

BERTL

EXCEPTIONAL



Xerox WorkCentre 7435



35-ppm Monochrome; 35-ppm Color

Print • Copy • Scan • Fax

Key Buyer Benefits

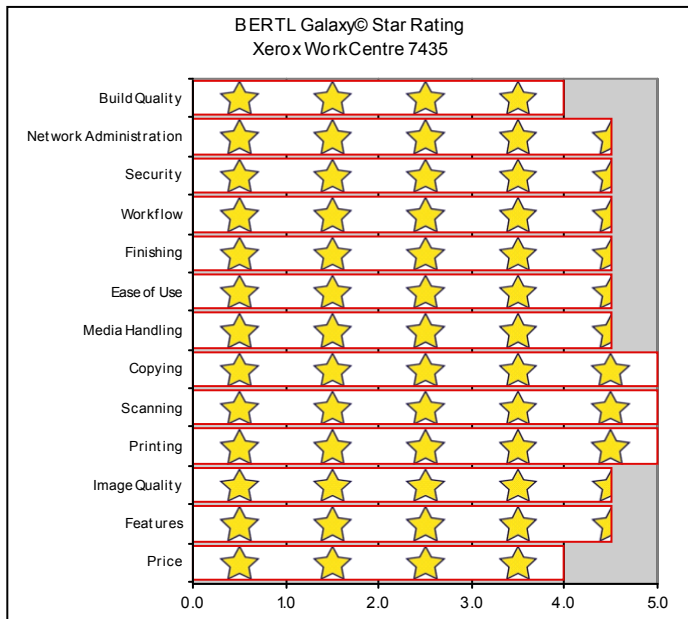
- Exceptional image quality creates professional presentations, graphics and office documents.
- Control panel has clear and easy to use menus including thumbnail preview of documents stored on the hard drive.
- Great design and ease-of-use with the PCL5, PCL6, and Adobe PS drivers.
- Optional internal finisher provides full functionality while maintaining small footprint.
- Outstanding ease-of-use for clearing misfeeds, loading paper, and changing toner.
- Flexible desktop and network utilities via Xerox's Centware Internet Service delivers exceptionally easy to use device monitoring.
- Versatile document management capabilities from both a walk-up and desktop point of view.
- Scan to USB (Optional USB Thumbdrive Print Kit) and SD card (Optional Media Card Reader Kit).
- Professional finishing options including saddle stitching, booklet making, multi-position stapling and hole punch.

100% INDEPENDENT ANALYSIS

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OFFICE



ABOUT BERTL'S GALAXY® STAR RATING

BERTL understands how difficult it is to choose one office-imaging device over another and exists to make this an easier choice for the consumer. That said, how does a consumer decide between two or more devices that carry the same BERTL 3-, 4- or 5-star rating?

Category-Criteria

Build Quality - An analysis of the construction quality of the major components that the user must interact with on a regular basis (e.g.: paper trays, access covers, supplies, etc.).

Network Administration - The quality of administrative and management utilities (both executable and Web-based) when compared to that of a sliding scale benchmark based on the network administration feature set of other vendors.

Security - A security feature-set analysis (removable hard disk, hard-disk overwrite, encryption, IP filtering, Microsoft Windows NT Authentication and LDAP lookup) when compared to a sliding scale benchmark based on the security feature set found on other devices.

Workflow - The quality of the network scanning, job submission, document management, sharpening and enhancement, file conversion and job layout tools based on a sliding scale benchmark when compared to the workflow tools employed by other devices.

Finishing - The productivity penalty (punch, staple, booklets) based on tests and finishing specifications and effectiveness based on a sliding scale benchmark when compared to that of other finishing systems found on other devices.

Ease of Use - Ease of maintenance (adding paper, toner, misfeeds, cleaning) and ease of using the documentation, help, control panel, print drivers and client utilities when compared to a sliding scale benchmark based on the ease of use of other devices.

Media Handling - Evaluations based supported specifications on a sliding scale benchmark when compared with the handling of special media (e.g.: oversize, thick or coated stock) found on other devices.

Copying - Copy productivity based on tests and a feature-set analysis when compared to a sliding scale benchmark based on the feature set found on other devices.

Scanning - Simplex and duplex scan productivity and quality based on tests and a comparison of the overall scan and send feature set when compared to a sliding scale benchmark based on the feature set found on other devices.

Printing - Duplex and simplex print productivity based on tests and a printing feature set analysis when compared to a sliding scale benchmark based on the feature set found on other devices.

Image Quality - The quality of business color images (text, dot, line, halftone and solid quality) based on tests and a subjective rating on the quality of continuous tones (photos) when compared to a sliding scale benchmark based on the continuous tone quality produced by other devices.

Features - The feature set compared to a sliding scale benchmark based on the feature set found on other devices.

Price - MSRP of a system configured with network printing, copying, scanning, and two media trays/rolls (wide format) configuration.

Launching in May 2009, Xerox will be expanding its family of color-capable office MFPs multifunction with three new WorkCentre 7400 series of products. The WorkCentre 7400 series is among Xerox's newest and fastest products that print, copy, scan and fax while incorporating the company's Extensible Interface Platform (EIP). EIP is based on Web standards and allows software developers, as well as customers, to create applications tailored to address specific business applications, such as automating routine scan-and-distribute applications.

BERTL was recently given the opportunity to test the WorkCentre 7435, which at 35 ppm monochrome and 35 ppm color, with a maximum paper capacity of up to 3,140 sheets, is the high-end system in the series. The system lists at \$16,994, (as a digital copier/network printer), and at this economic pricing, is positioned by Xerox as providing "truly affordable color" capability. It is designed for mid-sized workgroups who may be budget sensitive.

The WorkCentre 7435 controller is built on Xerox's Smart Controller Print System, which in turn is based on a 667 MHz PowerPC CPU, and includes PCL 5, PCL 6 and PostScript 3 print drivers for both Microsoft Windows, Apple Macintosh, UNIX and Linux platforms.

For network and device management, Xerox Centware Web enables users to perform detailed status checks on the system and consumables, administer system settings, and manage access and accounting controls. Xerox provides device management support for some of the most wide-ranging network environments which include Unicenter TNG, Tivoli Netware, Microsoft Management Console, HP OpenView, and SAP R/3. Xerox's Smart Kit technology monitors critical device components in order to predict and prevent downtime.

Xerox's advanced MFP security features protect the document, device, and transmission path, and are available on all new WorkCentre MFPs. Encrypted Disk and Image Overwrite features protect latent images recorded on the hard drive, and can be used automatically upon job completion or on demand. The Secure Print and Secure Fax safety measures ensure sensitive information stays private. With systems equipped with network scanning, users can create encrypted and searchable Adobe PDF and XPS files.

In the following test report, BERTL takes an in-depth look at the WorkCentre 7435, testing and evaluating its productivity, image quality and ease-of-use.

PRICING

Xerox WorkCentre 7435 - Features Summary	
List Price	\$16,994
Imaging Technology	Laser, electrostatic
Standard Functions	Network Printing, and Copying,
Optional Functions	Network Scanning, LAN Fax
Maximum Monthly Print Volume	105,000 pages
Recommended Monthly Print Volume	15K – 18K
Mono Print Speed	35 ppm
Color Print Speed	35 ppm
Mono First Page Out Time	5.0 seconds
Color First Page Out Time	6.4 seconds
Automatic Duplex	Yes
Network Scanning	Yes
Color Scanning	Yes
NT Authentication	Yes
LDAP Compatibility	Yes
Hard Disk Overwrite	Optional



The Xerox WorkCentre 7435 as tested by BERTL.

SPECIFICATIONS

Output Speed – Printing and Copying	
Black and white	Up to 35 ppm 8.5 x 11 in. (A4/210 x 297 mm) LEF
	Up to 23 ppm 8.5 x 14 in. (216 x 356 mm)
	Up to 20 ppm 11 x 17 in. (A3/297 x 420 mm)
	Up to 35 ppm 8.5 x 11 in. (A4/210 x 297 mm)
Color	Up to 23 ppm 8.5 x 14 in. (216 x 356 mm)
	Up to 20 ppm 11 x 17 in. (A3/297 x 420 mm)
	Copy – Black and White As fast as fast as 5.0 seconds
	Copy – Color As fast as 6.4 seconds

Maintenance	
Black Toner Yield*	Info not available
Color Toner Yield*	Info not available
User Replaceable Fuser Unit?	Yes
User Replaceable Waste Container?	Yes
User Replaceable Original/Paper Feed Rollers?	Yes
Automatically Senses Media Sizes?	Yes

*Manufacturer's stated yield based on 5% page coverage.

Paper Handling	
Duplex Automatic Document Feeder	Capacity 75 sheets (based on 20 lb Bond/80 gsm paper)
	Speed 50 images per minute black and white/45 images per minute color (Letter/A4 long edge feed (LEF))
	Sizes 5.5 x 8.5 in. (A5/148 x 210 mm) to 11 x 17 in. (A3/297 x 420 mm)
	Weights 16 to 32 lb Bond / 60 to 120 gsm

Paper Handling – Bypass Tray

Capacity	100 sheets
Sizes	4.13 x 5.83 in. (A6/105 x 148 mm) to 12 x 18 in. (SRA3/320 x 450 mm)
Weights	16 lb Bond to 140 lb Index / 55 to 256 gsm
Types	Same as front-loading trays plus envelopes

Paper Handling – Main Tray 1 (Standard)

Capacity	520 sheets
Sizes	Sizes User adjustable from 5.5 x 7.2 in. (139.7 x 182 mm) to 11 x 17 in. (A3/297 x 420 mm)
Weights	Weights 16 lb Bond to 140 lb Index / 55 to 256 gsm
Types	Types Plain Paper
	Recycled
	Bond
	Custom Type 1 through 5
	Lightweight
	Heavyweight
	Extra Heavyweight
	Transparency
	Gloss
	Heavyweight Gloss
	Extra Heavyweight Gloss
	Labels
	Punched
Letterhead	
Pre-printed	

Envelope Tray (Optional – replaces Tray 1)

Capacity	Up to 60 envelopes
Sizes	Sizes #10 Commercial (9.25 x 4.125 in.), Monarch, DL, C5, custom, Large U.S. Postcard, A6
Weights	Weights 75 to 90 gsm

Paper Handling Paper Handling – Input Tray Options - Three Tray Option

Tray 2, Tray 3, Tray 4	520 sheets each
Sizes	User adjustable from 5.5 x 7.2 in. (139.7 x 182 mm) to 12 x 18 in. (SRA3/320 x 450 mm)
Weights	16 lb Bond to 140 lb Index / 60 to 256 gsm

Paper Handling Paper Handling – Input Tray Options - Three Tray Option	
Paper Types	Plain Paper
	Recycled
	Bond
	Custom Type 1 through 5
	Lightweight
	Heavyweight
	Extra Heavyweight
	Transparency
	Gloss
	Heavyweight Gloss
	Extra Heavyweight Gloss
	Labels
	Punched
	Letterhead
	Pre-printed
Envelopes	
Total Capacity	2,180 sheets (Includes Tray 1, Three Tray option and Bypass Tray)

Paper Handling – Input Tray Options - High-Capacity Tandem Tray Option	
Tray 2	520 sheets
Sizes	User adjustable from 5.5 x 7.2 in. (139.7 x 182 mm) to 12 x 18 in. (SRA3/320 x 450 mm)
Tray 3 and Tray 4	2,000 sheets total
Sizes	8.5 x 11 in., B5, A4
Weights	16 lb Bond to 140 lb Index / 60 to 256 gsm
Types	Types Plain Paper
	Recycled
	Bond
	Custom Type 1 through 5
	Lightweight
	Heavyweight
	Extra Heavyweight
	Transparency
	Gloss
	Heavyweight Gloss
	Extra Heavyweight Gloss
	Labels
	Punched
	Letterhead
	Pre-printed
Envelopes	
Total Capacity	3,140 sheets (Includes Tray 1, High-Capacity Tandem Tray option and Bypass Tray)

Paper Handling – High-Capacity Feeder (HCF)	
Capacity	2,000 sheets of 20 lb Bond (75 gsm)
Sizes	8.5 x 11 in. LEF (A4/210 x 297 mm)
Weights	16 lb Bond to 80 lb Cover / 60 to 220 gsm
Total Capacity	5,140 sheets with High Capacity Tandem Tray option – 4,180 sheets with Three Tray option

Output – Standard	
Stacking Trays*	Stacking Trays* Dual Offset Catch Tray – up to 250 sheets each
	Face up Tray – up to 100 sheets
Sizes	5.5 x 8.5 in. (A5/148 x 210 mm) to 12 x 18 in. (SRA3/320 x 450 mm)
Weights	16 lb Bond to 140 lb Index / 60 to 256 gsm

Output – Integrated Office Finisher Option	
Stacking Tray	500 sheets of 20 lb Bond (80 gsm) 8.5 x 11 in./A4 or 250 sheets of 20 lb Bond (80 gsm) 11 x 17 in./A3
Sizes	8 x 10 in. / B5 to 11 x 17 in. / A3
Weights	16 lb Bond to 80 lb Cover / 60 to 220 gsm
Stapling	Single
	Auto stapling (50 sheets maximum less than 90 gsm or (2) 220 gsm covers)
	Letter, Legal, Tabloid, A3, A4, B4 and B5 sizes supported

Output – Optional Hole Punch for Office Finisher LX	
North America	3-hole punch
	2-hole Legal punch
Europe	2-hole punch
	4-hole punch

Output – Office Finisher LX Option	
Stacking Tray	2,000 sheets unstapled or 1,000 sheets single staple or 750 sheets dual staple (24 lb Bond / 90 gsm)
Sizes	8 x 10 in. / B5 to 11 x 17 in. / A3

Output – Office Finisher LX Option	
Weights	16 lb Bond to 80 lb Cover / 60 to 220 gsm
Stapling	Single and dual
	Auto stapling (50 sheets maximum less than 90 gsm)
	Letter, Legal, Tabloid, A3, A4, B4 and B5 sizes supported

Output – Optional Booklet Maker (Score/Crease, Saddle-stitch Staple) for Office Finisher LX	
Capacity	40 booklets (1-15 sheets per booklet – 80 gsm or less; 2-10 sheets per booklet – over 80 gsm)
Sizes Letter	Letter – 8.5 x 11 in. (A4/210 x 297 mm)
Legal	Legal – 8.5 x 14 in. (216 x 356 mm)
Ledger	Ledger – 11 x 17 in. (A3/297 x 420 mm)
Saddle-stitch Stapling	2-15 sheets / 8 – 60 page booklet
	16 lb Bond to 24 lb Bond / 55 to 90 gsm
Score/Crease	1-15 sheets / unstapled

Output – Professional Finisher Option	
Top Tray	500 sheets
Stacking Stapling Tray	1,500 sheets
Sizes	8 x 10 in./B5 to 11 x 17 in./A3
Weights	16 lb Bond to 80 lb Cover / 60 to 220 gsm
Stapling Single	Stapling Single
	Auto stapling (50 sheets maximum) – 24 lb/90 gsm
	Letter, Legal, Tabloid, A3, A4, B4 and B5 sizes supported
Booklets - Booklet Tray	Saddle-stitch up to 15 sheets (One 60 lb cover/169 gsm plus fourteen 24 lb Bond/90 gsm sheets)
	V-fold up to 5 sheets
	Letter, Legal, Tabloid, A3, A4 supported
Hole Punch	North America: 2–3 Hole Punch
	Europe: 2–4 Hole Punch, Swedish Hole Punch

Device Specifications – Security

Capability	
	<ul style="list-style-type: none"> Secure Print Secure Fax NDS Authentication over IP LDAP/Kerberos/SMB Password Protected PDF Encrypted Disk Audit Log and Encrypted Scan to Email. Hard disk overwrite immediate or on demand. Secure Web Page via SSL. IPv6 IPSec Secure Access Unified ID System (Optional) Image Overwrite Password protected and encrypted PDF Common Criteria certification Federal Information Processing Standards (FIPS) 140-2

Device Specifications – Accounting

Accounting with Third- Party Server Applications (optional)	Up-to-the-minute data on how the system is being used; comprehensive usage tracking and reporting; print, scan, copy and fax
Auditron	Controls and tracks black and color copy, print, fax and scan usage
Accounting Control	<ul style="list-style-type: none"> Xerox Standard Accounting Job based accounting Third-party integration Supports Foreign Device Interface Active directory user profile – Controls color copy and print usage Xerox Page Accountant Print Audit 5
Xerox Standard Accounting	Tracking Copy, Print, Fax and Scan usage
Accounting	Up to 9,999 User accounts (User ID)
Features	Enable/disable via the web UI or the GUI in tools, admin can manage the feature remotely via the web UI, Data can be exported via a CSV file, user required to enter XSA ID into the print driver when submitting a print job, similar to secure print.

