Xerox WorkCentre 7665
Business Color Device
50 PPM Color / 65 PPM Black
Copy • Print • Fax • Scan

Overall Rating ................................★★★★★
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: $24,000 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 SMART controller and the PostScript 3 print driver (version 4.194.2). The crossover cable eliminates network traffic, allowing for optimal productivity of the unit.

Comparative Analysis

The Xerox WorkCentre 7665 is targeted to meet users’ monochrome needs in a departmental office environment without sacrificing performance for color requirements. Demonstrating exceptional print productivity, as well as excellent overall ease of use and image quality, the unit proved to be an outstanding performer, earning an overall rating of Five Stars.

These additions to the color Xerox MFP lineup, which includes the well-reviewed WorkCentre Pro C2128, C2636 and C3545, the WorkCentre 7665 and 7655 are intended to play to larger workgroups, offering higher running speeds, paper capacities, toner yields, drum yields and memory capabilities, for example. Designed as a modular device, enabling users to upgrade based
on their environments, the WorkCentre 7665 offers standard copy functionality, and optional print, scan and fax (including walk-up fax and network server fax) capabilities. The unit offers 512 MB of standard memory (upgradeable to 1 GB) and a 40-GB hard drive, and features a four-drum, single-pass engine, which lays down the color on the paper in one pass through the transport area. The engine design helps to accommodate the manufacturer rated speeds of 50 ppm for color output, which is the highest for the group, and 65 ppm for black output, which is among the highest for the group.

Advantages

- Outstanding overall print productivity. For example, results of the unit’s job stream productivity, which simulates the type of traffic a typical device might experience in a real-world, multi-user environment, is the highest for similarly equipped models tested to date in both black and auto-color mode.

- Outstanding overall ease of use from the control panel. For example, the LCD touch screen is full color, the monitor can be tilted up and down and swiveled left to right and most of the features required for a typical copy job can be programmed within the Copy tab.

- Excellent overall ease of use from the print drivers. The PostScript 3 and PCL 6 print drivers are very similar in appearance, most of the features required for a typical print job are on the Paper/Output tab and highly detailed consumables status is available within the bidirectional print drivers.

- Xerox’s SSmart kits help predict, prevent and shorten downtime.

- Two black toner cartridges double the black toner capacity to prevent downtime. Further, the black toner cartridges, as well as the color cartridges, are housed in separate compartments, enabling users to add toner while the device is running.

- Applications such as Auditron and Xerox Standard Accounting help track and control color usage.

- Highest bypass tray capacity (250 sheets) and document feeder capacity (250 sheets) for competitive models available. Further, the unit’s rated color toner yields (34,000 impressions for cyan and yellow, 31,000 impressions for magenta) are the highest for the group.

Shortcomings

- Suggested retail price is the highest among similarly configured models (PostScript 3 printing, saddle-stitch finishing and an RADF).

- The print drivers do not offer a point-and-click interface for selecting paper source and output destination.

- Although the drawers have automatic paper sensors, users must confirm the paper size on the control panel, which is an extra step that some competitive units do not require.

- Below-average standard paper capacity (3,010 sheets). Further, the unit’s rated color drum life (115,000 impressions) and black toner yield (30,000 impressions) are below average.
The WorkCentre 7665 demonstrated outstanding overall print productivity, including the highest job stream productivity of similarly equipped models tested to date in both auto-color mode and black mode. In addition, the unit demonstrated good overall copy productivity, including the highest copy productivity in auto-color mode for the group in all three modes tested, as well as the highest copy productivity in 2:2 black mode for the group. The unit’s ease of use was also outstanding, both from the control panel and its very well-designed print drivers.

The WorkCentre 7665 also demonstrated excellent overall image quality. The unit utilizes Xerox’s trickle charge development technology, in which fresh developer continually mixes into the toner, enabling more consistent toner level over a longer period of time and better image quality, according to the company. Further, the device utilizes EA toner, which allows more precise reproduction due to uniform toner size and shape, according to Xerox. The belt fuser also has an extended contact area, thus toner adheres more completely for fast printing and a professional finish.

The WorkCentre 7665 features Xerox’s S Mart kits to help predict and prevent downtime on the device. The device monitors itself and communicates to users and administrators via the control panel, print drivers, e-mail, and CentreWare administrative utilities, alerting them when the S Mart kit components (including the drum cartridges, fuser, waste bottle and charger) 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 unit offers users a number of applications to help track and control color usage. For example, Auditron tracks and controls usage by users and groups. It can be configured to limit the number of color pages and black-and-white pages. In addition, Xerox Standard Accounting provides access, authentication and job-based accounting features for greater cost control of printing, copying, faxing and scanning.

