printed documents such as forms, directions, applications, etc., in filing cabinets, etc., and users only print the exact number of documents needed, eliminating waste. Administrators may secure files so that only authorized users may access and print them.
- With **Eco-Settings**, quickly apply default settings for conserving energy, paper and toner; also schedule when the printer will go into sleep mode—for instance, within 15 or 30 minutes, etc.
- Easy management of Lexmark Solutions—during hardware setup, administrators can opt out of all Solutions, as well as disable them at any time. Additional Lexmark Solutions, such as a secure print-release solution and mobile workflows, are available for easy download at Lexmark's Web site.

LIMITATIONS

- None.

CONTROL PANEL AND TOUCH SCREEN

Pressing the Sleep button on the control panel manually puts the printer into Sleep or Hibernate mode, so that less energy is consumed. The printer automatically wakes up in just a few seconds when the touch screen or a hard key is pressed, a print job is sent, or a media drawer or cover is open.

- The MS812de's 7" e-Task color touch screen is especially intuitive and easy to use—there's a "click" whenever the user presses a button, confirming they've made the selection, while a "beep" indicates an invalid entry. The touch screen provides large, easy-to-read text, screens are simply laid out and not cluttered, and it's easy to navigate backward and forward.
- The touch screen also makes it easy to find and print Stored and Held jobs. And, when users send a Held job to the printer, later at the touch screen they can change the job's settings, such as simplex to duplex. Users can also preview held jobs as thumbnails on the touch screen so they can make sure they're printing the correct job, avoiding mistakes and waste. Files downloaded from a USB flash memory drive may also be previewed at the touch screen.
- The touch screen's viewing angle can be adjusted, and it can be remotely viewed and operated from any workstation with the Web-based Remote Operator Utility.

LIMITATIONS
- None.

The MS812de's control panel. From left to right are: USB port for printing from USB flash memory drives; 7" e-Task color touch screen; and numeric keypad. Below the numeric keypad is an "X" job cancel key. When a USB flash memory drive is inserted into the USB port, documents and images stored on it are displayed, and can then be selected and printed.

Lexmark's MS812de as tested by Wirth Consulting.

7" Lexmark e-Task color touch screen; below is the home screen. Note that all icons can be removed from the screen if desired.

Change language displayed by the touch screen.

Search Held Print Jobs; Launches a QWERTY-style keypad.

Access and print Held Print Jobs (print jobs that are stored in printer memory when the user selects the Confidential, Verify, or Reserve and Repeat option in the print driver.

Create file links for URLs (FTP, HTTP, and HTTPS files); files can be viewed and printed on demand from the touch screen, and can be PIN-protected (users must enter a 4-digit PIN to access them).

Search Held Print Jobs by user who sent print job. A QWERTY-style keypad is provided.

Change the background of the touch screen.

Launch the Help Guide.

Indicates printer status, and current status of toner and imaging unit.

Launches Eco Settings menu for making eco-friendly settings such as automatic duplexing the default.

Displays links to documents for print-on-demand at the touch screen.

Launch the printer menu system.
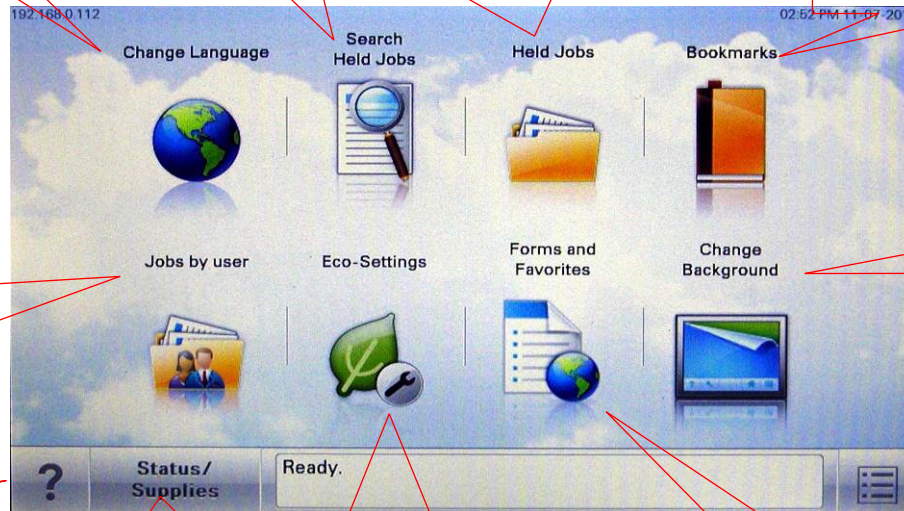
CHANGE LANGUAGE
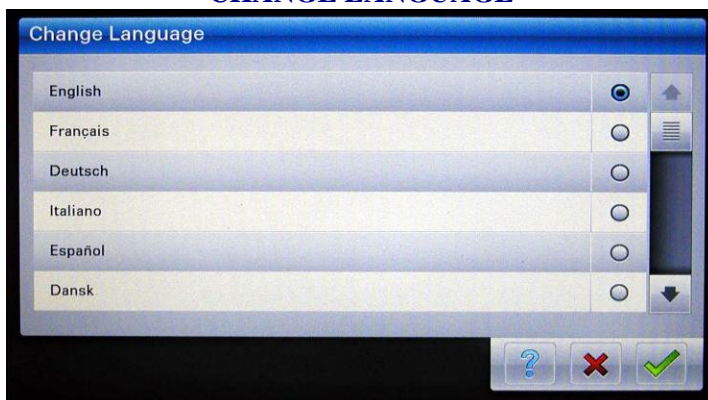
Quickly change the language displayed by the touch screen. Over 20 languages are supported, including English, French, Spanish, Chinese, etc.

BOOKMARKS

With Bookmarks, administrators can create folders and configure links to URLs for frequently printed documents such as forms. Select the folder to access stored jobs and view and print them.
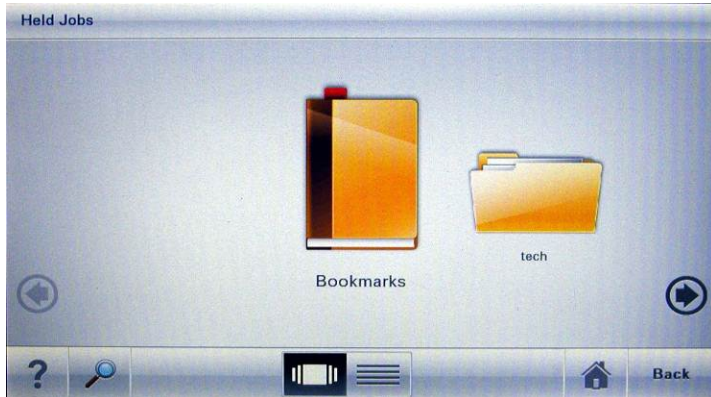
HELD JOBS

Held Jobs contains Bookmarks and Held print jobs (print jobs held in printer memory that were sent to the print using the Confidential, Verify, or Reserve and Repeat option in the print driver).

HELD JOBS
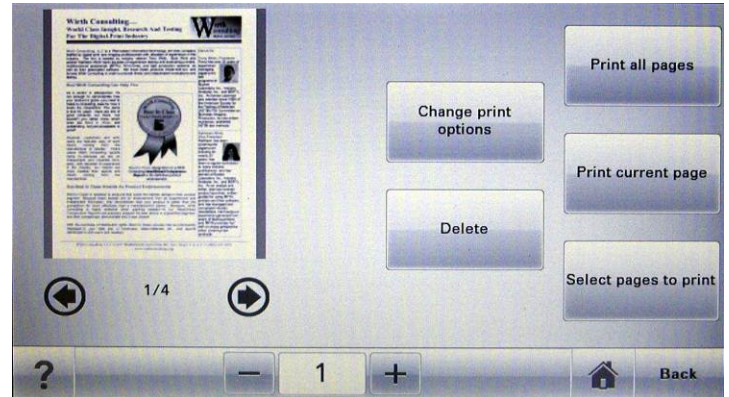
Before printing on demand, users can change print options (set automatic duplexing, collating), select which pages to print, and select number of copies.

