

Canon



**imageRUNNER
ADVANCE
500iF / 400iF**



Service Guide

Published by
Canon U.S.A., Inc.
One Canon Park
Melville, NY 11747-3336
1-800-OK-CANON
E-Mail: serviceplanning@cusa.canon.com

Canon U.S.A. Homepage: <http://www.usa.canon.com>
Canon U.S.A. Internet e-Support Center Web site: <http://www.support.cusa.canon.com>
Canon U.S.A. ISG Central Web site: <http://www.isgcentral.cusa.canon.com>
Canon Network Access (CNA) Web site: <http://www.cna.cusa.canon.com>

Distributed in the United States by Canon U.S.A., Inc.

IMPORTANT

THIS SERVICE GUIDE INCLUDES THE INFORMATION RELATING TO THE imageRUNNER ADVANCE 500iF/400iF.

SPECIFICATIONS AND OTHER INFORMATION CONTAINED HEREIN MAY VARY SLIGHTLY FROM ACTUAL DEVICE VALUES OR THOSE FOUND IN ADVERTISING AND OTHER PRINTED MATTER.

USE OF THIS SERVICE GUIDE SHOULD BE STRICTLY SUPERVISED TO AVOID DISCLOSURE OF CONFIDENTIAL INFORMATION.

ALL PRICES LISTED ARE SUBJECT TO CHANGE WITHOUT NOTICE.

PART NUMBERS LISTED MAY BE CHANGED WITHOUT NOTICE TO REFLECT ENGINEERING REVISIONS.

REVISION HISTORY

Revision	Date	Sections	Details
—	May 2013	All	Release of the imageRUNNER ADVANCE 500iF/400iF Series Service Guide.
1	June 2014	II B and C	Added clearer descriptions for the optional Cabinet Type-H (Small) and Cabinet Type-L (Large).

COPYRIGHTS AND TRADEMARKS

This Service Guide is the property of Canon U.S.A., Inc.
© Canon U.S.A., Inc. 2014. All rights reserved.

Canon, imageRUNNER, and Always Ask for Canon Genuine Toner, Parts & Supplies are registered trademarks of Canon Inc. imageWARE is a registered trademark of Canon U.S.A., Inc.

All other company names and product names may be trademarks or registered trademarks of their respective owners, and are hereby acknowledged.

LEGAL NOTICES

The information contained in this Service Guide constitutes confidential information of Canon U.S.A., Inc.

Pursuant to the authorized Service Agreement with Canon U.S.A., Inc., this Service Guide is solely for reference purposes and may be used only by an authorized Service Provider of Canon U.S.A., Inc. No part of this Service Guide may be reproduced or transmitted in any form by any means, electronic or mechanical, for any purpose without the prior written consent of Canon U.S.A., Inc., except as expressly permitted herein.

Pursuant to the authorized Service Agreement with Canon U.S.A., Inc., the Service Provider agrees to indemnify Canon U.S.A., Inc. and to hold it harmless from and against any and all claims arising out of Service Provider's possession, use, or misuse of this Service Guide.

As an authorized Canon dealership for the imageRUNNER ADVANCE 500iF/400iF Series, you agree that the imageRUNNER ADVANCE 500iF/400iF Series and its related hardware/software accessories will not be exported from the United States except in strict accordance with the Export Administration Regulations of the U.S. Department of Commerce and other U.S. laws and regulations controlling exports from the United States.

Canon U.S.A., Inc. from time to time updates this online Service Guide and may modify the information and/or specifications contained in it at any time without notice. Additionally, all prices and availability dates listed herein are subject to change without notice. The latest version is available online at the ISG Central and e-Support Web sites noted above. Please make certain that you are using the latest version. Specimens of Web pages included herein are for illustration purposes only.

DISCLAIMER

NEITHER CANON NOR ITS SUPPLIERS NOR ANY AUTHORIZED SERVICE PROVIDER SHALL BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE (UNLESS CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER), LOSS OF REVENUE OR PROFIT, FAILURE TO REALIZE SAVINGS OR OTHER BENEFITS, EXPENDITURES FOR SUBSTITUTE EQUIPMENT OR SERVICES, LOSS OR CORRUPTION OF DATA, INCLUDING, WITHOUT LIMITATION, DATA STORED ON THE PRODUCT'S OPTIONAL HARD DISK DRIVE, STORAGE CHARGES OR OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THE PRODUCT, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED AND EVEN IF CANON OR ITS SUPPLIERS OR ANY AUTHORIZED SERVICE PROVIDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST CANON OR ITS SUPPLIERS OR ANY AUTHORIZED SERVICE PROVIDER BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, THE PURCHASER ASSUMES ALL RISKS AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO PERSONS AND THE PROPERTY OF THE PURCHASER OR OTHERS ARISING OUT OF THE POSSESSION, USE, MISUSE, OR INABILITY TO USE THE PRODUCT NOT CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER.

