



Canon DR-4010C

BUYERS LABORATORY INC. Lab Test Report

A Comprehensive BLI Laboratory Evaluation

Canon DR-4010C

84 IPM* Duplex Sheet-Fed
Departmental Document Scanner



Test duration: Two weeks, 7,500 scans



Reliability	Excellent
Media Handling	Excellent
Ease of Setup	Very Good
Drivers/Software	Very Good
Image Processing Features	Excellent
Hardware Ease of Use	Very Good
Ease of User Maintenance	Very Good
Productivity	Excellent
File Size	Good
Footprint	Very Good
Value	Good

* Manufacturer-rated speed at 200 dpi

LAB TEST

BLI RECOMMENDATION

The well-designed Canon DR-4010C sheet-fed departmental document scanner proved to be an impressive performer in BLI's tests. Fairly compact yet sturdily constructed, this unit turned in a flawless reliability performance, producing 7,500 scans without a single misfeed. A strong model across the board, this unit also offers very fast tested speeds that don't slow down when scanning in color or at 300 dpi, along with excellent media handling and very good overall ease of use. Technicians noted that scanning with the DR-4010C is highly automated, with features such as automatic paper size detection and automatic detection of color and black originals eliminating the need for users to make many selections in the software. BLI highly recommends the Canon DR-4010C for users with either letter- or legal-size scanning requirements.



STRENGTHS

- Perfect reliability performance
- Very fast scan speeds that don't slow down in color mode or at 300 dpi
- Scans credit cards and plastic ID cards
- Scans longer documents
- Multi-feed detection
- Auto-detects black and color originals
- Very easy to set up
- Three scanning profiles for simple one-button scanning from the control panel
- Very easy paper loading via its front-loading feeder
- Full version of Adobe Acrobat included and support for encrypted PDFs

WEAKNESSES

- Rollers do not come pre-installed
- No pop-up error message for some paper jams
- Cover for the pick-up roller is not clearly marked and, rather than swinging out of the way, must be removed to replace the roller
- No port for security lock

PERFORMANCE OVERVIEW

+, – and ○ represent positive, negative and neutral attributes, respectively.

RELIABILITY

EXCELLENT

+ The Canon DR-4010C is one of only two scanners tested to date that performed flawlessly in BLI's tests, scanning 7,500 pages without any misfeeds occurring.

Manufacturer's Maximum Daily Volume: 1,500 scans

Malfunctions	Service Required	Meter Count (Scans)
Meter count (beginning of test)		0
End of test period		7,500
Total misfeeds/misfeed rate	0 / Not applicable	
Total Malfunctions	0	

- + The unit is backed by a one-year warranty, during which Canon will replace a defective unit with a replacement unit.

MEDIA HANDLING

EXCELLENT

- + The DR-4010C features a front-loading 100-sheet automatic document feeder with dual CIS scan heads that can feed up to 40-lb. bond (or up to 144-lb. bond when using the unit's alternate straight paper path) at a rate of 84 images per minute. In addition to feeding letter- and legal-size sheets, the Canon DR-4010C can also feed magnetic stripe ID cards, business cards and insurance cards. Long paper up to 39.2" is also accommodated using the long document mode.

- + The DR-4010C features multi-feed detection, which can be disabled to allow feeding of multiple-part forms, for example.

- + Cards as small as 2.1" x 3.4" can be fed through the feeder by adjusting the side guides to the desired size.

- + In BLI's tests, the Canon DR-4010C satisfactorily handled business cards, checks, ID cards, wrinkled documents and multiple-part forms. And when using the long document mode, it can feed documents up to 39.2" long.

- + Although Canon says the scanning of embossed cards, such as credit cards, is not guaranteed, credit cards were also scanned without problems in BLI's tests.

- + In BLI's tests, the DR-4010C fed a mixed batch of documents of different sizes and weights without any problems.

- + There are two feeding modes, adjusted via a lever on the control panel. One is for scanning a stack of documents, while the bypass mode is for scanning one sheet at a time or feeding documents consisting of multiple pages that are attached, such as multi-part forms.