ECO-MODE
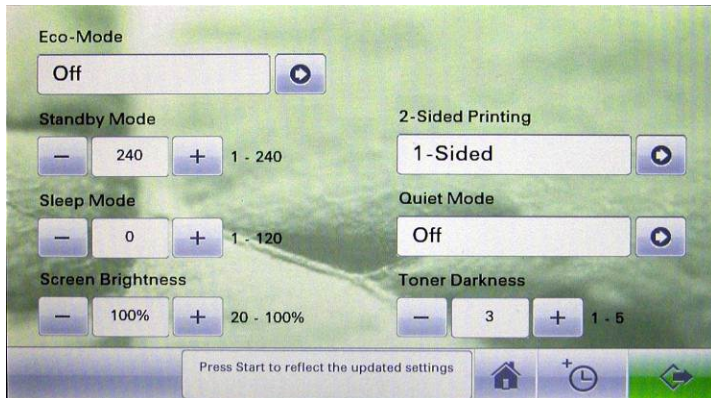
Eco-Mode enables administrators to configure eco-friendly defaults, such as when the printer should default into energy-saving sleep and standby modes, make two-sided printing the default, and reduce the toner usage by reducing toner darkness.

ECO-MODE

A key feature is the ability to schedule when the printer should go into power-saving modes, for instance, after work hours and on weekends, in order to conserve energy.

FORMS & FAVORITES
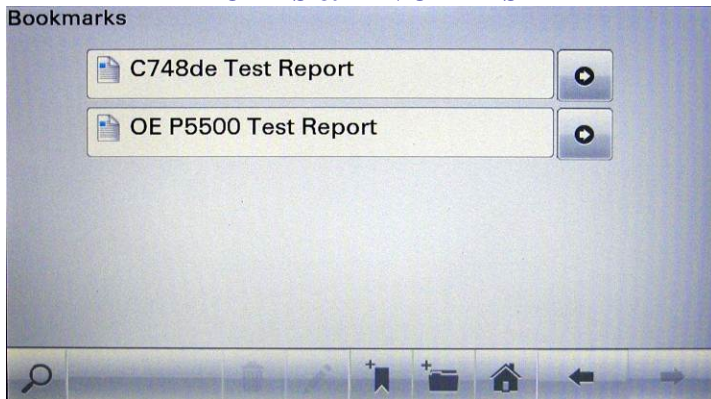
We set up links to two documents in a network folder. Select the document and apply settings to print the file.

QWERTY-STYLE KEYPAD

The touch screen provides a QWERTY-style keypad used for searching for Forms & Favorites, Bookmarks, Held Jobs, etc.

PRINTER MENU

The printer menu system enables administrators to configure defaults for paper settings, network settings, security, etc.

PRINTER MENU
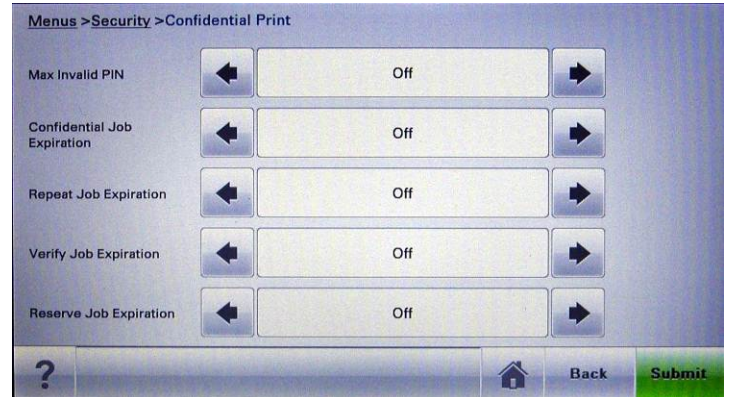
Under the security menu, administrators can enhance security by, for instance, specifying the number of invalid user PIN entries a user can make before they're locked out of using the touch screen, and specify when held print jobs are deleted from memory.

PRINTER MENU
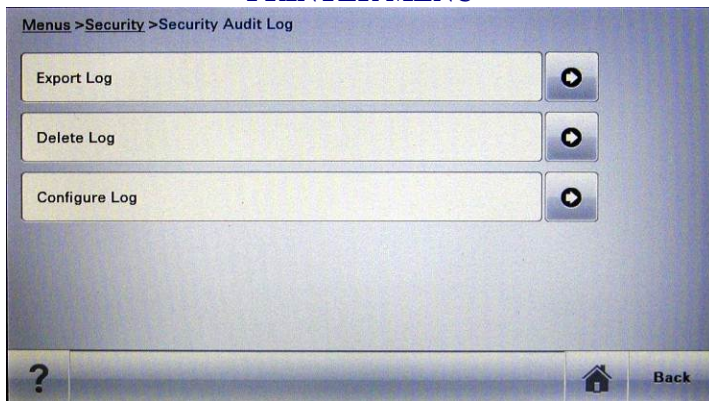
Tracking of user activity is also provided, and administrators can export Audit logs to a USB flash memory drive.

DEVICE AND SUPPLY STATUS
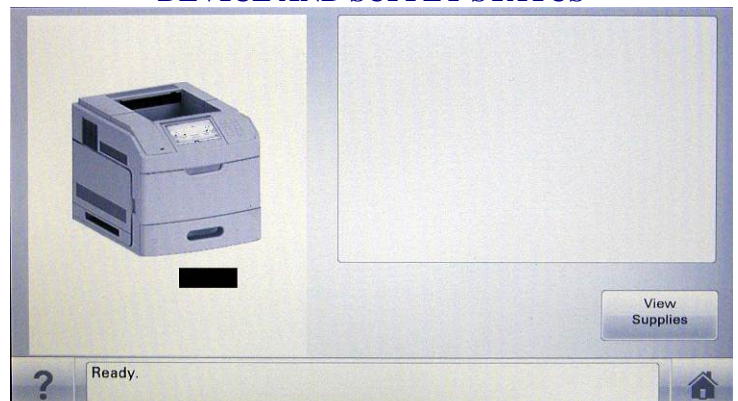
Press the Status/Supplies icon to see current printer status as well as current Consumables status.
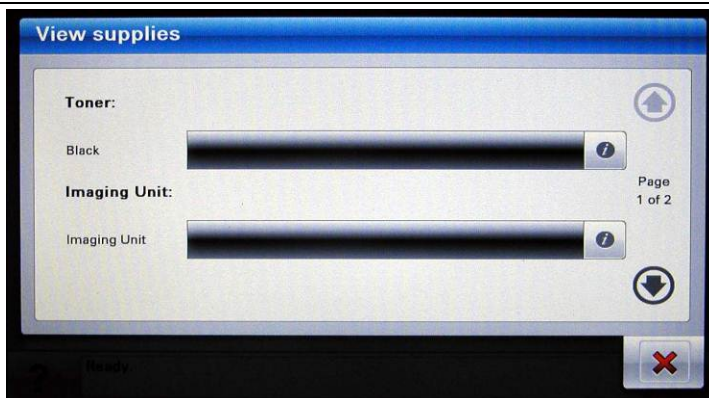
Detailed status on the current remaining life of the toner cartridge and imaging unit is displayed…
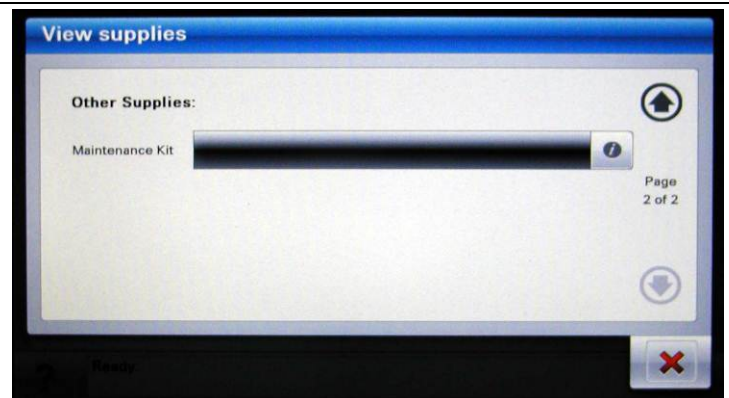
… as well as remaining life for the Maintenance Kit.