Device Specifications	
Basic Configuration	Network Multifunction System with network controller – Copy and Print capability standard
Accessories	<ul style="list-style-type: none"> • Three Tray Paper Feeder • High Capacity Tandem Tray • High Capacity Feeder • One-line fax with Internet Fax • Three-line fax with Internet Fax • Fax Server Enablement • Scan Kit • Thumbnail preview • Secure Watermark • Scan to PC Desktop (Professional or SE edition) • Media Print (Print from a USB Thumb drive or media card) • USB/Parallel Port Printing • Integrated Office Finisher • Office Finisher LX • Booklet Maker (requires Office Finisher LX) • Professional Finisher • Foreign Device Interface • Work Surface • Convenience Stapler
Electrical Requirements	220–240 V Nominal, 50/60 Hz, 10A 100-127 Vac, 50/60 Hz, 12A
Power Consumption	<ul style="list-style-type: none"> • Running < 646 watts • Standby < 145 watts • Low-Power Mode < 79 watts • Sleep Mode < 2 watts
Warm Up	45 seconds(maximum)
Low-Power Recovery	30 seconds (maximum)
Required Temperature Range	50° to 82° F (10° to 28° C)
Required Relative Humidity	15% to 85%
Noise Emission	20 dB(A) standby 56 dB(A) running
Heat Emission	2584 BTU/Hr running 580 BTU/Hr standby
Dimensions and Weights	
Base Unit	<ul style="list-style-type: none"> • 41.2 in. / 1046 mm (Width) • 26.6 in. / 678 mm (Depth) • 44.3 in. / 1125 mm (Height) • 317.5 lbs / 144 kg (Weight)

NETWORK PRINTER FEATURES

DEVICE MEMORY

+ The dedicated printer memory for the Xerox WorkCentre 7435 is a respectable 1.5 GB and offers a 40 GB hard drive.

+ The Xerox multitasking network controller handles multiple tasks with speed and efficiency and this is due to its powerful network controller which has a processing speed of 667 MHz.

PRINT DRIVERS (PDLs)

+ The WorkCentre 7435 also delivers multiple Page Description Languages (PDLs) including the following:

- Adobe® Postscript® 3™
- TIFF
- PCL® 5c
- PS-PDF: v1.3
- PCL® 6
- HP-GL2™
- XPS®

+ The PostScript, PCL5C, and PCL6 drivers offer bidirectional communication with the device with its user-selectable interface for all of the Windows base operating systems. The PostScript driver offers an enhanced PPD file for the supported Macintosh operating systems. While bidirectional on all UNIX operating systems can be accomplished with Xerox's Custom Graphical User Interface.

NEW PRINT DRIVERS (X-MED / X-GPD)

+ The WorkCentre 7435 device supports two innovative new print drivers that can greatly simplify installing, managing and supporting printers and multifunction devices on the network, and increase end-user productivity:

+ Xerox Mobile Express Driver (X-MED) makes it easy for mobile users to find, use and manage Xerox and non-Xerox devices in every new location. Plug into a new network, and X-MED automatically discovers available printers and provides status and capability information. Save a list of "favorite" printers for each location, store application print settings for use on any printer in any network, and greatly reduce mobile support calls to IT.

+ Xerox Global Print Driver (X-GPD) is a truly universal print driver that lets IT administrators install, upgrade and manage Xerox and non-Xerox devices from a single driver. It provides a consistent, easy-to-use interface for end-users, reducing the number of support calls, and simplifying print services management.

Both of these drivers provide users with the following enhanced options

- Printers are automatically discovered
- Printer list can be managed based on location
- Gives Bi-directional feedback, device status, supplies, queue management

DRIVERLESS PRINTING (CWIS)

+ The WorkCentre 7435 offers remote users the option to print without a driver with Xerox's CentreWare Internet Services (CWIS) web utility. Any connected computer can immediately output PDF, TIFF and PRN files from any network computer, without using a print driver at all.

OPERATING SYSTEMS SUPPORTED

+ The 7435 offers support for a wide array of operating systems such as the following

- Vista XPS (mini driver available)
- Windows 2000/2003/XP 32 Bit
- Windows 2003/XP 64 Bit
- Windows Vista/Vista 32 Bit
- Windows Vista/Vista 64 Bit (Microsoft certified)
- Macintosh® OS 10.3.0 and above
- UNIX
- AIX 5lv5.3
- HP UX 11.0, 11i v2
- Solaris 8, 9, 10
- Linux FedoraCore 1, 5
- RedHat Enterprise Linux 4
- SUSE 10.x

PRINT RESOLUTION

+ In the Image Quality department, the WorkCentre print drivers' offers users several print resolution options which range from 600 x 600 dpi up to 1200 x 2400 dpi resolution.

CONNECTIVITY

+ Connectivity options for the 7432 include Ethernet 10/100BaseTX, High Speed USB 2.0 printer port, Wireless Ethernet (IEEE 802.11b) via third-party adapters, and an optional Parallel Port.

NETWORK PROTOCOLS

+ Supported Network Protocols include: TCP/IP, HTTP/HTTPS, Internet Printing Protocol, LPR/LPD, Raw Socket Printing/Port 9100, IPv4/IPv6, Netware Bindery and NDS IPX/SPX, NDPS/NEPS (with Server Gateway) AppleTalk, EtherTalk Microsoft Windows Networking over IP and NetBEUI. All protocols not in use can be disabled by the network administrator.

+ Administrative Protocols supported include DHCP, BOOTP, SNMP, WINS, DDNS, SLP v2, HTTP, RARP, DHCP Autonet, and SSL.

PRINTING FEATURES

The following table provides a list of all the printing features supported on the Xerox WorkCentre 7435.

Network Printing – Printing Features	
• Enhanced Gloss Level	• Fit to new paper size
• Print Calibration	• Transparency Separators
• Secure Print	• Banner Sheet enable/disable
• Delay Print (specific time)	• Output tray selection
• Sample Set	• Image Quality
• Booklet creation	• Draft Mode
• Cover selection	• Store and Recall driver settings
• Inserts and exception pages	• Reduce/enlarge
• Store File in Folder	• Mirror image
• Paper selection by attribute	• Margins
• N-up Scaling	• Two sided printing
• Overlays	• Watermark
• Saddle-stitch booklet making (requires Professional Finisher or Office Finisher LX)	
• Hole Punch (requires Professional Finisher or Office Finisher LX)	
• Booklet Fold / V Folding (requires Professional Finisher or Office Finisher LX)	
• Bi-Directional status Print to Fax (requires optional Fax Kit)	
• Secure Watermark (requires optional Secure Watermark Kit)	

PRINTING BACKGROUND

Printing passed copying as the primary method of reproducing documents years ago. Today, printing is just as important—if not more important—than copying.

Connectivity

Most devices include Ethernet and USB connectivity out-of-the-box. Some devices also include a parallel interface. In addition, many devices provide a selection of optional connectivity choices such as Wireless 802.11b or g (g is the faster, preferred standard), Bluetooth for cell phone or PDA connectivity, PictBridge photo printing for printing directly from a digital camera, and FireWire for high-speed local connectivity.

Page Description Languages (PDLs)

PCL is the page description language (PDL) provided by most printer and MFP suppliers. Some manufacturers charge for a PostScript upgrade or provide a PostScript Level 3 emulation (clone). Still other manufacturers provide genuine Adobe PostScript Level 3 and bundle in PCL. A few manufacturers also include their own PDL, which are typically loosely based on the Microsoft

Windows/GDI printing technology of old. These Windows or GDI drivers often offer significant productivity advantages over traditional PCL and PostScript print drivers, since the bulk of the processing is handled by the more powerful desktop PC, rather than by the less well-equipped printer processor itself.

Network-Bandwidth/Print File Sizes			
	Native File Size	PCL	PS
1-page digital photo PDF	4.48 MB	14.2 MB	5.79 MB
4 page Passport Form PDF	0.08 MB	320 KB	506 KB
16-page Magazine in PDF	1.78 MB	16.0 MB	3.41 MB
22-page Excel Worksheet	0.12 MB	1.55 MB	1.50 MB
32-page Text-Based PowerPoint	0.23 MB	15.9 MB	2.48 MB
32-page Graphic Intensive PowerPoint	4.20 MB	37.7 MB	26.0 MB
38-page Form Word Document	0.91 MB	13.9 MB	13.5 MB
50-page Text-Based PDF	0.17 MB	1.81 MB	1.73 MB

PRODUCTIVITY

Evaluating print productivity is not as simple as timing copy jobs. The printing process involves several steps and can be affected by a variety of factors along the way.

The document must first be spooled by the print driver into a PCL or PostScript file. The PCL or PostScript file is then sent to the printer where it is raster image processed (RIPped) into image data by the device processor. The image data is then sent to the marking engine and output as printed pages.

There are three obvious factors highlighted above (spool time, RIP time, and print engine speed), which can all make or break a device's overall productivity. Other factors include concurrency and contention; for instance, print speed may slow down when the device is being used for other functions, such as scanning.

However, it is possible to time and compare these factors through the use of careful preparation, conditioning and testing. Following are charts that show printing performance when tested under controlled conditions.

First Page Out Time (seconds)			
Job List	Media Size	PCL	PS
1-page photo print	Letter	32.96	42.53
4-page passport form PDF	Letter	13.33	14.80
16-page Magazine PDF	Letter	15.08	16.39
22-page Excel Worksheet	Letter	12.09	16.61
32-page text-based PowerPoint	Letter	13.05	16.86
32-page graphic-intensive PowerPoint	Letter	13.65	14.93
38-page Word form	Letter	12.43	14.77
50-page text-based PDF	Letter	13.40	16.49
50-page text-based PDF (duplex)	Letter	19.08	28.96

Total Job Time (seconds)				
Job List	Media Size	Mode	PCL	PS
1-page digital photo print original	Letter	1:1	32.96	42.53
4-page passport form PDF	Letter	1:1	18.50	23.50
16-page Magazine PDF	Letter	1:1	40.25	52.84
22-page Excel Worksheet	Letter	1:1	47.94	56.22
32-page text-based PowerPoint	Letter	1:1	65.30	79.81
32-page graphic-intensive PowerPoint	Letter	1:1	67.60	74.82
38-page simplex Word form	Letter	1:1	78.00	85.34
50-page text-based PDF	Letter	1:1	97.16	101.97
50-page duplex text-based Adobe PDF	Letter	1:2	101.28	114.33

Simplex PCL Print Productivity Black-and-White Text (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	4.5	10.7	14.8	20.8	26.2	28.6	30.0	30.9
2	7.9	16.4	20.8	26.2	30.0	31.5	32.3	32.9
3	10.7	19.9	24.1	28.6	31.5	32.6	33.2	33.6
4	13.0	22.4	26.2	30.0	32.3	33.2	33.7	33.9
5	14.8	24.1	27.6	30.9	32.9	33.6	33.9	34.2
6	16.4	25.4	28.6	31.5	33.2	33.8	34.1	34.3
7	17.8	26.5	29.4	32.0	33.5	34.0	34.3	34.4
8	18.9	27.3	30.0	32.3	33.7	34.1	34.4	34.5
9	19.9	28.0	30.5	32.6	33.8	34.2	34.4	34.6
10	20.8	28.6	30.9	32.9	33.9	34.3	34.5	34.6
20	26.2	31.5	32.9	33.9	34.5	34.7	34.8	34.9
30	28.6	32.6	33.6	34.3	34.7	34.8	34.9	34.9
40	30.0	33.2	33.9	34.5	34.8	34.9	35.0	35.0
50	30.9	33.6	34.2	34.6	34.9	34.9	35.0	35.0

Duplex PCL Print Productivity Black-and-White Text (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	3.1	8.0	11.6	17.4	23.2	26.2	28.0	29.1
2	5.8	13.0	17.4	23.2	28.0	30.0	31.1	31.8
3	8.0	16.5	20.9	26.2	30.0	31.5	32.3	32.8
4	9.9	19.0	23.2	28.0	31.1	32.3	32.9	33.3
5	11.6	20.9	24.9	29.1	31.8	32.8	33.3	33.7
6	13.0	22.4	26.2	30.0	32.3	33.2	33.6	33.9
7	14.3	23.6	27.2	30.6	32.7	33.4	33.8	34.0
8	15.5	24.6	28.0	31.1	32.9	33.6	34.0	34.2
9	16.5	25.5	28.6	31.5	33.2	33.8	34.1	34.3
10	17.4	26.2	29.1	31.8	33.3	33.9	34.2	34.3
20	23.2	30.0	31.8	33.3	34.2	34.5	34.6	34.7
30	26.2	31.5	32.8	33.9	34.5	34.6	34.7	34.8
40	28.0	32.3	33.3	34.2	34.6	34.7	34.8	34.9
50	29.1	32.8	33.7	34.3	34.7	34.8	34.9	34.9

Simplex PostScript Print Productivity Black-and-White Text (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	3.6	9.0	12.8	18.6	24.2	26.8	28.4	29.4
2	6.6	14.3	18.6	24.2	28.4	30.1	31.1	31.7
3	9.0	17.7	22.0	26.8	30.1	31.4	32.1	32.6
4	11.0	20.2	24.2	28.4	31.1	32.1	32.7	33.0
5	12.8	22.0	25.7	29.4	31.7	32.6	33.0	33.3
6	14.3	23.4	26.8	30.1	32.1	32.9	33.2	33.5
7	15.6	24.5	27.7	30.7	32.4	33.1	33.4	33.6
8	16.7	25.4	28.4	31.1	32.7	33.2	33.5	33.7
9	17.7	26.2	29.0	31.4	32.9	33.3	33.6	33.8
10	18.6	26.8	29.4	31.7	33.0	33.5	33.7	33.8
20	24.2	30.1	31.7	33.0	33.7	33.9	34.0	34.1
30	26.8	31.4	32.6	33.5	33.9	34.1	34.2	34.2
40	28.4	32.1	33.0	33.7	34.0	34.2	34.2	34.2
50	29.4	32.6	33.3	33.8	34.1	34.2	34.2	34.3

Simplex PCL Print Productivity Color Microsoft PowerPoint Presentation (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	4.4	10.5	14.6	20.5	25.7	28.1	29.4	30.3
2	7.8	16.1	20.5	25.7	29.4	30.9	31.8	32.3
3	10.5	19.6	23.7	28.1	30.9	32.0	32.6	33.0
4	12.7	22.0	25.7	29.4	31.8	32.6	33.1	33.3
5	14.6	23.7	27.1	30.3	32.3	33.0	33.3	33.6
6	16.1	25.0	28.1	30.9	32.6	33.2	33.5	33.7
7	17.4	26.0	28.8	31.4	32.9	33.4	33.7	33.8
8	18.6	26.8	29.4	31.8	33.1	33.5	33.8	33.9
9	19.6	27.5	29.9	32.0	33.2	33.6	33.8	34.0
10	20.5	28.1	30.3	32.3	33.3	33.7	33.9	34.0
20	25.7	30.9	32.3	33.3	33.9	34.1	34.2	34.2
30	28.1	32.0	33.0	33.7	34.1	34.2	34.3	34.3
40	29.4	32.6	33.3	33.9	34.2	34.3	34.3	34.4
50	30.3	33.0	33.6	34.0	34.2	34.3	34.4	34.4