- + Users have a choice of paper paths. Documents of normal weight can be fed through the U-turn paper path and exit onto an integrated exit tray that pulls out from the top front of the unit. An alternate straight paper path allows for the feeding of thin or thick media and small documents such as business cards. A small access door on the rear of the unit, when opened, becomes an exit tray for this straight paper feeding method. When using this paper path, pages are stacked in the reverse order from which they were scanned.

- + The unit's input tray, which is integrated into the scanner, folds down forward to allow paper feeding and folds up over the unit to save space when not in use.



An access door on the rear of the unit, when opened, becomes an exit tray for an alternate, straight paper path for the feeding of thin, thick or smaller media.

LABTEST



- + A Folio mode selectable in the driver enables users to scan 11" x 17" documents by scanning them folded in half; both sides are scanned and combined into a single image. This feature worked well in BLI's tests.

EASE OF SETUP

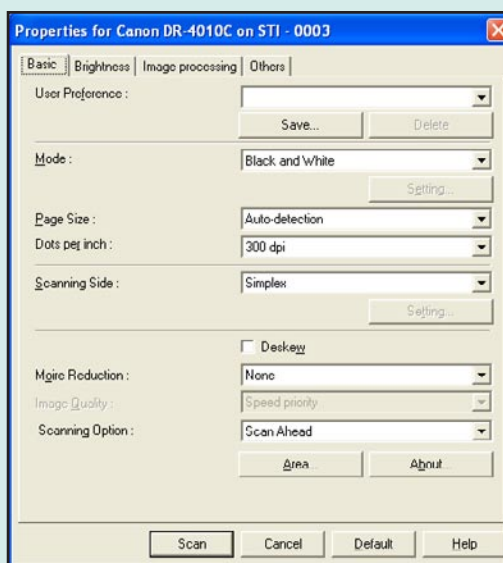
VERY GOOD

- + Setting up the scanner is an easy process. The unit comes bundled with two CDs, one containing the drivers and utilities and the other containing a full version of Adobe Acrobat 7.0. If the user already has Acrobat, only one CD need be installed. Both CDs automatically launch when inserted into the drive. When installing the first CD, which contains the ISIS-certified TWAIN driver and CapturePerfect 3.0 capture software to initiate scanning from the PC, along with user manuals and the Job Registration and Job Care utilities, a typical installation requires 15 clicks of the mouse. A custom installation enables users to install only the desired components and would require fewer clicks.
- + The user then connects the power cord and connects the USB cable between the PC and the scanner, after which no additional steps are required, unlike with some competitive scanners.
- Although, unlike most other scanners tested, the DR-4010C does not come with its pick-up roller and retard roller pre-installed, installing them was not difficult, as access to the area is good. (See "Ease of User Maintenance.")

DRIVER/SOFTWARE

VERY GOOD

- + The ISIS-certified TWAIN driver is Microsoft certified.
- + Most commonly used selections are on the main screen of the driver.
- + Clicking on a Help icon in the driver provides some limited information.
- The scan driver offers average ease of use.
- The driver offers pre-scan, displaying the scanned image on the PC screen.
- + CapturePerfect 3.0 is an ISIS-compatible application for initiating scans from the PC. It enables scanning to a specified folder, a default printer, or to an application on the PC, such as an e-mail application, which will automatically launch.



ISIS-Certified TWAIN Driver

- + Programming the scan profiles that enable users to scan to a user-specified destination using user-specified settings for resolution, file format, type of original, single-sided or double-sided original, etc., was very easy.
- Job Care 4.1, a component of the Job Registration Utility, provides a pop-up message when the unit is scanning that counts the pages as they are scanned. Although it accurately provided error messages in the tests, it did not indicate a paper jam when BLI intentionally caused one in the tests.
- File formats supported include PDF, searchable PDF, encrypted PDF, single-page and multiple-page TIFF and JPEG.