PRINT DRIVERS

The MS812de ships with a GDI (XL) print driver that's installed from the software CDROM.
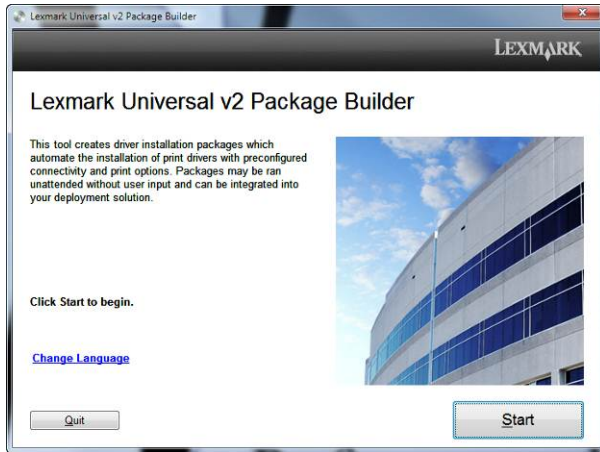
PCL 5/6 and PostScript 3 emulation print drivers can be obtained and installed by downloading and running Lexmark's Universal v2 Package Builder.

STRENGTHS

- Although the evaluated GDI (XL) driver contains seven tabs, it's very easy to navigate, and has the same user interface as that of other Lexmark print drivers.
- Save collections of print settings, name them, and then recall them, eliminating having to re-specify print settings.
- Confidential (secure) print – users specify a PIN in the print driver, and then enter it at the control panel, so that confidential print jobs aren't left unattended.
- Administrators can restrict and track user printing by requiring that users authenticate themselves in the print driver.

LIMITATIONS

- None.
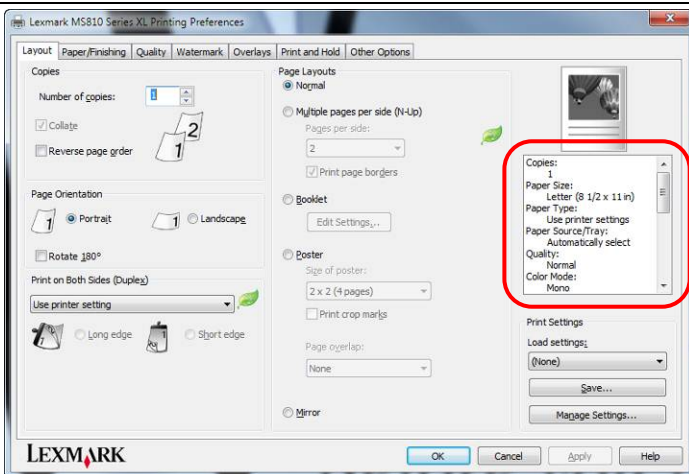
The GDI (XL) print driver contains seven tabs, with the most frequently used settings on the first tab. The box in the upper right conveniently displays currently selected settings.
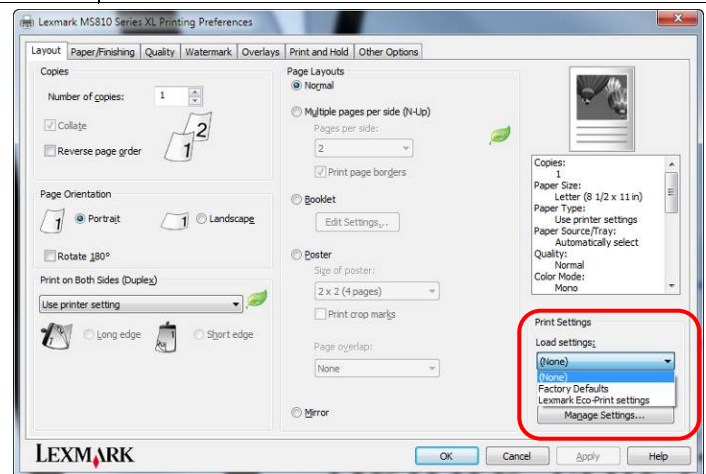
With the Load settings option, users can conveniently configure a collection of settings, name them, and then recall them using the Load Settings menu, saving time and eliminating mistakes.
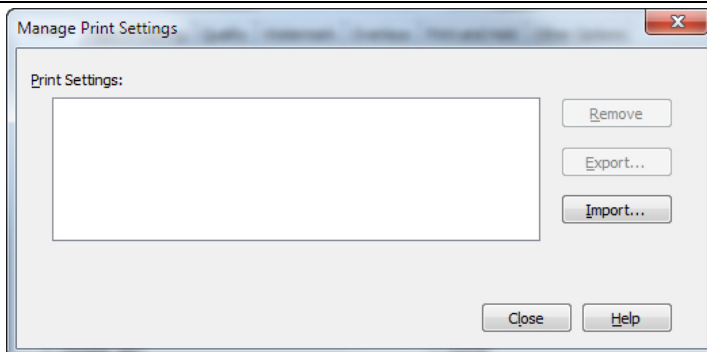
Collections of print settings can also be imported from other sources, such as other Lexmark printers.
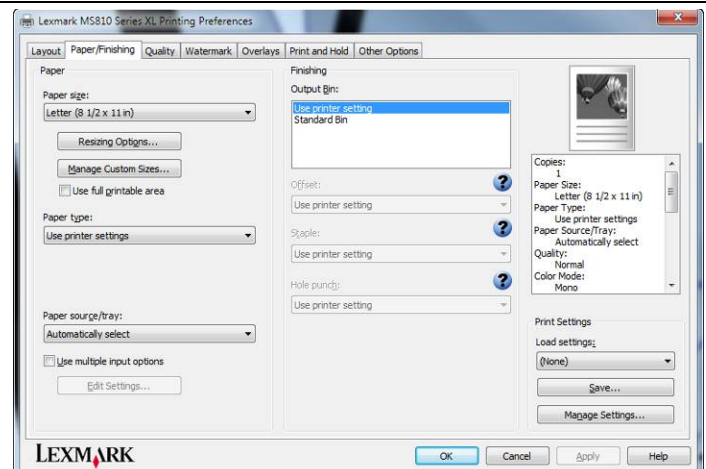
The straight-forward Paper/Finishing tab. The illustration in the upper right also indicates current settings.
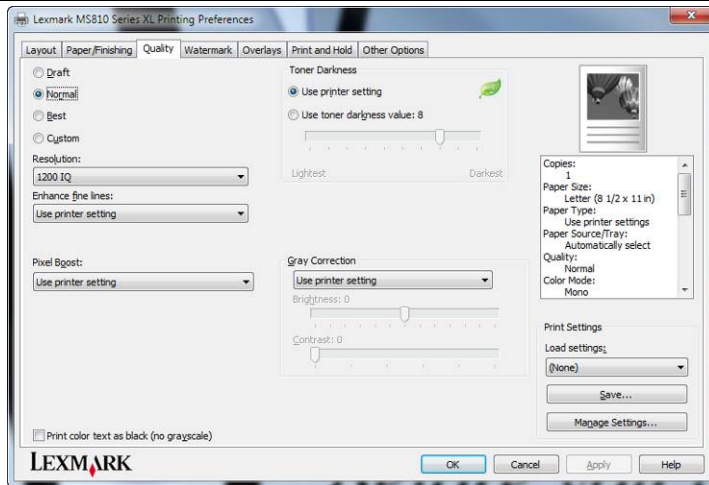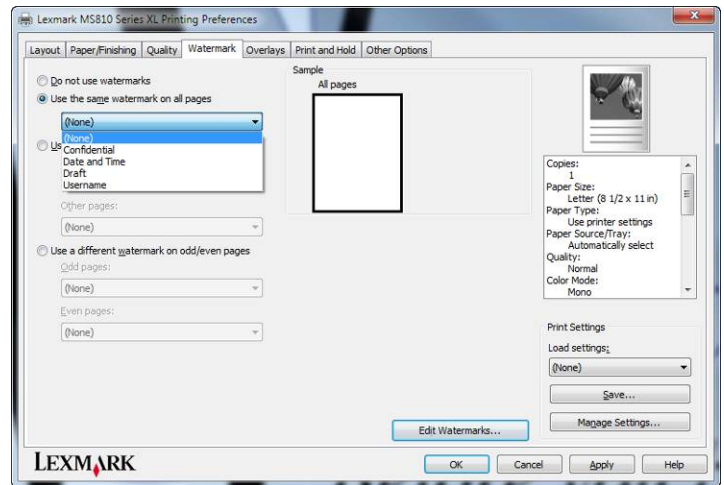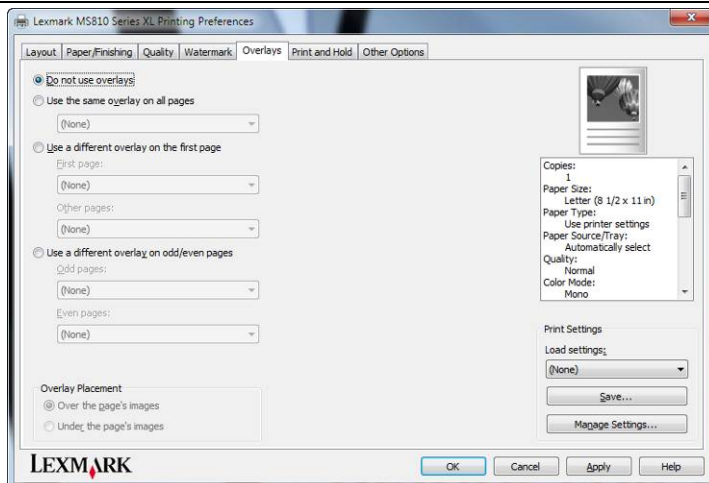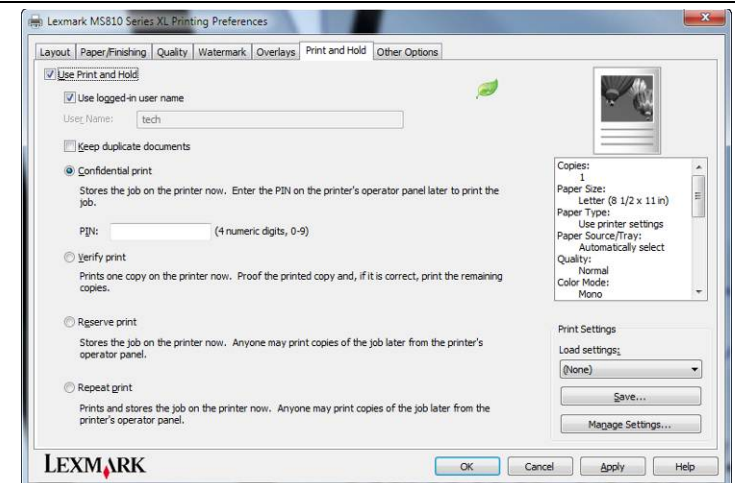
The straight-forward Quality tab, with a Toner Darkness option that enables users to conserve toner.

