



Digital Multifunctional Device  
Dry Toner  
Electrostatic Imaging

**Panasonic**  
Digital Document Company  
**WORKiO DP-C401**

October 2003

**BACKGROUND INFORMATION**

The Panasonic WORKiO DP-C401 is a black-and-white *and color* digital copier/printer designed for the general office. As such, the unit competes against the Canon imageRUNNER 2050 and 2058, Ricoh Aficio CL7000CMF. Minolta CF2002 and CF1501, and Sharp AR-C150/2C50.

As with these competitive units, the DP-C401 is also targeted at replacing multiple desktop color printers. The unit features an embedded Xerox controller that is based on a Power PC processor, and provides "RIP-while-print," printing while receiving new data, and printing while scanning hard copy, making it especially useful for shared workgroup use.

**VENDOR PRODUCT-POSITIONING STATEMENT**

(**EDITOR'S NOTE:** The information contained in the *Vendor Product Positioning Statement* below was provided by the product vendor *before* the results of the test were released. It is not intended to serve as a response to the results of the *Critical Test Report*.)

"The WORKiO DP-C401 is the quintessential 'multi-functional color product.' It is for those who work in both a color and black-and-white work environment. Its outstanding color quality and performance doesn't compromise its 40-ppm monochrome MFP performance, including an outstanding First Copy Out Time, warm-up time, copy and print productivity. Its black and white output is superior to that of many monochrome-only devices on the market today. Incredible output quality is matched by its powerful standard configuration. The DP-C401 is a standard printer, scanner, copier with maximum paper supply, memory and accessories. Indeed, only two options are available - a multi-position stapler and scan-to-e-mail option. It is the complete MFP for today's work environment." – **Panasonic Corporation.**



**CRITICAL  
TEST REPORT®**

Digital Multifunctional Device  
Electrostatic Imaging

**Vendor Background**

Panasonic Communications  
& Systems Company  
Two Panasonic Way  
Secaucus, New Jersey  
(201) 348-7000  
<http://www.panasonic.com>

**Panasonic WORKiO DP-C401  
Specs-At-A-Glance**

Rec. MPV. .... 21,000 pages  
Print Speed..... 22/40 color ppm  
Max. Paper Size ..... 12"x19"  
Max. Resolution..... 1200 dpi  
Std. Paper Cap.... 3,140 sheets  
Max. Paper Cap... 3,140 sheets  
Paper Weights. 16lb. bond -110  
lb. index  
Color Output/  
Scanning ..... Yes/Yes  
Std. RAM ..... 512MB  
Hard Disk ..... 10 GB  
Network Scanning ..... Yes

**Tested Configuration  
(List Pricing)**

WORKiO DP-C401 .....\$26,750\*  
Finisher..... \$4,395  
**Total ..... \$31,145**

\*Includes network printing and  
scanning, 2,000-sheet LCT and  
duplexing

**Other Available Options**

Token Ring Interface ..... \$595  
Foreign Interface Kit ..... \$150

**Industry Analysts, Inc.**

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1275 Bloomfield Avenue  
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## DEVICE OVERVIEW

### ENGINE

Panasonic Rated Speed .....	22 (color)/40 ppm
Rated FPOT.....	10.1 (color)/6.8 seconds
Resolution.....	1,200 dpi
Rec. Monthly Volume.....	21,000 pages

### PAPER CAPACITIES

Std. Supply .....	3,140 sheets
Sizes .....	5.5" x 8.5"-12" x 19"
Paper Weights .....	16 lb. bond - 28 lbs. index (bypass: 16 lb bond - 110 lbs. index)
Paper Trays .....	2x500 sheets, 2,000 sheets
Optional High Capacity Feeder .....	None
Max. Supply.....	3,140
Bypass .....	100 sheets

### MINIMUM/MAXIMUM INPUT CAPACITIES

DADF .....	50 sheets
Panasonic Rated DADF Speed .....	31 ppm
DADF Original Size.....	11"x 17"
Scanner Resolution.....	600 dpi

### OUTPUT CAPACITIES

Optional Finisher .....	1,000 sheets
Offsetting Catch Tray .....	Yes
Stapling.....	50 sheets/3 positions

### COPIER FEATURES

Hard Drive.....	512 MB
Scan-Once-Print-Many .....	Yes
Electronic Collation .....	Yes

### NETWORK PRINTING

Controller .....	Power PC 750
Printer RAM .....	512 MB
Interface .....	10/100BaseT Ethernet
Supported NOS .....	Windows 95, 98, NT 4., 2000, XP; Mac OS 9.x
Print Drivers .....	PCL 5e, PCL 6, Adobe PS 3

### SOFTWARE

- Internet Services (printer Web home page)
- Network Scanner Utility

### SCANNING FEATURES

Color scan-to-file .....	Yes*
Scan-to-e-mail .....	No
Scan-to-FTP-site .....	Yes
Scan-to-desktop .....	Yes**
Scan-to-Internet fax .....	No
Scan-to-fax .....	No
QWERTY-style keypad.....	No
Authenticated e-mail.....	No
LDAP-compatible.....	No

\*JPEG or TIFF format.

\*\*Users must scan documents to *Internet Services'* mailboxes, and then retrieve them using the *Internet Services* printer Web page.

### OTHER NOTEWORTHY FEATURES

- Standard scanning to the user mailboxes contained within the unit's memory.
- Full bleed tabloid-size paper capability (prints images up to 11.7" x 18.8" images on paper up to 12" x 19")

### OTHER CONFIGURATIONS

- None

### DIMENSIONS, WEIGHT AND POWER

Height .....	45.1"
Width .....	26.2"
Depth.....	30.7"
Weight .....	383 lbs.
Power .....	115V, 60Hz 15A (115v), 10A (220/240v)
Dedicated Outlet.....	Yes

### SOLD THROUGH

Authorized Panasonic dealers and branches

## IMAGE QUALITY

Image-quality samples were produced using a variety of applications. Image quality was measured from images produced using the default automatic settings.

	<b>Panasonic WORKiO DP-C401</b>							
	<b>Black Output</b>				<b>Color Output</b>			
<b>Copier Optical Density</b>	1.374				1.418*			
<b>Copy Resolution</b> - (Minimum line pair reproduced per millimeter [lp/mm])	6 lp/mm				4 lp/mm			
<b>Printer Resolution</b> - (Horizontal/vertical point lines produced)	3 pt.				<b>C</b>	<b>Y</b>	<b>M</b>	<b>K</b>
					4 pt.	4 pt.	4 pt.	4 pt.
<b>Copier Halftone Reproduction</b> - (Moiré effect noted in auto mode expressed as line screen/halftone)	85/80, 50, 30, 20, 10%				150/30, 20% 133/50, 20% 120/30, 20%			
<b>Minimum Copier Halftone Reproduced</b> - (Before white)	85 line screen/10%				150 line screen/5%			
<b>Maximum Copier Halftone Reproduced</b> - (Before black)	85 line screen/95%				85 line screen/95%			
<b>Printer Halftone Reproduction</b> - (Using an original with halftones ranging from 10% to 100% coverage in 10% gradations)	Halftone gradations were even.				Halftone gradations were even.			
<b>Positive/Negative Line Reproduction</b> - (Discernable differences between line widths when printed in widths ranging from 1 - 6 pts.)	There were no discernable differences between the horizontal and vertical widths of the negative and positive lines.				Positive 1, 2, 3 pt.		Negative 1, 2, 3 pt.	
<b>Positive/ Negative Dot Reproduction</b> - (Percent of correctly printed 1 and 2 pixel positive/negative dots)	<b>1 Pixel</b>		<b>2 Pixel</b>		<b>1 Pixel</b>		<b>2 Pixel</b>	
	Positive 100%	Negative 0%	Positive 100%	Negative 50%	Positive 100%	Negative 100%	Positive 100%	Negative 50%

\*Process black – Image Density

### Image-Quality Discussion

In testing, the Panasonic WORKiO DP-C401 produced above-average black-and-white image quality. The device also produced color image quality that was somewhat better than that produced by other workgroup color devices tested to date by IATSD. Note that because there is no fuser oil, prints are less shiny, and are more matte in finish when compared to prints produced by some other color laser-imaging devices.

