A Buyers Laboratory Document Imaging Device Assessment

Xerox WorkCentre 7132

Business Color Device
8 PPM Color / 32 PPM Black
Copy • Print • Fax • Scan

Overall Rating	★★★★½
Value	★★★★
Ease of Use	★★★★★
Black Copy Productivity	★★★★
Color Copy Productivity	★★★
Black Print Productivity	★★★★
Color Print Productivity	★★★★
Black Image Quality	★★★★★
Color Image Quality	★★★★★
Multitasking	Lab Test Report Only
Utilities	Lab Test Report Only
Reliability	Lab Test Report Only
Feedback to Workstations	Lab Test Report Only
Toner Yield/Cost per Page	Lab Test Report Only

* *Based upon a five-star rating system, with five being the best.*

Suggested retail price: $5,999 base unit. (Complete specifications information for this unit, including pricing for accessories and options, is available through bliQ, at www.buyerslab.com/bliq.)

Testing method: The unit's copy/print capabilities were tested using a Windows XP workstation with a crossover cable, the Xerox controller and the Adobe PostScript 3 print driver (version 4.2.22). The crossover cable eliminates network traffic, allowing for optimal productivity of the unit.

Comparative Analysis

For a copy of BLI's upcoming Xerox WorkCentre 7132 Lab Test Report, contact BLI at (201) 488-0404, info@buyerslab.com, or www.buyerslab.com.

The Xerox WorkCentre 7132 is targeted at small to mid-size workgroups. Demonstrating excellent image quality and very good overall ease of use, the unit proved to be a very strong performer, earning an overall rating of Four and a Half Stars.

The WorkCentre 7132 is built off of the same family as the monochrome WorkCentre Pro 128, which performed strongly in BLI's testing, earning a Five-Star Field Report rating as well as a Highly Recommended in lab testing. The WorkCentre 7132, which offers a manufacturer's rated speed of 32 ppm

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for black output and 8 ppm for color output, is therefore positioned as a very effective monochrome device that offers users the ability to add occasional color. The unit's single-drum engine, which lays down color in four passes through the transport area, makes it well-suited for environments that print in black and white 70 to 80 percent of the time and color 20 to 30 percent of the time. The unit features standard copy and print functionality, as well as optional scan and fax capabilities, along with 768 MB of standard memory and a 40-GB hard drive.

The unit demonstrated exceptional overall ease of use from its control panel. For example, the control panel touch-screen display is uncluttered and easy to read, and most of the selections required to program a typical copy job are on the first tab. In addition, the All Services Screen of the control panel

Advantages

- Suggested retail price (SRP) is among the lowest for similarly configured models (Adobe PostScript 3 printing, simple finishing, RADF and network scanning).
- Excellent overall ease of use from the control panel, featuring an intuitive layout and a customizable All Services screen.
- Very good overall ease of use from the print drivers. For instance, the print drivers are bidirectional, offering highly detailed information on device and job status, currently loaded paper sizes and types, as well as installed options all within the drivers.
- The unit offers support for true Adobe PostScript 3 printing.
- Xerox's SMart kits help predict, prevent and shorten downtime.
- Applications such as Device Auditron and Xerox Standard Accounting help track and control color usage.

Shortcomings

- Below-average overall color copy productivity. For example, the unit's first-copy times in auto-color mode are among the slowest for the group, and its copy productivity in two of the three modes tested is also among the slowest.
- The print drivers do not offer a point-and-click interface for selecting paper source and output destination. Further, the Adobe PostScript 3 print driver and PCL 6 print driver do not have the same look and feel, making it more difficult for users to navigate the screens when switching between them for different types of jobs.
- Below-average standard paper capacity (520 sheets), maximum paper capacity (2,720 sheets) and document feeder capacity (50 sheets). The unit's rated color toner yield (8,000 impressions) is also below average.
- Saddle-stitch finishing, which is offered on most competitive models, is not available.

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touch-screen display can be customized to display the features that are most used in order of priority. Overall ease of use from the unit's print drivers was very good. The print drivers are bidirectional, offering highly detailed information in relation to device and job status, currently loaded paper sizes and types, as well as installed options all within the drivers. Genuine Adobe PostScript 3 printing is also available. Further, to avoid bottlenecks, the controller is designed for concurrent operation. Thus if a device is in the midst of a long print run, users can scan, send a fax job and also program and queue the next copy jobs, according to Xerox.

The unit also displayed outstanding overall image quality for both black-and-white and color output. According to Xerox, the WorkCentre 7132 features the second generation of its chemically built toner—Emulsion Aggregate High Grade (EA-HG)—and its uniform small particle size and lower melting point allow for better energy efficiency and higher image quality, according to Xerox.

Other highlighted features of the unit include programmable Job Flow Sheets, which enable front panel-based routing of scanned documents to multiple destinations, including fax numbers, e-mail addresses, network server locations and remote printers. SMart kit technology is built into the system to predict and prevent downtime. The device monitors itself and communicates to users and administrators via the control panel, print drivers, e-mail and CentreWare administrative utilities, alerting users when the SMart kit components (including drum cartridge, waste toner container, fuser, staple cartridge, transfer belt and transfer roll) are running low, thus allowing users to plan ahead and order a new part. Xerox's Total Satisfaction Guarantee, under which Xerox will replace a covered device with an identical model or with one that is comparably equipped, is also available for the unit. For more information on Xerox's Total Satisfaction Guarantee, please see the article, "Vendors Aim to Please with Extended Warranties," from the September 2004 issue of BLI's *The Business Consumer's Advisor*.