Print, edit, and create watermarks.

With the Overlays tab, users can print overlays – such as a company logo – on printed output.

On this tab, users can send confidential print jobs (the print job is held in memory until the user enters the PIN they've specified in the print driver at the control panel). They may also send print jobs that are held in printer memory, so that they can be printed on demand at the touch screen, and can designate whether just themselves or other users can print the held job.

Administrators can also require that users authenticate themselves, so that they can both restrict and track user printing.
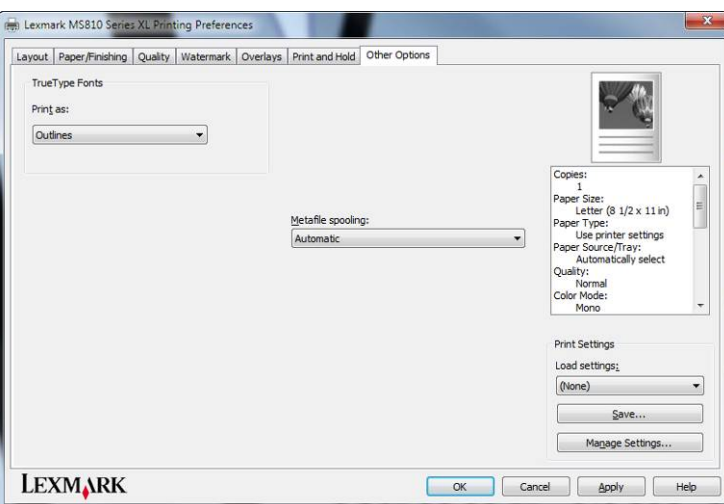
The Other Options tab provides TrueType font substitution and job-spooling options.

CLIENT AND ADMINISTRATIVE SOFTWARE
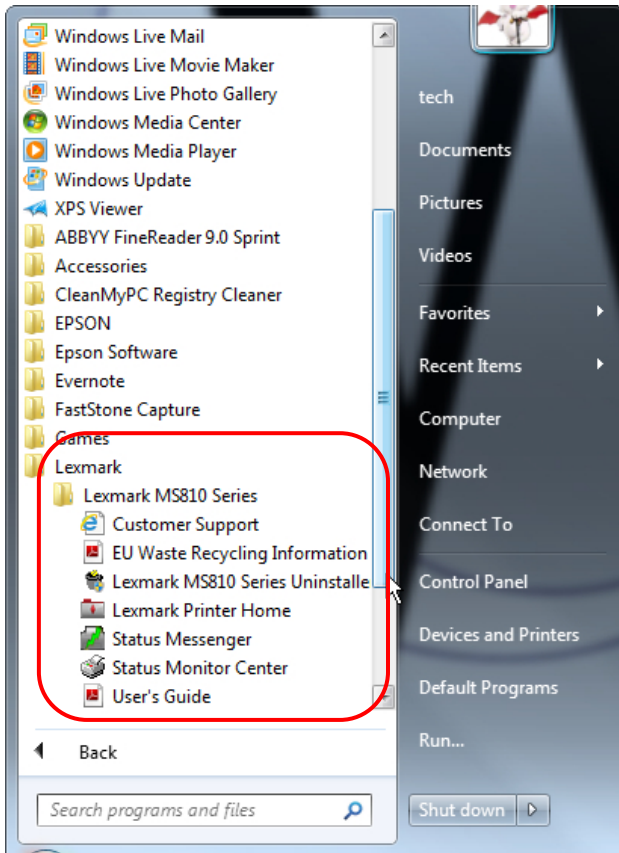
The MS812de's installed software.

STRENGTHS

Client Software:

- Status Messenger utility automatically indicates to users at their PCs when errors occur, and supplies need to be replaced, so that users can correct problems before downtime occurs.
- With Status Monitor Center, users can quickly see that the printer is ready and supplies are good before sending a print job.