## NETWORK-PRINTER PRODUCTIVITY

IATSD determined printer productivity using its controlled Windows 2000 local area network with a Windows 2000 Professional client. Since printer productivity involves many minor variables (such as network hardware/software throughput efficiency, network-queue polling times, network-server processing power and computer-workstation processing power), the printer-productivity test results below may be difficult to replicate. Productivity tests were performed using a 10-page Microsoft Word text document. Timings were performed using default printer settings, and timing began from the “click of the mouse” until the complete exit of the print.

	<b>Panasonic WORKiO DP-C401</b>	
<b>Paper Source/Feed/Output</b>	Tray 1/Long-edge/Finisher	
<b>Advertised Print Speed</b>	40 ppm (black-and-white)	
<b>Print Driver</b>	<b>PCL 6</b>	<b>PostScript Level 3</b>
<b>Simplex First Page Out Time</b>	12.2 seconds	9.3 seconds
<b>1 Set Simplex</b>	12.0 ppm	26.2 ppm
<b>3 Sets Simplex</b>	22.0 ppm	33.9 ppm
<b>5 Sets Simplex</b>	27.0 ppm	35.1 ppm
<b>10 Sets Simplex</b>	32.5 ppm	35.4 ppm
<b>Duplex First Page Out Time</b>	25.2 seconds	14.0 seconds
<b>1 Set Simplex to Duplex</b>	10.6 ppm	21.2 ppm
<b>3 Sets Simplex to Duplex</b>	19.1 ppm	27.2 ppm
<b>5 Sets Simplex to Duplex</b>	22.7 ppm	28.9 ppm
<b>10 Sets Simplex to Duplex</b>	26.5 ppm	29.0 ppm

### IATSD “Snapshot” of Competitive Productivity Test Results

In the chart below, the Panasonic WORKiO DP-C401’s black-and-white printer productivity is compared to the black-and-white productivity of another color imaging device tested by IATSD, one rated at 38 ppm by its manufacturer in black-and-white mode.

As can be seen, the Panasonic DP-C401 was faster than the other unit in simplex and duplex PostScript modes (it also had faster First Page Out Times in PostScript mode), while the other unit was faster in PCL mode.

ppm	PCL Simplex (Sets)					PCL Duplex (Sets)					PostScript Simplex (Sets)					PostScript Duplex (Sets)				
	FPOT*	1	3	5	10	FPOT*	1	3	5	10	FPOT*	1	3	5	10	FPOT*	1	3	5	10
38	11.44	23.8	31.9	34.1	36.0	18.99	19.0	28.4	31.6	34.4	12.69	21.9	30.9	33.5	35.8	21.31	18.0	26.0	31.6	33.4
<b>40**</b>	<b>12.20</b>	<b>12.0</b>	<b>22.0</b>	<b>27.0</b>	<b>32.5</b>	<b>25.16</b>	<b>10.6</b>	<b>19.1</b>	<b>22.7</b>	<b>26.5</b>	<b>9.30</b>	<b>26.2</b>	<b>33.9</b>	<b>35.1</b>	<b>35.4</b>	<b>14.00</b>	<b>21.2</b>	<b>27.2</b>	<b>28.9</b>	<b>29.0</b>

\*FPOT = First Page Out Time (seconds).

\*\*Panasonic WORKiO DP-C401 test results.

## COPIER PRODUCTIVITY

Black-and-white copy jobs were timed from the press of the “Start” button until the complete exit of the copy using a 10-page original, the document feeder and default automatic settings.

	<b>WORKio DP-C401</b>
<b>Paper Source/Feed/Output</b>	<b>Tray 1/Long-edge/Finisher</b>
<b>Advertised Print Speed</b>	<b>40 ppm (black-and-white)</b>
<b>Simplex First Copy Out Time</b>	10.1 seconds
<b>1 Set Simplex</b>	19.4 ppm
<b>3 Sets Simplex</b>	27.7 ppm
<b>5 Sets Simplex</b>	28.6 ppm
<b>10 Sets Simplex</b>	29.9 ppm
<b>Duplex First Copy Out Time</b>	15.6 seconds
<b>1 Set Simplex to Duplex</b>	19.0 ppm
<b>3 Sets Simplex to Duplex</b>	26.2 ppm
<b>5 Sets Simplex to Duplex</b>	27.2 ppm
<b>10 Sets Simplex to Duplex</b>	28.1 ppm

### IATSD “Snapshot” of Competitive Productivity Test Results

In the chart below, the 40-ppm WORKio DP-C401’s black-and-white copier productivity is compared to that of another color device tested by IATSD, one rated at 38 ppm in black-and-white by its manufacturer.

As may be seen, the WORKio DP-C401 was faster than the other unit in duplex mode, but slower in simplex mode.

Simplex Copies (Sets)						Duplex Copies (Sets)				
ppm	FCOT*	1	3	5	10	FCOT*	1	3	5	10
38	8.6	26.0	33.3	35.3	36.9	17.3	18.7	23.5	24.8	26.2
<b>40**</b>	<b>10.1</b>	<b>19.4</b>	<b>27.7</b>	<b>28.6</b>	<b>29.9</b>	<b>15.6</b>	<b>19.0</b>	<b>26.2</b>	<b>27.2</b>	<b>28.1</b>

\*First Copy Out Time = FCOT (seconds).

\*\*Panasonic WORKio DP-C401 test results.

## Color Versus Black-and-White Productivity Comparison

In order to compare the differences in print speed between color and black-and-white output, IATSD made copies of a full-color, 10-page MS PowerPoint presentation with a solid background. Tray 1, which was configured for 8-1/2" x 11" long-edge feeding, was used as the paper source. Copies were output to the center tray.