To address the strong desire in color environments to monitor and limit color, the WorkCentre 7132 offers users a number of applications to help track and control color usage. Device Auditron, available via CentreWare Web, can restrict and track print, copy, scan and fax usage by users and groups. Xerox Standard accounting, which tracks copy, scan, print and fax usage by user, is available via a firmware update, and will be available with all machines beginning in September, according to Xerox. Xerox Standard Accounting can also be used for authorization to restrict access. Further, third-party accounting applications to set permissions and track the use of the unit are available using the Network Accounting Kit.

The optional office finisher features a 1,000-sheet stacker and 50-sheet multi-position stapler (top left, top right and dual stapling along the left or top edges of the document). Other finishing accessories include the stan-

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dard center offset catch tray and the side output tray. The center offset catch tray offsets printed jobs for easy sorting of up to 500 sheets. The side output tray, also standard, helps users keep faxes separate from prints, for example.

▲ Value Analysis ★★★★

The WorkCentre 7132, configured as a copier/printer with Adobe PostScript 3 printing, simple finishing, an RADF and network scanning, has a suggested retail price (SRP) that is among the lowest for similarly equipped models available. Further, although the unit's rated speed for color output is among the slowest for the group, its rated speed for black output is competitive. The unit's Xerographic drum life (80,000 impressions each) and black toner yield (21,000 impressions) are competitive with the group. BLI rates value by evaluating a unit's SRP in relation to its overall performance, paper handling, and user and service intervention (see Advantages/Shortcomings).

▲ Summary

Because of its color capabilities, as well as its excellent image quality and very good overall ease of use, BLI gives the WorkCentre 7132 an overall Field Tested Rating** of **Four and a Half Stars**.

*** Note: The data presented in this Field Test Report was obtained from testing performed by BLI outside of our 10,000 sq. ft. test lab. BLI's Lab Test Reports contain the results of BLI's extensive in-house testing for reliability, multitasking, toner yield/cost per page and performance of additional functions and on additional platforms. Please contact BLI (phone 201-488-0404, or e-mail info@buyerslab.com) for information regarding when the Lab Test Report for this product will be available.*

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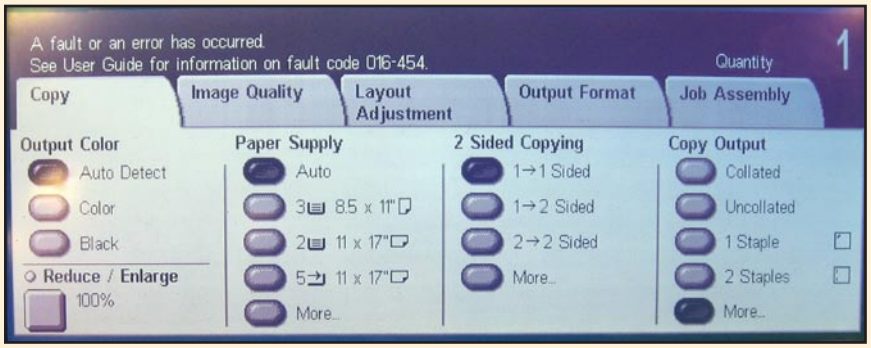
▲ Ease of Use .....★★★★★

Control panel .....★★★★★
User maintenance.....★★★★★
Print drivers..... ★★★★

Control Panel

A contrast dial on the left top of the control panel allows users to easily adjust the black-and-white display to various lighting conditions. However, the control panel cannot be tilted for further adjustment. In addition, a Help key is not available.

The All Services screen (accessed by selecting the All Services hard key) enables users to easily switch between the various functions of the device, such as copy, network scanning and fax. The All Services Screen can also be customized to display the features that are most used in order of priority. When users select a function, such as copy, the display is uncluttered and easy to read. Of the features required for a typical copy job, paper selection, duplex and finishing options such as collate and staple are available on the first screen, the Copy tab. In addition, users can select the output color mode from this tab. Users select the More key under the various features for additional basic programming such as 2-to-1-sided copying and collating with separators. In order to adjust the reduction/enlargement of the output (adjustable up to 400 percent), users select the Reduce/Enlarge 100% touch key and a new window opens within the Copy tab.



Copy Tab of the Control Panel

The Image Quality tab offers an array of features for adjusting the image quality of copy jobs. When selected, the Color Effects touch key offers preset color options to automatically create desired color effects, such as lively, bright, warm and cool. The Image Options touch key enables users to lighten or darken the image to one of seven different levels. Further, users

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can adjust the sharpness and saturation to five different levels each. When the Color Balance touch key is selected, users can adjust the low, medium and high density levels for each color by seven different levels each. The Image Enhancement touch key will adjust the background suppression and contrast of the job. The Color Shift key enables users to rotate the hue of the image, changing the feeling of the output image by making it warmer or cooler, for example.

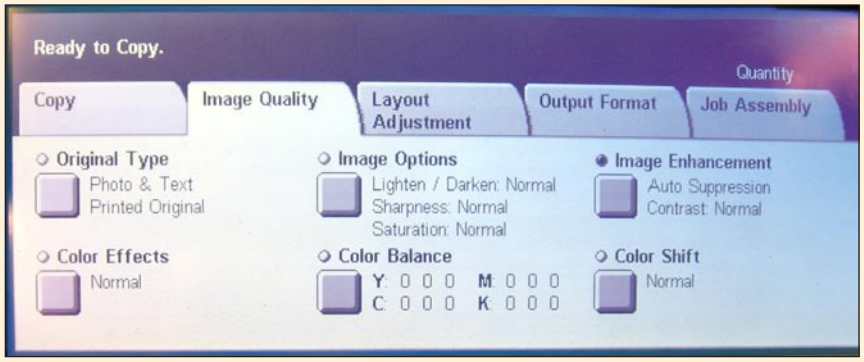

Image quality can be adjusted via the Image Quality tab.