Finishing options include the advanced office finisher and the professional finisher with booklet maker. The advanced office finisher offers an output capacity of 3,500 sheets, as well as 50-sheet multi-position stapling and hole punching with two separate output trays. The professional finisher with booklet maker extends the capabilities to include bi-folded booklets (up to five sheets), saddle-stitching and center-fold booklets (up to 15 sheets) with three output trays.
△ Value Analysis

The WorkCentre 7665, configured as a copier/printer with PostScript 3 printing, saddle-stitch finishing and an RADF, has a suggested retail price that is the highest for similarly equipped models available. However, the unit’s rated speed for color output is the highest for the group, and its rated speed for black output is among the highest for the group. In addition, the unit’s rated color toner yield is the highest for the group (32,500 impressions), and its bypass tray capacity and RADF capacity are also the highest for the group (250 sheets each). 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 excellent print productivity, ease of use and image quality, BLI gives the WorkCentre 7665 an overall Field Tested Rating** of Five 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.
Ease of Use ..................★★★★★
Control panel ..........................★★★★★
User maintenance.......................★★★★
Print drivers.............................★★★★★

Control Panel

The WorkCentre 7665 features a large, full-color touch-screen display, and the control panel monitor can be tilted up and down and swiveled left and right. A contrast dial on the side of the control panel monitor allows further adjustment to different lighting situations. A Help hard key is also available.

The All Services screen allows users to easily switch between the various functions of the device, such as copy, fax, scan to e-mail and network scanning. This screen is selectable via the Services hard key on the control panel, and users can also return to the screen at any time by selecting the All Services touch key conveniently located on each of the main tabs within the selected functions. Although BLI technicians noted a slight delay in key response on the control panel, ease of use overall from the control panel was exceptional.

Most of the features required for a typical copy job can be programmed from the Copy tab, including paper selection, duplexing, reduction/enlargement and sorting. Stapling options are also available on the first screen. Graphical icons change as users select settings for output color, paper supply, two-sided copying and copy output. Further, the percentage of paper in each drawer is displayed when users select a paper source for output. Thus, users know how much paper is in the selected drawer without ever having to leave the first screen. More detail on paper sources is available when users select the More touch key under Paper Supply, as a gauge shows size of paper, color of paper, paper type and percent full.
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 Color Balance touch key allows users to control the balance between colors on the original and the overall amount of color on the output. The Color Shift touch key is used to adjust the overall color of the output by shifting colors towards adjacent hues. The Image Options touch key enables users to adjust sharpness and saturation, as well as lighten and darken.

Advanced features such as job build, covers, transparency options and booklet creation are located under the Output Format and Job Assembly tabs. The WorkCentre 7665 offers advanced job build functionality, in which users can combine assorted sets of originals, each with different settings, into one job. Users can opt to output without covers, with front and back covers, with front covers only, or with back covers only. Covers can contain images and be printed on different paper than the rest of a user’s job. Booklet creation was very simple. Users can also review or change the output of their job section by section, or run a proof set of the entire job to ensure the output matches their requirements.

When selected, the Machine Status hard key provides users with very detailed information on the unit. Users can view the paper size, type, color and percent full, as well as the percentage of toner and SMART kit life remaining. The Billing Information tab provides users with the number of black impressions, color impressions and total impressions. The usage counters provide highly detailed information, offering users pull-down menus for impressions, sheet, images sent and fax impressions. Although the counters cannot be printed from the device, billing information can be accessed and printed from CentreWare Internet Services.

The job queue is accessed via the Job Status hard key. The job queue indicates the number of originals in copy jobs and number of output pages in copy jobs, as well as the number of sets programmed. Although it does not count...
pages when copying, it counts up as sets are copied. The queue indicates the number of originals and sets in print jobs. Although it does not count pages while printing, it counts up as sets are printed. It also indicates completed jobs. Although jobs cannot be prioritized, they can be deleted.

Detailed information on the unit is available when users select the Machine Status hard key.