	Black Output	Color Output	Color/Black & White Differential (%)
First Copy Out Time	10.05 seconds	15.49 seconds	<b>54.13%</b>
1 Set Simplex	31.52 seconds	40.06 seconds	<b>27.09%</b>

## Productivity Discussion

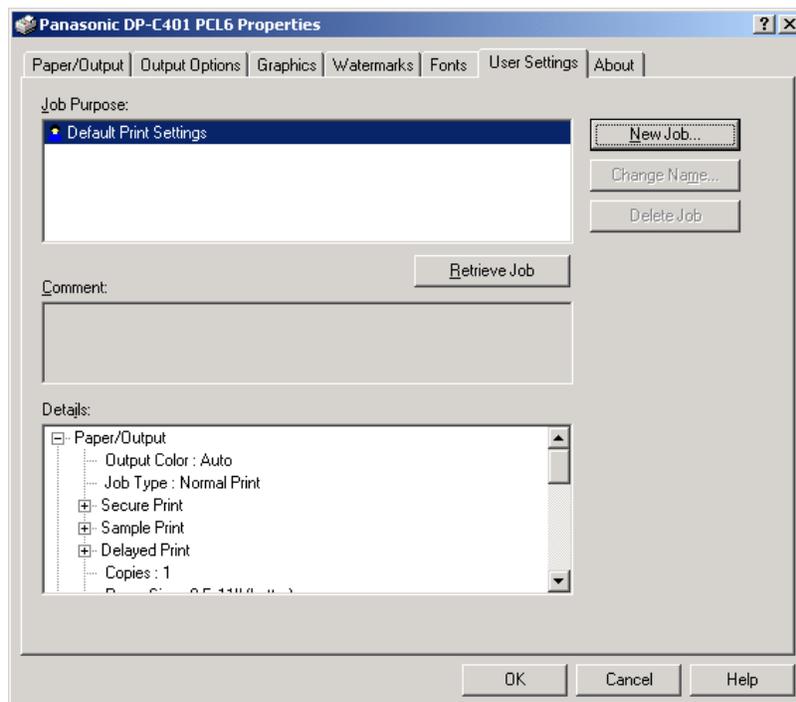
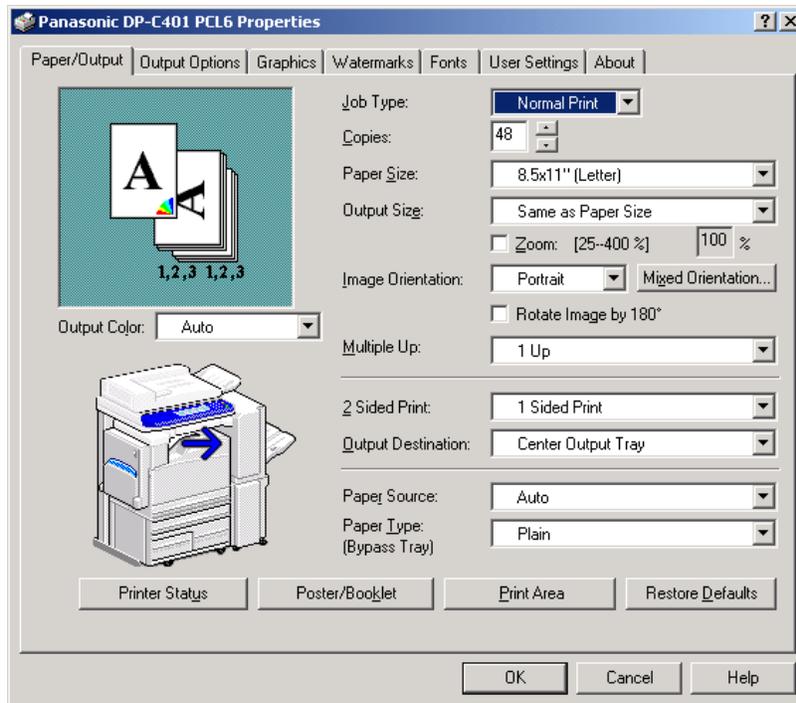
Interestingly, when printing black-and-white output, the unit was considerably more productive in Adobe PostScript mode, than in PCL mode in testing (usually it is the opposite). First Page Out Times for both simplex and duplex were also faster in PostScript mode. Indeed, the unit was more productive in Adobe PostScript 3 mode than it was in copier mode.

In both printer and copier modes, the unit was from 27 to 36 percent slower printing a 10-page document containing spot color than when printing black-and-white output.

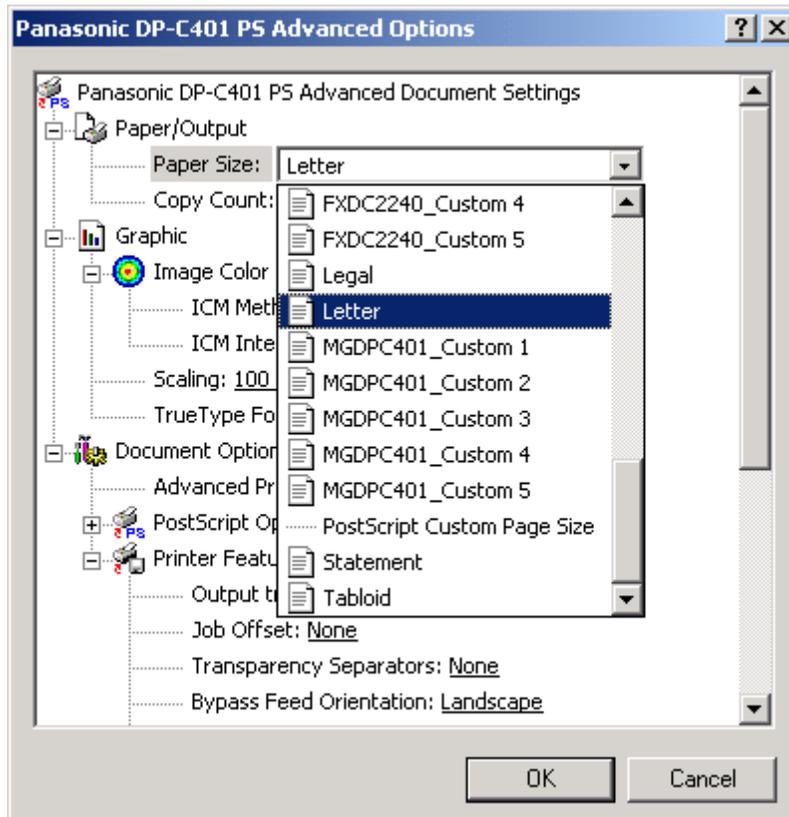
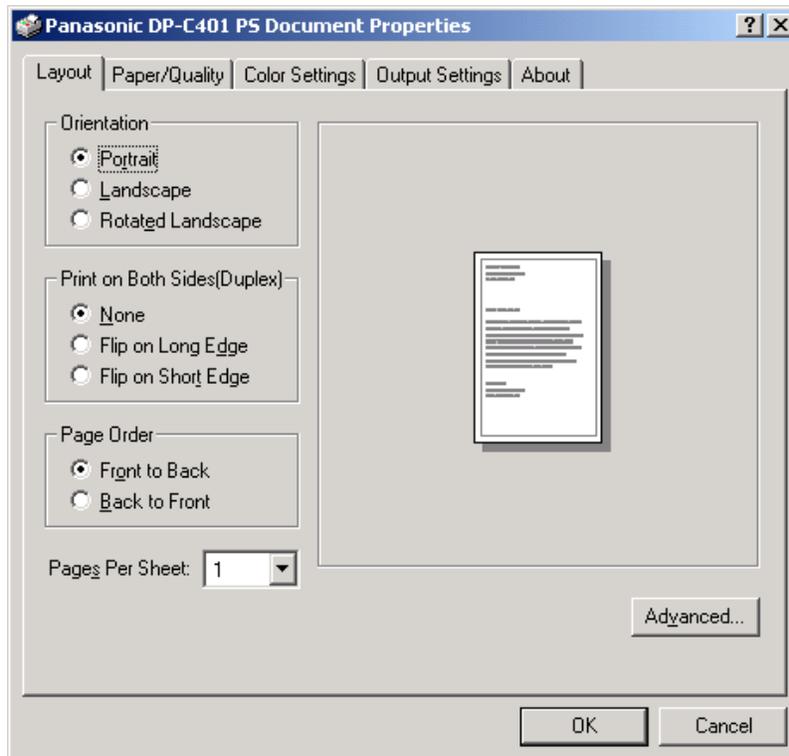
First Page Out Time in both copy and print modes was faster than most workgroup color MFPs and was as fast (or faster) than that of many tested black-and-white imaging devices.