Advanced features such as cover insertion, transparency insertion, poster mode, annotation, watermarking and job build are located within the Output Format and Job Assembly tabs. Users can choose to insert no covers, only front covers, or front and back covers, and can print on them or leave them blank. Users can also choose to insert no separators, blank separators, blank separators and handouts, or transparency sets and handouts. Poster mode enables users to make an extra-large copy of their originals in order to fit it on more than one sheet of paper. Annotation selections include stamp, date and page number. Stamp allows users to place pre-determined text in margins of copy sheets, as well as choose position, color and print on first or all pages. The date functionality allows users to place the date in the margins of copy sheets, choose position and print on first or all pages. The page number capability allows users to place page numbers in the margins of copy sheets, as well as choose the style, position and what pages to include. Combine Original Sets allows users to copy documents that exceed the capacity of the document feeder. Build Job enables users to scan and merge individual job segments with different features programmed. Both the document glass and document feeder can be utilized.

When selected, the Machine Status hard key provides users with very detailed information on the unit. For example, users can view the paper tray status (type, size and percent full), as well as the percentage of toner and drum remaining and status of SMart kit parts, including the waste toner container,

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fuser, staple cartridge, transfer belt and transfer roll. The electronic meter counter displays the number of black impressions, color impressions and total impressions. A mechanical counter is not available.

The job queue is accessed via the Job Status hard key. The highly detailed job queue indicates the number of originals, output pages and sets in a copy job, and counts up as both pages and sets are copied. The queue identifies the user when printing, indicates the number of originals and sets in print jobs and counts up pages and sets while printing. Jobs can also be moved and deleted, and complete and incomplete jobs are indicated. The Stored Documents tab includes sample, secure and delayed print jobs, as well as public mailbox jobs.

User Maintenance

The WorkCentre 7132 supports a wide range of paper sizes and weights. The unit comes standard with one drawer that handles 520 sheets of paper up to

Throughput Capabilities and Materials

Standard paper supply	Sources	1
	Total capacity	520 sheets
	Paper sizes	5.5" x 8.5" to 11" x 17"
	Weights	16-lb. bond to 110-lb. index
Bypass	Capacity	100 sheets
	Paper sizes	3.5" x 3.9" to 11" x 17"
	Weights	16-lb. bond to 110-lb. index
	Automatically detects paper and paper size?	Yes
Document feeder (Optional RADF)	Capacity	50 sheets
	Paper sizes	4.5" x 5" to 11" x 17"
	Weights	16-lb. bond to 32-lb. bond
Maximum paper supply	Sources	4
	Total capacity	2,720 sheets
	Paper sizes	3.5" x 3.9" to 11" x 17"
	Weights	16-lb. bond to 110-lb. index
Media types	Paper, envelopes, labels and transparencies	

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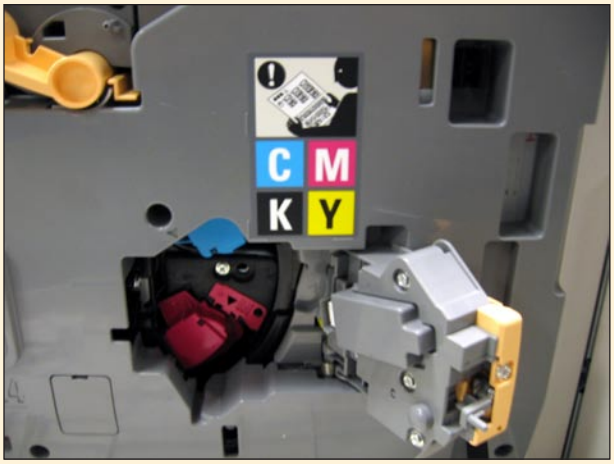
11" x 17". Users must add either a paper stand or one of two optional paper modules. The two-tray module adds two additional 520-sheet trays that also support paper sizes up to 11" x 17". The high-capacity feeder module (used in BLI's configuration) adds two letter-size trays with capacities of 900 and 1,200 sheets. All the trays support media up to 110-lb. index.

The drawers can be opened without pressing any buttons, and contain sliding length guides, which are preferred to guides that must be removed and reinserted. The drawers also have automatic paper sensors, which detect the size of the paper loaded and reflect it in the control panel. However, users must confirm the paper size on the control panel, which is an extra step that some competitive units do not require. This feature can be turned off, according to Xerox. The 100-sheet bypass tray is intelligent, as it detects the size of paper placed in the bypass and registers it. As with the other paper sources, the user must confirm the paper size being loaded.

The procedures for clearing misfeeds on the unit are simple, as the unit offers accurate, real-time information regarding misfeed locations. As soon as the misfed sheets are removed, the display clears and the device restarts the job without any additional user intervention. Unlike typical copier devices, the WorkCentre 7132 has no misfeed locations in the main body of the unit. Rather than users having to open the front cover and navigate through the interior of the copier to access misfed paper, the user can access misfeeds from the left side (the non-finisher side) only. The setup is similar to a printer design in that it has fewer misfeed areas. The four toner cartridges are stored in a revolving carousel mounted inside the unit. When one of the cartridges is empty, it rotates to the supply port for replacement.