Duplex PostScript Print Productivity Black-and-White Text (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	2.1	5.5	8.3	13.3	19.1	22.3	24.4	25.8
2	3.9	9.5	13.3	19.1	24.4	26.9	28.3	29.3
3	5.5	12.5	16.7	22.3	26.9	28.8	29.9	30.6
4	7.0	14.8	19.1	24.4	28.3	29.9	30.8	31.3
5	8.3	16.7	20.9	25.8	29.3	30.6	31.3	31.8
6	9.5	18.2	22.3	26.9	29.9	31.1	31.7	32.1
7	10.6	19.5	23.5	27.7	30.4	31.4	32.0	32.3
8	11.6	20.6	24.4	28.3	30.8	31.7	32.2	32.5
9	12.5	21.5	25.2	28.8	31.1	31.9	32.4	32.6
10	13.3	22.3	25.8	29.3	31.3	32.1	32.5	32.7
20	19.1	26.9	29.3	31.3	32.5	32.9	33.1	33.2
30	22.3	28.8	30.6	32.1	32.9	33.2	33.3	33.4
40	24.4	29.9	31.3	32.5	33.1	33.3	33.4	33.5
50	25.8	30.6	31.8	32.7	33.2	33.4	33.5	33.5

Simplex PostScript Print Productivity Color Microsoft PowerPoint Presentation (Pages Per Minute)								
SETS								
PAGES	1	3	5	10	20	30	40	50
1	3.6	8.7	12.3	17.8	22.9	25.3	26.7	27.7
2	6.4	13.7	17.8	22.9	26.7	28.3	29.2	29.7
3	8.7	17.0	20.9	25.3	28.3	29.5	30.1	30.5
4	10.7	19.2	22.9	26.7	29.2	30.1	30.6	30.9
5	12.3	20.9	24.3	27.7	29.7	30.5	30.9	31.1
6	13.7	22.2	25.3	28.3	30.1	30.7	31.1	31.3
7	15.0	23.2	26.1	28.8	30.4	30.9	31.2	31.4
8	16.0	24.1	26.7	29.2	30.6	31.1	31.3	31.5
9	17.0	24.7	27.2	29.5	30.7	31.2	31.4	31.5
10	17.8	25.3	27.7	29.7	30.9	31.3	31.5	31.6
20	22.9	28.3	29.7	30.9	31.5	31.7	31.8	31.8
30	25.3	29.5	30.5	31.3	31.7	31.8	31.9	31.9
40	26.7	30.1	30.9	31.5	31.8	31.9	31.9	32.0
50	27.7	30.5	31.1	31.6	31.8	31.9	32.0	32.0

WHAT WE LIKED

- Tested black-and-white simplex and duplex network-printer speeds in both PCL and PostScript modes were up to approximately 35 ppm, matching Xerox's rated print speed of up to 35 ppm.
- Tested color network print speed was up to 34.4 ppm in PCL and 32 ppm in PostScript mode, closely matching Xerox's rated print speed of up to 35 ppm.
- Tested network-printer First Page Out Time (FPOT) was as fast as 13.40 seconds in PCL mode and up to 16.49 seconds in PostScript mode.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's printing capabilities.

BACKGROUND

Nearly all MFPs on the market today provide digital copying, while many desktop printers offer it as an option. Despite the fact that many devices provide a wide range of digital-copying capabilities, from image manipulation to page insertion, most typical copy jobs actually consist of a single set of a simplex document that is five pages or less, with no finishing, and no image-quality manipulation.

Small Simple Jobs

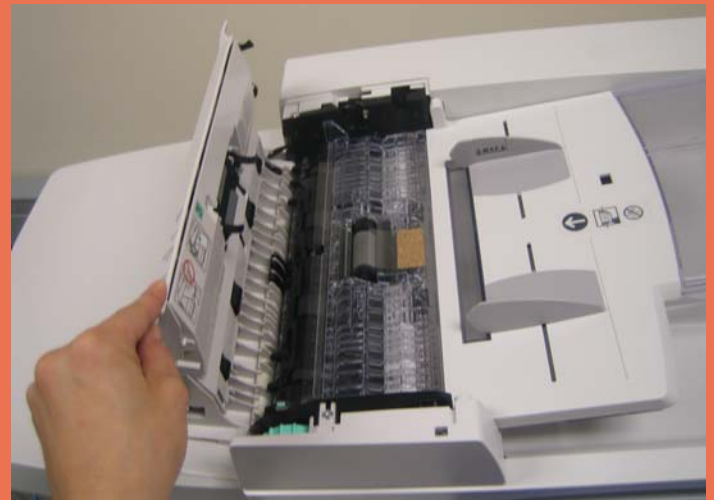
Although most MFPs provide a wide range of copying features, most users are not willing to navigate through countless screen menus in order to get to the point where they can actually press the *Start* key. There are two components of copy-job productivity: 1) user productivity, and 2) device productivity. BERTL encourages enterprises to also consider the impact of *user* productivity, along with device productivity. Device productivity only includes the time it takes from the press of the *Start* key until the final copy exits the device, and does not take into account the time that it takes a user to program and start the copy job. However, the easier the job, the easier it is to program; users will also take less time to program jobs as they acclimate to the controls and/or create job programs. And, of course, some users are more astute and capable than others. Consequently, these uncontrolled factors introduce a high degree of variability. However, of course, a device that takes twice as long to produce the first copy affects the job productivity of each and every user and job.

Large, Complex Jobs

Even with large copy jobs—where it seems engine speed plays the largest role—user productivity should be taken into account. For example, the user is less likely to wait at the copier for larger and more complex jobs. Factors that enhance user productivity include such features as easy job programming; a scan-ahead feature so that users can program and scan jobs while other jobs are printing; fast original scanning so that users can more quickly return to their desks with their originals; the ability to build a job using a mix of different-size originals scanned from both the document feeder and platen; and job notification at the computer desktop when the copy job is completed (thus eliminating the guesswork of when to return to the copier to collect the job).

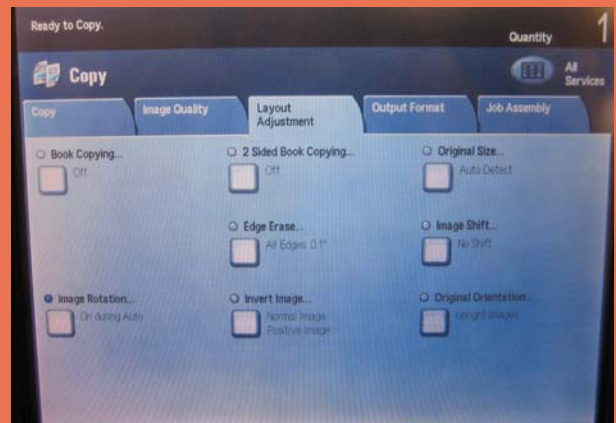


Above and below: The WorkCentre 7435's platen (above) and document feeder (below), with the document feeder's cover opened in order to expose the feeder's misfeed-access area.





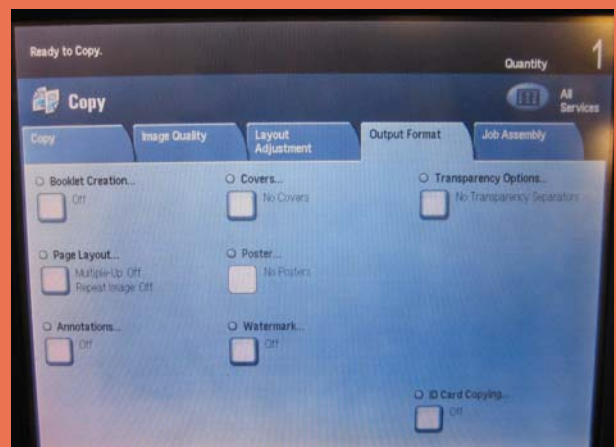
The "Services" button on the main control panel displays all of the device's available functions.



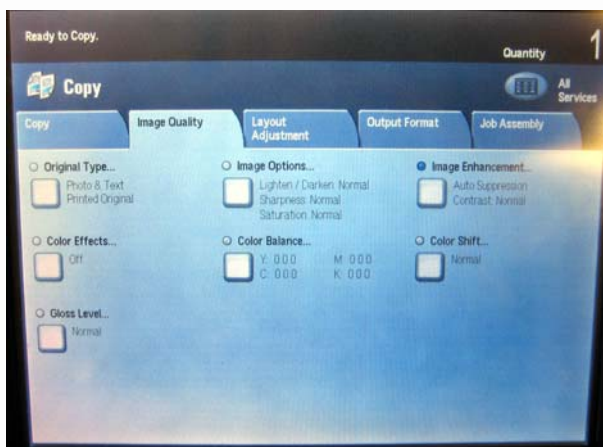
The Layout Adjustment tab provides options for Book Copying, 2-Sided Book Copying, Original Size, Edge Erase, Image Shift, Invert Image, Image Rotation and Original Orientation.



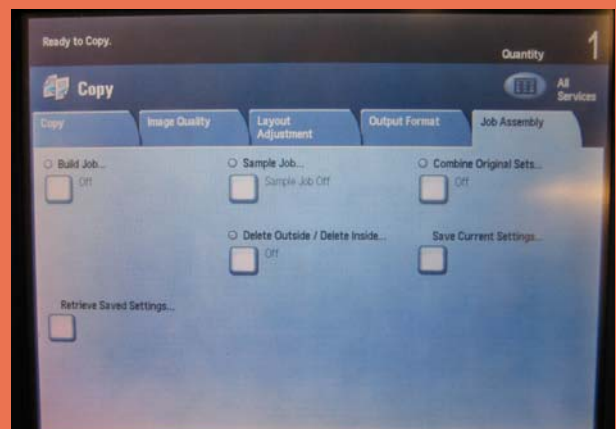
The "Copy" touch screen's main menu provides users with the most common copying choices. The blue bold buttons on the touch screen display currently selected settings.



Users can choose several different Output Formats for their copy jobs from this touch screen. Options include Booklet Creation, Covers, Transparency Options, Page Layout, Posters, Watermark and Annotations.



The touch screen displaying image-quality options for the copy function.



The touch screen's Job Assembly options provide users with the ability to Build a Job, print a Sample Job, Combine Original Sets, and Delete Outside / Delete Inside.

COPY PRODUCTIVITY

Advertised speeds are always quoted using the simplest route—in-and-out of a device. Of course, users often apply finishing options, incorporate different media sizes and types into the document, print in duplex, and add other elements that can affect speed. In the chart below, BERTL tests how different modes—mixed-size original mode and duplex mode—affect document-feeder productivity.

In order to assess copier productivity, BERTL ran a series of copy jobs in order to determine document-feeder scanning speed, the affect of the first set out on overall engine speed, and whether specific job attributes affect engine throughput capability. Each job was set up by feeding media from the shortest media route to the shortest available output destination. A separate test examines how adding finishing/output destinations affects productivity.

First Copy Out Time*		
Number of Originals	Black-and-White Mode Seconds	Color Mode Seconds
1 Simplex Original	8.87	9.04
2 Simplex Original (Duplex Model)	17.19	16.50

*Using the automatic document feeder.

Copy Job Time			
# of originals	MONOCHROME MODE	Time In Seconds	CPM
10	1 sided to 1 sided	30.59	19.6
10	1 sided to 2 sided	51.00	11.8
10	2 sided to 1 sided	64.63	9.3
10	2 sided to 2 sided	91.25	6.6
COLOR MODE			
10	1 sided to 1 sided	30.69	19.6
10	1 sided to 2 sided	50.56	11.9
AUTO COLOR MODE			
10	1 sided to 1 sided	30.72	19.5

Simplex Black-and-White Copier Productivity (Pages Per Minute)								
SETS								
Pages	1	3	5	10	20	30	40	50
1	6.8	13.1	16.2	19.6	21.9	22.8	23.3	23.6
2	10.6	17.2	19.6	21.9	23.3	23.8	24.1	24.2
3	13.1	19.2	21.1	22.8	23.8	24.1	24.3	24.4
4	14.9	20.3	21.9	23.3	24.1	24.3	24.5	24.5
5	16.2	21.1	22.5	23.6	24.2	24.4	24.5	24.6
6	17.2	21.6	22.8	23.8	24.3	24.5	24.6	24.6
7	18.0	22.1	23.1	23.9	24.4	24.5	24.6	24.7
8	18.6	22.4	23.3	24.1	24.5	24.6	24.7	24.7
9	19.2	22.6	23.5	24.1	24.5	24.6	24.7	24.7
10	19.6	22.8	23.6	24.2	24.5	24.6	24.7	24.7
20	21.9	23.8	24.2	24.5	24.7	24.8	24.8	24.8
30	22.8	24.1	24.4	24.6	24.8	24.8	24.8	24.8
40	23.3	24.3	24.5	24.7	24.8	24.8	24.8	24.8
50	23.6	24.4	24.6	24.7	24.8	24.8	24.8	24.8

Duplex Black-and-White Copier Productivity (Pages Per Minute)								
SETS								
Pages	1	3	5	10	20	30	40	50
1	3.5	7.0	8.8	10.9	12.3	12.9	13.2	13.4
2	5.7	9.4	10.9	12.3	13.2	13.5	13.7	13.8
3	7.1	10.6	11.8	12.9	13.5	13.7	13.8	13.9
4	8.1	11.3	12.3	13.2	13.7	13.8	13.9	14.0
5	8.9	11.8	12.6	13.4	13.8	13.9	14.0	14.0
6	9.5	12.1	12.9	13.5	13.8	14.0	14.0	14.1
7	9.9	12.4	13.1	13.6	13.9	14.0	14.0	14.1
8	10.3	12.6	13.2	13.7	13.9	14.0	14.1	14.1
9	10.7	12.7	13.3	13.7	14.0	14.0	14.1	14.1
10	10.9	12.9	13.4	13.8	14.0	14.1	14.1	14.1
20	12.4	13.5	13.8	14.0	14.1	14.1	14.1	14.2
30	12.9	13.7	13.9	14.1	14.1	14.1	14.2	14.2
40	13.2	13.8	14.0	14.1	14.1	14.2	14.2	14.2
50	13.4	13.9	14.0	14.1	14.2	14.2	14.2	14.2

Simplex Color Copier Productivity (Pages Per Minute)								
SETS								
Pages	1	3	5	10	20	30	40	50
1	6.6	13.0	16.1	19.6	21.9	22.8	23.3	23.6
2	10.5	17.1	19.6	21.9	23.3	23.8	24.1	24.3
3	13.0	19.1	21.1	22.8	23.8	24.2	24.4	24.5
4	14.8	20.3	21.9	23.3	24.1	24.4	24.5	24.6
5	16.1	21.1	22.5	23.6	24.3	24.5	24.6	24.7
6	17.1	21.6	22.8	23.8	24.4	24.6	24.7	24.7
7	17.9	22.0	23.1	24.0	24.5	24.6	24.7	24.7
8	18.5	22.4	23.3	24.1	24.5	24.7	24.7	24.8
9	19.1	22.6	23.5	24.2	24.6	24.7	24.8	24.8
10	19.6	22.8	23.6	24.3	24.6	24.7	24.8	24.8
20	21.9	23.8	24.3	24.6	24.8	24.8	24.9	24.9
30	22.8	24.2	24.5	24.7	24.8	24.9	24.9	24.9
40	23.3	24.4	24.6	24.8	24.9	24.9	24.9	24.9
50	23.6	24.5	24.7	24.8	24.9	24.9	24.9	24.9

Duplex Color Copier Productivity (Pages Per Minute)								
SETS								
Pages	1	3	5	10	20	30	40	50
1	3.6	7.2	8.9	10.9	12.3	12.9	13.1	13.3
2	5.8	9.5	10.9	12.3	13.1	13.4	13.6	13.7
3	7.2	10.7	11.8	12.9	13.4	13.7	13.8	13.8
4	8.2	11.4	12.3	13.1	13.6	13.8	13.8	13.9
5	8.9	11.8	12.6	13.3	13.7	13.8	13.9	13.9
6	9.5	12.2	12.9	13.4	13.8	13.9	13.9	14.0
7	10.0	12.4	13.0	13.5	13.8	13.9	13.9	14.0
8	10.4	12.6	13.1	13.6	13.8	13.9	14.0	14.0
9	10.7	12.7	13.2	13.7	13.9	13.9	14.0	14.0
10	10.9	12.9	13.3	13.7	13.9	14.0	14.0	14.0
20	12.3	13.4	13.7	13.9	14.0	14.0	14.0	14.1
30	12.9	13.7	13.8	14.0	14.0	14.0	14.1	14.1
40	13.1	13.8	13.9	14.0	14.0	14.1	14.1	14.1
50	13.3	13.8	13.9	14.0	14.1	14.1	14.1	14.1

Document Feeder Productivity

BERTL also takes the user into account and looks at how document-feeder productivity affects the amount of time a user has to wait at the device before they can walk away with their originals.