## PRINT DRIVERS

The Panasonic WORKiO DP-C401 is equipped with PCL 6 and Adobe PostScript Level 3 print drivers.



**Figures 1-2** – The Panasonic WORKiO DP-C401’s PCL 6 print driver. On the top is the “Paper/Output” (main) tab that contains most programming options. On the bottom is the “User Settings” tab where users can store and recall the print settings used for commonly printed jobs.



**Figures 3-4** – The Panasonic WORKio DP-C401’s PostScript Level 3 print driver. On the top is the “Layout” (main) tab.

On the bottom is the “Advanced Options” tab. Note that this is the standard user interface provided with the Adobe PostScript driver development kit. This means that users with previous PostScript experience will be familiar with its use.

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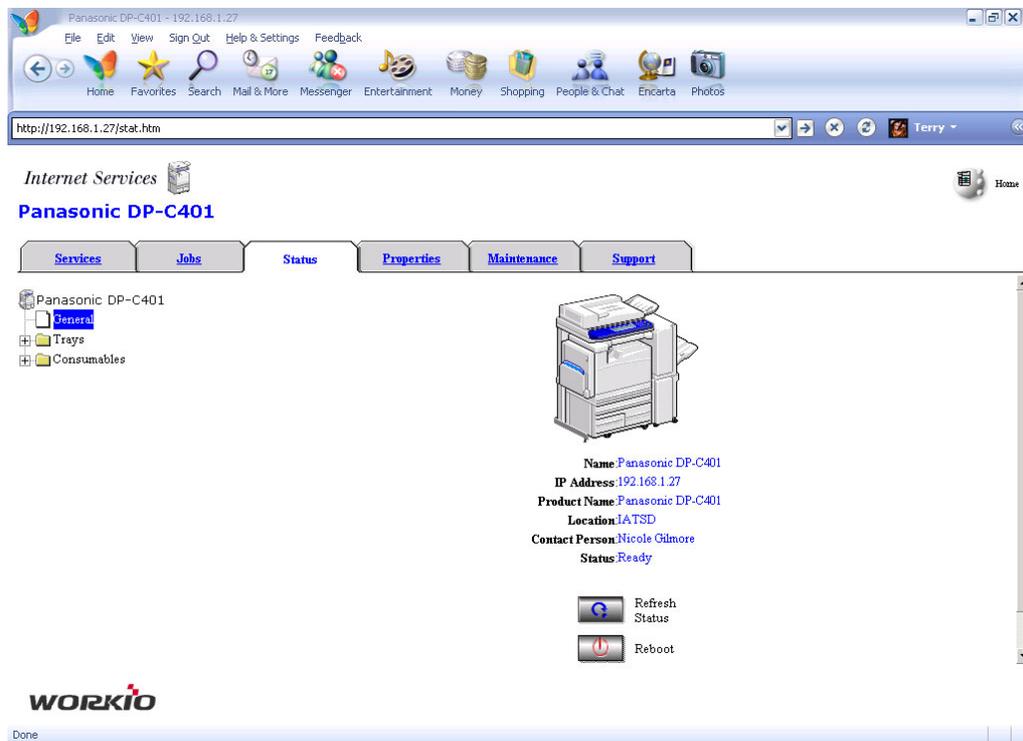
## **Print-Driver Discussion**

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The PCL and PostScript print drivers do not have the same user interface. This is a minor disadvantage, as it complicates support and training since users may have to learn how to use two user interfaces. Additionally, the print drivers do not provide bi-directional communication. Instead, users must consult Internet Services in order to see if the device is ready, to view installed paper sizes, etc. Finally, the user interface of the Adobe PostScript print driver (Figure 4) is rather difficult to use for programming advanced features. However, the interface is the same as nearly every other Adobe PostScript print drivers so users who have PostScript experience will have no problems programming the print driver.

## PRINTER-MANAGEMENT SOFTWARE

<p><b>Internet Services</b></p>	<p><i>Internet Services</i> is a Web-based network-printer management solution for administrators. It may be accessed by launching a standard Web browser and entering the printer's IP address in the address field. Alternately, it may be accessed directly at the computer desktop, without having to launch a Web browser. With <i>Internet Services</i>, administrators may access the device's embedded printer Web page. There they can view device status ("ready," "load paper," etc.), and the device's print queue. They may also:</p> <ul style="list-style-type: none"> <li>• Submit a print job by entering a file name without having to open the application with which the file was created, thus saving time.</li> <li>• Make settings for the job, such as duplex/simplex, number of copies, etc.</li> <li>• Delete pending print jobs.</li> </ul> <p>Clients may also use <i>Internet Services</i> to view device status and the status of the print queue. However, an administrative password is required to change network connectivity and configuration settings.</p>
<p><b>Network Scanner Utility</b></p>	<p>Enables users to access stored data in Internet Services' mailbox. It includes a TWAIN Network Scan Driver that enables users to retrieve scanned documents stored in Internet Services' mailboxes.</p>



**Figure 5** – The Panasonic WORKio DP-C401's *Internet Services* printer Web page. *Internet Services* enables users to view the DP-C401's status and availability via a standard Web browser, and does not require the installation of any software on the user's workstation. Administrators may also remotely monitor and configure network settings with *Internet Services*.