Toner Supply Port

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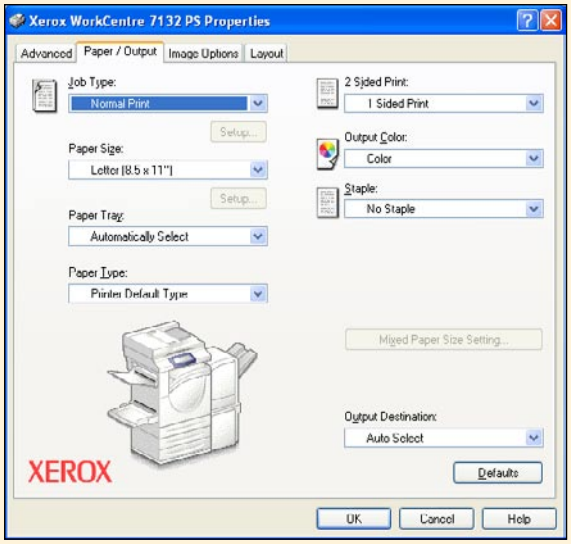
Print Drivers

Printing is standard on the WorkCentre 7132. The controller features a 300-MHz PowerPC processor and shares the 768 MB of memory and 40-GB hard drive with copy functionality. The controller provides standard PCL 5c and PCL 6 print drivers, and offers an optional genuine Adobe PostScript 3 print driver. The print drivers are bidirectional, offering highly detailed information regarding device and job status, currently loaded paper sizes and types, as well as installed options, all within the drivers.

The Adobe PostScript 3 and PCL print drivers are not identical in appearance or layout, making navigating their screens more difficult for users who need to switch between them for different types of jobs. Of the features required for a typical print job, paper size and source, duplex and finishing (stapling on the tested device) are located on the Paper/Output tab of the Adobe PostScript 3 print driver. Additional settings available on the Paper/Output tab include job type (normal print, secure print, delayed print and sample set) and output color (color or black). Selections for quantity, offsetting and collating are located within the Advanced tab of the Adobe PostScript 3 print driver. With the exception of the Advanced tab, which is text-based, the Adobe PostScript 3 print driver is graphical, and icons change to reflect the settings users select for job type, duplex, finishing and output color on the Paper/Output tab. Users can also simply click on the icons for job type, duplex, output color and finishing to select their desired settings without having to open the pull-down menus. The tab does not offer a point-and-click interface for selecting paper drawers, however. The Adobe PostScript 3 print driver allows up to three paper sources to be used per job, as users can select different sources for front covers, back covers and the job itself.



Paper/Output Tab of the Adobe PostScript 3 Print Driver

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The Image Options tab of the Adobe PostScript 3 print driver enables users to change the image quality settings based on how quickly the print job will output (standard or high speed), as well as based on the type of job programmed (standard, photos, presentation, Web pages, CAD, or off). Users can also adjust the brightness to one of 11 different levels. The RGB and CMYK color correction can also be changed. When users select the Image Adjustment key within the Image Options tab, the RGB gamma correction, RGB profile and RGB color temperature can all be adjusted. The Color Balance key opens a window within the Image Options tab that enables users to adjust the highlights, midtones and shadows of each target color (black, cyan, magenta and yellow).

In addition to selections for quantity, offsetting and collating, the text-based Advanced tab of the PostScript 3 print driver enables users to select different paper sources for front and back covers. Further, users can select their desired settings for transparency separators, including which tray to feed them from, whether they should be blank or printed on and what type of paper to use. Users can also turn on e-mail job confirmation from the Advanced tab. The Layout tab provides multiple-up features.

Selections for quantity, paper size and source, duplexing, collating and stapling are available from the Paper/Output tab of the PCL 6 print driver. Users can also select the job type (normal print, secure print, delayed print, sample set, save to mailbox and fax), output method, offset stacking and output color from the Paper/Output tab. Users can also program front covers, back covers and transparency separators within the Paper/Output tab by selecting the Paper Select key. As with the PostScript 3 print driver, the PCL 6 driver is graphical, and icons change to reflect the settings users select for job type, duplex, stapling and output color. Users can also simply click on the icons for job type, duplex, finishing and output color to select their desired settings without having to open the pull-down menus. Users can also save settings for commonly used print jobs with Favorites. The window under Paper Summary lists the various paper settings that have been selected in text form for quick viewing, including paper size, covers and trays selected for output. The tab does not offer a point-and-click interface for selecting paper drawers, however. The PCL 6 print driver allows up to four paper sources to be used per job, as different sources can be used for front covers, back covers, inserts and the job itself.

Similar to the PostScript 3 print driver, the Image Options tab of the PCL 6 print driver enables users to change the image quality settings based on how quickly the print job will output (standard or high speed), as well as based on the type of job programmed (standard, photos, presentation, Web pages, CAD, or POP). When users select the Image Settings key, a new window opens within the Image Options tab that allows users to adjust the brightness, contrast and saturation to one of 11 different levels each. Users can also adjust

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the highlights, midtones and shadows of each target color (black, cyan, magenta and yellow), as well as the temperature/gamma correction and ICC profile.

Watermarking options, as well as creating and registering forms and image overlay, can be set from the Watermarks/Forms tab. E-mail job confirmation, banner sheets and graphics settings (bitmap smoothing, thicken fine lines, image compression and resolution, for example) are programmed within the Detailed Settings tab. When faxing capability is added to the device, the Fax tab of the PCL 6 print driver allows users to set fax preferences, manage the fax phonebook and transmit faxes from their desktops.