Management Software:

- Administrators can configure automatic e-mail alerts so that specified users are alerted when problems need to be corrected or supplies replaced.
- Remote Front Panel is a Web-based utility enabling administrators to remotely view and operate the touch screen so that they can remotely diagnose and correct problems, minimizing downtime.
- Embedded Web Services (EWS, a printer Web page) provides remote Web-based printer monitoring, configuration, and management. It also provides detailed usage data.
- Compatible with Markvision Enterprise network- and fleet-management solution that's Web-based for remote administration. Markvision Enterprise is Lexmark's advanced next-generation network-management solution for managing, monitoring, and administering Lexmark and third-party network peripherals. Because it's Web-based, its toolset can be accessed from any workstation, and there's no client application to install. The database itself can be located on a remote server or on the server that hosts the Markvision Enterprise software.
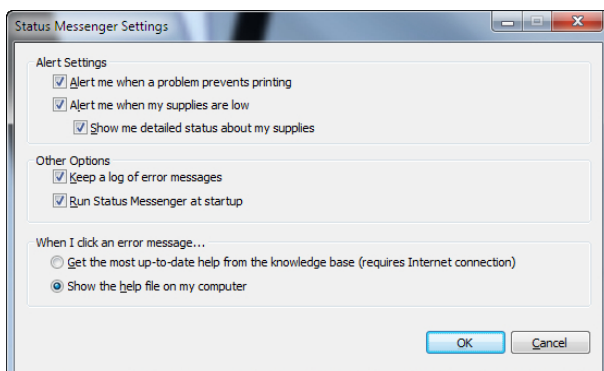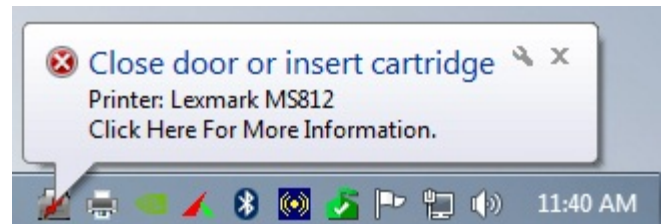
**LIMITATIONS**

- None.

STATUS MESSENGER

In the Windows task bar, the status monitor icon (far left) is shown with a green mark as shown above. A red mark appears if there's a problem.

Users can specify which kind of alerts they should receive and how error messages will appear.

Status Messenger provides automatic pop-up alerts at the computer workstation when the printer needs attention, for instance, when a printer door is open or the toner cartridge needs attention. The user clicks on the message to see more information …
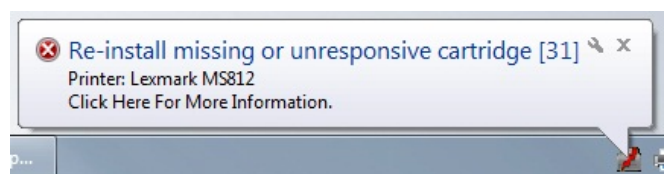
Status Messenger indicating that the toner cartridge is either missing or unresponsive.

EMBEDDED WEB SERVICES

Embedded Web Services is a Web-based tool that enables administrators to monitor and configure the printer via Web browser from virtually anywhere. Above it is indicating paper and consumables' status.

Administrators can also conveniently clone settings to and from other Lexmark printers and MFPs, saving time.

The Settings tab enables administrators to configure general printer settings, paper menu, network settings, security settings, etc., as well as set up emails alerts for specified users that indicate when the printer needs attention.

With the Apps' setting, administrators can install, configure, disable, or uninstall Lexmark Solutions.

Administrators can also set Bookmarks for the Forms & Favorites Solution. These Bookmarks will be displayed on the printer's touch screen, and can be accessed and printed by users at the touch screen.

Administrators may also configure print-setting defaults for Bookmarks, so that for instance, all prints will be produced in two-sided format.

With Forms & Favorites, administrators can configure links to network and URL files at the touch screen for print-on-demand by users at the touch screen.

Administrators can also apply additional settings such as user authentication and document finishing.

Advanced security is provided, including multiple methods of user authentication.

Administrators can set up email alerts notifying specified users of various printer events, such as low toner.

Extensive job history and tracking is provided, as shown above and to the right.

Remote Operator Panel displays the printer's touch screen, and can be operated using a keyboard or mouse at the computer workstation.
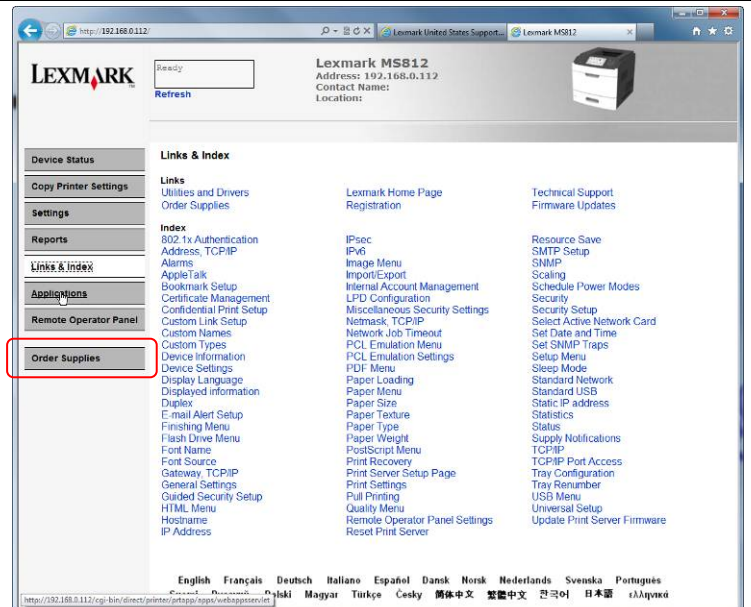
Extensive help and information is also provided. Using the Order Supplies link on the left, administrators can also order supplies online at Lexmark's Web site.

HARDWARE INSTALLATION

The MS812de ships with a Return Program toner cartridge (yields up to 10,000 pages), Return Program imaging unit, CD containing software and documentation, a setup poster for local or network connection, power cord, warranty statement, and safety sheet.

The MS812de's included documentation shond CD containing software.

Hardware Installation Time: Approximately 8 minutes

STRENGTHS
- Hardware setup of the MS812de was easy and fast at approximately 8 minutes, and can be performed by just one person.
- Both the toner cartridge and imaging unit are pre-installed.
- Very little packaging material must be removed for fast setup.
- A setup poster is conveniently included, unlike with other Lexmark products we have tested – with those other products, setup information is contained on CD.

LIMITATIONS
- None.

The MS812de's open shipping carton.

SOFTWARE AND NETWORK INSTALLATION

To begin software and network installation, select Install.

Software & Wired Network Installation Time: 8 minutes
Total Software/Network/Hardware Installation: 16 minutes

STRENGTHS
- Using the automated installation utility and selecting the network-installation option required just 9 click-throughs and was simple to follow. Total software and network installation time was 16 minutes.