IMAGE PROCESSING FEATURES

EXCELLENT

- + The Canon DR-4010 offers a wide range of image enhancement features—more than on many competitive units. BLI test technicians found that the wide range of automatic image processing features minimized the need to make time-consuming adjustments via software required by many competitive models, contributing greatly to ease of use. For example, the DR-4010C offers automatic paper-size detection and auto cropping so users do not have to specify paper size; and it offers automatic detection of color and black originals so users do not have to specify the type of original.
- + Other image processing features include blank page removal, de-skew, de-speckle (noise removal), smoothing, reverse image, auto-sharpen, back-



ground removal, RGB adjustments, dynamic threshold (automatically adjusts brightness based on the density of the original) and the ability to remove borders and specify certain areas of a document for image processing.

- + The Color Drop-Out feature, which enables users to specify a color to drop out from scanned images so that the text in boxes on a form can be more accurately OCR'd, was easy to use and performed very well in BLI's tests. Unlike most other scanners, which allow users to drop out either red, blue or green, the DR-4010 enables users to specify a custom color (a spectrum of colors is displayed on the screen and users specify the range of color they would like dropped out), allowing for greater flexibility.
- The blank-page detection feature also performed well in the tests.
- + The unit can automatically delete hole-punch marks from scanned images.
- + Resolutions supported range from 100 to 600 dpi.
- Unlike with many scanners tested, OCR software to convert scanned documents into editable text is not bundled with the unit; however, any OCR software could be used.

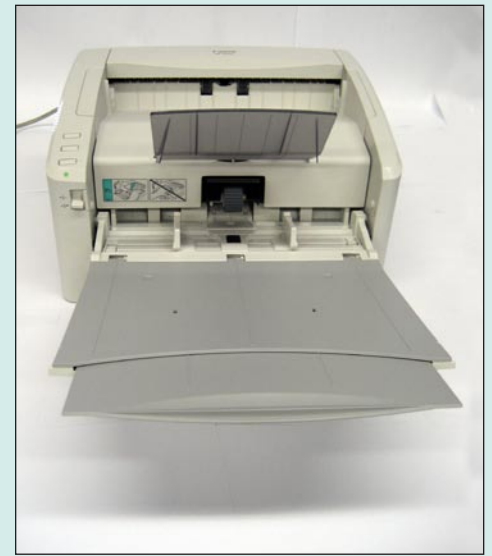
HARDWARE EASE OF USE

VERY GOOD

- + In addition to being able to scan from the PC using CapturePerfect, the DR-4010C enables users to scan directly from three one-touch keys on the scanner by setting up profiles specifying the parameters for the job (destination, resolution, paper size, etc.) using the Job Registration Utility. The three keys on the control panel are pre-set to start a scan job, stop a scan job or save a scan job to the "My Pictures" folder on the PC; however, each can be customized for a specific destination, which can be either a folder on the local PC, a network folder, an application such as Capture Perfect or Photoshop, or a default printer, along with desired settings. The scanner comes with labels that can be affixed to these keys, so users can identify the purpose of the buttons.
- + After scanning using one of the one-touch keys, users can scan using another one-touch key without having to close the scan application on the PC, which is required by some other scanners when switching between buttons.
- The control panel has one LED that illuminates green to indicate the scanner is in a ready condition and blinks to indicate a paper jam or other error condition.
- + Ease of loading documents is above average, thanks to the unit's front-loading feed tray. Other scanners tested are fed from the top or rear of the



Up to three buttons on the control panel can be programmed to allow for quick, simple scanning to a pre-registered location using pre-registered settings.



Fully extended here, the DR-4010C's front-loading feed tray can fold up over the unit when not in use to save space.

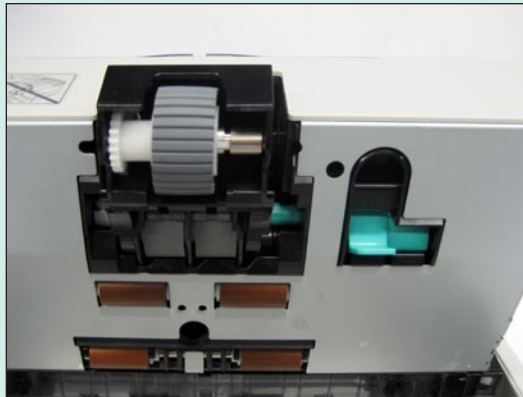
device, which is not as convenient. Moreover, unlike with some other scanners tested, nothing impedes access to the drawer (e.g., rollers do not have to be moved out of the way).