### Throughput Capabilities and Materials

<table>
<thead>
<tr>
<th>Source</th>
<th>Total Capacity</th>
<th>Paper Sizes</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Paper Supply</strong></td>
<td>3010 sheets</td>
<td>5-1/2” x 8-1/2” to 11” x 17”</td>
<td>17-lb. bond to 110-lb. index</td>
</tr>
<tr>
<td><strong>Bypass</strong></td>
<td>250 sheets</td>
<td>4” x 6” to 13” x 19”</td>
<td>17-lb. bond to 170-lb. index</td>
</tr>
<tr>
<td><strong>Document Feeder (Standard RADF)</strong></td>
<td>250 sheets</td>
<td>5-1/2” x 8-1/2” to 11” x 17”</td>
<td>16-lb. bond to 110-lb. index</td>
</tr>
<tr>
<td><strong>Maximum Paper Supply</strong></td>
<td>5,260 sheets</td>
<td>4” x 6” to 13” x 19”</td>
<td>16-lb. bond to 170-lb. index</td>
</tr>
<tr>
<td><strong>Media Types</strong></td>
<td></td>
<td></td>
<td>Labels, transparencies, tabs, heavy papers</td>
</tr>
</tbody>
</table>
User Maintenance

The unit comes equipped with four paper drawers. Drawers one and two hold 500 sheets each, and are user-adjustable up to 11” x 17”. 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. Drawers can be set to “dedicated” and the size/color/type is pre-programmed so that confirmation is not necessary, according to Xerox. But if users change the paper size in the drawers, they will again have to pre-program the new size to avoid having to confirm it within the control panel. Drawers three and four can also be opened without having to press any buttons, and fit letter-size paper only. Drawers three and four automatically lower when opened. The unit’s short, straight paper path allows all trays to handle heavy weight media up to 110-lb. index. An optional high-capacity feeder adds 2,000 sheets of letter-size paper. The standard bypass offers a 250-sheet capacity and can handle custom paper sizes up to 13” x 19”. The bypass can also feed media up to 170-lb. index. However, the bypass tray is non-intelligent, requiring control panel programming.

Misfeeds are accessed from the front and left side of the unit. The graphic displayed when misfeeds occur is dynamic, instructing users after each misfeed is cleared. Procedures for replacing toner are simple. To replace any of the toner cartridges, users open the toner cover and remove the cartridge by holding the handle and gently pulling it out. Each cartridge also features a carrying handle. Users simply insert the new cartridge until it clicks into place. The unit is equipped with two black toner cartridges, doubling the black toner capacity to prevent downtime. The two black toner cartridges, as well as the color cartridges, are housed in separate compartments, enabling users to add toner while the device is running.

Print Drivers

Printing is optional on the WorkCentre 7665 with the SMart controller. The controller features a 1.8-GHz processor, and offers 512 MB of standalone memory while adding an additional 80-GB hard drive. The SMart controller includes bidirectional PCL 6 and PostScript 3 print drivers, indicating device status, job status, currently loaded paper sizes and types and installed options all within the drivers. In addition, the controller enables five processes to be done simultaneously (RIP, receive, program ahead, queue processing and transmit), enabling true multitasking/concurrency, according to Xerox.

The PostScript and PCL print drivers are very similar in appearance, making navigating their screens easier for users who need to switch between them for different types of jobs. Most of the features required for a typical print job are available on the Paper/Output tab, including paper source and type,
duplex, collate and finishing (including booklet creation, as a new window opens within the Paper/Output tab when users select booklet creation from the finishing pull-down menu). Further, users can select output color (black and white or color) and job type (normal print, secure print, sample set and delayed print) from the Paper/Output tab. Although quantity is not available from the Paper/Output tab, it can be selected from the Advanced tab. The drivers are graphical, and icons change to reflect the settings users select for job type, duplex, paper summary, finishing and output color. Users can also simply click on the icons for job type, duplex and output color to select their desired settings without having to open the pull-down menu. When users select the icon for paper summary, a new window opens to allow them to program advanced paper selection without having to use the pull down menu. The window under Paper Summary also lists the various paper settings that have been selected in text form for quick viewing, such as paper size, type and color. In addition, the window under Finishing Summary lists the various finishing settings that have been selected in text form for quick viewing. Users can also load and save settings for commonly used print jobs under the Saved Settings section within the Paper/Output tab. Further, named jobs are preserved when upgrading the driver to a newer version for the same branded printer. When users simply scroll over the graphic of the device in the bidirectional print drivers’ Paper/Output tab, the percent, size and color of paper in each drawer is displayed, as is the percent remaining for each toner. When users select the Status key, additional job details are displayed, including completed print jobs.