LIMITATIONS
- None.
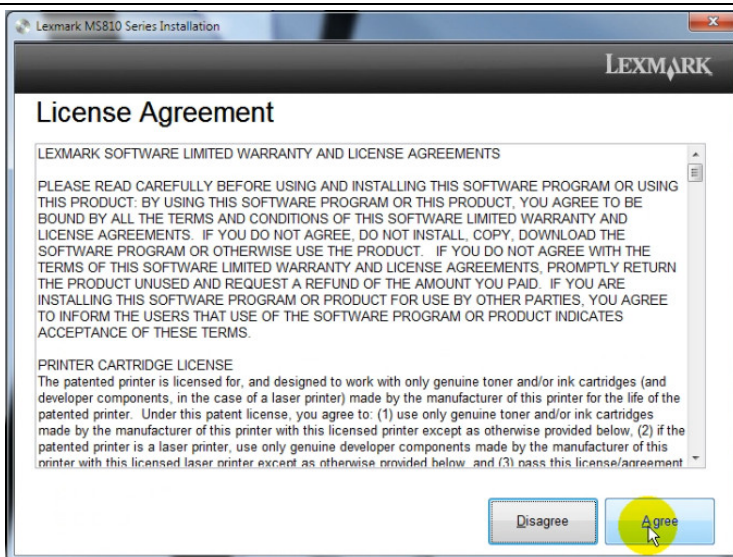
Agree to the end-user license agreement.
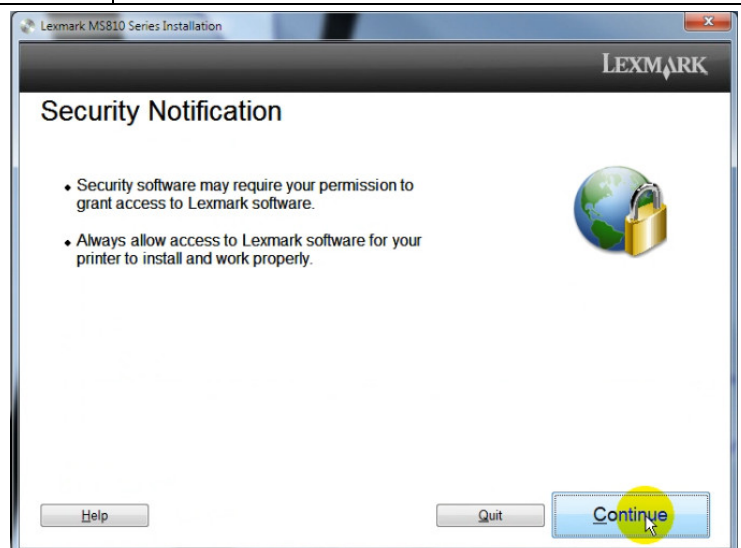
Allow access to Lexmark software.
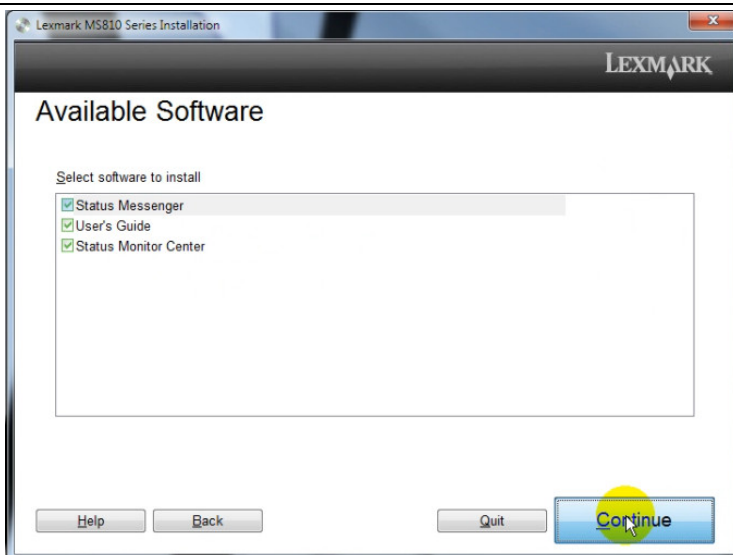
Select which software to install.
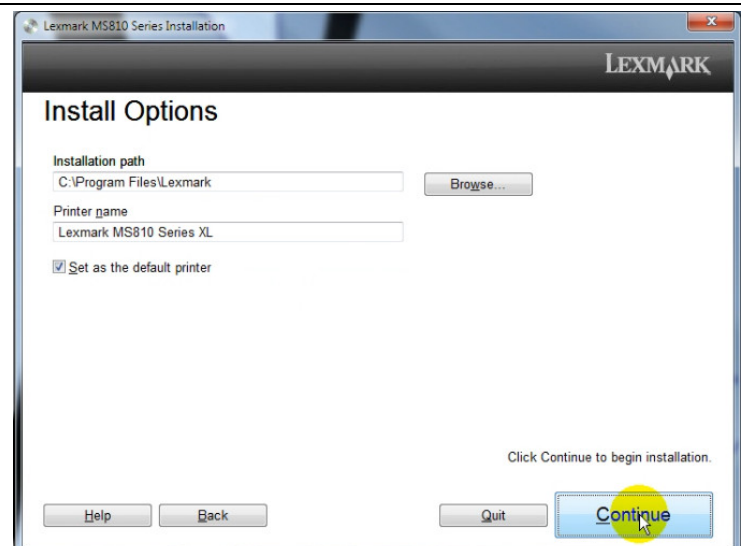
Select the location for installed software.
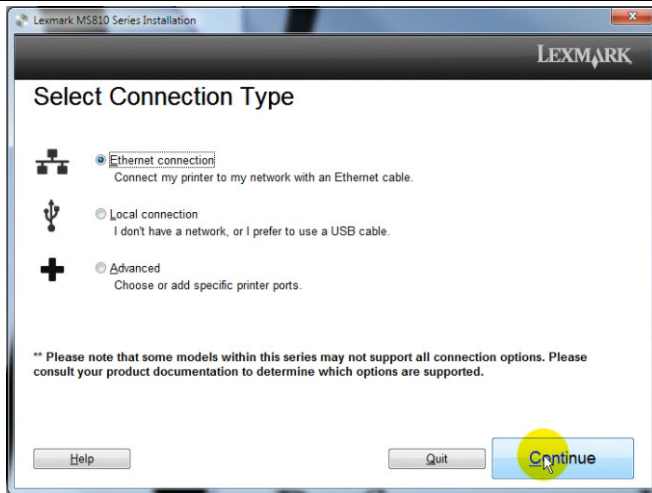
Select Ethernet or local (USB) connection, or advanced connection. We selected Ethernet.
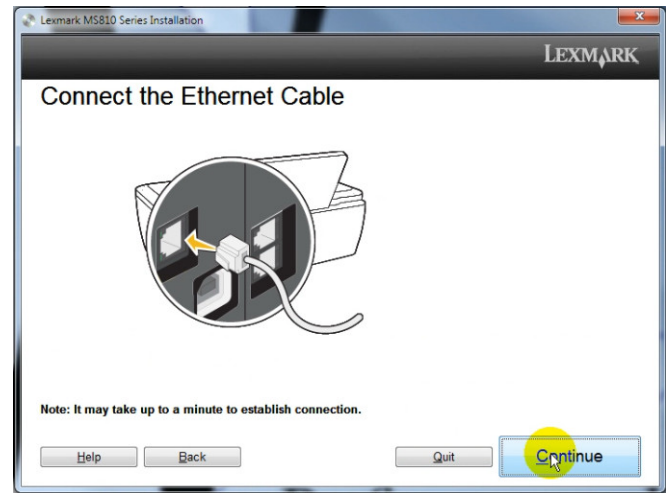
Connect an Ethernet cable to the printer.
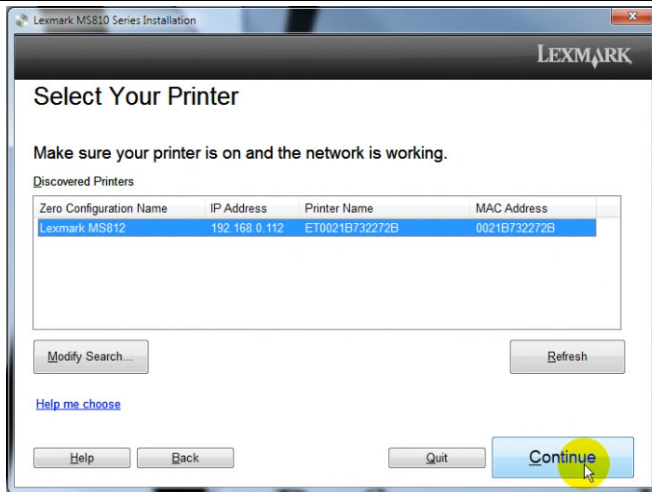
The printer was automatically discovered. Select Continue.
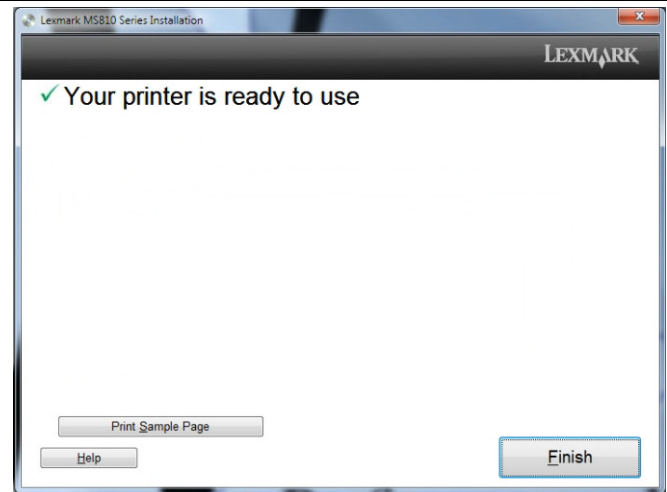
Select Finish to complete software and network installation.