▲ **Black Copy Productivity ..... ★★★★**
First-copy time ..... ★★★
Copy productivity ..... ★★★★
Copy efficiency ..... ★★★★

Color Copy Productivity ..... ★★★
First-copy time ..... ★★
Copy productivity ..... ★★★
Copy efficiency ..... ★★★★★

Copy productivity for business color units is tested by BLI in both black mode and auto-color mode. In black mode, copies are output in black using black toner regardless of whether the originals are color or black. In auto-color mode, the model detects whether originals are black or color and automatically adjusts to produce black or color output. For example, if one page is composed of black text and the next page contains color, the unit will print the second page in color using full-color mode without any additional user intervention. It will then revert back to printing in black mode if the subsequent page contains black text only. When a user selects full-color mode, originals are copied in color regardless of whether the originals are color or black and white, thus black text pages are printed using process black (a mixture of cyan, magenta, yellow and black toner). BLI's 10-page, double-sided original comprises 12 black text pages and eight pages that contain black text combined with color charts, logos and printed photographs. With Xerox's Automatic Color Copy feature, the device detects black-and-white and color pages separately in the original source document and prints and charges for them at their different rates.

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First-Copy Time

The WorkCentre 7132's first-copy times in black mode from both the platen and document feeder are slower than average for similarly equipped models tested to date, at 12.7 seconds and 13.3 seconds, respectively. Further, the unit's first-copy time in auto-color mode from both the platen and document feeder are among the slowest for the group, at 24.8 seconds and 25.4 seconds, respectively.

First-copy time measures the time it takes for the first copy to be produced after the Start button is pressed. The test is conducted using BLI's black and color test originals, using normal contrast and standard resolution and with all auto features off.

Copy Productivity

The WorkCentre 7132's tested copy speed in black mode is competitive with similarly equipped models tested to date in all three modes tested, at 23.7 cpm in 1:1 mode; 19.8 cpm in 1:2 mode; and 21.2 cpm in 2:2 mode. Although the unit's tested copy speed in auto-color mode is competitive for the group in 1:1 mode, at 10.8 cpm, it is slower than average for the group in 1:2 mode (5.8 cpm) and 2:2 mode (6.1 cpm).

BLI tests a unit's copy productivity by making one, five and 10 sets a 10-page document in three copy modes: 1:1 mode (single-sided originals to single-sided copies), 1:2 mode (single-sided originals to double-sided copies) and 2:2 mode (double-sided originals to double-sided copies). BLI obtains the overall productivity for each copy mode by averaging the productivity results for each run length.

Copy Efficiency (in percent)

	WorkCentre 7132	Competitive Units	
		Highest	Lowest
BLACK			
1:1	74.0	89.6	64.1
1:2	61.8	82.6	47.5
2:2	66.4	85.9	47.1
AUTO COLOR			
1:1	**135.2**	**135.2**	36.6
1:2	72.0	114.6	43.1
2:2	75.8	114.0	46.3

Bold indicates that this unit is the best of the group.
Efficiency is tested using a 10-page document.

Copy Efficiency

The WorkCentre 7132's copy efficiency in auto-color mode is the highest for similarly equipped models tested to date in 1:1 mode, at 135.2%, and is among the highest for the group in 1:2 mode (72.0%) and 2:2 mode (75.8%). The unit's copy efficiency in black mode is competitive for the group in 1:1 mode (74.0%) and 2:2 mode (66.4%), but below average in 1:2 mode (61.8%).

BLI tests a unit's copy efficiency (the percentage of the rated speed at which the unit operates when producing real-world jobs) by making one, five and 10 sets of a 10-page document in three copy modes: 1:1, 1:2 and 2:2. BLI obtains the overall efficiency for each copy mode by averaging the efficiency ratings (derived by dividing the tested speed of the device by the rated speed and then multiplying by 100) for each run length. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the unit.

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▲ Black Print Productivity ..... ★★★★
Print productivity ..... ★★★★
Print efficiency ..... ★★★★
Job stream ..... ★★★★★

Color Print Productivity ..... ★★★★
Print productivity ..... ★★★★
Print efficiency ..... ★★★★★
Job stream ..... ★★★★★

BLI tests print productivity for business color units in both black mode and auto-detect mode. The black mode always prints in black regardless of whether the originals are color or black. In auto-detect mode, the model detects whether originals are black or color and automatically changes modes to produce black or color output. BLI tests these units by using a 10-page test document that comprises six black text pages and four pages that contain black text combined with color charts, logos and printed photographs. With Xerox's Automatic Color Print feature, the device detects black-and-white pages within a print job even with the output selection set to color. The black-and-white printed pages are then printed and charged at the black-and-white rate.

Print Productivity

The WorkCentre 7132's tested print speed in black mode is competitive with similarly equipped models tested to date in both simplex mode and duplex mode, at 21.0 ppm and 16.8 ppm, respectively. Although the unit's tested print speed in auto-detect mode is competitive for the group in simplex mode, at 10.2 ppm, it is below average in duplex mode, at 5.8 ppm.

BLI tests a unit's print productivity by printing one and five sets of a 10-page document. Print jobs are sent using the Adobe PostScript 3 print driver at 600-dpi resolution. BLI obtains the overall productivity for each print mode by averaging the productivity for each run length.