- + BLI test technicians commented that the height and angle for paper loading was perfect for comfortable use.
- The tray is not marked to indicate how to feed originals (face up) or to indicate where various paper sizes should be placed.
- Although the tray is marked with a height indicator that a stack of paper should not exceed, it could easily go unnoticed.
- + Adjusting the side guides for different paper sizes is easy.
- In testing, a pop-up message indicating a paper jam appeared in the software when attempting to feed documents longer than 14” without the long document mode set to on and when the cover was open; however, an error message did not appear when BLI intentionally caused a paper jam.
- Ease of removing misfeeds is average for workgroup scanners tested. There is only one access door to open.

EASE OF USER MAINTENANCE

VERY GOOD

- When roller life has been exceeded, a pop-up message alerts the user to replace the roller. Counters for both the total scans and the feed roller are accessible by selecting the control panel within Windows and then selecting the counter tab for the Canon DR-4010C scanner. The roller counter can be reset without entry of a password. There is no counter for tracking for the life of the lamp.
- A cleaning cloth is not included with the unit.
- + The pick-up roller and retard roller have an estimated life of 250,000 scans.
- Ease of replacing the rollers is average. Although replacement requires alignment of pins on the rollers with holes in the scanner, the access area is good and the interior of the unit is light in color, making parts easier to see. In addition, the rollers are designed such that they can't be inserted the wrong way.
- There is no marker indicating the cover for the pick-up roller, which must be removed to replace the roller. BLI prefers designs in which covers swing away instead of having to be removed.



DR-4010's Feed Roller

PRODUCTIVITY

EXCELLENT

- + The Canon DR-4010C offers tested speeds that are among the fastest of scanners tested to date by Buyers Lab, both when scanning using the driver and when scanning using a one-touch button on the unit's control panel.
- + Scan speeds do not slow down when scanning in color.



+ Whereas most scanners slow down when scanning at 300-dpi resolution as opposed to 200-dpi resolution, the DR-4010C maintained a nearly identical speed.

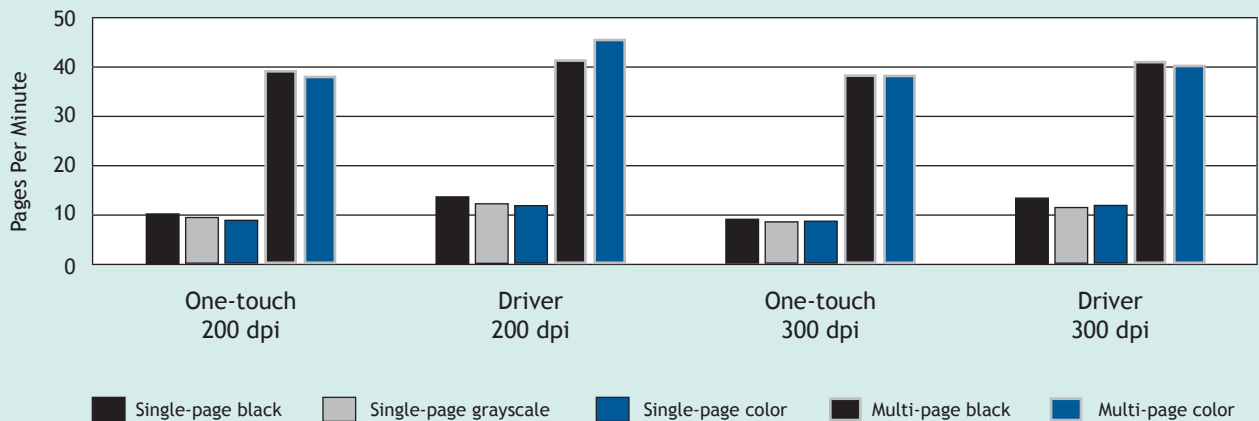
○ Single-page scan speeds are competitive.