Document Feed Speed			
# of originals	MONOCHROME MODE	Time In Seconds	OPM*
10	Simplex Originals	32.66	18.4
5	Duplex Originals	59.04	5.1
10	Mixed-Size Originals	35.94	16.7
COLOR MODE			
10	Simplex Originals	32.53	18.4
5	Duplex Originals	88.16	6.8

*Originals per minute.

Document-Finishing Penalty				
# of originals	Finishing Selection	Time In Secs	1 Set Time (Secs)	Penalty Per Set (Secs)
10/5	Corner Staple	146.82	36.46	1.17
10/5	Side Staples	118.81	30.86	0.03
8/5	Saddle-Stitch Booklet	*	*	*
10/5	Covers and Inserts	240.47	55.19	4.92

* Saddle-Stitch option was not available on the device tested.

COPY FEATURES

- + The Xerox WorkCentre 7435 comes standard with a Duplex Automatic Document Feeder with capacity for up to 75-sheet (based on 80 gsm paper).
- + Users can submit jobs that require single or duplex copying. The WorkCentre supports copy jobs that require 1:1, 1:2, 2:2 and 2:1 side printing.
- + Users can make copies that range from 1 to 999 in quantity.
- + Xerox Rated Output Speed is up to 35 ppm color and 35 ppm black-and-white.
- + Xerox Rated First-Copy-Out Time (FCOT) is as fast as 6.4 seconds color, 5 seconds black-and-white
- + Copy Resolution is set at 600 x 600 dpi.
- + The WorkCentre 7435 can simultaneously scan, print, copy, fax, and route files.

+ Users can use the variable zoom to scale from 25% to 400% in 1% increments

SPECIAL COPY FEATURES

The following is a list of supported copying features offered on the Xerox WorkCentre 7435.

Highlighted Features	
<ul style="list-style-type: none"> Auto reduction / enlargement to fit selected paper size 	<ul style="list-style-type: none"> Negative image
<ul style="list-style-type: none"> Auto registration 	<ul style="list-style-type: none"> Mirror image
<ul style="list-style-type: none"> Auto tray switching 	<ul style="list-style-type: none"> Covers insertion (front only, front and back, back only, blank or printed)
<ul style="list-style-type: none"> Automatic job recovery 	<ul style="list-style-type: none"> Build Job (enables special programming for different pages in one document – can be used for inserts, different paper sources and mixing input from the document glass and the document feeder)
<ul style="list-style-type: none"> Auto color selection 	
<ul style="list-style-type: none"> Area Designation 	<ul style="list-style-type: none"> Store and recall job programming
<ul style="list-style-type: none"> Poster mode 	<ul style="list-style-type: none"> Job interrupt
<ul style="list-style-type: none"> Watermark 	<ul style="list-style-type: none"> Book copying
<ul style="list-style-type: none"> Secure Watermark (requires Secure Watermark Kit option) 	<ul style="list-style-type: none"> Sample job
<ul style="list-style-type: none"> Annotation 	<ul style="list-style-type: none"> Mixed-size originals
<ul style="list-style-type: none"> Auto Paper Select 	<ul style="list-style-type: none"> Hole Punch (requires Professional Finisher or Office Finisher LX)
<ul style="list-style-type: none"> Single/Dual color 	<ul style="list-style-type: none"> V-Folding (requires Professional Finisher)
<ul style="list-style-type: none"> Copy calibration 	<ul style="list-style-type: none"> Saddle-stitch booklets (requires Professional Finisher or Office Finisher LX)
<ul style="list-style-type: none"> Booklet creation 	
<ul style="list-style-type: none"> Multi-up – 2, 4 or 8 up 	<ul style="list-style-type: none"> Stapling (single/dual/quad) (quad requires Professional Finisher)
<ul style="list-style-type: none"> Repeat Image 	ID Card Copy

WHAT WE LIKED

- Tested black-and-white FPOT as fast as 8.87 seconds in simplex copier mode, and as fast as 17.19 seconds in duplex copier mode.
- Tested color FPOT as fast as 9.04 seconds in simplex copier mode, and as fast as 16.50 seconds in duplex copier mode.
- Tested black-and-white copier productivity was up to 24.8 ppm in simplex mode and up to 14.2 ppm in duplex mode, closely matching Xerox's rated copy speed of up to 28 ppm.
- Tested color productivity in simplex mode was as fast as 24.9 ppm, and as fast as 16.50 ppm in duplex color mode.
- Minimal document-finishing penalty when applying corner and side stapling.
- Fast document-feeder speeds of up to 18.4 opm in monochrome simplex mode and up to 5.1 opm in duplex mode.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's copying capabilities.

BACKGROUND

In just a few years, network scanning has changed from being a “luxury” function to one that is virtually essential.

Indeed, today, nearly all MFPs provide standard or optional network scanning, including scan-to-e-mail. This makes document-feeder design even more critical, with users looking for document feeders with higher feeding speeds, low-resolution capabilities, as well as for MFPs with more versatile scanning, and color-scanning capability.

Address Book Integration

MFPs’ ability to integrate their scanning addresses book with central corporate address book located on LDAP or Microsoft Windows NT network servers is the current *de facto* standard. The ability to force-populate outgoing e-mail from the MFP with sender information through an enforced login process is also required (i.e., senders must enter their network password before they can use the MFP’s scan-to-e-mail).

Destinations

Most MFPs’ network-scanning capabilities include the ability to scan-and-send to e-mail addresses, SMB destinations (Windows desktop locations), FTP (File Transfer Protocol) sites, and Internet fax destinations. In some instances, the scanned document goes directly to the MFP’s hard drive, and an e-mail is sent to the recipient with a URL link. By navigating to the URL link, the recipient can quickly access the scanned file from the device’s hard drive. Also of note is that a growing number of devices are beginning to include external media ports to allow users to scan and send documents to USB flash memory devices and digital-camera SD chips. We expect this to become more common over the next year.

Security

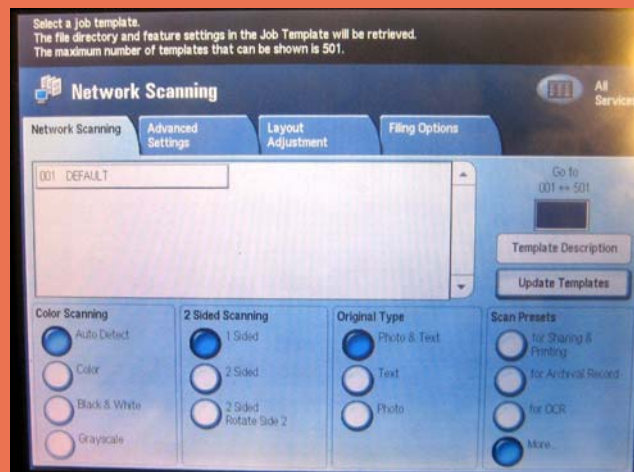
Security is another critical aspect of scanning. Several MFPs now include the ability to send scanned messages using encrypted PFD or other secure-transfer formats. This is an important capability in industries and sectors where data must be kept secure and confidential. Most devices also support network authentication, so that users must log into their device (usually with their network password) before they scan.

Integration with Third-Party Applications

The big buzz in the office digital-imaging industry is the move toward open architecture, with the MFP’s firmware backbone based on an industry standard such as Java or .NET rather than on a proprietary system.

Device Contention

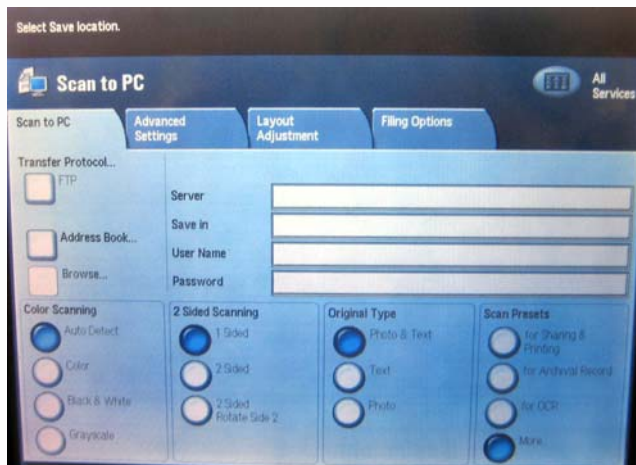
Print slowdown when scanning copy job?	No
Print slowdown when scanning in scan job?	No
Print slowdown when scan-data transfer underway?	No



Users can scan hard-copy originals, converting them into electronic files. Users can select the scanning color mode, single or duplex scanning mode, document type and scan presets.

Users have the option of sending these electronic documents to a multitude of places which include:

- Scan to network server
- Scan to remote email destinations via SMTP
- Scan to application (Electronic Document Management System/Repositories)
- Scan to Microsoft Exchange 2000 Web Folders
- Scan to PC Desktop (Professional and SE editions)
- SMARTsend
- ScanFlowStore
- Scan to Windows XP client SMB or FTP
- Scan to Folder
- Scan to Home



Above and below: Whether a user is scanning to PC or scanning to a folder users can specify the transfer protocol, address book, scanning color mode, single or duplex scanning mode, document type and scan presets.



Scanning Features

+ The WorkCentre 7435 offers users the option to scan their jobs in using the following color options; Color Scanning, Grayscale, Black and White, and Auto Color.

+ Users can scan while the system is copying, printing or while it is transferring scan to network or fax jobs.

+ The input scanning speed for the WorkCentre 7435 is 50 ipm using monochrome and 45 ipm using color. (216 x 279 mm / A4 Long Edge Feed).

Resolution

+ This device offers several resolution options aimed at satisfying the most demanding customers. Options include the following:

- 600 x 600 dpi
- 400 x 400 dpi
- 300 x 300 dpi
- 200 x 200 dpi

Bit depth:

- 1 bit (monochrome)
- 8 bit (grayscale)
- 24 bit (color)

Scan Area

+ The Maximum Scan Area for the WorkCentre 7435 is 11.7" x 17" inches (297 x 432 mm).

File Formats

+ Xerox provides users with a multitude of file format options which include

- TIFF 6.0 or TTF2 with JPEG, G3MH, G4 MMR compression (single page or multiple pages)
- PDF, PDF/A with MRC, JPEG, G3 MH, G4 MMR, MRC, JBIG 2 Huffman, JBIG Arithmetic Compression
- JPEG
- XPS
- Searchable PDF, PDF/A, XPS
- Password Protected PDF
- Encrypted PDF
- Linearized PDF

These options are sure to meet the needs of the most demanding user.

Secure Access and Authentication

+ The optional secure device login with network user name and password provides users with secure access to the WorkCentre 7435.

+ User Authentication is supported with Kerberos (Windows 2000/UNIX/Windows Server 2003), SMB (Windows 2000/Windows Server 2003/Vista) and LDAP.

LDAP

+ The Xerox WorkCenter 7435 is compatible with LDAP (Lightweight Directory Access Protocol), which allows it to browse address lists stored on a corporate network. When a new name is added to the database, connected devices automatically have access to that name. This eliminates the need to maintain a separate address book for the WorkCentre 7435.

+ This is much more convenient for IT managers, since it means they do not waste resources manually updating

each device address book every time a phone number or email address is added, deleted, or updated.

Network Protocol

+ This device supports the most commonly used network protocols supported today. This includes FTP via TCP/IP, Microsoft SMB via TCP/IP, Netware, HTTP and HTTPS.

Supported Scan Destinations

+ The WorkCentre 7435 supports a multiple scan destinations making it easy for users to route their documents to most destinations. Scan destination options vary by scanning software options purchased.

Xerox offers some of the most comprehensive workflow options in the the industry.

Scan destinations on the WorkCentre 7435 include;

- Scan to network server
- Scan to remote email destinations (via direct SMTP addresses or via various network scanning software options)
- Scan to application (Electronic Document Management System/Repositories)
- Scan to Microsoft Exchange 2000 Web Folders
- Scan to PC Desktop (Professional and SE editions)
- SMARTsend
- ScanFlowStore
- Scan to Windows XP client SMB or FTP
- Scan to Folder
- Scan to Home

Scan to PC Desktop SE (Optional)

+ Scan to PC Desktop SE is a desktop and server-based offering that provides document imaging, archiving, editing and organization tools.

+ ScanSoft PaperPort is an excellent software solution which is used for image viewing and file management.

+ ScanSoft OmniPage (for desktop/client installation) is another software solution which is used to perform OCR and file format conversions of scanned documents.

+ Image Retriever provides fully automated retrieval of scanned images direct from a scan enabled Xerox WorkCentre to individual desktops.

Scan to PC Desktop Pro (Optional)

+ Scan to PC Desktop Pro is a desktop and server-based offering that provides document imaging, archiving, editing and organization tools.

+ The PaperPort Personal Scanning Platform empowers office workers with the ability to customize, directly from the desktop, the scanning menus available to them on Xerox EIP enabled MFP devices.

+ ScanSoft PaperPort Pro – an excellent software solution which is used for image viewing and file management.

+ The PaperPort Pro version offers the following advance scanning features:

- Unlimited Scanner Profiles
- Capture Assistant with Scanning Preview
- DesktopDelivery from eMail
- DesktopDelivery from a Folder
- Scheduled Search Indexing
- SendTo OmniPage® Workflow
- SendTo Web Folders (WebDAV)
- SendTo ODMA
- SendTo SharePoint

+ ScanSoft OmniPage Pro (for desktop/client installation) is another software solution which is used to perform OCR and file format conversions of scanned documents.

The OmniPage Pro version offers the following advance scanning features:

+ Advanced Productivity Features:

- Automatically Redact (Black-out), Highlight and Strikethrough text using keywords
- Form drawing & arrangement (e-form creation)
- Automatic data collection from forms
- Integration with SharePoint 2003
- Integration with SharePoint 2007
- ODMA (DMS) and FTP integration

+ Automation Capabilities:

- File-It Assistant with barcode driven workflows
- Workflow / Batch manager - jobs (scheduled workflows)
- Workflow / Batch manager - folder watching
- Workflow / Batch manager - mailbox watching

+ Image Retriever – provides fully automated retrieval of scanned images direct from a scan enabled Xerox or through email WorkCentre to individual desktops. Also includes an Email inbox polling capability.

Additional Scanning Features

The following is a list of additional supported scanning features offered on the Xerox WorkCentre 7435.

Scan Features	<ul style="list-style-type: none">• Mixed size originals• Bound originals• Edge erase• Reduction/enlargement• Fit to size• Scan Build Job• Compression Quality/File Size Control• Original type (photo and text, photo, text)• Auto Background and Shadow Suppression• Job Flow Sheets• Thumbnail Preview
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Scan to Email

+ The WorkCentre 7435 supports Scan to Email (included with the Scanning Option) in color, auto color, grayscale, and black and white modes. Users can direct their document destination directly from the device.

+ Users can easily look up and search for a destination or e-mail address by accessing Exchange/Notes/LDAP address directly from the control panel.

+ Users can also download an address list directly to the device using a CSV file (comma-separated file format).

+ The WorkCentre 7435 offers users the ability to view their scan documents using the optional Thumbnail Preview. Images stored on a folder in the device hard drive can be viewed directly on the control panel.

+ Images can be scanned, printed and faxed directly to the device hard drive and stored in a mailbox.

+ Scan or fax images that are stored in the mailbox can then be printed, emailed, sent via fax, sent via IFax, routed to a PC, an FTP or SMB site via Job Flow Sheets.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's network-scanning capabilities, features and functions.

Fax Server Features

+ The WorkCentre 7435 offers users an optional network fax server integration which provides users with the ability to fax documents directly from the device control panel.

Other options include the following:

- One-sided, two-sided, or two-sided rotate side 2
- Phone number entry
- Add to send list (50 numbers maximum)
- Delay
- send (specific time)
- Resolution selection (super fine/600 x 600, super fine/400 x 400, fine/200 x 200, standard/200 x 100 dpi)
- Original type (photo, text, or photo and text)

Fax Server Print Features

- One- or two-sided printing
- Quantity
- Staple on/off
- Collate on/off
- Finisher output tray selection (top tray or main tray)
- Secure print on/off

Optional One/Three Line Fax Options Transmission Resolution Options

+ The transmission speed available with these modem(s) is up to 33,600 bps, which equates to less than four seconds per page of transmission time.