Print Efficiency

The WorkCentre 7132's print efficiency in auto-detect mode is the highest of similarly equipped models tested to date in simplex mode, at 127.1%, and is among the highest for the group in duplex mode, at 71.8%. The unit's print efficiency in black mode is competitive for the group in both simplex mode and duplex mode, at 65.6% and 52.6%, respectively.

BLI tests a unit's print efficiency by printing one and five sets of a 10-page document. Print jobs are sent using the Adobe PostScript 3 print driver at 600-dpi resolution. BLI obtains the overall efficiency for each print mode by

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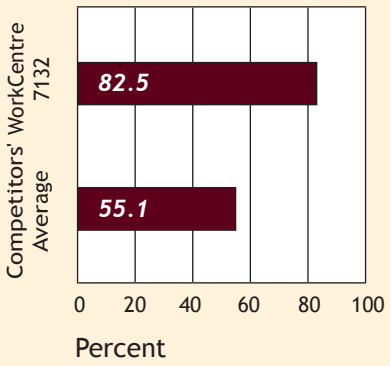
averaging the efficiency ratings (derived by dividing the tested speed of the device by the rated speed and then multiplying by 100) for each run length. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the unit.

Full-Color Print

The WorkCentre 7132's efficiency when printing a 10-page PowerPoint file in full-color mode is the highest for similarly equipped models tested to date, at 82.5%. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the unit. The unit's tested speed is competitive with the group, at 6.6 ppm, printing the file in one minute and 30.95 seconds.

Print Efficiency in Full-Color Mode



Print Efficiency (in percent)

	WorkCentre 7132	Competitive Units	
		Highest	Lowest
BLACK			
Simplex	65.6	81.8	50.7
Duplex	52.6	82.6	47.5
AUTO DETECT			
Simplex	**127.1**	**127.1**	41.8
Duplex	71.8	91.2	32.6

Bold indicates that this unit is the best of the group.
Efficiency is tested using a 10-page document.

Job Stream

The WorkCentre 7132's efficiency rate when printing BLI's job stream in auto-detect mode is the highest for similarly equipped models tested to date, at 90.8%, resulting in a tested speed that is competitive for the group, at 7.3 ppm. The unit completed the job stream in auto-detect mode in two minutes and 37.05 seconds. The unit's efficiency rate when printing BLI's job stream in black mode is among the highest for the group, at 58.2%, resulting in a tested speed that is competitive for the group, at 18.6 ppm. The unit completed the job stream in black mode in one minute and 1.22 seconds.

BLI's job stream includes a combination of black and color Word documents, Outlook e-mail messages, Excel spreadsheets, PowerPoint, HTML and Acrobat PDF files. This test simulates the type of traffic a typical device might experience in a real-world, multi-user environment. To determine job stream

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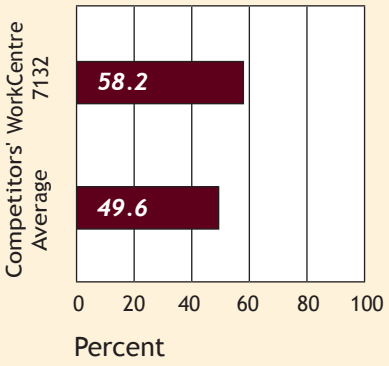
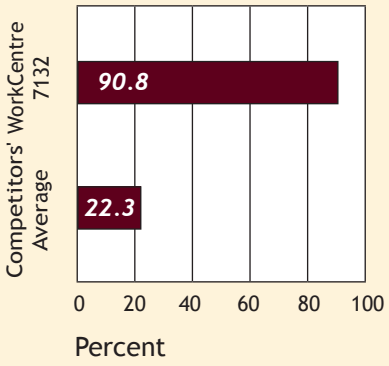
speed, BLI sends all of the files to the printer as a group, at which time the stopwatch begins; timing ends when the last page of the last file exits the device. Job stream efficiency is determined by the percentage of the rated speed at which the unit operates when producing real-world jobs. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the unit.

Job Stream Efficiency in Black Mode



Job Stream Efficiency in Auto-Detect Mode



▲ Image Quality Black ★★★★★

Copy

Solids were excellent, with above average boldness and consistent solid coverage. Line art was also excellent, as closely spaced fine lines were distinct, line thickness was consistent and circles were fully formed. Further, there was no evidence of toner overspray or stair-stepping. Halftone output was excellent, with grayscale visible from 15% (which is the minimum coverage level of the original) to 100%, even fill within levels and distinct separation between all levels. Halftone patterns were smooth and exhibited no evidence of banding. Text was rated very good, as boldness and sharpness were above average and text was fully formed. There was no evidence of toner overspray, and smoothness of curves/serifs/lines was average.

Print

Text was rated excellent, as boldness, sharpness and smoothness of curves/serifs/lines were above average, text was fully formed and there was no evidence of toner overspray. Line art was also excellent, as closely spaced

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fine lines were distinct, line thickness was consistent and circles were fully formed. Further, there was no evidence of toner overspray or stair-stepping. Halftone output was excellent, with grayscale evident from 1% to 100% and all levels distinct. Halftone patterns were also smooth with minimal banding. Solids were also excellent, with above average boldness and consistent solid coverage.