Scan Speed (in Pages per Minute)

	One-touch 200 dpi	Driver 200 dpi	One-touch 300 dpi	Driver 300 dpi
Single-page black	10.15	13.61	9.06	13.33
Single-page grayscale	9.43	12.22	8.53	11.43
Single-page color	8.84	11.79	8.65	11.86
Multi-page black	39.18	41.35	38.31	41.03
Multi-page color	38.03	40.54	38.23	40.28

Speed is the same for one-sided and two-sided pages.

Graphic Representation of Scan Speed



FILE SIZE

GOOD

File Size (in Kilobytes)

	200 dpi	300 dpi
Single-page black	32.3	46.5
Single-page grayscale	539	1,104
Single-page color	240	530
Multi-page black	794	1,154
Multi-page color	6,534	13,392



- File sizes of the scanned images produced in the tests were generally competitive for most types of document and in most modes, both at 200-dpi and 300-dpi resolution. File size for BLI's 25-page color document is superior to that of most competitive units, minimizing bandwidth usage. The unit also has a high-compression mode, but the standard mode was used in the tests.

OTHER FEATURES

NOT RATED

- + This unit is also equipped with a port for a SCSI interface.
- The unit does not have a port for a security lock.

FOOTPRINT

VERY GOOD

- + The sturdily constructed DR-4010C measures 12.5" wide x 21.5" deep x 7.4" high and weighs 14.1 lbs. Its design, with integrated trays and supports that can be folded out of the way when not needed, makes for a fairly compact footprint.
- As with most models, the power and USB ports are on the back of the device.

VALUE

GOOD

- + The Canon DR-4010C's price of \$3,995 is competitive with that of other departmental scanners in its speed range.



PERFORMANCE OVERVIEW

Test Environment

This product was tested in BLI's 10,000-square-foot test lab, in an environment monitored by a Honeywell Temp/RH chart recorder, which replicates typical office conditions.

Test Equipment

A PC running Microsoft XP Professional, based on a 2.8-GHz Intel P4 processor with 1-GB memory and an 80-GB hard drive. The scanner is connected to the PC via a USB cable.

Test Duration

Products are tested for two weeks, one week of which consists of a reliability test during which the product is run for 1,500 scans a day.

Tested Configuration

Base unit.

Test Procedures

The test methods and procedures employed by BLI in its lab testing include BLI's proprietary procedures. An industry-standard Katun test original, as well as BLI's 6% coverage original, is used in the speed tests. BLI's test is designed to replicate real-world use over an eight-hour workday, and as such includes a mix of various types and sizes of documents, color and black-and-white, legal size and letter size, single-sided and double-sided. Tested originals include lightweight invoices, checks, business cards, heavier card stocks, credit cards, ID cards and embossed cards, when supported. Speed tests are conducted in black-and-white, grayscale and color modes using both a single page and a stack of 25 pages. The tests are performed at 200-dpi resolution using single-sided pages and default settings, but a test is conducted to check for any slowdowns in duplex mode. Speed tests are also conducted at 300 dpi to gauge the degree of slowdown at high resolutions. The speed is measured both for scans sent from the driver and for scans sent via a one-touch key, when available. OCR tests are performed using default settings at 200 dpi and 300 dpi using a clean, good-quality test document, as well the same document that contains high-lighted text; the same document wrinkled; and the same document printed with very light text.

LABTEST

CERTIFICATE OF RELIABILITY

AWARDED TO
CANON U.S.A., INC.

For the performance of the
Canon DR-4010C
throughout BLI's in-house durability test.

This is to certify that when subjected to a 7,500-scan
Buyers Lab durability test, the Canon DR-4010C
proved to be a highly reliable product.


ANTHONY F. POLIFRONE
MANAGING DIRECTOR



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DATE