![Paper/Output Tab of the PostScript 3 Print Driver](image-url)
The print drivers also feature Exception Page Programming (accessed by selecting the Special Pages tab), which enables users to custom build an entire job within the print driver. Up to six different paper stock options can be included in a job. Users can opt to add front or back covers, tabs, blank or imaged insert pages and single- and two-sided pages. Users can view the Special Pages Summary to edit, delete and review their selections as they go. Although a job will be held for resources if the paper trays are not configured to match the paper types that have been selected, the bidirectional feature within select paper/special stock allows users to view what stock is loaded in the device so that they can make appropriate paper selections up front. Furthermore, the device’s “Print Around” capability will hold a job needing resources and print the next job in the queue, eliminating bottlenecks.

The Image Options tab enables users to change settings for image quality (enhanced, standard, or toner saver) RGB source color (Xerox RGB, sRGB, or AppleRGB), CMYK source color (commercial, SNAP, SWOP, EuroScale, or Japan Color) and output color correction (automatic, sRGB, none or press match). It also provides options for reduction/enlargement up to 400 percent. The Layout/Watermark tab provides booklet layout and watermarking options.
**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, 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.

**First-Copy Time**

The WorkCentre 7665’s first-copy times in black mode from the platen and document feeder are competitive with similarly equipped models tested to date, at 8.4 seconds and 9.8 seconds, respectively. The unit’s first-copy times in auto-color mode from the platen and document feeder are also competitive for the group, at 15.6 seconds and 14.5 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 7665’s tested copy speed in auto-color mode is the highest for similarly equipped models tested to date in all three modes tested, at 33.2 cpm in 1:1 mode; 27.1 cpm in 1:2 mode; and 33.0 cpm in 2:2 mode.
The unit’s tested copy speed in black mode is the highest for the group in 2:2 mode, at 45.7 cpm, and is among the highest in 1:1 mode (45.4 cpm) and 1:2 mode (36.5 cpm).

BLI tests a unit’s copy productivity by making one, five and 10 sets of 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 Productivity (in cpm)

<table>
<thead>
<tr>
<th></th>
<th>WorkCentre 7665</th>
<th>Competitive Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fastest</td>
<td>Slowest</td>
</tr>
<tr>
<td><strong>BLACK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:1</td>
<td>45.4</td>
<td>47.7</td>
</tr>
<tr>
<td>1:2</td>
<td>36.5</td>
<td>43.4</td>
</tr>
<tr>
<td>2:2</td>
<td>45.7</td>
<td>45.7</td>
</tr>
<tr>
<td><strong>AUTO COLOR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:1</td>
<td>33.2</td>
<td>33.2</td>
</tr>
<tr>
<td>1:2</td>
<td>27.1</td>
<td>27.1</td>
</tr>
<tr>
<td>2:2</td>
<td>33.0</td>
<td>33.0</td>
</tr>
</tbody>
</table>

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

### Copy Efficiency

The WorkCentre 7665’s copy efficiency in auto-color mode is competitive for similarly equipped models tested to date in 1:1 mode and 2:2 mode, at 66.3% and 66.1%, respectively, but below average for the group in 1:2 mode, at 54.2%. The unit’s copy efficiency in black mode is competitive for the group in 2:2 mode, at 70.3%, but below average in 1:1 mode (69.8%) and 1:2 mode (56.2%).

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.
Booklet Copy

BLI technicians found the procedures for programming booklet copies from the unit’s control panel to be simple, as users press the Booklet Creation touch key and select the options. The WorkCentre 7665’s productivity to produce 10 sets of a 16-page document output in booklet mode in black mode is the highest for similarly equipped models tested to date. The unit completed the job in three minutes and 53.06 seconds, running at 41.2 cpm, which translates to an efficiency rate of 63.4%.

The unit’s productivity to produce 10 sets of a 16-page document output in booklet mode in auto-color mode is also the highest for the group. It completed the job in five minutes and 31.85 seconds, running at 28.9 cpm, which translates to an efficiency rate of 57.9%.
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 7665’s tested print speed in black mode is the highest for similarly equipped models tested to date in both simplex and duplex mode, at 43.3 ppm and 35.3 ppm, respectively. The unit’s tested print speed in auto-color mode is also the highest for the group in both simplex and duplex mode, at 31.6 ppm and 25.8 ppm, respectively.