▲ Image Quality Color ★★★★★

Copy and Print

The WorkCentre 7132 offers exceptional overall color image quality that will meet most users' imaging needs for business applications. Color business graphics output in both print and copy modes were rated excellent. Saturation was excellent, with bright colors, while sharpness/fine details, pastel shades and background reproduction were above average. In copy mode, consistency of coverage was above average. Color photographic image output was rated excellent in print mode and very good in copy mode. In print mode, flesh tones were natural, and smoothness of output and the ability to produce a wide range of shades were both above average. Although smoothness and the ability to produce a wide range of shades were both above average in copy mode, flesh tones had a slight reddish tint. In the output of the test original that produces primary colors in shades ranging from light (10% fill) to dark (100% fill) in 10% increments, fill is even and separations between levels are distinct in both print and copy modes. BLI evaluates color image quality based on our suite of 11 originals (six for copy mode, five for print mode).

Auto-Color Detection

BLI tests auto-color detection by selecting auto-color mode on the control panel and copying one set of BLI's 10-page, double-sided original. This test document comprises 12 black text pages and eight pages that contain black text combined with color charts, logos and printed photographs. BLI's testing found that the unit was able to accurately reproduce all of the pages in the test document.

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Multitasking

Reserves

The WorkCentre 7132 allows users to reserve additional copy jobs while a print or copy job is in progress. The number of reserves available is limited only by the hard drive memory of the device.

Interrupt

To pause a job in progress in order to perform an immediate copy job, the user selects the Interrupt hard key on the control panel and is able to access most features required for a typical copy job, including multiple sets, duplexing and finishing. During testing, this unit automatically returned to both non-interrupted print mode and copy mode almost immediately and restarted the job that was interrupted without user intervention. This would be beneficial in a networked environment where many jobs would likely be waiting in the queue. Some other units do not automatically return to non-interrupted mode; others return to non-interrupted mode but do not restart the interrupted job until the Start key is pressed.

Other Features

Scan

The WorkCentre 7132 scans up to 40 ipm in black-and-white and 13 ipm in color at 200 dpi. Users can add either the optional scan to e-mail kit or network scanning kit. The network scanning kit provides users with scan to e-mail as well as mailbox, network servers (SMTP, FTP, or SMB) and TWAIN. File formats include TIFF, multi-page TIFF, PDF, password-protected PDF and JPEG. Compression methods include JPEG, MMR and MH. Users can also combine multiple scan jobs into one file. Scan to e-mail provides support for local or global (LDAP) address books. The unit supports two LDAP servers simultaneously as primary and secondary. Authentication can also be enabled to prevent unauthorized access. Internet faxing is included when users add faxing capability. The WorkCentre 7132 also features programmable Job Flow Sheets, which can automatically route documents to multiple electronic destinations. Users can choose multiple destinations at the front panel before scanning a document for simultaneous delivery to multiple fax numbers, e-mail addresses, network server locations and printer devices. The unit is also compatible with SMARTsend, a more dynamic routing tool for sending scanned images to multiple locations including network folders, e-mail addresses, remote printers, workflow applications and document management systems.

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Fax

Walk-up fax (one or three lines including LAN fax) is optional for the WorkCentre 7132. The faxing capabilities include a 33.6-Kbps modem with JBIG, MMR and MH compression available, 3- second PSTN transmission speed, 200 speed dials and 50 group dials, as well as support for pages up to 11" x 17". Additional faxing capabilities include 200 mailboxes, duplex sending and receiving and fax build job. Further, secure fax provides users with additional security using the FCODE secure fax standard. Incoming faxes can also be routed to the side output tray for more convenient visibility.

Security

Xerox offers built-in security features for the network and for document security. Authentication security capabilities include system administrator authentication, network authentication and print/copy/fax/scan auditron. The unit also supports HTTPS, which enables CentreWare Internet Services to be set up using industry-standard SSL technology. Access to the device is also restricted via IP address filtering, domain filtering and port blocking. Print channel encryption delivers secure communication via secure socket layer/ transport layer security (SSL/TLS). Device usage can also be closely tracked via Xerox Standard Accounting, which can provide audit log reports showing print, copy, scan and fax events with time stamps. In addition, the unit's hard drive can be removed for secure storage. Analog fax and network isolation architecture isolates the fax telephone line and the network connection to prevent in-coming attacks. Additional standard capabilities include secure print, encrypted e-mail, password-protected PDF and secure scanning and network management.

For additional security capabilities, users can add the data security kit. The disk image overwrite erases data that has been processed to the hard drive one time or three times, and also encrypts information stored on the hard drive using AES 128-bit block encryption.

Administrative Utilities

Administrative utilities for the WorkCentre 7132 include CentreWare Web for administrators and CentreWare Internet Services for administrators and users. CentreWare Web allows the administrator to monitor all simple network management protocol (SNMP)-compliant devices on the network, including non-Xerox units, remotely from a desktop via a Web browser (SNMP is a set of protocols for managing networks). The administrator can perform installation, troubleshoot and track meter counts from within this utility. To control color cost and access, Device Auditron, which is available via CentreWare Web, can restrict and track print, copy, scan and fax usage by users and groups.

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The CentreWare Internet Services utility allows the administrator to remotely configure the device and manage it from any desktop. It also allows the administrator and users to view the status of the device—toner levels, paper tray status or error messages, or the color of the paper loaded in tray four, for example—from their desktop before sending a print job. In addition, the administrator can view the print queue and manage jobs—hold, release, promote and delete—and submit jobs to print.

As mentioned in the Security section, Xerox Standard Accounting tracks copies, prints, scans and faxes. Xerox Standard Accounting is currently available as a firmware update, and will be available with all machines in September, according to Xerox. It sets up different types of accounts via CentreWare Internet Services. Up to 1,000 user IDs and 1,000 group accounts are available. In addition, usage limits (up to 9,999,999) can restrict the total number of copy, print, scan and fax jobs that a user can perform. Both administrators and users can generate usage reports from Xerox Standard Accounting via CentreWare Internet Services. Reports can be viewed online or can be downloaded as a .csv file and imported into Excel, etc. Users and administrators who opt to use Xerox Standard Accounting must enable it on both the device and the print driver, however. If Xerox Standard Accounting is enabled on the device, but not in the print driver, any print jobs sent to the device will be deleted.