Contents

I.	Product Overview and Configuration	1
A.	Overview	1
B.	New Features	2
C.	Main Unit Box Contents	5
D.	Configuration	6
II.	Hardware Accessory Options	12
A.	Cassette Module-AA1	12
B.	Cabinet Type-H (Small)	12
C.	Cabinet Type-L (Large)	12
D.	FL Cassette-AS1	12
E.	Envelope Cassette-E1	13
F.	Staple Finisher-R1	13
G.	Copy Card Reader-F1	13
H.	IC Card Reader Box-A1	13
III.	System Options	14
A.	Copy and Print Options	14
1.	Barcode Printing Kit-D1	14
2.	Direct Print Kit (for PDF/XPS)-H1	14
3.	PCL International Font Set-A1	14
4.	Secure Watermark-B1	14
B.	Universal Send and Fax Options	15
1.	Universal Send Trace & Smooth PDF Kit-A1	15
2.	Universal Send Security Feature Set-D1	15
3.	Universal Send Digital User Signature Kit-C1	15
4.	Super G3 2 nd Line Fax Board-AM1	15
C.	Connectivity Options	15
1.	Web Access Software-H1	15
2.	Remote Operator's Software Kit-B1	15
D.	Data Security Options	16
1.	Encrypted Secure Print Software-D1	16
2.	HDD Data Encryption Kit-C6	16
3.	iR-ADV Security Kit-H1 for IEEE 2600.1 Common Criteria Certification Set (Available after Launch)	16
E.	Accessibility Option	16
1.	ADF Access Handle-A1	16
IV.	Document Storage Capabilities	17
A.	Advanced Box Client	17
B.	Network	18
C.	Memory Media	18
V.	Security Features	19
A.	Device Authentication	19
1.	Department ID Management	19
2.	SSO-H	20
B.	Data Security	21
1.	Initialize All Data/Settings Function	21
2.	HDD Data Erase Kit	22
3.	TPM (Trusted Platform Module)	23
4.	HDD Data Encryption Kit	24

C. Document Security	25
1. PDF Visible Digital Signature	25
2. Adobe LiveCycle Rights Management ES Server Integration	25
D. Network Security	26
1. IPSec	26
2. Filtering by Port Number	26
3. Wireless Security and Authentication	26
4. Network Port and Application Access Control	26
VI. Software Solutions	27
A. Document Management and Binding Software	27
1. imageRUNNER ADVANCE Desktop	27
2. imageRUNNER ADVANCE Quick Printing Tool	27
3. imageWARE Document Server	27
4. imageWARE Scan Manager DS	28
5. eCopy PDF Pro Office	28
B. Scan Management Software	28
1. Workflow Composer and Connectors	28
2. Authorized Send	28
3. uniFLOW (Scanning)	28
4. Cloud Portal for imageRUNNER ADVANCE	29
5. eCopy ShareScan	29
C. Print/Output Management Software	30
1. Direct Print & Scan for Mobile	30
2. uniFLOW	30
3. AA-PRINT (Advanced Anywhere Print)	30
4. EFI PrintMe	30
D. Device Security and Management Software	31
1. AA-PROX (Advanced Authentication – Proximity Card)	31
2. uniFLOW Device Security & Management	31
3. uniFLOW Serverless Secure Print	31
4. imageWARE Enterprise Management Console and Plug-ins	31
5. imageWARE Secure Audit Manager Express	32
6. MEAP Web	32
E. Business Workflow Software	32
1. Forms and Print Services for Salesforce	32
2. Canon Middleware Platform	32
VII. Dealer Sales/Service Authorization	33
VIII. Educational Training	33
A. Training Program Overview	33
B. Prerequisites	33
C. Certification	34
D. Who Should Attend	34
E. What You Will Learn	34
F. Training Facilities	35
G. Course Equipment	35
H. Service Materials	35
IX. Servicing Notes	36
A. Power and Plug Requirements	36
B. Installation Space Requirements	38
C. Estimated Installation Times	40
D. Remote Support Services	41

1.	imageWARE Remote	41
2.	Content Delivery System	41
E.	Serviceability	44
F.	Less Maintenance Strategy	45
1.	DCM (Device Configuration Manager)	46
2.	Device Migration Navigator	46
G.	LMS (License Management System)	47
H.	Content Delivery System Web Site	48
I.	Recommended System Engineer Requirements	49
J.	Firmware Upgrades Using the Service Support Tool	50
K.	Computer Requirements for Downloading Firmware	51
L.	Hard Disk Drive Handling	51
M.	Special Tools, Solvents and Oils	52
N.	Consumables	53
O.	Consumable Parts	54
P.	Periodically Replaced Parts	55
Q.	Periodic Maintenance	56
R.	Soft Counter	57
S.	MEAP Counter	58
X.	Suggested End-User Customer Service Offerings	59
A.	Monthly Copy/Print Volume	59
B.	Limited Warranty Support	59
1.	End-User Limited Warranty Conditions	59
2.	GPR-39 Drum Unit Limited Warranty	59
3.	Flat-Rate Program	60
4.	Warranty Parts for Repair	62
5.	e-Tag	65
6.	Online Limited Warranty Credit Inquiry	67
XI.	Product Technical Support Offerings	71
A.	Dealer Support Requirements	71
B.	Canon USA Support Offerings	72
1.	Canon USA Technical Support Center	72
2.	NAVI	74
3.	Internet Support	78
XII.	Appendix	82
A.	Specifications	82
B.	Warranty	90
1.	Main Unit Limited Warranty	90
2.	GPR-39 Drum Unit Limited Warranty	91
C.	List of Tables	92
D.	List of Figures	93

I. Product Overview and Configuration

A. Overview

The Canon imageRUNNER ADVANCE 500iF/400iF Series machines bring the following capabilities to users in a mid-volume, small or remote office environment:

- Speeds of up to 52 ppm (pages per minute) in B&W (black-and-white) using letter-sized (LTR) paper.
- Standard automatic duplexing document feeder with a 100-sheet capacity (20 lb bond (80 g/m²)).
- A 7" full-color WVGA LCD display (640 x 480 pixels), tilting control panel.
- A maximum paper size of 8 1/2" x 14" (LGL) is supported. Multiple paper sources, including optional cassette modules, can hold up to 2,300 sheets of paper.
- True 1,200 dpi printing at the engine's rated speed.
- Standard HDD (Hard Disk Drive) Data Erase feature.
- Inter-device link functionality enables imageRUNNER ADVANCE 500iF/400iF machines with a network connection to connect to other imageRUNNER ADVANCE host models with an Advanced Box. This enables the imageRUNNER ADVANCE 500iF/400iF machine to act as a client, and share the Scan to and Print functions from the Advanced Box of the host imageRUNNER ADVANCE machine. Client imageRUNNER ADVANCE 500iF/400iF Series machines can also share remote address books.
- RAPID Fusing Technology enables quick warm up times and first copy output times.
- MEAP (Multifunctional Embedded Application Platform) enabled, which allows the development of custom applications to run alongside native functions, such as Copy and Scan and Store.
- Standard Universal Send and UFR II, PCL5e/6, and Adobe PS printing.
- Standard USB memory support. Use the USB memory port to scan to or print from a USB memory stick.
- Compact E-Drum technology improves durability and reliability, which results in lower operating costs and reduced downtime.
- All imageRUNNER ADVANCE 500iF/400iF Series machines are EPEAT (Electronic Product Environmental Assessment Tool) qualified.
- "Less-Maintenance" design – Some customers are able to replace a few components that require regular replacement. This enables the dealer to lower their costs.
- The ability to activate optional software products via the LMS (License Management System). Refer to the [LMS](#) section herein for further details.

B. New Features

The imageRUNNER ADVANCE 500iF/400iF Series machines offer the following new system, performance, and environmental features over the imageRUNNER 1700 Series:

- Advanced imageCHIP System Architecture – A high-speed CPU for image processing, and maintains concurrent UI and network connection responses.
- Enhanced user authentication capabilities.
- OOXML Scan to PowerPoint support with enhanced authentication for Send.
- Quick startup and high-speed RIP (new controller).
- Energy Saver LED key and improved handling of originals.
- Remote/Auto Shutdown and Weekly Shutdown Timer support.
- Toner signal alarm (pre-toner low alarm and toner bottle count up alarm).
- Faster firmware upgrade time with the Parallel Update feature.
- Ability to duplicate the same settings on one machine, and then install these settings on multiple other machines.
- Use of a temporary data storage function by making a backup in the Service mode.

Table 1 - imageRUNNER ADVANCE 500iF/400iF Series Comparison

Feature		imageRUNNER ADVANCE	
		500iF	400iF
Copy/Print Speed (ppm) (LTR and B&W)		Up to 52	Up to 42
Optimum Copy/Print Volume (impressions)		Approximately 3,000 to 35,000	Approximately 3,000 to 30,000
Scan Speed (LTR, 300 dpi, B&W/Color)	Simplex	Approximately 52 ipm/52 ipm	
	Duplex	Approximately 33 ipm/33 ipm	
Scan Speed (LTR, 600 dpi, B&W Only)	Simplex	Approximately 52 ipm	
	Duplex	Approximately 33 ipm	
Duplexing Document Feeder		Standard	
Feeder Capacity		Up to 100 sheets (20 lb bond (80 g/m ²))	
Resolution	Scan	B&W: Up to 600 x 600 dpi Color: Up to 300 x 300 dpi	
	Copy	Up to 600 x 600 dpi	
	Print	Up to 1,200 x 1,200 dpi	
Maximum Paper Size		8 1/2" x 14" (LGL)	
Maximum Paper Weight		34 lb bond (128 g/m ²)	
Paper Capacity (20 lb bond (80 g/m ²))	Standard	Up to 550 sheet paper cassette, 100 sheet stack bypass	
	Optional	Up to 3 paper cassettes x 550 sheets each	
	Maximum	Up to 2,300 sheets	
Multiple Copies		1 to 999 sheets	
Printer Memory		1.5 GB	
Hard Disk Drive ¹		Approximately 80 GB	
Warm Up Time (at a room temp. of 68°F (20°C)) ²	From Power ON ³	Approximately 34 seconds	
	From Sleep Mode	Approximately 10 seconds	
	From the Quick Startup Settings for Main Power Mode ⁴	Approximately 7 seconds	
FCOT (First Copy Output Time)		Approximately 5 seconds	
Power Consumption	Maximum	Approximately 1.5 kW	
	In the Sleep Mode	Approximately 1 W	
	Quick Startup Settings for Main Power Mode is 'Off'	Approximately 0.19 W	
	Quick Startup Settings for Main Power Mode is 'On'	Approximately 0.45 W	
Power Requirements		120 V/10.5 A	
Plug Type		NEMA 5-15P	

¹ The HDD capacity is subject to change in a future release.

² Activation time may vary, depending on the environment and conditions under which the machine is used.

³ The Quick Startup Settings for Main Power mode is set to 'Off'.

⁴ Even if the Quick Startup Settings for Main Power mode is set to 'On', the Warm-Up time may be longer, depending on the conditions under which the machine is used.