+ The WorkCentre 7435 has four transmission resolutions: Superfine (600x600 dpi), Super fine (400 x 400 dpi), Fine (200x200 dpi), and Standard (200x100 dpi). Some devices only offer resolution up to 400 dpi quality.

Compression Standards

+ The Xerox WorkCentre 7435 uses MH/G3, MMR/G4, JBIG Super G3Fax compression coding schemes. JBIG sends documents containing text mixed with graphics significantly faster than in MMR format.

Fax Forward

+ Fax-forwarding feature lets users forward incoming faxes to an email address, fax number or a document repository. When enabled with the scan and fax kit, faxes can be received into a folder on the device hard drive. Images that are in the folder can be routed to an Email, an FTP or SMB location or a Fax.

Job Accounting

+ Job tracking can accurately monitor device usage remotely via the web. Xerox Standard Accounting monitors

both the documents produced and also track the people that produced them. The Xerox Standard Accounting function is also used to manage access and gather data for print, copy, scan and fax output — black-and-white and color.

Fax Send Features

- Fax from print driver
- Auto fax transmission reduction
- Page-by-page job status at the machine
- Fax from platen
- Delay start
- Automatic memory resend
- Automatic cover sheets
- Priority send
- Broadcast
- Booklet Scan
- PSTN Fax
- Internet Fax
- LAN Fax
- Secure Fax

Fax Receive Features

Fax receive features include one- or two-sided printing, reduction at reception to fit available paper, and junk fax prevention.

Fax Report

Administrators can generate up to 5 different fax reports which include;

- Activity report
- Address Book
- Transmission confirmation
- Pending fax
- Folder List

Fax Receive Mailboxed

Fax Receive Mailboxes
Up to 200 password-protected folders

Single Line Options

The Single Line option supports a total of 200 speed dials and up to 50 dial groups with up to 20 recipients per group. With the extended memory option up to 200 dial groups with up to 200 recipients per group can be added.

Internet Fax (Optional) – Standard with One or Three Line Fax Option

Fax Capability

+ Direct document transmission to remote Internet Fax machines or email clients (SMTP)
Reception and automatic printout of documents in black and white sent via email from remote Internet Fax machines or email clients

Maximum Scan Area

+ Maximum Scan Area: 11 x 17 in. (A3)

Address Directory Access

+ Users can download the address list as a CSV (comma-separated value file format).

Fax File Formats

+ Supported file formats include TIFF-FX Profiles S with G3 MH, F with G4 MMR, or J with JBIG.

Resolutions

- + Fax resolution options include:
- 600 x 600 dpi
 - 400 x 400 dpi
 - 200 x 200 dpi
 - 200 x 100 dpi
 - Bit Depth: 1 bit (monochrome)

Network Protocols

+ The WorkCentre 7435 supports POP3 and SMTP network protocols.

Compliance

+ Compliant with ITU-T T.37 compliant.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's fax capabilities, features and functions.

IMAGE QUALITY

BERTL evaluates the output of several “test targets” in order to determine image quality. Following are descriptions of key elements of image quality. Note the numbered examples on each of the test targets shown in the right column.

Office Color Image Quality

1. **Density of Solid Areas** - Better contrast; more vivid overall images
2. **Line Work** - Better production of lines and text
3. **Halftones** - Better production of photographic and screened images
4. **Negative/Positive** - Better production of fine detail

Photographic Color Image Quality

5. **Flesh tones** - Better production of portraits
6. **Banding** - Better solid and dithered fill
7. **Low Contrast** - Better production of dark images
8. **Saturation** - Better production of bright colors
9. **Caste** – Better color fidelity
10. **Fine Detail** – Better reproduction of fine details
- 11.

Density of Solid Areas*		
	Copy Density	Print Density
Black	1.40	1.62
Cyan	1.31	0.50
Magenta	1.11	0.97
Yellow	0.99	0.87

*Density is on a scale of 0 to 2.5, with 2.5 being the best possible.

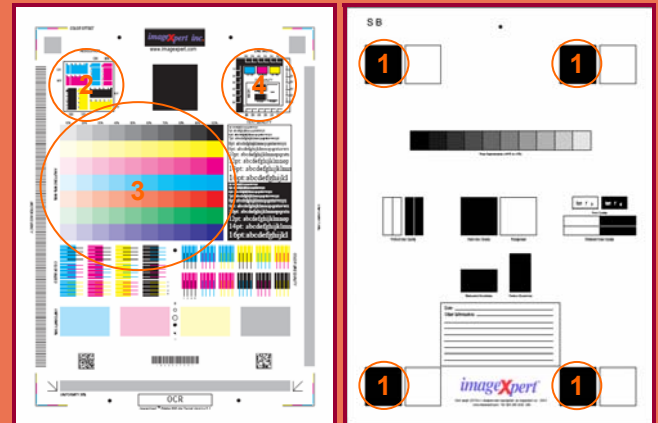
Copy & Print Resolution*				
	Copy Resolution		Print Resolution	
	Vertical	Horizontal	Vertical	Horizontal
Black	6.3	5.6	2	2
Cyan	--	--	2	2
Magenta	--	--	2	2
Yellow	--	--	3	3

*Line Pairs per Millimeter. For copy resolution, higher is better (range, 2.0-8.0); for printer resolution, lower is better (range, 1.0-5.0).

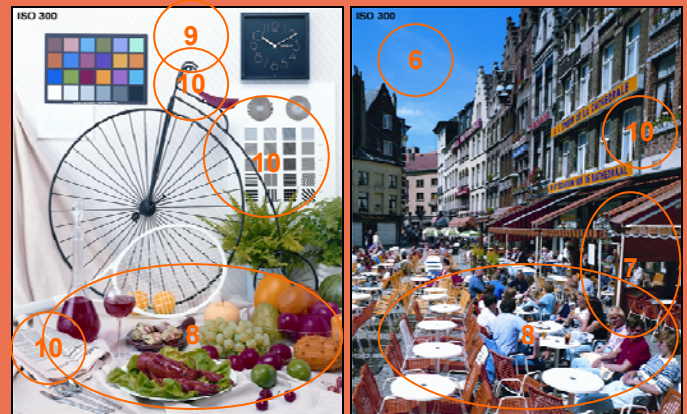
Print Halftones		
	Min. Gradation*	Max. Gradation**
Black	10	100
Cyan	10	100
Magenta	10	90
Yellow	10	100

*Minimum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible minimum gradation is 10 percent.

**Maximum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible maximum gradation is 100 percent.



BERTL uses ImageExpert printer test targets for the evaluation of printed image quality. BERTL technicians' measure image density and evaluate the device's ability to produce a full range of halftones and various sizes of negative/positive text, dots and lines in each primary printing color (CYMK).



BERTL uses synthetic (photographic) test images obtained from ISO International Standard 12640--Graphic Technology--Prepress digital data exchange--CYMK Standard Color Image Data (CYMK/SCID) in order to evaluate the ability to print photographic images.

IMAGE QUALITY

Copy Halftones		
	Min. Gradation*	Max. Gradation**
Black	10	100
Cyan	10	90
Magenta	20	90
Yellow	10	90

*Minimum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible minimum gradation is 10 percent.

**Maximum gradation is on a scale of 10 – 100 percent in 10 percent increments. The best possible maximum gradation is 100 percent.

Negative/Positive Lines*				
Line Width (points)	Negative		Positive	
	Vertical	Horizontal	Vertical	Horizontal
1	√	√	√	√
2	√	√	√	√
3	√	√	√	√
4	√	√	√	√
5	√	√	√	√
6	√	√	√	√

A "√" mark indicates the device was able to print the line width correctly.

*Chart cells containing an "x" indicate that the printer was not able to print the line width correctly. Overall, the fewer "x's," the better the image quality. If no cells are marked with an "x," then the device was able to print all line widths correctly.

Negative/Positive Dots*	
Line Width (points)	% of Dots Printed
1 pixel Black	100
1 pixel Black Neg	100
1 pixel Cyan	100
1 pixel Magenta	100
1 pixel Yellow	70
2x2 pixel Black	100
2x2 pixel Black Neg	100
Checkerboard apparent?	100

*On a scale of 0 – 100%. The higher the percentage, the better.

Photo Quality	
	Ranking (1-5)*
Fleshtones	4.0
Banding	5.0
Low Contrast	4.0
Saturation	3.5
Caste	4.0
Fine Detail	4.0

*Based on a scale of 1 – 5, with 5 being the best.

WHAT WE LIKED

- Very Good print and copy density in all four colors.
- Excellent resolution in both copy and printer modes.
- Above-average halftone reproduction in printer mode when printing all four colors (black, cyan, yellow and magenta), as the device was able to correctly produce virtually all halftone shades in BERTL's halftone-evaluation chart.
- Good halftone reproduction in copier mode when printing all four colors.
- The device displayed good line control and excellent dot control.
- Excellent production of photographic images. Photographic color images were rated "Above Average"; BERTL analysts noted bright, rich colors and sharp details.
- Fleshtones were smooth and realistic.
- 1200 x 2400 dpi print resolution.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's image quality.



The WorkCentre 7435's Control Panel consists of a touch screen and hard keys.

PROGRAMMING THE CONTROL PANEL

Visit a few MFP manufacturers' showrooms, and you will see a wide range of control panels and touch screens. The most rudimentary consist of a selection of hard keys and an LCD screen that can often be challenging to navigate. On the other hand, some control panels that utilize hard keys and LCD screens can actually be easier to use than touch screens. However, hard-key/LCD panel systems that require users to scroll through various settings and make a selection can also often be challenging to use.

Among touch screens, some utilize a menu-driven system, while others utilize an icon-based system. Some menu-driven touch screens can involve many complicated sub-menus that can be difficult to navigate.

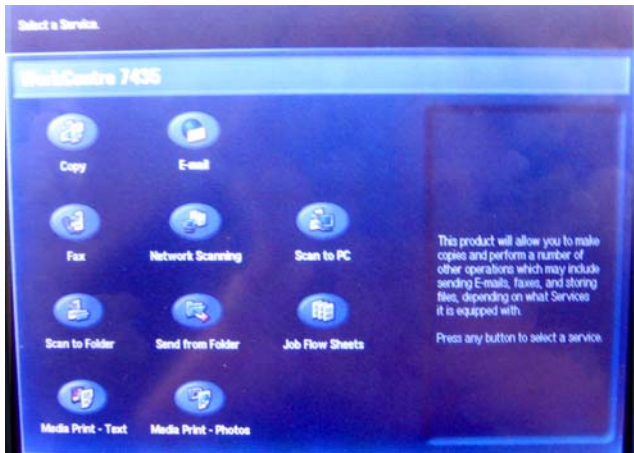
Most manufacturers try to keep their control panels and touch screens consistent across their MFPs and printers, so that users do not have to spend time learning how to use a new control panel when moving from device to device.

A control panel's ease of use—or lack of—can often have a significant affect on user productivity. The harder it is to select frequently used options such as duplexing, document finishing, etc., the more time the user has to spend programming the device and the less productive they are. In the chart to the right, BERTL assesses how many steps are required to make these commonplace settings.

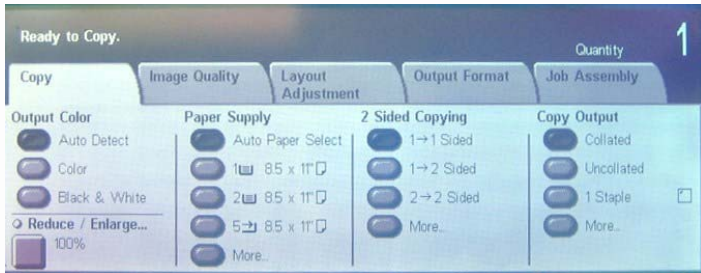
Selections Required for Frequently Used Copy Functions	
Corner Staple	1
1:2	1
2:2	1
Photo Mode	3
Copied Front and Rear Covers	3



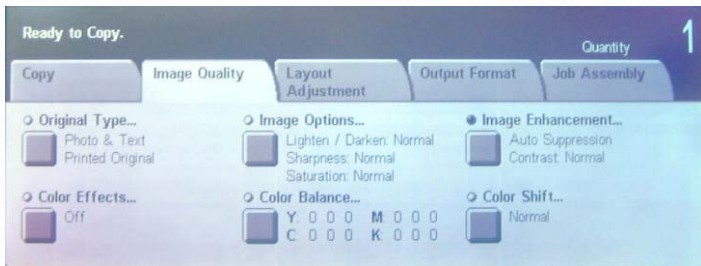
The right side of the control panel contains various hard keys, including keys for "Start," "Stop," etc. as well as a numerical keypad for entering number of copies and fax numbers, and hard keys for switching between different functions such as services, displaying job status and machine status.



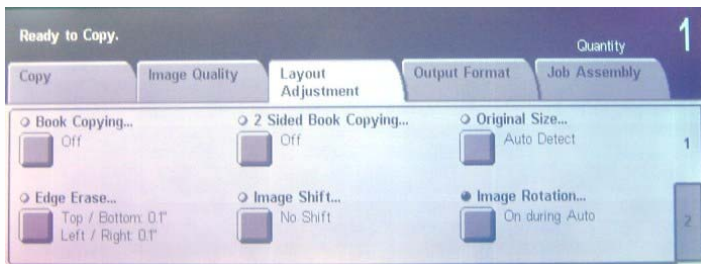
The "Services" button displays all of the device's available functions.



The touch screen's main menu provides users with the most common copying choices. The bold buttons on the touch screen display currently selected settings.



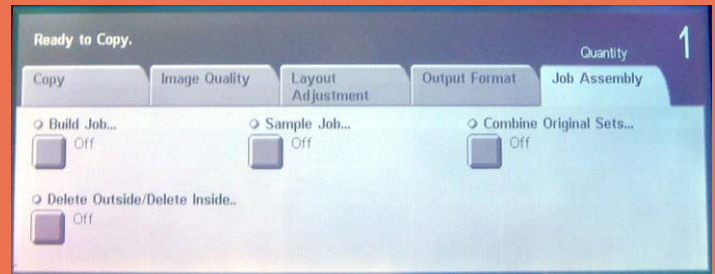
The touch screen displaying image-quality options for the copy function.



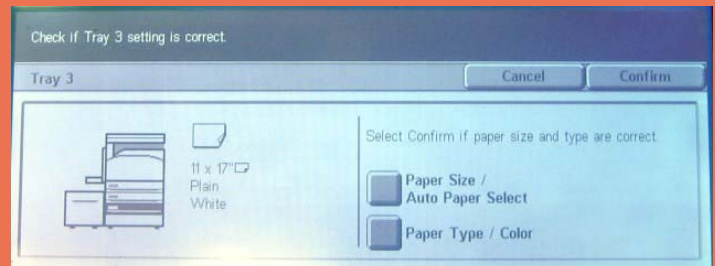
The Layout Adjustment tab provides options for Book Copying, 2-Sided Book Copying, Original Size, Edge Erase, Image Shift and Image Rotation.



Users can choose several different Output Formats for their copy jobs from this touch screen. Options include Booklet Creation, Covers, Transparency Options, Page Layout, Posters and Annotations.



The touch screen's Job Assembly options provide users with the ability to Build a Job, print a Sample Job, Combine Original Sets, and Delete Outside / Delete Inside.



Whenever paper is changed in the paper sources, the touch screen will prompt users to confirm the paper size and type.