BLI tests a unit’s print productivity by printing one and five sets of a 10-page document. Print jobs are sent using the 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 Productivity (in ppm)

<table>
<thead>
<tr>
<th></th>
<th>WorkCentre 7665</th>
<th>Competitive Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highest</td>
<td>Lowest</td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplex</td>
<td>43.3</td>
<td>43.3</td>
</tr>
<tr>
<td>Duplex</td>
<td>35.3</td>
<td>35.3</td>
</tr>
<tr>
<td>AUTO DETECT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplex</td>
<td>31.6</td>
<td>31.6</td>
</tr>
<tr>
<td>Duplex</td>
<td>25.8</td>
<td>25.8</td>
</tr>
</tbody>
</table>

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

The WorkCentre 7665’s print efficiency in black mode is competitive for similarly equipped models tested to date in both simplex and duplex mode, at 66.6% and 54.3%, respectively. The unit’s print efficiency in auto-detect mode is also competitive for the group in both simplex and duplex mode, at 63.1% and 51.6%, 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 PostScript 3 print driver at 600-dpi resolution. BLI obtains the overall efficiency for each print 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.

Full-Color Print

The WorkCentre 7665’s tested speed when printing a 10-page PowerPoint file in full-color mode is the highest for similarly equipped models tested to date, but its efficiency is below average for the group. The unit printed the file in 27 seconds, running at 22.2 ppm, which translates to an efficiency rate of 44.4%. The closer the rate is to 100%, or if it exceeds 100%, the more efficient the unit.

Booklet Print

BLI technicians found the procedures for printing booklets from the print driver to be simple. Users click on the Select Finishing key and select Booklet Creation from the pull-down menu. A new window opens allowing users to program the booklet print job. The WorkCentre 7665’s productivity when printing 10 sets of a 16-page Acrobat PDF file output in booklet mode in black
mode from the PCL 6 print driver is the highest for similarly equipped models tested to date. The unit completed the job in three minutes and 32.10 seconds, running at 45.3 ppm, which translates to an efficiency rate of 69.6%.

The unit’s productivity when printing 10 sets of a 16-page Acrobat PDF file output in booklet mode in auto-detect mode from the PCL 6 print driver is also the highest for the group. The unit completed the job in four minutes and 47.16 seconds, running at 33.4 ppm, which translates to an efficiency rate of 66.9%. (BLI technicians experienced an error when using the PostScript 3 print driver for booklet printing. Therefore, above results are based on the PCL 6 print driver.)

**Job Stream**

The WorkCentre 7665’s tested speed when printing BLI’s job stream in black mode is the highest for similarly equipped models tested to date. The unit completed the job stream in black mode in 27.72 seconds, running at 41.1 ppm, which translates to an efficiency rate of 63.3%. The unit’s tested speed when printing BLI’s job stream in auto-detect mode is also the highest for the group. The unit completed the job stream in auto-detect mode in 44.90 seconds, running at 25.4 ppm, which translates to an efficiency rate of 50.8%.

*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 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 Productivity in Black Mode](chart1)

<table>
<thead>
<tr>
<th>Competitors’ WorkCentre Average</th>
<th>WorkCentre 7665</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.4</td>
<td><strong>41.1</strong></td>
</tr>
</tbody>
</table>

![Job Stream Productivity in Auto-Detect Mode](chart2)

<table>
<thead>
<tr>
<th>Competitors’ WorkCentre Average</th>
<th>WorkCentre 7665</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1</td>
<td><strong>25.4</strong></td>
</tr>
</tbody>
</table>

**Image Quality Black ★★★★★**

**Copy**

Text was excellent, as boldness, sharpness and smoothness of curves/serifs/lines were above average and text was fully formed. Line art was also excellent, as closely spaced fine lines were distinct, line thickness was consistent and circles were fully formed. Solids were excellent, with above average boldness and consistent solid coverage. 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 also smooth with no evidence of banding.

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

▲ Image Quality Color ★★★★★

Copy and Print

The WorkCentre 7665 offers very good overall color image quality that will meet most users’ imaging needs for business applications. Color business graphics output was excellent in copy mode and very good in print mode. Consistency of coverage was above average. Saturation was excellent, with bright colors, and sharpness/fine details, pastel shades and background reproduction were above average. Color photographic image output was excellent in copy mode and good in print mode. In copy mode, flesh tones were natural, and smoothness and the ability to produce a wide range of shades were both above average. In print mode, flesh tones had a heavy reddish and heavy yellowish tint, while smoothness and the ability to produce a wide range of shades were both average. 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 the pages in the test document.
Multitasking

Reserves

The WorkCentre 7665 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 memory of the device.