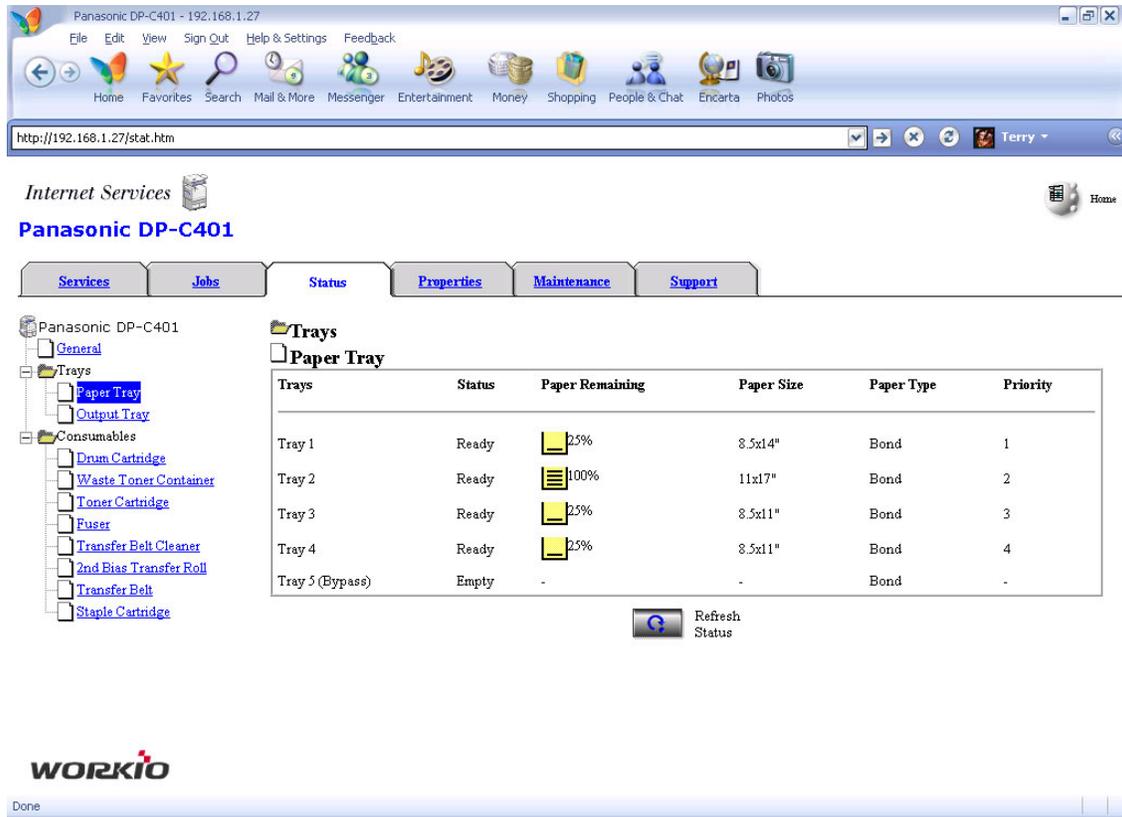


Figure 6 – The Panasonic WORKiO DP-C401’s *Internet Services* indicating current paper levels (in percentage), and currently installed paper sizes, types and priority.

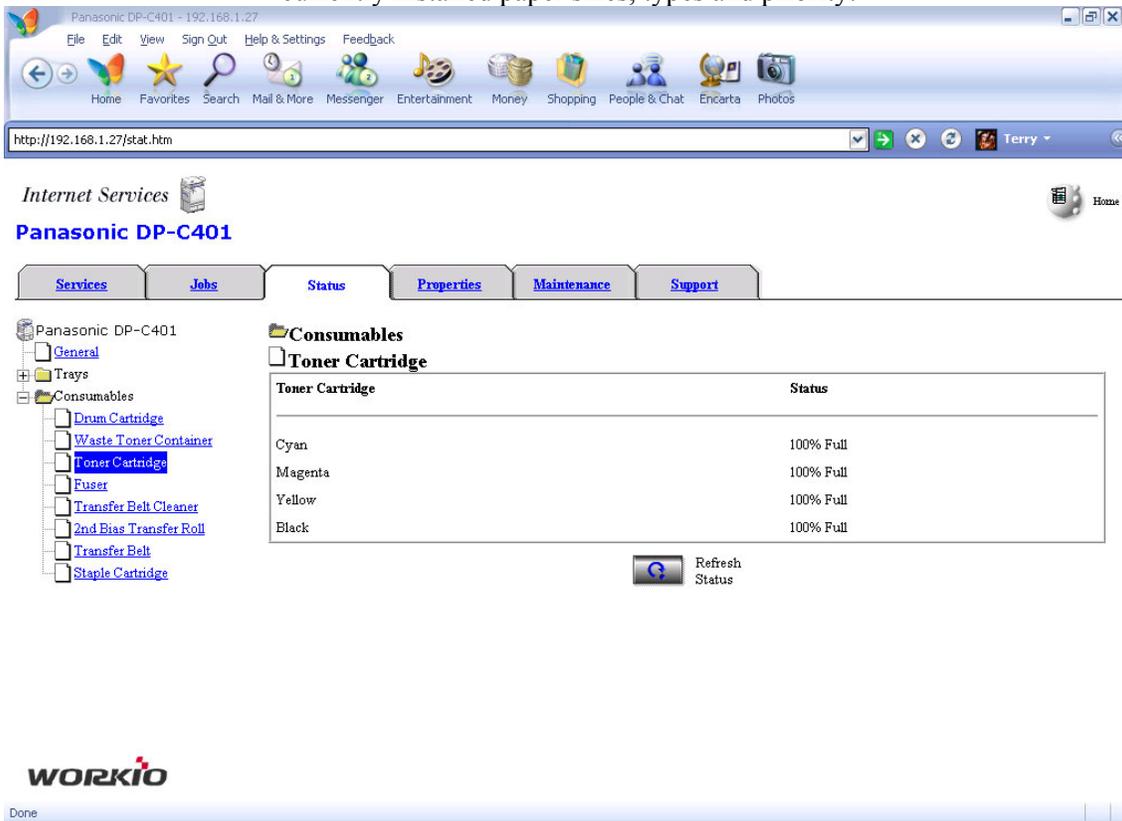
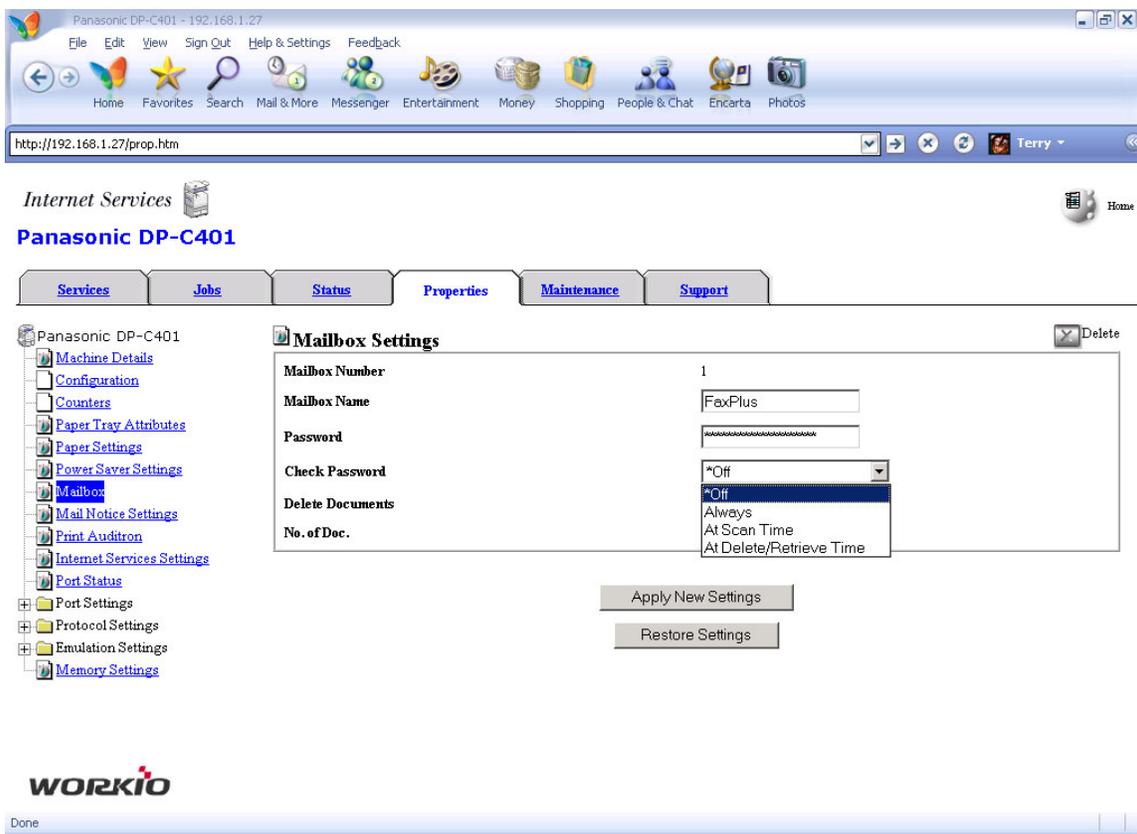
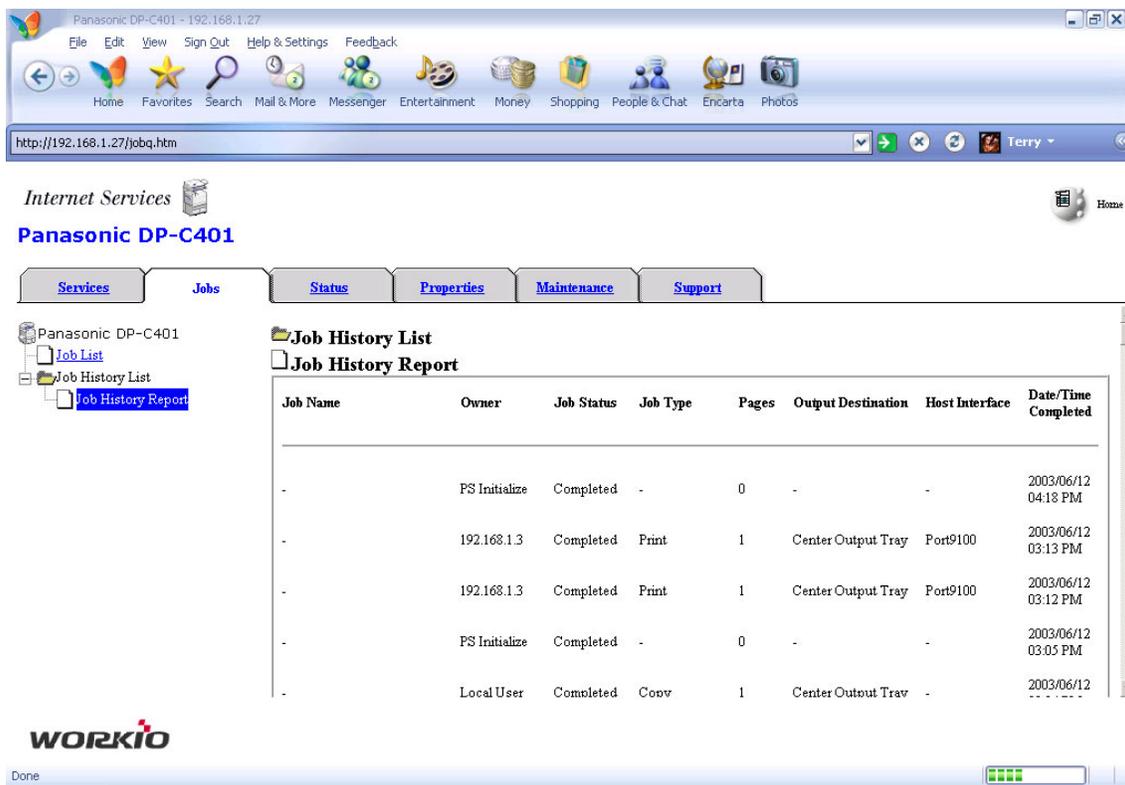