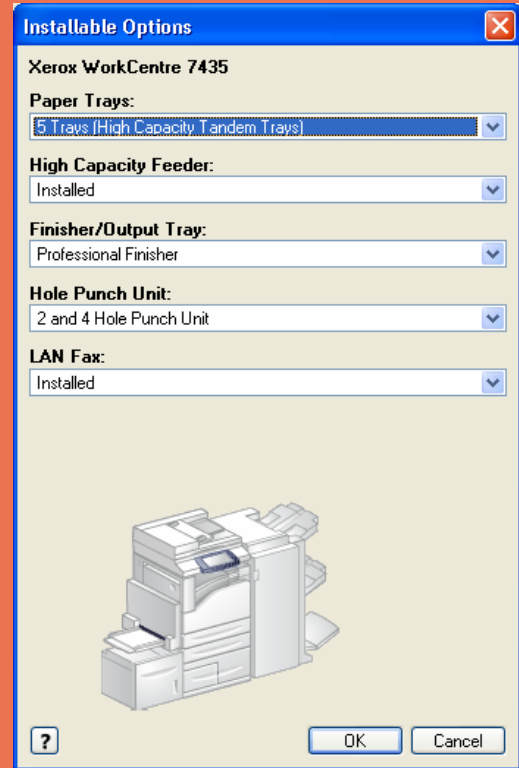
PCL AND POSTSCRIPT DRIVERS

As with control panels and touch screens, print-driver design can vary enormously from manufacturer-to-manufacturer. And, as with control panels and touch screens, how easy it is—or isn't—to make selections in the print driver and navigate through it can significantly affect user productivity.

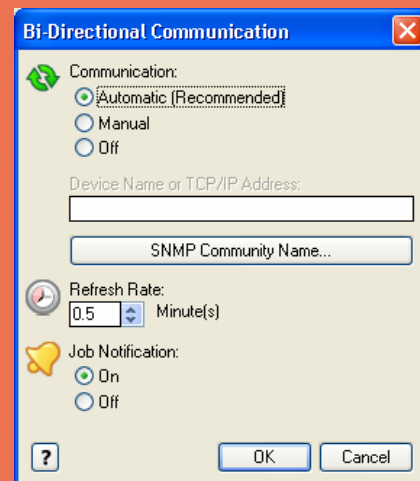
Most vendors provide an emulation of PCL (printer control language) developed by the Hewlett-Packard Company. Some may also provide an emulation of PostScript, developed by Adobe Systems Incorporated, or they may license PostScript directly from Adobe. While the Adobe PostScript driver is not the most user-friendly of print drivers, the advantage is that many users are already familiar with it. Alternately, some manufacturers may use an emulation of PostScript and design their own print-driver user interface, or may license PostScript from Adobe and also design their own print-driver interface.

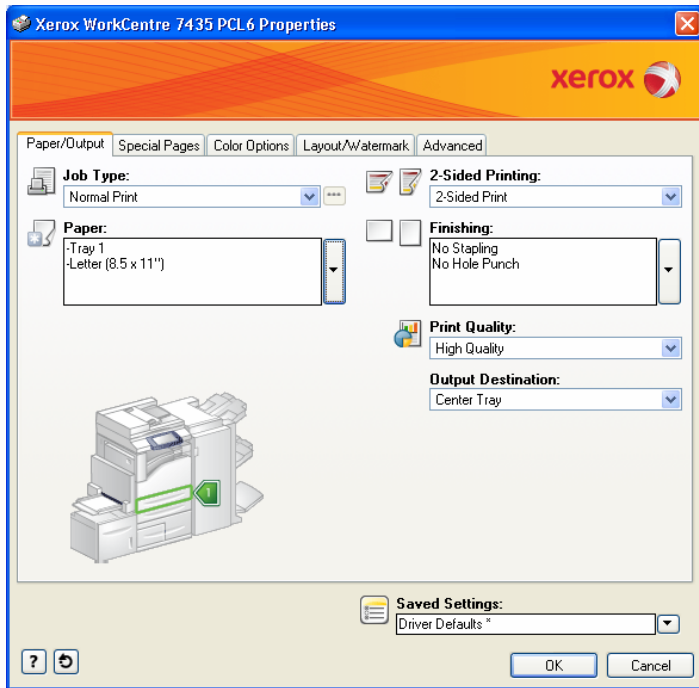
Print-Driver Checklist	
Do print drivers have identical user interfaces?	Yes
Are print drivers interfaces identical to other vendor models?	Yes
Bidirectional communication within print drivers?	Yes
Auto device configuration from within print driver?	Yes
Does print-driver installation require rebooting of the workstation?	No
Are print-driver deployment processes included?	Yes
Are print-driver deployment guidelines and procedures included?	Yes

PRINT DRIVER DIALOGUE SCREENS



Above and Below: In order to specify which options have been installed, as well as to specify system defaults, administrators first access the "Printers and Faxes" folder via the Microsoft Windows' Start menu, and then select either the WorkCentre 7435's PCL or PostScript drivers. Administrators can "manually" specify which options are installed, or they may simply enable "Bi-Directional Communication" between the device, and the driver automatically indicates that the options shown above are available for use.

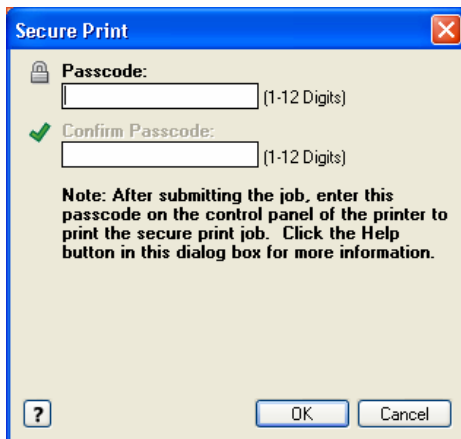




The print driver dialogue screen for both the PCL and PostScript drivers are virtually the same with some minor differences. The first tab on both the PCL and PostScript drivers is the Page/Output. This tab provides basic options such as job type, paper options, 2-sided printing, finishing, print quality, and output destination. The image of the device on the left with the green number one indicates the currently selected paper output option.

In the "Job Type" drop-down menu on the top left are options for Normal Print, Secure Print, Sample Set, Delay Print, Store File in Folder and Fax.

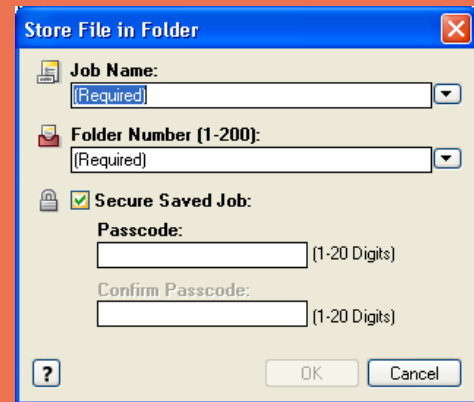
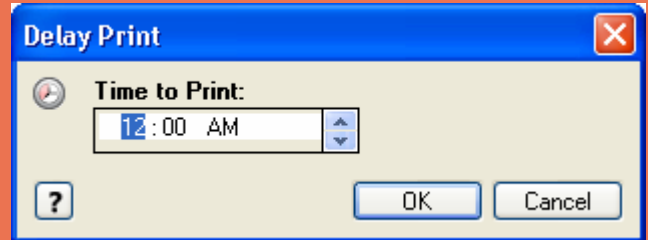
Normal Print: Prints the job immediately without requiring a pass code.



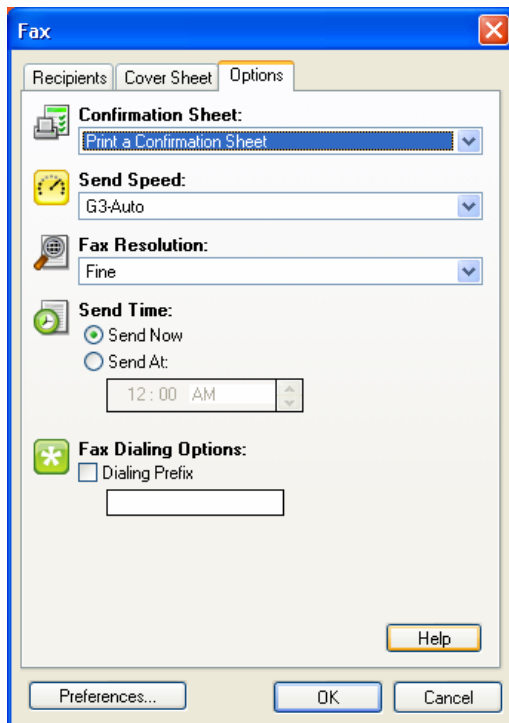
Secure Print: Prints the job only after the user enters their pass code at the printer's control panel.

Sample Set: Prints one copy of the job as a sample and holds the remaining copies of the job at the printer until you release them from the printer's control panel.

Delay Print: Prints the job at the time specified by the user. When this job type is selected, the Delay Print dialog box appears so users can specify a time to print.

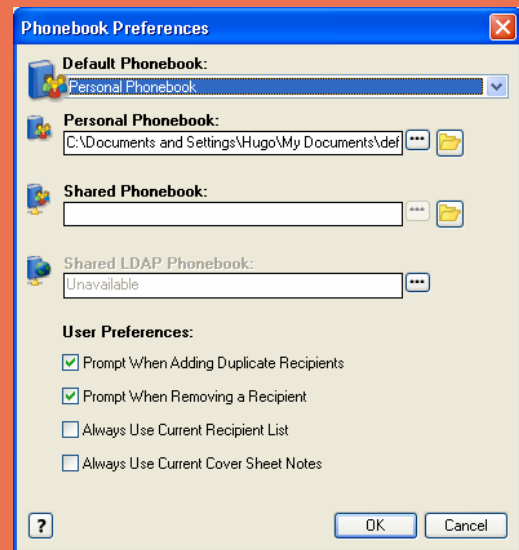


Store File in Folder: Stores the job on the printer's hard drive so that it can then be printed on demand from the printer's control panel or printed from CentreWare Internet Services. When this job type is selected, the Store File in Folder dialog box appears so users can assign a job name, folder name and, if desired, enable secure saved job by providing a passcode with up to 20 digits.

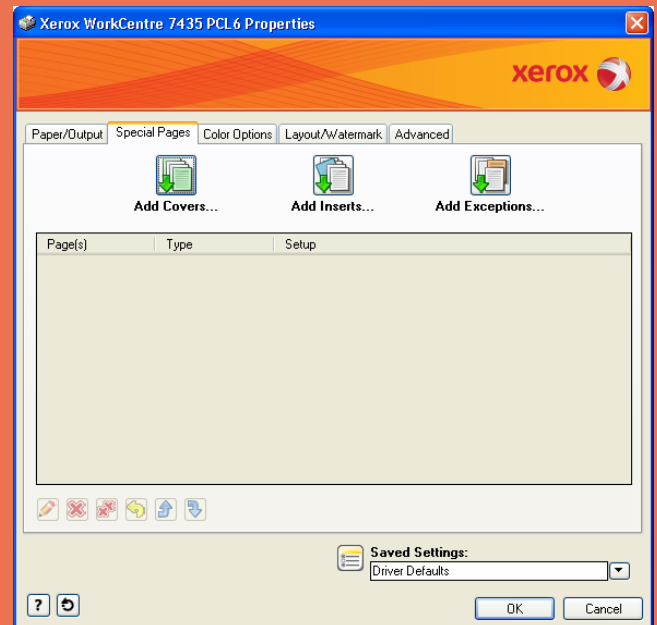


The Fax Options tab provides users with the ability to set several options which include the following:

- **Confirmation Sheet:** Select whether to print a confirmation sheet to confirm that the fax was successfully sent.
- **Send Speed:** Select the appropriate fax transmission rate in kilobits per second (kbps) or bits per second (bps). This feature is especially useful for users who live in an area where the phone lines are inadequate for high speed fax/data transmission. Users can select a lower transmission rate to reduce the chance of transmission errors.
- **Fax Resolution:** Users can choose the resolution for the fax. The resolution setting affects the amount of detail that is reproduced during the fax transmission. Higher resolution fax transmissions consume more memory and take longer to send.
- **Send Time:** Users can select Send Now, to transmit the fax immediately, or Send At, to delay the fax and send it at a specified time.
- **Fax Dialing Options:** Is useful for users that need to use a dialing prefix to access an outside phone line. For example, many corporate phone systems require you to dial "9" to bypass the internal phone extensions and access an external dial tone.

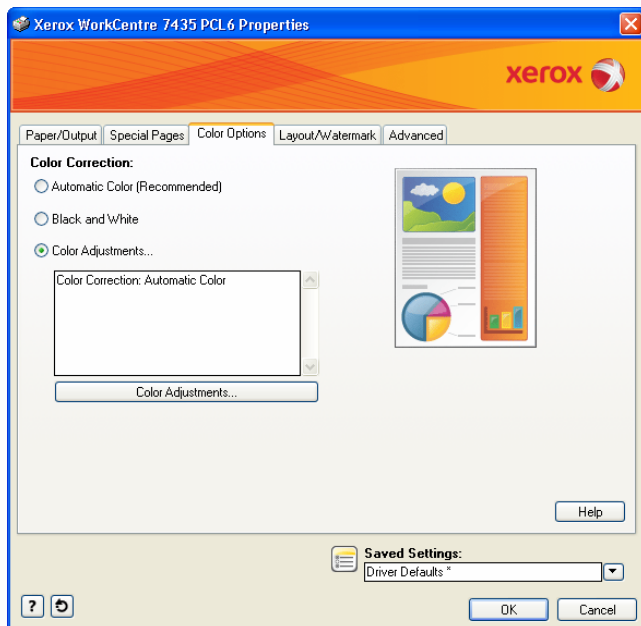


Users can set their phonebook preferences from this dialogue box. Users are given the option of using either a local or shared phonebook.

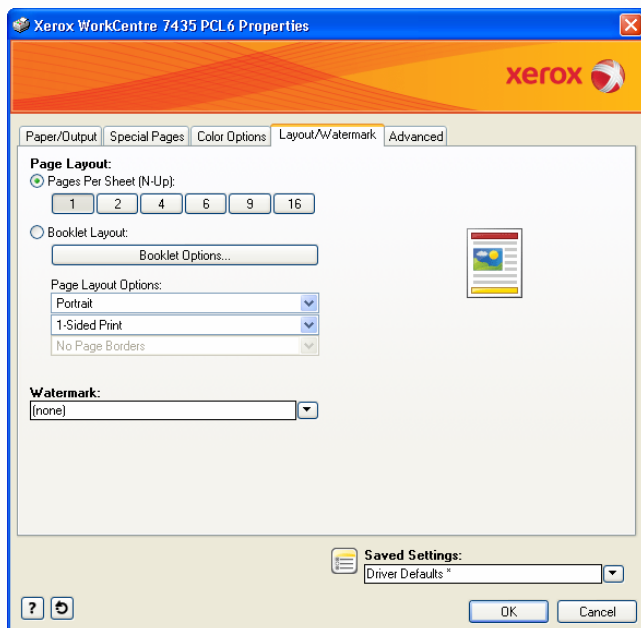


The Special Pages tab enables users to add, modify, or delete cover pages, inserts, or exception pages.

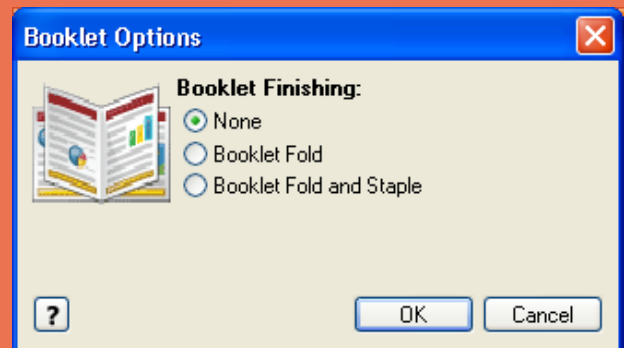
The center table in the dialogue screen provides a summary of the special pages set for the print job. Up to 250 inserts and up to 250 exception pages can be included in the table.



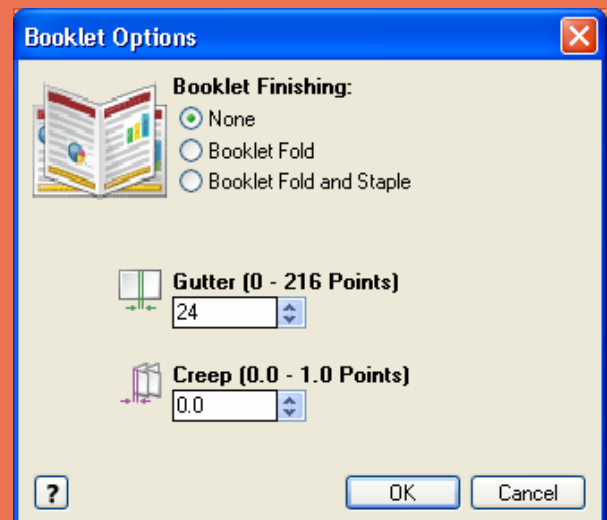
The Color Options tab enables user with the ability to adjust the colors in their print job. This feature provides users with options for matching the printer's colors as closely as possible to colors on other devices, such as those of a computer screen or a printing press, or converting the colors to grayscale.