Table 1 – imageRUNNER ADVANCE 500iF/400iF Series Comparison Continued

Feature		imageRUNNER ADVANCE	
		500iF	400iF
Toner Yield (at 6% Coverage (LTR))		Approximately 15,200 pages	
Drum Yield (at 6% Coverage (LTR))		Approximately 116,000 pages	Approximately 102,000 pages
Copy		Standard	
Store	Mail Box	Not Available	
	Advanced Box	As a client only	
	Memory Media Support	Standard (USB)	
Print	UFR II	Standard	
	PCL5e/6	Standard	
	Direct Print	Standard (PDF, JPEG, TIFF)	
		Optional (XPS) with the Direct Print Kit (for PDF/XPS)-H1	
	Adobe PS (PostScript)	Standard	
	imagePASS (External)	Not Available	
Send	Color Universal Send	Standard	
	Scan to USB/Print from USB	Standard	
	Searchable PDF	Standard	
	PDF Security Feature Set	Optional ⁵	
	PDF Digital User Signature	Optional	
Fax	Single Line	Standard	
	2 nd Line	Optional w/Super G3 2 nd Line Fax Board-AM1	
Network		Standard Ethernet 10Base-T/100Base-TX/1000Base-T	
Remote UI		Standard	
MEAP/MEAP Web Capability		Standard	
AMS (Access Management System)		Standard	

5 Includes Digital Device Signature (PDF/XPS) and Encrypted PDF modes.

C. Main Unit Box Contents

Note: The box contents shown below are for *reference purposes only*, and are subject to change without notice.

Table 2 – imageRUNNER ADVANCE 500iF/400iF Series Box Contents

Contents	imageRUNNER ADVANCE	
	500iF	400iF
Main Unit	✓	✓
GPR-39 Drum Unit	✓	✓
Quick Operation Guide	✓	✓
Starter Guide	✓	✓
Drum Unit Replacing Guide (US Eng.)	✓	✓
User Manual CD-Rom (US Eng.)	✓	✓
UFR II User Software	✓	✓
PCL User Software	✓	✓
PS User Software	✓	✓
FAX Driver Software	✓	✓
READ THIS SHEET FIRST!	✓	✓
Precautions in Moving the Machine	✓	✓
Attaching the Duplex Tray	✓	✓
About VOC Filters	✓	✓
Installing the Drum Unit	✓	✓
Precautions When Handling the Drum Unit (Multi)	✓	✓
iW EMC CD v3.1 (E)	✓	✓
AMS KIT Software/Manual CD	✓	✓
Features of AMS	✓	✓
Notice for Latest Software (CS/PS)	✓	✓

D. Configuration

Note: All configurations shown are for *reference purposes only*, and are subject to change without notice. Please refer to the Dealer Price List on the ISG Central Web site for the most up-to-date item numbers.

Table 3 – Configuration

Item	Part Number ⁶
imageRUNNER ADVANCE 500iF with the optional Cassette Module-AA1 	
imageRUNNER ADVANCE 500iF ⁷	6859B003AA
imageRUNNER ADVANCE 400iF ⁷	6856B003AA

⁶ Part numbers are subject to change without notice.

⁷ Ships standard with one 100-sheet Duplexing Automatic Document Feeder, standard Super G3 Fax Board, UFR II, PCL, and Adobe PS3 printing, one 550-sheet paper cassette, 100-sheet multipurpose tray, Color Universal Send, Searchable PDF/XPS, OOXML (Scan to PPT), HDD Data Erase, IP Sec, Color Network ScanGear, and drum unit.

Table 4 – Hardware Accessories

Item	Part Number ⁶
Cassette Module-AA1 ⁸	6862B001AA
Cabinet Type-H (Small) ⁹	8765B001AA
Cabinet Type-L (Large) ¹⁰	8766B001AA
FL Cassette-AS1 ¹¹	6863B001AA
Envelope Cassette-E1 ¹²	6864B001AA
Staple Finisher-R1	6865B001AA
USB Keyboard (Cherry) ¹³	1266V426
Universal Keyboard Stand-A1	2212V477
Card Reader Assembly for Universal Keyboard Stand ¹⁴	2212V478
Copy Card Reader-F1 ^{15, 16}	4784B001AA
Copy Card Reader Attachment Kit-C2	4768B002AA
Canon Card Set-A1 (1-30)	4781B001AA
Canon Card Set-A2 (31-100)	4781B002AA
Canon Card Set-A3 (101-200)	4781B003AA
Canon Card Set-A4 (201-300)	4781B004AA
Canon Card Set-A5 (301-500)	4781B005AA
Canon Card Set-A6 (501-1000)	4781B006AA
ADF Access Handle-A1	1095B001AA
Braille Label Kit-F1	7518A004AA
Convenience Stapler-B1	1727V838

⁶ Part numbers are subject to change without notice.

⁸ Up to three Cassette Modules-AA1 can be installed at the same time.

⁹ Recommended when adding two or three extra Cassette Modules-AA1.

¹⁰ Recommended when only one Cassette Module-AA1 is attached, or when no cassette modules are attached.

¹¹ Universal replacement cassette for Paper Drawers 1, 2, 3, and 4 (550-sheet capacity).

¹² Requires the Cassette Module-AA1. Installs in the optional second cassette only.

¹³ When installing the USB Keyboard, it is recommended to install the Universal Keyboard Stand-A1.

¹⁴ Attaches to the Universal Keyboard Stand-A1 for card reader authentication.

¹⁵ Requires the Copy Card Reader Attachment Kit-C2.

¹⁶ The Copy Card Reader-F1 and IC Card Reader Box-A1 cannot be installed at the same time.