Figure 7 – The Panasonic WORKiO DP-C401’s *Internet Services*, here indicating in percentage the remaining toner in each of the four toner cartridges.



**Figure 8** – The Panasonic WORKiO DP-C401’s *Internet Services*. Above, the administrator may create password-protected electronic mailboxes where scanned files may be stored and retrieved by users



**Figure 9** – The Panasonic WORKiO DP-C401’s *Internet Services* job log indicating the status of various print jobs.

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## Printer-Management Software Discussion

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**Printer-Management Software Discussion:** The WORKiO DP-C401 features *Internet Services*, an exceptionally complete printer Web home page. *Internet Services* is clearly part of a well-thought-out printer-management and usability strategy. It is *not* an afterthought, which is the case with many competitors.

In order to view device readiness and status, users consult the printer's Web home page, Internet Services. Here users can check if the device is ready, and the installed paper sizes and types, as well as remaining paper levels. Among many other features, there are also links to the administrator's e-mail address.

## NETWORK SCANNING

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With the WORKiO DP-C401, users can scan using two methods. **First**, users may either store a scanned job in one of *Internet Services*' mailboxes, and then later retrieve the scanned stored document at their desk using *Internet Services*. Users can save scanned documents in JPEG or TIFF format.

Administrators must set up *Internet Services*' mailboxes for their different users. Administrators will typically assign mailboxes individual passwords; in order to retrieve document stored from within their particular mailbox, the user must enter a password that the administrator sets for them.

**Second**, users can also scan and retrieve documents using *Job Templates* created by the administrator (the administrator uses *Internet Services* to create these scanning templates).

These *Job Templates* specify scan settings, such as “full color,” and in which mailbox the scanned document should be stored. Administrators can create up to 250 job templates.

For instance, the administrator can configure mailbox #1 for user “Jon” and assign the mailbox the password “Private.” When Jon wishes to scan, he selects mailbox #1 at the WORKiO DP-C401 touch screen, loads the document in the document feeder, makes document settings such as simplex/duplex, and presses “Start.” The document is electronically stored in his mailbox. In order to access the document, the password “Private” must be entered (i.e., note that the administrator may assign different passwords for different users).

### Retrieving Documents Using Internet Services

Scanned documents stored in *Internet Services* mailboxes may be viewed, retrieved or deleted using *Internet Services*. The user must:

1. Launch *Internet Services* (enter the printer's IP address in the Web browser's address field).
2. To retrieve the entire document, select the *Retrieve* option.
3. To retrieve specific pages of the document, check the *Enable* box, type in the page numbers, and then select the *Retrieve* option.
4. *Open* or *Save* the document.

### Retrieving Documents Using The TWAIN Driver

In order to import a scanned document into their software application, users must:

1. Launch their TWAIN-compatible software application (such as Microsoft Word).
2. Select the TWAIN scanning source.
3. Select the DP-C401 from *Sources*, then select *OK*.
4. From the File menu, select the command to import the image from the scanner.
5. Select the scanner for connection from the list, then select *Scanner*, or “double-click” on the displayed scanner name.
6. Enter the mailbox password, and select *Open Mailbox*.
7. Select the desired document, and select *Import*.