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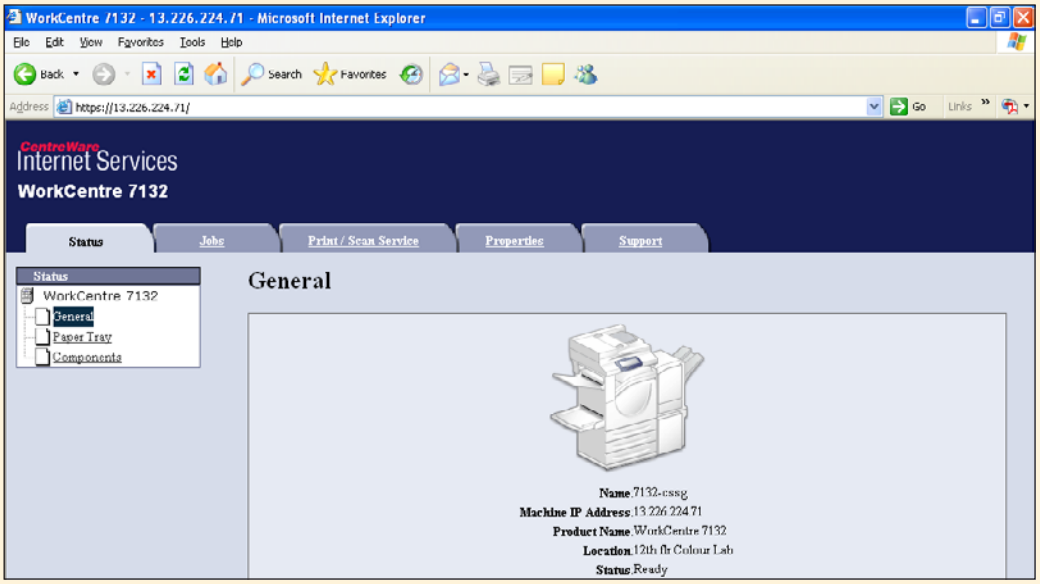

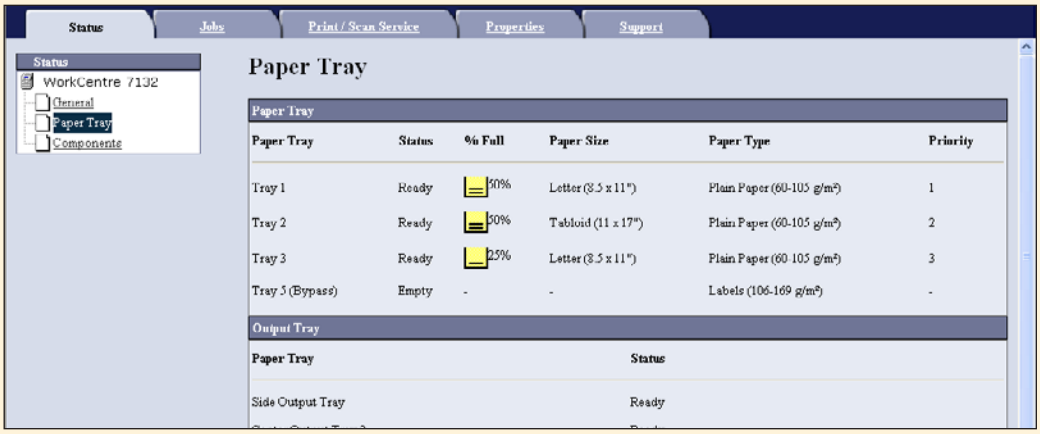

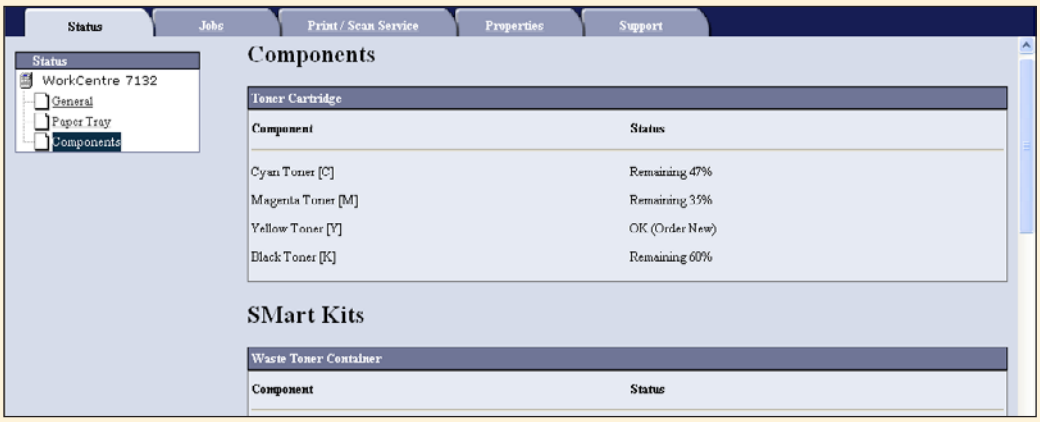

CentreWare Internet Services Utility

FIELD TEST

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