Table 5 – System Accessories

Item	Box Part Number ⁶	eLAN Number ¹⁷
Super G3 2 nd Line Fax Board-AM1	6871B001AA	-
PCL International Font Set-B1	6919B001AA	-
Direct Print Kit (for PDF/XPS)-H1 ^{18, 19}	-	3674B004AA
Encrypted Secure Print Software-D1	-	1337B011AA
Secure Watermark-B1	-	1082B010AA
Barcode Printing Kit-D1	-	3999B004AA
Web Access Software-H1	-	2738B007AA
Universal Send Trace & Smooth PDF Kit-A1 ¹⁸	-	8581B002AA
Universal Send Security Feature Set-D1 ¹⁸	-	3406B006AA
Universal Send Digital User Signature Kit-C1 ²⁰	-	1326B013AA
Remote Operators Software Kit-B1	-	4001B004AA
HDD Data Encryption Kit-C6	6872B001AA	-
iR ADV Security Kit-H1 for IEEE 2600.1 Common Criteria Certification Set ^{21, 22}	6873B001AA	-
IC Card Reader Box-A1 ¹⁶	6866B001AA	-
Silex Wireless Bridge SX-2500CG	8034B002AA	-

⁶ Part numbers are subject to change without notice.

¹⁶ The Copy Card Reader-F1 and IC Card Reader Box-A1 cannot be installed at the same time.

¹⁷ The eLAN (Electronic License Access Number) is delivered via the CNA (Canon Network Access) Web site.

¹⁸ Contains multiple options. Current (tangible) item requires multiple LANs to generate multiple license keys for activation. New eLAN (intangible) item utilizes a single eLAN to generate multiple license keys or files for activation.

¹⁹ Used to enable XPS direct printing only. PDF direct printing is provided as standard via Adobe PS3 printing.

²⁰ SSO-H settings must be enabled.

²¹ Includes the HDD Data Encryption Kit-C6. Specified configurations and settings need to be applied to the device to achieve and maintain IEEE 2600.1 Common Criteria Certification. Cannot be used with the Super G3 2nd Line Fax Board-AM1, Direct Printer Kit (for PDF/XPS)-H1, Remote Operators Software Kit-B1, or Web Access Software-H1.

²² Available after launch.

Table 6 – Integrated and imageRUNNER ADVANCE Solutions

Item	Box Part Number ⁶	eLAN Number ¹⁷
AA-PROX V2.4 Software Only ^{23, 24}	-	4164BJ19AA
AA-PROX V2.4 NFR Software Only ^{23, 24}	-	4164BJ20AA
AA-PROX V2.4 Starter Package ^{23, 25}	5105B039AA	-
AA-PROX V2.4 NFR Starter Kit ^{23, 25}	TBD	-
Authorized Send Kit V5.2 (1 License) ²³	-	4164BJ12AA
Authorized Send Kit V5.2 (10 Licenses) ²³	-	4164BJ13AA
Authorized Send Kit V5.2 (100 Licenses) ²³	-	4164BJ14AA
Authorized Send Kit V5.2 (1 License NFR) ²³	-	4164BJ15AA
AA-PRINT for MFP V1.2 (1 License) ²³	-	TBD
AA-PRINT for MFP V1.2 NFR (1 License) ²³	-	TBD
AA-PRINT for LBP V1.0 (1 License) ²³	-	4164BG20AA
AA-PRINT for LBP V1.0 NFR (1 License) ²³	-	4164BG22AA
Universal Login Manager – 1 Device License ²⁶	3575B372AA	-
Universal Login Manager – 5 Device Licenses ²⁶	3575B373AA	-
Universal Login Manager – 10 Device Licenses ²⁶	3575B374AA	-
Upgrade ULM to uniFLOW for SMB-MEAP ²⁶	3575B405AA	-
MiCard PLUS ²⁷	3575B353AA	-
imageRUNNER ADVANCE Desktop V3.0.1L with 3 Years Software Maintenance	-	4140B397AA
imageRUNNER ADVANCE Desktop V3.0.5L with 3 Years Software Maintenance	-	4140B398AA
imageRUNNER ADVANCE Desktop V3.0.20L with 3 Years Software Maintenance	-	4140B399AA
imageRUNNER ADVANCE Desktop V3.0.10L NFR ²⁸	-	4140B400AA
imageRUNNER ADVANCE Desktop 1L with 1 Year Software Maintenance Extension ²⁹	7494A752AA	-
imageRUNNER ADVANCE Desktop 5L with 1 Year Software Maintenance Extension ²⁹	7494A689AA	-
imageRUNNER ADVANCE Desktop 20L with 1 Year Software Maintenance Extension ²⁹	7494A751AA	-

⁶ Part numbers are subject to change without notice.

¹⁷ The eLAN (Electronic License Access Number) is delivered via the CNA (Canon Network Access) Web site.

²³ The Jar file can only be attained via download from <http://www.canon.com/fau/downloads>.

²⁴ Requires a supported RF IDEas pcProx Card Reader.

²⁵ Includes one AA-PROX V2.4 license, an RF IDEas pcProx Card Reader for HID (Human Interface Device) proximity cards, and a HID Proximity Card Set (10 cards).

²⁶ Software license only.

²⁷ Supports 35 different proximity card types. Refer to the [ISG Central Web site](#) for a complete list of supported card frequencies.

²⁸ Licenses expire in one (1) year.

²⁹ Software Maintenance Extensions can be purchased and registered up to 5 years in advance.