USER MAINTENANCE

The MS812de's included toner cartridge, which yields up to 10,000 pages.

STRENGTHS

- **Replacing Imaging Supplies** – We found it very easy to remove and replace both the toner cartridge and imaging unit. The long-life imaging unit only has to be replaced every 100,000 printed pages. Replacing both the toner cartridge and imaging unit is easy enough that a single dedicated user could perform it without requiring help from IT.
- **Replenishing Media** – A redesigned paper tray makes loading paper exceptionally easy. Paper-size changes are automatically indicated.
- **Removing Misfeeds** – There are three misfeed-access areas: inside the paper tray, back of printer, and underneath the imaging unit. We had no difficulty accessing these areas. No misfeeds occurred in testing.

LIMITATIONS

- None.

REPLENISHING MEDIA

The standard 550-sheet paper drawer can be completely removed for easier loading when adjusting the paper size. It also incorporates a stop that prevents users from inadvertently completely pulling it out without supporting it, which could result in dropping the tray.

The redesigned paper tray has a side guide that locks into place to fit different paper sizes. Paper sizes are large and clearly marked, and both the paper width and length guides slide easily into place.

The paper tray's paper-length guide slides easily into place. There is a blue lock switch (circled in red) that can be used to lock the guide into place.

To use the 100-sheet bypass tray, lower the front door as shown above.

The bypass tray has a single side guide that's fitted to the paper width.

To print on letter or A4 media, extend this support.

REPLACING TONER CARTRIDGE

To replace the toner cartridge, first lift up the top portion of the printer as shown above and lower the front door.

Pull the toner cartridge out using the green handle.

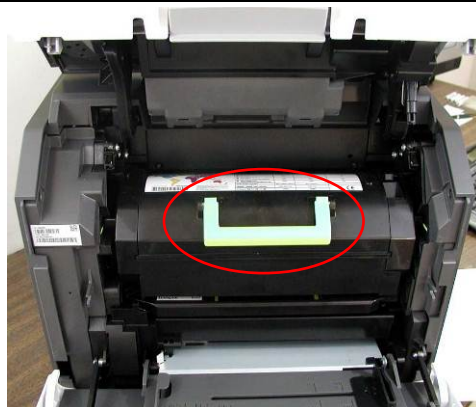Line up the toner cartridge with these green guides and slide it in.

REPLACING IMAGING UNIT

To replace the long-life imaging unit, first remove the toner cartridge. Then pull out the imaging unit using the green handle shown above.

The imaging unit is removed.

Line up the new imaging unit with the green arrows and slide it in. We found replacing both imaging supplies very easy.

MISFEED ACCESS

To access misfeeds from the back of the paper path, lower this door on the back of the printer.

With the door lowered, any misfed paper in the back of the paper path can be easily accessed. The two other misfeed-access locations (underneath the imaging unit and within the paper tray) are also easy to access.

MEDIA HANDLING

The MS812e is a letter-size (8.5"x11")/A4 printer that prints on up to legal-size (8.5"x14") media, and is equipped with a 550-sheet paper drawer and a 100-sheet multipurpose tray.

Media Sizes Supported
10 Envelope, 7 3/4 Envelope, 9 Envelope, A4, A5, B5 Envelope, C5 Envelope, DL Envelope, Executive, Folio, JIS-B5, Legal, Letter, Statement, Universal, Oficio A6

Media Types Supported
Card Stock, Dual Web Labels, Envelopes, Integrated Labels, Paper Labels, Plain Paper, Transparencies

Maximum Print Size: 8.5"x14"
Acceptable Media Weight: 16 – 47 lb. bond
Std./Max Media Capacity: 650/ 4,400 sheets
Standard Media Sources: 100-sheet bypass, 550-sheet drawer
Std./Max. Media Sources: 2/6
Paper-Output Tray Capacity: 550 sheets
Automatic Duplex Printing: Yes
Media Options: Up to 3x250-sheet drawers; 3x 550-sheet drawers; 2,100-sheet High Capacity Feeder
Opt. Document Finishing: 500-sheet Stapler Finisher, 500-sheet Output Expander, 4-bin Mailbox, 1,500-sheet High Capacity Output Expander, 3x 5-bin Mailbox

STRENGTHS

- Standard 550-sheet paper drawer, so users can load a full ream of paper.
- Expand media capacity to a very substantial 4,400 sheets with optional paper drawers.
- Optional document finishing is available.

	LIMITATIONS
	• None.

COST PER PAGE

The MS812de ships with a Return Program imaging unit and return-program toner cartridge, the latter of which yields up to 10,000 pages in accordance with ISO/IEC 19752 test standard.

Cost per Page Using 621X Extra High-Yield Return Program Toner Cartridge and 520Z Return Program Imaging Unit

Consumable	Price	Page Yield*	Cost Per Page
Toner Cartridge	$519.00	45,000	1.153¢
Imaging Unit	$47.99	100,000	0.048¢
			1.201¢

STRENGTHS
• Very low cost per page of just 1.2¢ using Lexmark 621X Extra High Yield Return Program Toner Cartridge and 520Z Return Program Imaging Unit.
• Very low Total Cost of Ownership.

LIMITATIONS
• None.

MONTHLY SUPPLY COSTS AND TOTAL COST OF OWNERSHIP

Lexmark MS812de		
Supply Type	**Black Cost Per Page**	**Device Purchase Price**
621X Extra High-Yield Return Program Toner Cartridge 520Z Return Program Imaging Unit	$0.01201	$1,949.00
Monthly Page Volume	**Black Monthly Supply Cost[1]**	**Total Cost of Ownership[2]**
1,000	$12.01	$2,669.60
5,000	$60.05	$5,552.00
10,000	$120.10	$9,155.00
20,000	$240.20	$16,361.00
30,000	$360.30	$23,567.00
40,000	$480.40	$30,773.00
50,000	$600.50	$37,979.00

[1]Based on an original with 5% area coverage.
[2]Based on 60 months usage, plus the device's purchase price.