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## Network-Scanning Discussion

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Overall, the Panasonic WORKiO DP-C401's network-scanning capability is not as extensive as that of some other systems. The WORKiO DP-C401 provides scan-to-FTP sites and scanning to *Internet Services*' mailboxes. Users scan to *Internet Services*' mailboxes by either selecting a particular mailbox at the touch screen, or by selecting a pre-configured Job Template at the touch screen. At the desktop, users may retrieve the scanned document by either using *Internet Services*, or by "pulling" documents into their software application. Unlike some other digital copier/printers, it does not provide scan-to-e-mail, scan-to-fax or network scanning "on the fly" (i.e., users cannot enter a new scanning destination at the device's control panel).

# CONTROLS & MAINTENANCE



Figure 10 – The Panasonic WORKio DP-C401’s control panel.

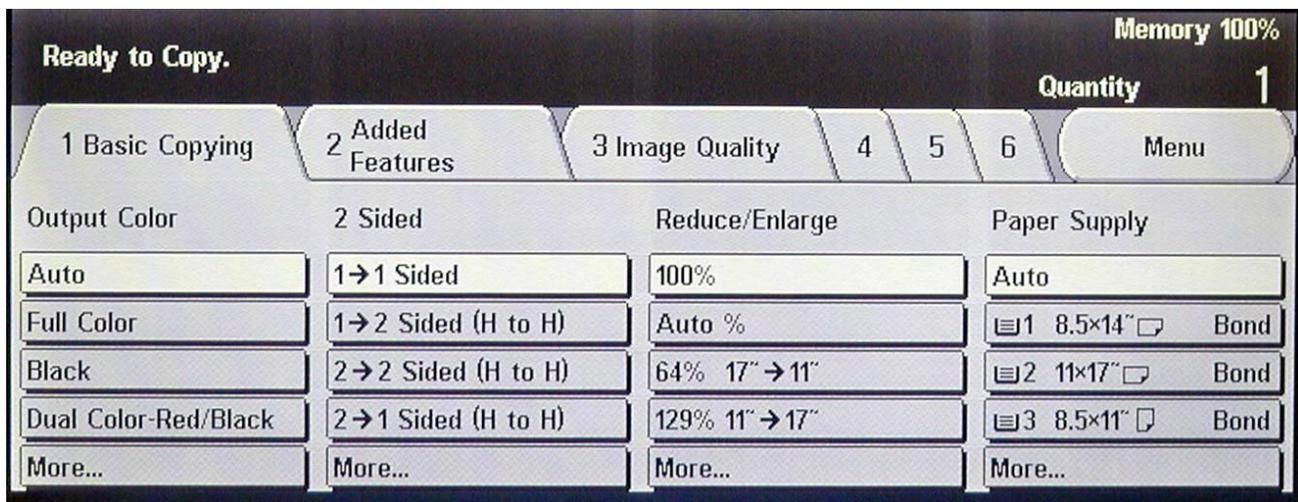


Figure 11 – The Panasonic WORKio DP-C401’s touch screen (main screen).

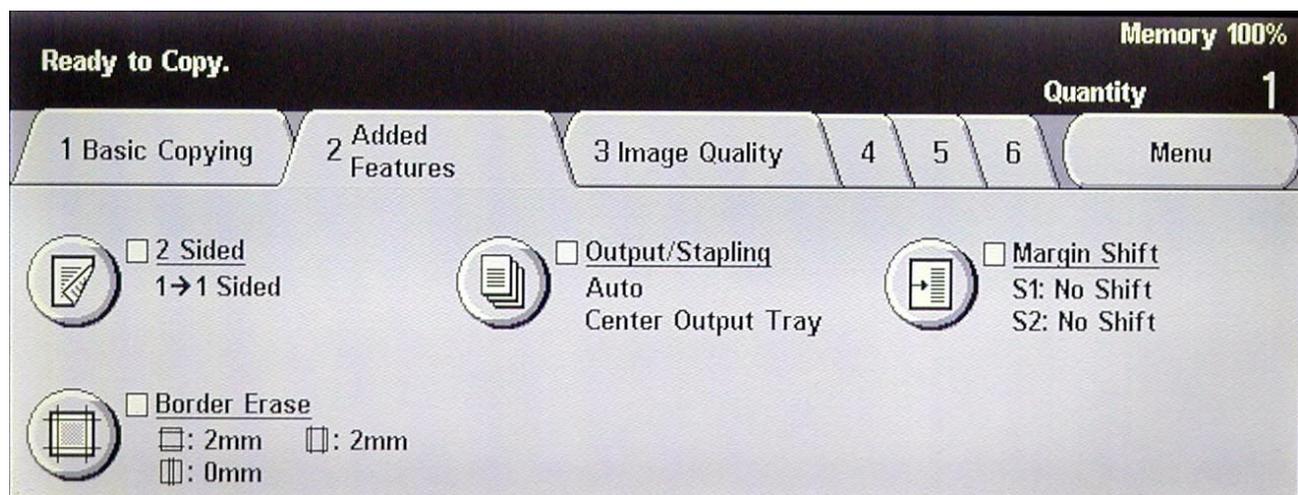


Figure 12 – Additional copier features displayed on the touch screen.

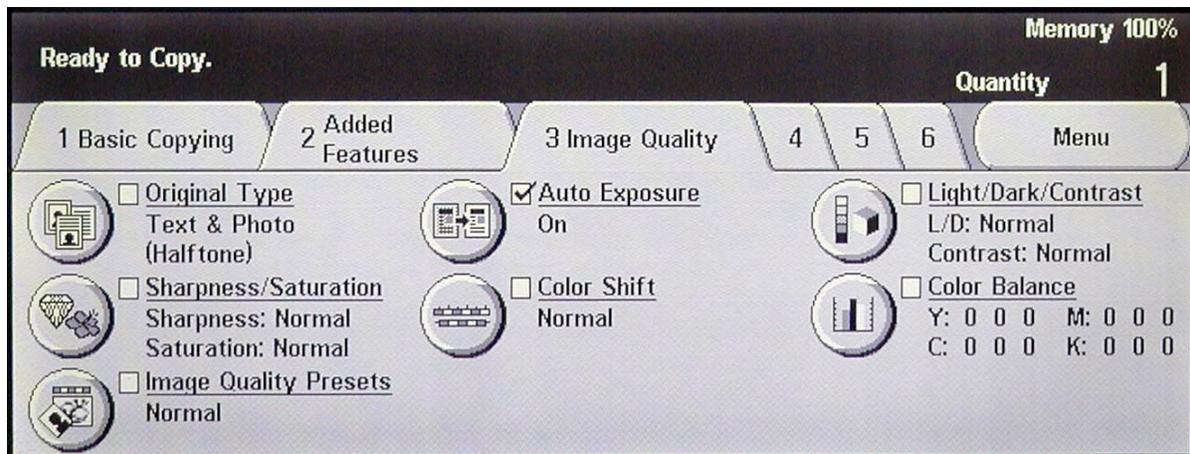


Figure 13 – Various image-quality options displayed on the touch screen.