Table 6 – Integrated and imageRUNNER ADVANCE Solutions Continued

Item	Box Part Number ⁶	eLAN Number ¹⁷
Workflow Composer with MEAP Connectors V2.2 1L (1 to 4 Licenses)	-	4165B073AA
Workflow Composer with MEAP Connectors V2.2 1L (5 to 19 Licenses)	-	4165B074AA
Workflow Composer with MEAP Connectors V2.2 1L (20 or More Licenses)	-	4165B075AA
Workflow Composer with MEAP Connectors V2.2 1L NFR	-	4165B079AA
MEAP Connector for SharePoint Server V1.1 (1 Device) ³⁰	-	4165B036AB
Client Access License for imageWARE Document Server V2.0 5CAL	-	4143B046AB
Client Access License for imageWARE Document Server V2.0 20CAL	-	4143B047AB
Client Access License for imageWARE Document Server V2.0 100CAL	-	4143B048AB
Client Access License for imageWARE Document Server V2.0 10CAL NFR	-	4143B049AB
imageWARE Document Server V2.0E 1L with 3 Years Software Maintenance ³¹	-	4143B039AB
imageWARE Document Server V2.0E 1L NFR	-	4143B045AB
imageWARE Document Server 1L with 1 Year Software Maintenance Extension ²⁹	7494A696AA	-
imageWARE Document Server V1.1 1L and DT 5L with 1 Year Software Maintenance Extension ²⁹	7494A766AA	-
imageWARE Scan Manager DS V1.1E 1L with 3 Years Software Maintenance ³¹	7494A698AB	-
imageWARE Scan Manager DS V1.0/1.1 EFS 1L with 1 Year Software Maintenance Extension ²⁹	7494A699AA	-
imageWARE Scan Manager DS V1.1E 1L NFR ³²	7494A700AB	-
Direct Print and Scan for Mobile V2.0 MEAP Application ^{17, 23, 33}	4164BH80AA	-
Direct Print and Scan for Mobile V2.0 MEAP Application - NFR ^{17, 23, 33, 34}	4164BH81AA	-

⁶ Part numbers are subject to change without notice.

¹⁷ The eLAN (Electronic License Access Number) is delivered via the CNA (Canon Network Access) Web site.

²³ The Jar file can only be attained via download from <http://www.canon.com/fau/downloads>.

²⁹ Software Maintenance Extensions can be purchased and registered up to 5 years in advance.

³⁰ Workflow Composer must be installed. Does not come with software maintenance.

³¹ Ships standard with three year software maintenance.

³² Dealers can purchase up to three NFR packages per showroom.

³³ Requires the Direct Printer Kit (for PDF/XPS)-H1.

³⁴ Dealers can only purchase one NFR license per showroom.

Table 7 – Supplies and Consumables

Item	Part Number ⁶
GPR-39 Drum Unit	2773B004AA
GPR-48 Black Toner	2788B003AA
Staple-P1 ³⁵	1008B001AA

⁶ Part numbers are subject to change without notice.

³⁵ Used for corner stapling only. Contains two cartridges per case and 5,000 staples per cartridge.

II. Hardware Accessory Options

A. Cassette Module-AA1



- Holds up to 550 sheets per Cassette Module-AA1 (20 lb bond (80 g/m²)).
- Can attach up to three cassette modules.
- Supports paper sizes up to 8 1/2" x 14".
- Paper weight: 17 to 28 lb bond (64 to 105 g/m²)).

B. Cabinet Type-H (Small)



- Used to place the device on the floor.
- When the small cabinet is attached to the Cassette-Module-AA1, the customer can add up to two or three additional cassette modules.

C. Cabinet Type-L (Large)



- Used to place the device on the floor.
- When the large cabinet is attached to the Cassette-Module-AA1, the customer can add up to one additional cassette module.
- Contains storage space for additional supplies, such as paper or toner.

D. FL Cassette-AS1



- Replacement cassette for Paper Drawers 1, 2, 3, and 4.
- Holds up to 550 sheets (20 lb bond (80 g/m²)).
- Maximum paper size: LGL (8 1/2" x 14")
- Paper weight: 17 to 28 lb bond (64 to 105 g/m²))

E. Envelope Cassette-E1



- Requires the Cassette Module-AA1.
- Installs in the second cassette only, and feeds up to 50 envelopes (or envelopes stacked to approximately 1 1/4" (30 mm) in height).

F. Staple Finisher-R1



- Contains one tray, which can hold approximately 500 sheets (17 to 24 lb bond (64 to 90 g/m²)).
- Can corner staple approximately 50 sheets of paper (LTR, 17 to 24 lb bond (64 to 90 g/m²)).

G. Copy Card Reader-F1



- Supports up to 1,000 departments or users.
- Performs Department ID Management automatically. Users must insert a control card to access the machine.
- Requires the optional Copy Card Reader Attachment Kit-C2.
- Cannot be installed with the IC Card Reader Box-A1.

H. IC Card Reader Box-A1



- Provides a dedicated enclosure to secure a proximity card reader to the device.
- Cannot be installed with the Copy Card Reader-F1.

III. System Options

The functionality of the imageRUNNER ADVANCE 500iF/400iF Series can be expanded by installing the following system related optional accessories.

A. Copy and Print Options

1. Barcode Printing Kit-D1

- Provides the ability to print 1D and 2D barcodes on output.
- Requires license activation via the LMS.

2. Direct Print Kit (for PDF/XPS)-H1

- Enables the user to print PDF and XPS files directly from the Remote UI.
- Users can also print PDF files from memory media and the Advanced Box of another imageRUNNER ADVANCE machine on the network.
- Requires license activation via the LMS.