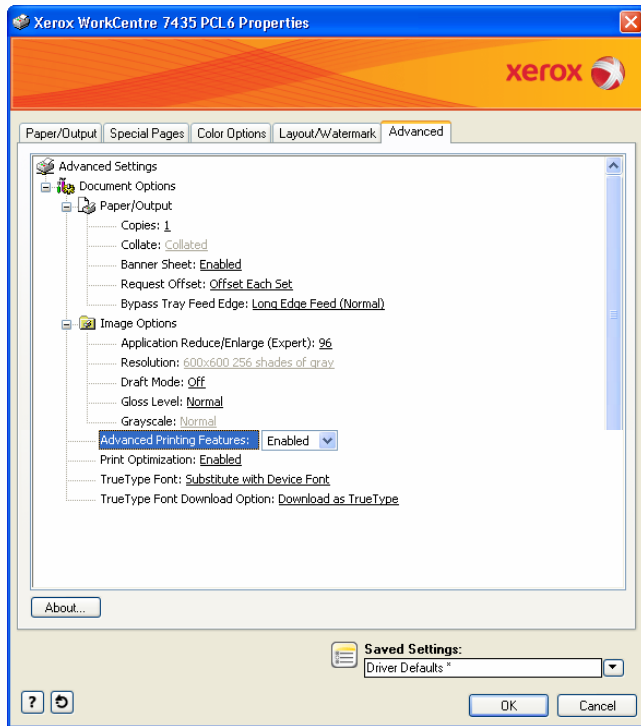
The Layout/Watermark tab contains print options that add effects to the print jobs such as Page Layout (N-up), Booklet Layout, and Watermarks.



Above and below: The Booklet Layout option automatically prints two pages on each side of each sheet of paper. The print driver changes the order of the pages so that they can be folded and stapled to create a booklet. The image above shows the available booklet options for the PCL driver.



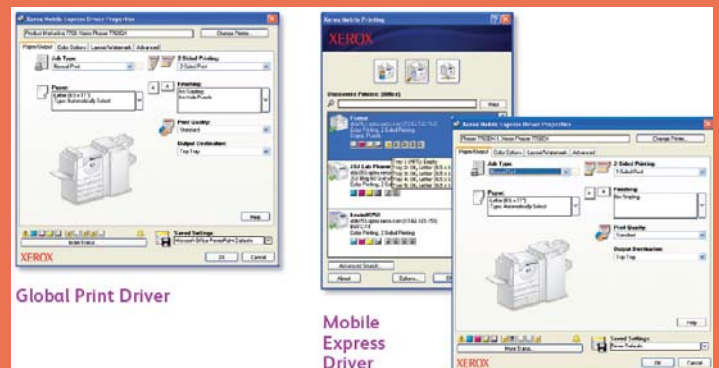
With the PostScript driver, users are given option of adjusting both the Gutter and Creep.



The Advanced options tab provides users with the ability to select advanced printing options that are rarely changed. The image above shows the Advance tab for the PCL6 driver, while the image below shows the options for the Advance tab on the PostScript driver.



The about button provides the print-driver version information.

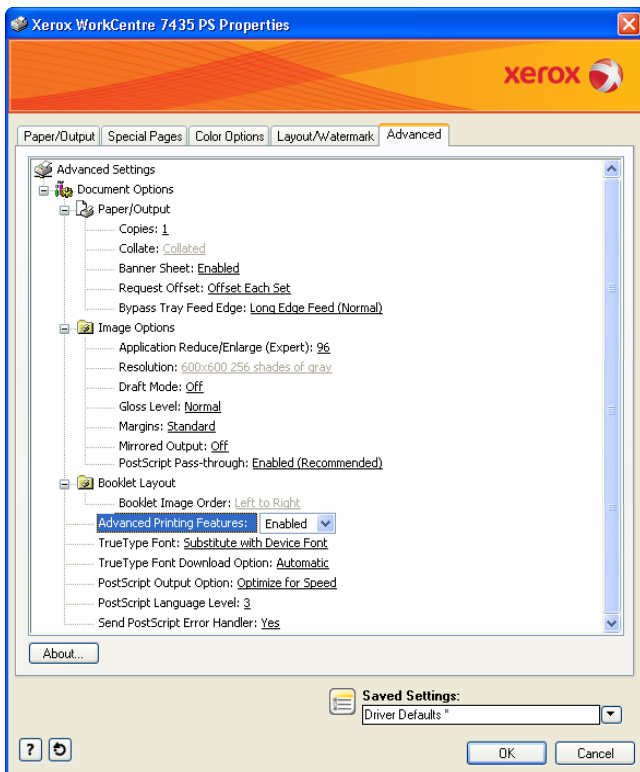


The WorkCentre 7435 device supports two innovative new print drivers that can greatly simplify installing, managing and supporting printers and multifunction devices on the network, and increase end-user productivity:

Xerox Global Print Driver (X-GPD) is a truly universal print driver that lets IT administrators install, upgrade and manage Xerox and non-Xerox devices from a single driver. It provides a consistent, easy-to-use interface for end-users, aimed at reducing the number of support calls, and simplifying print services management.

The Xerox Mobile Express Driver (X-MED) makes it easy for mobile users to find, use and manage Xerox and non-Xerox devices in every new location. Users can plug into a new network, and the X-MED driver will automatically discover available printers and provide status and capability information. Users can save a list of "favorite" printers for each location, store application print settings for use on any printer in any network, and greatly reduce mobile support calls to IT administrators.

In addition, these drivers provide users with a consistent single interface for all printers, with real-time, dynamic reports of printer status. As a result, users can easily identify the best printer for their needs, quickly choose the correct options and see updated consumables status without the assistance of IT.



ROUTINE MAINTENANCE

Workgroup devices sold through retail and traditional IT distribution outlets usually are maintained by office workers who change the all-in-one cartridge units that encase the entire imaging system, including the toner cartridge (or the ink cartridges employed by ink-jet imaging systems). Units sold through resellers and dealers are usually maintained by office workers and/or trained service engineers. While separate long-life parts are more complex to install (i.e., separate toner cartridges, imaging drums, transfer belts), they tend to cost less than low-yield, all-in-one alternatives.

Toner or Ink Replacement

Changing the toner, imaging cartridge or ink cartridge is a necessary task that is traditionally avoided by some for fear of toner dust or ink leaking on clothing or hands, or the fear that it might be too complicated. However, most units today offer clean replacement of toner or ink supplies, and there is very little risk of toner or ink leakage. Usually the replacement process is usually easy.

Clearing Media Misfeeds

The main issue that office users attempt to avoid is the removal of an occasional media misfeed. As a general rule, the faster a device engine, and the more media handling and finishing options it has, the more complex is the process of removing media misfeeds.

Common media-misfeed sources involve the duplex unit and poor loading of media supplies. The position of the duplex unit may be a major factor in the removal of many media misfeeds. How easy or difficult it is to load media supplies can also be a factor in the overall number of misfeeds that may occur.

Loading Media

It goes without saying that loading media should be as easy as possible, but sometimes that is not the case. Among the factors that affect ease-of-use are:

- The user should be able to load an entire ream (500 sheets) in a single step.
- Mechanisms such as corner separators and ramps in the media drawer can impede loading media.

The most critical factor involved in ease-of-loading media is automatic media-size detection. Ultimately, the device should be able to recognize the new media size and reflect it on its control panel/touch screen and across the network in print drivers and printer-management software. Without automatic media-size detection, users must remember to program-in the new media size—something they often neglect to do, or do incorrectly. This can result in jobs printed on the wrong media size, backed-up job logs, etc.

LOADING MEDIA

Paper Loading Checklist

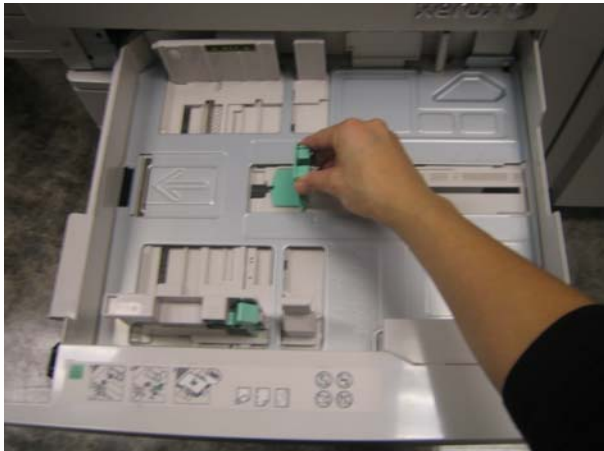
Maximum media weight from all media sources?	No
Drop-in loading of a full ream of paper?	Yes
Corner separators in paper trays?	No
Spring-loaded ramps in paper trays?	No
Geared media size side guides?	Yes
Captured rear media guide?	Yes
Automatic paper size detection?	Yes



Both the standard tray 1 and optional trays (2, 3, and 4) can each hold 520 sheets of 16 lb Bond to 140 lb Index (55 to 256 gsm) media. The standard tray 1 supports media sizes ranging from 5.5" x 7.2" in. (139.7 x 182 mm) to 11" x 17" in. (A3/297 x 420 mm), while the optional trays support 5.5" x 7.2" in. (139.7 x 182 mm) to 12" x 18" in. (SRA3/320 x 450 mm).



In order to adjust the paper drawers, the user squeezes this green lever and then slides the guide into place.



This paper tray is equipped with an end stop that the user must slide in order to adjust the paper drawer to accommodate the desired paper size. Overall, BERTL found adding paper and adjusting paper drawers to be relatively easy.



BERTL Analyst found replacing the WorkCentre 7435's toner cartridge to be easy. The user must first lower the front door as shown above.

ROUTINE MAINTENANCE—REPLACING TONER

Maintenance Checklist	
Load ink/toner while running?	No
Requires rear access for maintenance items?	No
Requires side access for access to maintenance items?	Yes
All-in-one imaging units?	No
User-disposable waste item(s)?	No



The user must then select the toner cartridge to be replaced and then simply slides out the old cartridge and then replaces it with a new one.



To replace the image drums users must first unlock the two levers by moving them counter-clockwise.



Above and Below: Once the image drum cover is opened users must press down on the tan levers located on the front of the image drum and then simply slides it out and replaces it with a new image drum.



MISFEED ACCESS

If a misfeed occurs on the WorkCentre 7435's, it is indicated on the touch screen, which displays the misfeed-assess area.



In order to access any misfeeds that may occur in the automatic document feeder, the user lifts up this cover.



The Integrated Office Finisher's adds standard finishing chores without adding to the device footprint. The misfeed-access area on the finisher can be access by lifting the handle on the right side as shown by the pointer.



To access the fuser and side misfeed-access area, the user first opens the side cover door and removes any misfeeds that are jammed in the paper path.



Paper jams can also occur at the start of the paper path located at the paper drawers. To remove any paper jams in this section, users must open the cover located under the bypass tray and simply remove the paper.

CLIENT UTILITIES

In order to take the best and most efficient advantage of a device and its capabilities, as well as ensure maximum uptime, clients need an efficient way to access and monitor the device. This is true whether the device is an MFP, printer, or scanner.

Most general users want to know first if a device is capable of handling a particular job—for instance, if it has duplexing, color capability; supports specific media sizes, or provides certain document finishing, such as stapling or saddle-stitch booklet making.

Second, users want to know a device's current status—if it is ready to print or is offline, for instance. Third, they may

also wish to know whether it is equipped with sufficient supplies, such as ink and media, to be able to produce their job. Fourth, when the device is shared, they may wish to know how many other jobs may be lined up ahead of them.

Manufacturers typically provide the user with this information either via a client software utility that is installed on the client's workstation, or via a printer Web page that is accessed via the Web and a Web browser. Some manufacturers may also provide software that automatically indicates (via a pop-up window) when the user's job is completed or if there is a problem with the device, such as depleted media.

CentreWare® Internet Services – Integrated Device Web Page	
Xerox CentreWare Web	A Web-based server application for network administrators that permits Web browser-based device management from any workstation, whether running Windows or UNIX or any other operating system <ul style="list-style-type: none"> • Works with any SNMP-managed printer from any manufacturer • Provides help with device discovery and installations, health checks and troubleshooting, and device upgrades, as well as basic accounting and asset management
Device Status	Web server embedded on SMart Network Controller™ <ul style="list-style-type: none"> • Tray status/contents • Consumables status
Print Queue Viewing	Complete job print queue management – hold, release, promote and delete
Web-based Job Submission	Print-ready files (PS, PCL, TIFF, PDF, XPS) Output feature selection
Device Administration	Allows simple, remote installation setting of configuration options and management of the device
Browsers	<ul style="list-style-type: none"> • Windows XP, 2000: Netscape Navigator, Firefox • Microsoft Internet Explorer • Macintosh 9.x/OS X: Netscape Navigator 6.x, Apple Safari™, Firefox • Linux: Netscape 6.x



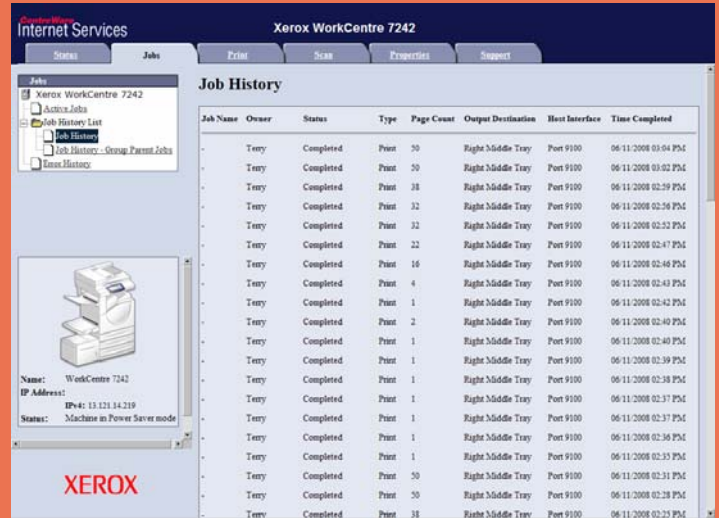
Xerox provides several solutions for monitoring the device and jobs. Among them is CentreWare Internet Services, a web-based solution that enables clients to view device status and configuration, and enables administrators to manage and configure system and network settings.



With CentreWare Internet Services, clients can view current device status, current toner levels, and installed paper sizes, types, and status levels.



From CentreWare Internet Services, users can check the status of the following consumables: toner cartridges, waste container, drum cartridge, fuser assembly, and staple cartridge among others.



Within the Job option, users can check the status of Active Jobs, Job History and Error History.



Users have the ability to log on to the CentreWare Internet Services and submit a print job directly from the web interface. Users are limited to the types of files they can submit using this interface. Options include print ready files such as *.xps, *.ps, *.pcl, *.jpeg, and *.tiff files.



Users can log on to the CentreWare Internet Services Scan to Mailbox interface and download the stored scan jobs right to their desktop. Users must select the template that contains the destination and other required settings from the template list found on the control panel. Once the job is scanned, users will be able to access the electronic version of the document at their workstations.



Administrators can modify the device's printer default settings and enable or disable the device to automatically print banner pages, set the Secure Print Pass Code Length, and set other basic print defaults.



Administrators can configure and manage both the network and device settings directly from CentreWare Internet Services.



CentreWare Internet Services provides detailed billing information and total impression counts.

For its part, Smart eSolutions provide administrators with secure automatic meter reads and supply replenishment information. Administrators have the option of accessing this information directly from the device or via the web client interface.

DEVICE MANAGEMENT

An efficient device-management software system is critical in order to take maximum advantage of a device's feature set, be it a printer, fax, scanner or multifunctional peripheral (MFP).

Device management is typically provided via a Web server on the device controller. This Web server is accessed using any desktop Web browser. The user simply enters the device's IP address into the address line of their Web browser. Note that administrators and office users have different management and monitoring needs.

General Office Users

As noted previously, end users want to know if a device is capable of handling a particular job, current status (such as "Ready"), and current supply levels (media, toner, ink), as well as if there are any other jobs waiting to be printed.