Interrupt

To pause a copy or print 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. When selected, the current running job will stop in the middle of the set and allow for programming of the copy job. During testing, this unit automatically returned to non-interrupted mode within approximately two minutes and 30 seconds 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 7665 scans at up to 80 ipm in black-and-white and 50 ipm in color from the RADF at up to 600 dpi. In addition, the scanning algorithms have been enhanced, according to Xerox. The unit has a 50 percent better compression rate than its predecessor, causing less network traffic. Network scanning, scan to e-mail (includes LDAP functionality), scan to PC desktop and Internet fax are optional. One primary and one secondary LDAP server may be configured, and LDAP referrals are supported. Scan to applications/network file server makes large volumes of hard copy available to anyone on the network. Scan to repository/digital archive enables users to move documents into electronic filing systems for easy access. Users can also scan and preserve color information for later use in electronic files or color printing and copying. Users can also manage up to 250 scan templates via CentreWare Internet Services, and share scan templates among other WorkCentre devices via cloning.
Additional scanning functionality can be added to the WorkCentre 7665 with FreeFlow SMARTsend and SMARTsend Professional. SMARTsend is a server-based document routing software that supports multiple scan-enabled multifunctional systems (up to 250 per device). SMARTsend enables users to scan to multiple destinations in a single scan. Destinations include, e-mail, network folder, file transfer protocol (FTP), Microsoft Exchange 2000 Web folders, Web URL and remote printers. Users can also scan to document repository destinations, including DocuShare, Domino, Domino.doc and Microsoft SharePoint. In addition to the features of SMARTsend, SMARTsend Professional adds workflow initiation via Paperware (scan cover sheets), server-based optical character recognition (OCR) for digital archiving and document conversion, adding of metadata information and scan to Internet fax or file destination.

Fax

Walk-up fax (one or two lines) and network server fax are optional for the WorkCentre 7665. The unit features mixed-size originals faxing, an enhancement from its predecessor. Users can also build a job of up to 1,000 images. Network server faxing helps users maintain central management and control of their fax servers and offers input and output options such as two-sided scanning and printing, stapling, hole punching and secure printing of fax documents. Up to 200 password-protected fax mailboxes and up to 255 password-protected Poll Remote mailboxes are also available. Additional faxing features include auto redialing (up to 14 attempts) and group dialing (100 groups, 200 destinations per group for the one-line option and 200 groups, 400 destinations per group for the two-line option). The fax memory for the unit is 32 MB for one line and 256 MB for two lines.

Security

The WorkCentre 7665 offers built-in security features for physical and network-based access controls, user authentication, usage tracking, file encryption and file deletion to fully comply with the IT organization’s information security policies. The unit is currently undergoing certification by the National Information Assurance Partnership (NIAP) to meet Common Criteria Evaluation Assurance Level (EAL) 2. Authentication security capabilities include system administrator authentication, network authentication and 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 IPSec. The internal security audit log permits tracking of activity at the device per regulations such as HIPAA, Sarbanes Oxley and GLBA. 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. Other security features include secure printing, as well as analog fax and network...
isolation, which isolates the fax telephone line and the network connection to foil in-coming attacks. Secure scanning and network management includes support for SNMPv3.

For added security, users can opt for the disk image overwrite, which electronically erases data that has been processed to the hard disk using a three-pass algorithm specified by the U.S. Department of Defense Directive 5200.28-M.

Administrative Utilities

Administrative utilities for the WorkCentre 7665 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, troubleshooting and track meter counts from within this utility.

The CentreWare Internet Services utility allows the administrator to remotely configure the device and manage the device 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. CentreWare Internet Services also features the device’s cloning functionality. When an administrator is installing a fleet and has specific requirements and default settings he or she wants, he or she can now clone across the fleet versus having to go to each machine and set each default.

As mentioned in the Security section, Xerox Standard Accounting tracks copies, prints, scans and faxes. Xerox Standard Accounting is embedded in the software of the device; therefore, there are no additional third-party applications required. It sets up different types of accounts via CentreWare Internet Services. Up to 2,500 user IDs, 500 group accounts and 500 general accounts are available. In addition, usage limits (up to 16,000,000) 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.
General

Input Tray 1: Ready
Input Tray 2: Empty
Input Tray 3: Ready
Input Tray 4: Ready
Input Tray 5 (Optional): Ready

Output Destination

Consumables

CentreWare Internet Services Utility