3. PCL International Font Set-A1

- Provides Andalé font support for the PCL driver.
- Enables the user to print in four Asian languages: Japanese, Chinese, Korean, and Taiwanese.
- Requires license activation via the LMS.

4. Secure Watermark-B1

- Enables the user to embed hidden text in the background of copies. The embedded text becomes visible when copies of the document are made on a copier.
- Requires license activation via the LMS.

B. Universal Send and Fax Options

1. Universal Send Trace & Smooth PDF Kit-A1

- Enables the user to send Trace & Smooth PDF files.
- Requires license activation via the LMS.

2. Universal Send Security Feature Set-D1

- Enables the user to encrypt PDF and Digital Device Signature PDF/XPS files, as well as set a password to send them safely to a file server or e-mail address.
- Enables the recipient of a PDF or Digital Device Signature PDF/XPS file to verify which device scanned the file.
- Requires license activation via the LMS.

3. Universal Send Digital User Signature Kit-C1

- Enables the user to add a digital user signature obtained from a certificate authority to a PDF or XPS file. This enables the recipient of a PDF or XPS file to verify which user signed it.
- Requires license activation via the LMS.

4. Super G3 2nd Line Fax Board-AM1

Enables the user to use two lines to send and receive fax documents.

C. Connectivity Options

1. Web Access Software-H1

- Enables the user to view Web pages from the touch panel display of the machine.
- If PDF files are registered on the Web page, the user can print them from the machine without using a computer. Moreover, if a Web page or special content is created, and then registered as a PDF file, the Web page or special content can be shared with other users.

2. Remote Operator's Software Kit-B1

- Enables the user to access the machine's control panel and specify settings or process jobs from a computer (located on the same network as the machine) remotely.
- Requires license activation via the LMS.

D. Data Security Options

1. Encrypted Secure Print Software-D1

- Enables the user to encrypt print data sent from a computer by using the Secured Print function, and then decrypt it at the device.
- Requires license activation via the LMS.

2. HDD Data Encryption Kit-C6

Encrypts all image data and device settings before storing them on the hard drive.



IMPORTANT

Installing the HDD Data Encryption Kit (after the machine is installed and operational), requires the machine's system software to be updated. This reformats the entire hard drive, and all data previously stored on the hard disk drive is deleted. Accordingly, it is strongly recommended that all of the data stored on the hard disk drive of the machine be backed up prior to installing the HDD Data Encryption Kit.

3. iR-ADV Security Kit-H1 for IEEE 2600.1 Common Criteria Certification Set (Available after Launch)

- Enables the user to configure security settings that are required to comply with the IEEE 2600.1 standard.
- Includes the IEEE 2600 License Certificate, Bootable CD with certified system software, IEEE 2600 User Manual CD, Installation Manual, and HDD Data Encryption Kit.
- Cannot be used with the Super G3 2nd Line Fax Board-AM1, Direct Print Kit, Remote Operators Software Kit, Web Access Software, and some MEAP applications.

E. Accessibility Option

1. ADF Access Handle-A1

Attaches to the Automatic Document Feeder to enable seated users to open the document feeder.

IV. Document Storage Capabilities

The imageRUNNER ADVANCE 500iF/400iF Series machines offer three storage methods with flexible linkage to external systems for storing scanned documents and accessing stored files.

- Advanced Box Client
- Network
- Memory Media



IMPORTANT

- Canon U.S.A., Inc. is not responsible for any damages caused to user data that is stored on the hard disk drive of the machine. It is the customer's responsibility to create and maintain a data back up plan. Canon U.S.A., Inc. (hereinafter referred to as ("Canon USA")) offers several security options to enhance document handling and storage security needs. See ["System Options,"](#) on p. 14.
- It is strongly recommended to back up the data stored on the hard disk drive.

A. Advanced Box Client

If an imageRUNNER ADVANCE 500iF/400iF Series device is using the Inter-Device Link, it can be used as an Advanced Box Client, and connect to the Advanced Box of another imageRUNNER ADVANCE device (host device). Client devices can connect to the Advanced Boxes of up to 20 registered host devices to print JPEG, TIFF, or PDF files, or store scanned documents.

The Advanced Box is a storage area in the host machine that stores scanned documents and Microsoft Office files that can be used on a computer. There are two types of storage in the Advanced Box: the Shared Space and the Personal Space.

For a client device to access the Advanced Box of the host device, the Advanced Box must be opened to the public as an SMB (Server Message Block) server or WebDAV (Distributed Authoring and Versioning) server. This enables the user to access the Advanced Box from a computer, and store and share files in their native format, such as MS Word, Excel, and PowerPoint. To view and print these native format files from the Advanced Box, the user must access them via a computer.



IMPORTANT

It is strongly recommended to protect the Advanced Box folders from viruses. If the user's computer system has an antivirus system in place, add the Advanced Box folders to its list of folders to scan and protect.

B. Network

The imageRUNNER ADVANCE 500iF/400iF Series machines are equipped with a collaboration function that enables them to be connected to other imageRUNNER ADVANCE machines via the SMB/WebDav protocol. When one machine is connected to another machine, a user can select an Advanced Box in the other machine (if it is on the network) to store files or print a file that is stored in the other machine on this machine.