Administrators

The aim of most network administrators is to obtain greater control over networked devices without having to leave their own desk. From their computer desktop, they would like to be able to set up the device on the network, establish security for IP filter ranges, apply cost-control measures, check supply levels, and set up automated e-mail alerts for different staff members when problems occur or maintenance needs must be met.

Due to the nature of a device's Web server, this capability is usually limited to an individual device. However, many manufacturers also include a network device-management fleet tool, which allows for the concurrent monitoring and management of multiple devices connected to the network. Many also provide plug-ins for the most popular IT device-management utilities in order to ensure that the maximum amount of information can be relayed from their device to the third-party application.

Xerox provides a host of solutions for managing and monitoring the WorkCentre 7435, as well as solutions for managing files stored in user boxes, account-tracking, direct printing, faxing, and scanning.

Device Management Options	
Management Support	<ul style="list-style-type: none"> • SNMP Version 1, SNMP Version 2c and Version 3 trap over TCP/IP and IP • MIB access (IETF-MIB II RFC 1213), Host Resources • MIB RFC 2790, Printer MIB RFC 1759 v. 2
IP Filter	Allows administrator to control print access to device via IP address.

Device Management Options	
Xerox CentreWare for Unicenter TNG	<ul style="list-style-type: none"> • Provides added identification to the general discovery performed by Unicenter TNG and the ability to see the device under a Unicenter TNG Business Process View • Provides full integration with event management and the choice to integrate with problem management and advanced Help Desk
Xerox CentreWare for Tivoli Netware	<p>Provides for the identification of Xerox N-Series printers and WorkCentre multifunction systems in the general discovery performed by Tivoli NetView</p> <ul style="list-style-type: none"> • Provides the ability to see the discovered Xerox printers/devices in a Xerox Printers Set in addition to the Printers SmartSet • Provides full integration with the NetView and Event Browser and Tivoli Enterprise Console (TEC)
Xerox CentreWare for Microsoft Management Console (MMC)	CentreWare MC Snap-in supports printer discovery and management via a Microsoft Management Console (MMC) link to an embedded Web server. It is a general-purpose management display framework for hosting administrative tools.
Xerox CentreWare for HP OpenView	<ul style="list-style-type: none"> • Provides for the identification of Xerox N-Series printers and WorkCentre multifunction devices in the general discovery performed by HP OpenView • Provides the ability to see the current status of discovered Xerox printers/devices under a Xerox PrinterMap and IP Map via color-coded icons • Provides traps and message updates to the OpenView alarm browser and the ability to launch CentreWare Internet Services for device management directly from OpenView <p>Xerox Device Manager collects and manages the data that drives fact-based decisions for your enterprise device management environment. It is a single tool to install print queues and configure, manage, monitor and report on both networked and locally connected devices – regardless of vendor – across your enterprise. Xerox Device Manager provides:</p> <ul style="list-style-type: none"> • Device monitoring and troubleshooting • Extensive reporting and discovery of new devices • Usage collection, chargeback, and billing capabilities

Device Management Options	
Xerox Device Types for SAP R/3	<p>Simplifies printing in SAP R/3 environments by providing users of SAP R/3 v4.6C, 4.x and 3.x ERP applications with enhanced WorkCentre printing functionality (PostScript and PCL):</p> <ul style="list-style-type: none"> • Simplex or duplex printing • Finishing – single or dual stapling • Tray pull location from any tray • Print security via PIN ID capability at the WorkCentre
Xerox SAP R/3 Intelligent Barcode Utility (Optional)	<p>Provides built-in process intelligence that allows the printing of barcodes on any appropriately configured PostScript printer on the SAP R/3 4.x (or higher) network. Used in conjunction with Xerox Device Types for SAP R/3 Environment and Xerox Font Center Barcode Fonts. Utility automatically calculates checksum, placement of start/stop characters, and encoding of data string Web server embedded on SMart network controller</p> <ul style="list-style-type: none"> • Tray status/contents • Consumables status
Xerox Barcode Pro PS	<p>Enables intelligent PostScript printing on Xerox multifunction printers by storing Xerox software as well as the barcode fonts on the printer hard disk. Enables the printing of barcodes from any application (client or mainframe) that supports PostScript printing. Automatically calculates the check digit, places start/stop and middle bar characters in the data string, compresses and encodes the data string, and rotates the barcode through 90 or 270 degrees.</p>

SMart eSolutions	
Meter Assistant	Automates the process of collecting and submitting meter reads for tracking and billing of Xerox device usage. Eliminates the need for time-consuming end-user involvement and ensures that meter reads are submitted to Xerox on time.
Supplies Assistant	Automatically orders supplies for Xerox output devices based on actual usage, eliminating the need to manually manage supplies inventory.
Maintenance Assistant	Offers a fast (and free) way to resolve potential issues and receive assistance and automate the troubleshooting/repair process. Diagnostic data is sent to Xerox, allowing for problems to be solved faster with increased uptime.

WHAT WE LIKED

- The control panel's hard keys are large, well-organized and clearly labeled, while the touch screen features large text for easy viewing, as well as a simple design for easy navigation. The touch screen is virtually the same as other Xerox WorkCentre devices' touch screens, which will make it especially easy for WorkCentre users to quickly acclimate to it.
- The Xerox EIP software platform found inside the WorkCentre 7435 device enables personalized solutions that users can access right from the device touch screen.
- The WorkCentre 7435's touch screen displays the most common and frequently used copier settings on the Copy screen. This enables copy users to quickly and easily make typical settings without having to navigate through sub-menus, and significantly reduces the time to make copy-job settings. BERTL was able to make frequently used copier settings in a matter of only 1 or 2 key presses (see "Selections Required for Frequently Used Copy Functions" chart on page 27).
- For network and device management, Xerox provides its CentreWare Web Software Suite. CentreWare Internet Services provides an easy-to-use Web-based interface, and can be used to view detailed system and consumables' status. It also enables administrators to manage and configure device and network settings. This Web-based solution enables administrators to monitor and manage a fleet of devices from any workstation on the network.
- Network-management and configuration of the Xerox WorkCentre 7435 via CentreWare Internet Services Network Setup Utility. Administrators can clone multiple devices with settings obtained from one device.
- CentreWare Internet Services provides automatic e-mail alerts when the system requires attention.
- Both PCL and PostScript drivers are relatively easy to use and logically organized. Both drivers have nearly the same exact user interface. This will enable users to quickly and easily switch between drivers and allow them to find the settings they need from one driver to another with ease.
- Both PCL and PostScript feature bi-directional communication, so that users can view device status from the print drivers.
- Internet fax transmits faxes digitally via the internet with support for SMTP and POP3.
- Fax send and receive two-sided fax documents. Supports printing received faxes on 11 x 17 in. paper.
- Optional Network server fax — allows faxes to be sent and received digitally over the network with support for SMTP and POP3.
- Very easy toner image drum and paper replacement.

- Misfeed-access areas are easy to locate and access.
- With the WorkCentre 7435 multifunction device, print and scan drivers can be deployed centrally, thereby eliminating the need for IT staff to perform desk-to-desk manual installation of the driver software.
- CentreWare Web wizards provide aid in the installation processes, troubleshooting and upgrading print and scan drivers for employees, freeing up IT administrators
- Driver support is delivered for Windows (2000 / Server 2003 / XP / Vista), including most operating systems with 32-and 64-bit drivers; Macintosh OS 10.3 and above; and multiple UNIX and Linux platforms.

WHAT WE WOULD LIKE TO SEE

- BERTL found that the WorkCentre 7435 was very easy to use and maintain on a daily basis.

MEDIA INPUT

Substrate (media) handling is a core requirement of every device. If a device cannot print a file on specific media desired by the user, it hardly matters how fast the print engine is, or how many pages it can produce.

A device's media-handling capability basically concerns how it can handle two key criteria: the media size and media weight it can feed, as well as the maximum number of pages that can be loaded in the device's drawers, trays, etc. The greater the media capacity, the less time users will spend reloading media.



The WorkCentre 7435 shown above is equipped with one standard 520-sheet paper drawer, 100 sheet bypass tray and the three tray option brings the total paper capacity up to 2,180-sheets.

Media Handling Checklist	
Main Tray 1	16 lb. Bond to 140 lb. Index (55 gsm to 256 gsm)
Input Tray Options - Three Tray Option	16 lb. Bond to 140 lb. Index (60 gsm to 256 gsm)
High-Capacity Tandem Tray Option	16 lb. Bond to 140 lb. Index (60 gsm to 256 gsm)
High-Capacity Feeder (HCF)	16 lb. Bond to 80 lb. Cover (60 gsm to 220 gsm)
Feeds maximum media weight from all sources?	No
Offset Stacker	Standard
Finisher	Optional
Hole Punch	Optional
Saddle-Stitch Finisher	Optional
Booklet Maker	Optional

MEDIA OUTPUT AND FINISHING

Office workgroup devices' media-output handling options range from duplex printing to saddle-stitch booklet making. Many devices offer a choice of finisher/staplers, which provide a low-cost, minimum footprint solution, or a high-capacity, fully featured solution such as multi-position stapling, saddle-stitch booklet maker and/or document hole puncher.

BERTL evaluates these functions looking at how the same job outputs at different speeds when different finishing options are specified. The impact of the finishing selection is determined by timing jobs that are sent to a device with various finishing settings.

Stapling

Lower-cost finisher/stapler units often have a 15- to 30-sheet maximum stapling capability and are often limited to corner stapling. Floor-standing, higher-cost finishers typically provide 50-sheet capability and provide both corner and double stapling.

Saddle-stitch booklet making allows users to create folded, center-stapled booklets. Some saddle-stitch finishers only handle 10 sheets (for producing 40-page booklets), while others handle up to 15 sheets (for producing 60-page booklets).

ORIGINAL HANDLING

While scanning speeds and duty volumes may be based on perfect, standard letter/A4 size office-grade laser printer media, a much wider range of media substrates is commonly used and handled in the office world every day.

Scanning Speed

Obviously, the faster a scanner can scan originals, the faster the user can retrieve those originals and return to their desk, the sooner the device is available for someone else to use. Slower scanning means diminished productivity.

Document Feed Speed			
# of originals	MONOCHROME MODE	Time In Seconds	OPM*
10	Simplex Originals	32.66	18.4
5	Duplex Originals	59.04	5.1
10	Mixed-Size Originals	35.94	16.7
	COLOR MODE		
10	Simplex Originals	32.53	18.4
5	Duplex Originals	88.16	6.8

*Originals per minute.

WHAT WE LIKED.

- Paper capacity can be expanded to a substantial 3,140 sheets with the High Capacity Tandem tray option.
- The Integrated Office Finisher offers 500-sheet stacking and 50-sheet single-position stapling.
- The Office Finisher LX offers 2,000-sheet stacking capability along with 50-sheet multiposition stapling, optional hole-punching, and optional booklet maker (score, saddle stitch).
- The Professional Finisher offers 1,500-sheet stacking plus a 500-sheet top tray. Additional options include 50-sheet multiposition stapling, hole punching, V-folding, Saddle-stitch booklet making, and a Convenience Stapler which supports 50-sheet stapling (based on 20 lb. bond).
- Both the standard tray 1 and optional trays (2, 3, and 4) can each hold 520 sheets of 16 lb Bond to 140 lb Index (55 to 256 gsm) media.
- The standard tray 1 supports media sizes ranging from 5.5" x 7.2" in. (139.7 x 182 mm) to 11" x 17" in. (A3/297 x 420 mm), while the optional trays support 5.5" x 7.2" in. (139.7 x 182 mm) to 12" x 18" in. (SRA3/320 x 450 mm).
- Fast tested document-feeder speed of up to 28.7 opm in monochrome mode and up to 29.2 opm in color mode.

WHAT WE WOULD LIKE TO SEE

- BERTL was very satisfied with the WorkCentre 7435's paper-handling capabilities.

Xerox continues to push the boundaries with the introduction of its latest Color MFP designed to be easy on the environment while providing users with a reliable and dependable imaging system. Designed for small to mid-sized workgroups with black-and-white and color printing needs, the Xerox WorkCentre 7435 performed very well throughout BERTL's tests. Like other Xerox products evaluated by BERTL, Xerox's WorkCentre 7435 displayed solid overall performance.

- Tested black-and-white simplex and duplex network-printer speeds in both PCL and PostScript modes were up to approximately 35 ppm, matching Xerox's rated print speed of up to 35 ppm.
- Tested color network print speed was up to 34.4 ppm in PCL and 32 ppm in PostScript mode, closely matching Xerox's rated print speed of up to 35 ppm.
- Tested network-printer First Page Out Time (FPOT) was as fast as 13.40 seconds in PCL mode and up to 16.49 seconds in PostScript mode.
- Tested black-and-white FPOT as fast as 8.87 seconds in simplex copier mode, and as fast as 17.19 seconds in duplex copier mode.
- Tested color FPOT as fast as 9.04 seconds in simplex copier mode, and as fast as 16.50 seconds in duplex copier mode.
- Tested black-and-white copier productivity was up to 24.8 ppm in simplex mode and up to 14.2 ppm in duplex mode, closely matching Xerox's rated copy speed of up to 28 ppm.
- Tested color productivity in simplex mode was as fast as 24.9 ppm, and as fast as 16.50 ppm in duplex color mode.
- In testing, the WorkCentre 7435's output displayed good to very-good image quality. Density for all four colors in both print and copy modes was very good, as was resolution, halftone reproduction, and line and dot control. Image quality displayed by photos was excellent.
- The WorkCentre 7435 was exceptionally easy to use and maintain, from the large and easy-to-navigate touch screen to using the print drivers and device-management software.
- Ease of maintenance is very good, with front-loading toner cartridges that even novice users will find easy to replace, and uncomplicated misfeed access and paper-replacement.
- Xerox's CentreWare Internet Services, which provides detailed device and consumables' status, and provides network configuration, access management and accounting controls for administrators, is easy to use and very capable.
- Xerox Extensible Interface Platform (EIP) enables enterprises and developers to develop custom applications, accessible from the touch screen, that can automate and streamline frequent workflows, such as scan-and-distribute.
- Managers will appreciate Xerox's support services, the WorkCentre 7435's ease of use and maintenance, support and training; job tracking/accounting capabilities; and the ease of device monitoring.
- The Workcentre 7435 offers a smaller overall footprint with its integrated finisher and provides exceptional media flexibility with its support for paper stock up to 140 lb. index stock and paper size up to 12"x18" inches with the Three Tray option.

And of course, at its list price of \$13,799 (which includes standard printer controller), the WorkCentre 7435 is economically priced for a mid-size workgroup office color MFP.

Considering the Xerox WorkCentre7435's great overall performance in testing, excellent ease of use, and exceptional office-color image quality, BERTL awards the WorkCentre 7435 its Five-Star *Exceptional* rating and highly recommends the device for small- to mid-size offices that require a fully functional and innovative color MFP.

OFFICE

About BERTL

The success of an organization depends on its ability to manage its information and assets. An effective workflow process requires the complex integration of information, devices, software and people.

IT managers, office managers, and other knowledge-management professionals need to know what digital imaging devices would best serve their specialized workflow processes.

BERTL's services are designed around this real-world framework, delivering business consumers the independent analysis and insight needed to make critical decisions about digital imaging's role in their organization.

Independent Analysis and Insight

BERTL's reports, comparative data, and strategic guides look at digital imaging through the eyes of the business user. The research examines not only the technical features, but also vertical market applications, and business benefits. The impact on worker productivity is a primary concern.

BERTL is 100 percent independent. It receives no funding from manufacturers and all product evaluations and reports are published at BERTL's own expense for its subscribers. Business users worldwide trust BERTL for objective, unbiased analysis of digital imaging systems.

BERTL Services

Reports and Star Ratings

BERTL analysts provide detailed reports on the technical and practical benefits of thousands of color and monochrome workgroup, office, graphic arts, and production devices.

Product Specifications

DataCheck Gen II provides the most current competitive data on printers, copiers, MFPs, fax devices, wide format printers, scanners, and more.

News, Interviews, and Analysis

The ITchat online magazine provides insight into the dynamics and trends of the digital imaging marketplace through interviews, feature articles, and software reviews.

BERTL Awards

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