OPTIONAL EQUIPMENT
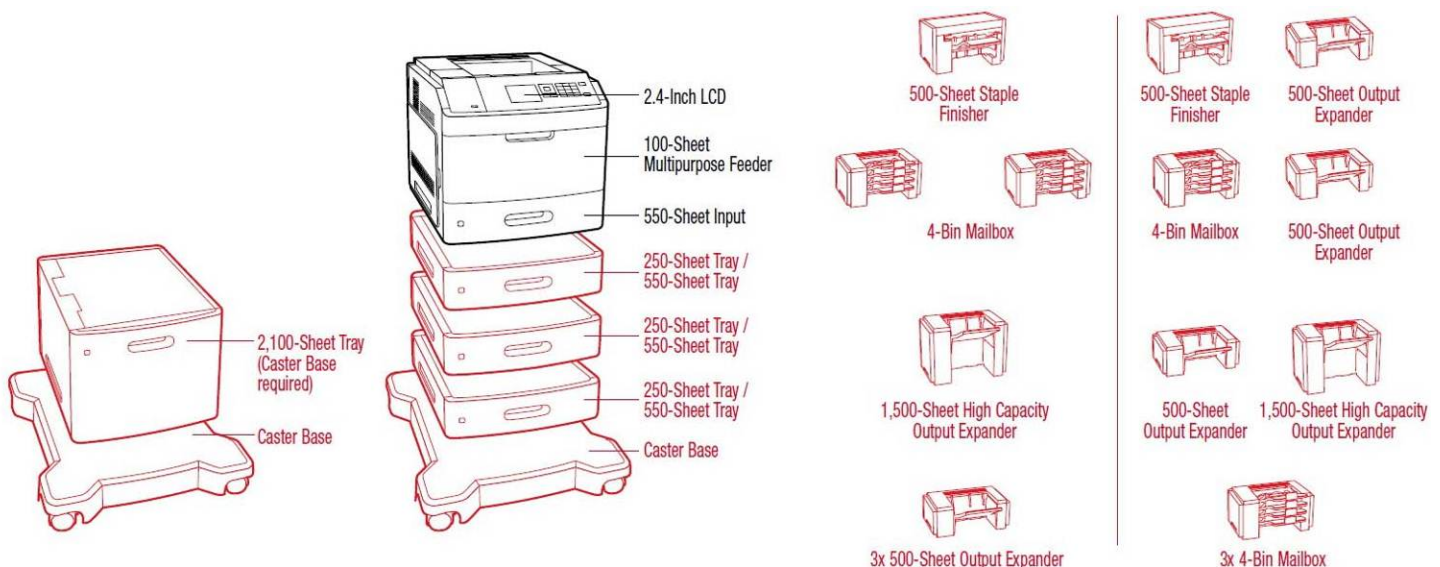
December 2012 © • Wirth Consulting, LLC • Denville, New Jersey USA • www.wirthconsulting.org

250-sheet Paper Tray - Add up to four ($199.00 each).	**1,024 MB x32 DDR3-DRAM** ($79.00)
250-sheet Lockable Paper Tray– Add up to ($239.00 each).	**2,048 MB x 32 DDR3-DRAM** ($99.00)
550-sheet drawers - Add up to four ($249.99 each).	**160+ GB Hard Disk** ($479.00)
550-sheet Lockable Paper Tray – Add up to four ($299.00 each)	**MarkNet N8350 802.11b/g/n Wireless Print Server** ($199.00)
2,100-sheet High Capacity Feeder ($499.00)	**Parallel 1284-B Interface Card** ($79.00)
Caster Base ($349.00)	**Parallel Cable (10-foot)** ($24.99)
Swivel Cabinet ($249.00)	**RS-232C Serial Interface Card** ($79.00)
MS812de Card for IPDS ($569.00)	**Lexmark Solutions -** Lexmark Solutions are provided by Lexmark's authorized partners and dealers, or through Lexmark Enterprise Services.
MS812de Card for PRESCRIBE Emulation ($199.00)	
MS812de Forms and Bar Code Card ($379.00)	

SPACE/POWER CONSUMPTION/WARRANTY

STRENGTHS
- Standard one-year warranty with next business-day exchange.
- EPA Energy Star and Blue Angel qualified.

LIMITATIONS
- None.

SPACE REQUIREMENTS	Width	Depth	Height
Footprint (inches):	16.7	20.1	16.5
Footprint: (mm):	424.18	510.54	419.10
Required Cubic Feet:			3.21
Required Cubic Centimeters:			90.76

WEIGHT

Weight (lbs.):	52.9
Weight (Kg):	24.00

POWER REQUIREMENTS

Electrical Supply:	110-127V, AC, 10.0A, 50/60Hz

POWER CONSUMPTION

Operational:	900W
Sleep Mode:	6W
Hibernate Mode:	0.5W

MAINTENANCE ACCESS

Access Requirements:	Front, Top, Back

WARRANTY
The MS812de has a one-year warranty with next-business day exchange.

ECO-FRIENDLY FEATURES

Lexmark Environmental Statement
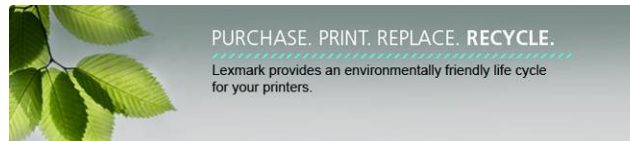
"When it comes to our planet, there is no substitute. Lexmark is committed to protecting our planet's natural resources and proud of the progress we are making to reduce the environmental impacts of printing.

"Environmental sustainability at Lexmark begins with our pledge to provide innovative, high-quality printing solutions and services for our customers in a safe, environmentally responsible manner; it encompasses our operations, where we deploy cost-effective best practices for energy conservation, wise water use, and waste reduction; and it extends to our support of community, where Lexmark employees are dedicated to creating cleaner, smarter, safer futures where we live and work."

As a provider of printing solutions, Lexmark produces and distributes millions of supplies each year, including ink, toner and paper. Lexmark understands its unique environmental responsibility and has implemented the Lexmark Cartridge Collection Program to encourage you, our customer, to easily recycle your empty Lexmark inkjet cartridges – at absolutely no cost to the consumer.

The Lexmark Cartridge Collection Program includes various methods of return and sponsors unique collection partnerships around the world. This program is designed to help ensure that empty Lexmark print cartridges are properly recovered, reused or recycled; resulting in less solid waste and fewer resources consumed. The Lexmark Cartridge Collection Programs are always free to the consumer and are designed to be easy to use.

As a provider of printing solutions including inkjet, laser, and all-in-ones, Lexmark shares in the environmental responsibility for those products at the end-of-life. Lexmark offers customers an environmentally responsible choice for disposal of their end-of-life printers - the Lexmark Equipment Collection Program.

Through this program, customers may return any end-of-life Lexmark branded products, and Lexmark will recycle the equipment for free. This program does not apply to warranty issues for Lexmark printers. For warranty exchange or service for a printer still under warranty, please follow the instructions included with the product."

STRENGTHS
- Energy Star-qualification means the systems meet U.S. EPA power-conservation standards for low power consumption in power-save standby mode.
- Automatic duplex printing reduces paper consumption and helps conserve natural resources.
- Pressing the Eco key located on the printer's control panel automatically puts the printer into a reduced energy-consumption mode (Sleep and Hibernate modes). With most other printers, there's no option to automatically go into sleep mode—instead, it may be some time before the printer actually goes into lower energy-consumption mode. Alternately, an administrator can schedule when the printer goes into sleep mode—for instance, after working hours, during the weekend, etc.
- Lexmark's free toner cartridge recycling program means users will not be contributing to landfills with used toner cartridges.
- Under Lexmark's free Equipment Collection Program, customers can submit their end-of-life equipment for recycling, so they will not be contributing to landfills with used equipment.

LIMITATIONS
- None.

ABOUT WIRTH CONSULTING
Wirth Consulting was founded in order to provide independent comprehensive evaluations of digital-imaging equipment. Founder Terry Wirth has over 30 years of experience in the evaluation and testing of business-imaging equipment, and as former chairman and member since 1989 of the American Society for the Testing of Materials (ASTM) F05 Committee on Business Imaging Products, he has authored numerous, published ASTM test methods.

ABOUT WIRTH CONSULTING RATINGS
When Wirth Consulting rates imaging devices, it assigns the device one of the following ratings: Outstanding, Well Worth Consideration, Worth Consideration, and Not Worth Consideration.

Contact Us
Wirth Consulting LLC
www.wirthconsulting.org
info@wirthconsulting.org
+1 (862) 223-9491
2101 Middlefield Court
Denville, NJ 07834 USA

Follow Us