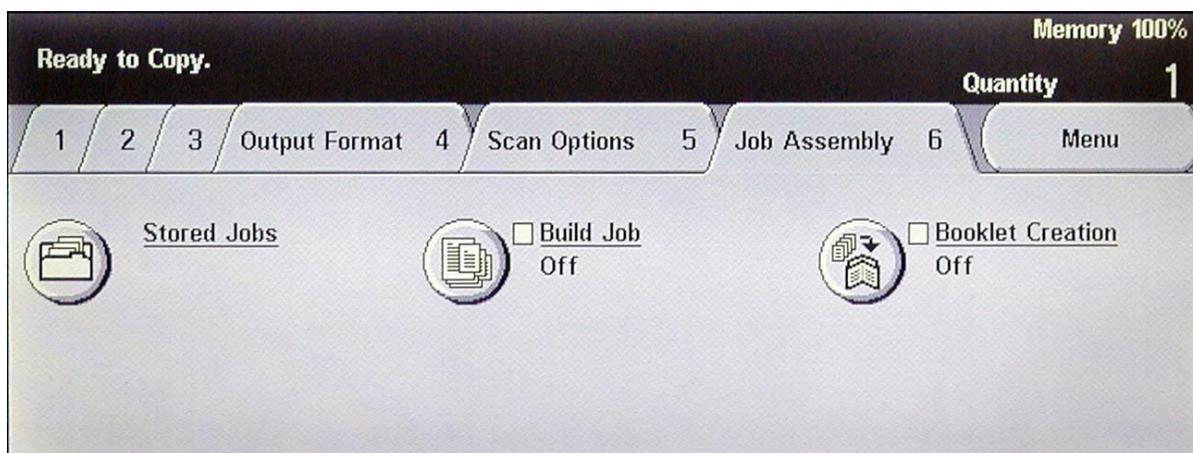


Figure 14 – Job-assembly options displayed on the touch screen.

**Adding Paper:** Adding paper is easy, as it basically involves simply adjusting paper-size guides.



Figure 15 – Adjusting one of the unit's paper drawers.

**Changing Paper Sizes:** Changing paper sizes is simple, as the paper trays are easy to adjust. Additionally, the touch screen automatically indicates new installed paper sizes. This means that, unlike with some other systems, the user need not program-in new installed paper sizes.

**Adding Toner:** Adding toner is very easy to perform. It is one of the cleanest (if not the cleanest) toner-addition processes IATSD has evaluated to date.

**Removing Misfeeds:** The short paper path provides minimal misfeed areas with good access as well as detailed instructions so that misfeeds can be easily removed. Overall, the unit provides easy misfeed clearance.



**Figure 16** – The finisher's misfeed-access area.



**Figure 17** – The finisher's bridge misfeed-access area.



**Figure 18** – Another view of the finisher’s bridge misfeed-access area.

## **Controls and Maintenance Discussion**

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Overall, it’s hard to find fault with either the Panasonic WORKiO DP-C401’s control panel and touch screen, or with the design of its paper trays and the ease of changing supplies. The control panel and touch screen are virtually self-explanatory – both are well-laid out, are not cluttered, and are simple to use. However, while it is easy to access and remove misfeeds from the base unit, removing misfeeds from the optional finisher can be complicated.

## Competitive Advantages

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- In testing, the Panasonic WORKiO DP-C401 produced excellent black-and-white image quality. The device also produced color image quality that was as good or better than that produced by other workgroup color devices tested to date by IATSD.
- Efficient printer controller (Power PC), which experienced no difficulty outputting complex color images.
- The WORKiO DP-C401 is easy to use and maintain; for instance, it automatically indicates on the touch screen and over the network when new paper sizes are installed.
- Excellent printer Web home page (*Internet Services*).
- Outstanding, easy-to-use control panel and touch screen.
- Easy and clean supply maintenance.
- At a list price of \$26,750 the WORKiO DP-C401 comes “fully loaded” with color network printing, network scanning, 2,000-sheet LCT and duplexing. The only items that are optional are the finisher, Token Ring interface and foreign-interface kit.
- Ample standard paper capacity (3,140 sheets) and versatile paper-weight handling (16 lb. bond -110 lbs. index).

## Competitive Disadvantages

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- Relatively long warm-up time when compared to other workgroup imaging devices.
- No manual standby mode or saddle-stitch finisher.
- Adobe PostScript print driver user interface is difficult to use; however, the unit is more productive in PostScript mode.
- Priced *higher* than other digital color copier/printers that have faster advertised speeds than the WORKiO DP-C401.
- Limited network-scanning capability. No scan-to-e-mail or network folder. No scanning directly to the user’s computer desktop (the user must retrieve scanned documents using the TWAIN-compatible *Network Scanning Utility* and *Internet Services*).

<b>Most Suitable For:</b>	<b>Less Suitable For:</b>
<ul style="list-style-type: none"> <li>• Black-and-white <i>and</i> color copying and printing.</li> </ul>	<ul style="list-style-type: none"> <li>• Office environments requiring fax and scan-to-e-mail capability.</li> </ul>
<ul style="list-style-type: none"> <li>• Small- to mid-size workgroups.</li> </ul>	<ul style="list-style-type: none"> <li>• Production black-and-white and color applications.</li> </ul>
<ul style="list-style-type: none"> <li>• Short-run production color applications</li> </ul>	

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## Conclusion

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The Panasonic WORKiO DP-C401 performed exceptionally well in testing. Indeed, it produced black-and-white image quality that was better than that produced by many black-and-white *only* devices tested. At the same time, the WORKiO DP-C401's color image quality and productivity was better than that of many color workgroup devices as well. Note, however, that the WORKiO DP-C401's prints have a less glossy appearance (are more "matte") than prints produced by some other color laser devices.

The Panasonic WORKiO DP-C401 was also supremely easy to use, as it is equipped with the best user interface IATSD has seen to date among color MFPs. It is also exceptionally easy to deploy and manage, as it is easy to install on the network, there is minimal software to install and support, and users will require minimal support and training on its use.

As with all office imaging devices, in testing, the unit had several minor weaknesses:

1. Warm-up time is longer than that of black-and-white MFPs.
2. When printing in color, the unit pauses at random intervals in order to calibrate one or more of the color drum units. This happens with other color MFPs, but not with other black-and-white MFPs.
3. With the Panasonic DP-C401, there are potential cost and/or management considerations due to the fact that a full color page can cost upwards of 8.9¢. Of course, keep in mind that the WORKiO DP-C401's black-and-white supply cost per page is comparable to that of black-and-white MFPs.
4. There is no bi-directional communication in the print drivers so users have to consult the excellent *Internet Services* printer Web page for device status and configuration information.

All things considered, the WORKiO DP-C401 is as close to being a perfect color MFP that IATSD has evaluated to date. Several options would only enhance the unit, including the addition of a manual energy-save key, saddle-stitch booklet-making finisher option and document three-hole punch option. Network scanning with send-to-e-mail, authentication and LDAP-compatibility would also be desirable.

## Contact Information

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