C. Memory Media

Scan to USB memory media support is standard on the imageRUNNER ADVANCE 500iF/400iF Series machines. Users can attach a USB memory stick to the USB port to scan and store documents in the PDF, JPEG, or TIFF file format. Users can also print files stored in the memory media from an imageRUNNER ADVANCE 500iF/400iF Series machine at any time with the desired print settings.

System Administrators can also restrict scanning to and printing from memory media independently to safeguard sensitive and confidential information.

V. Security Features

The imageRUNNER ADVANCE 500iF/400iF Series machines include a comprehensive set of security features, such as Device Authentication, Data Security, Document Security, and Network Security.

A. Device Authentication

There are two ways to authenticate users at the device: via Department ID Management and SSO-H (Single Sign-On Hybrid).

1. Department ID Management

Register a Department ID and password for each department, and manage the machine by limiting its use to only those who enter the correct Department ID and password. Department IDs and passwords for up to 1,000 departments can be registered. Use Department ID Management to keep track of the copy, scan, and print totals for each department.

2. SSO-H

A user authentication system that enables the functions of the machine and MEAP applications to be used by a user after being authenticated once. SSO-H has two compatible user authentication systems (Domain Authentication and Local Device Authentication). Domain Authentication is linked to a domain controller in a Windows Active Directory environment on a network. Local Device Authentication uses a database inside the machine to authenticate users. System Administrators can use one of these two systems or both at the same time.

The AMS (Access Management System) works with the SSO-H login service, and is standard on the imageRUNNER ADVANCE 500iF/400iF Series machines. AMS requires that a System Administrator controls and restricts access to the device via a user's device-level login or a function-level login credentials.

Device-Level Login: The System Administrator assigns permissions to users, based on their individual roles (System Administrator, Power User, General User, Limited User, and Guest). Up to 1,000 users can be registered, and users must enter their login credentials at the machine to gain access.

Function-Level Login: The System Administrator assigns users privileges to access specific device functions, such as Copy, Print, Send, and Fax. The user can access the machine, but are restricted to using only certain functions that the System Administrator assigns.

B. Data Security

The imageRUNNER ADVANCE 500iF/400iF Series machines offer several ways to protect and secure data. It is strongly recommended that a back up and security system is in place, along with an antivirus protection system to make sure that no data on the hard disk drives are lost, stolen, or compromised.

There are several security methods available from Canon USA that appropriately addresses a customer's needs for securing data.

- Customer Accessible HDD Initialization Function (Initialize All Data/Settings) and standard HDD Data Erase Kit
- imageRUNNER ADVANCE Trusted Platform Module
- Optional Security Kit (HDD Data Encryption Kit)

CAUTION

Canon USA is not liable for any damages resulting from the loss or corruption of data. (See ["DISCLAIMER,"](#) on p. ii for further details.)

1. Initialize All Data/Settings Function

The Initialize All Data/Settings function is a standard function on all Canon devices. This setting is available in the Management Mode, to which the System Administrator must authenticate. Performing this function, erases all user information on the hard disk drive of the machine (e.g., contact information, Advance Box client data, network settings, and image data) up to nine times, depending on the Administrator settings.



IMPORTANT

The Initialize All Data/Settings function deletes the FAT (File Allocation Table) and overwrites the target HDD data area with "0" (zeros) one time.

2. HDD Data Erase Kit

The standard HDD Data Erase Kit is for environments that require additional data security measures. The HDD Data Erase Kit automatically overwrites image data that is written to the hard drive following each job performed at the machine. Image data is overwritten up to three times with random data, depending on the preferences set by the System Administrator. Other settings for the overwrite kit include the ability to overwrite once with null data and overwrite once with random data.



IMPORTANT

Increasing the amount of times the HDD Data Erase Kit overwrites data, results in a loss of job productivity.

3. TPM (Trusted Platform Module)

TPM is a standard security chip (tamper resistant hardware) installed in the imageRUNNER ADVANCE 500iF/400iF Series machines. The TPM provides a facility for the secure generation of cryptographic keys, encrypts information stored on the internal HDD, and decrypts information read from the internal HDD. The public keys to encrypt confidential information are securely controlled by the TPM chip, and they can only be decrypted if the TPM releases the associated decryption key. If the HDD is removed from the machine, it will be difficult to retrieve data off that HDD since the encryption key for that data is stored in a separate location within the TPM.

CAUTION

Once the TPM setting is activated, if the end user fails to back up the TPM key, or if the end user loses the TPM key, it may result in permanent, unrecoverable data loss, for which Canon USA is not liable. (See [“DISCLAIMER,”](#) on p. ii for further details.)



IMPORTANT

- If the TPM setting is activated and the TPM chip fails, the confidential information stored on the chip can only be recovered if Canon's service representative replaces the TPM chip and restores the original TPM key to the new chip. Immediately, back up the TPM key on a USB memory stick, after the TPM setting is activated.
- Only the System Administrator of the machine can back up the TPM key.
- For security reasons, the TPM key can only be backed up once. Store the USB memory with the back up data in a safe place.
- For the back up of the TPM key, it is recommended that a USB memory stick (supported system file: FAT32) with free space of 10 MB or more is used.
- The TPM seals the hardware components associated with the data, and the data cannot be accessed unless the specific TPM key is issued by the TPM chip. Therefore, setting the TPM mode to 'On', may affect service procedures and service costs (if not handled properly). It is strongly recommended that the System Administrator who has access to the TPM key be present for all service calls to prevent the loss of data and productivity of the machine.

4. HDD Data Encryption Kit

The optional HDD Encryption feature is another security tool available for environments requiring additional data security measures, and can be used in conjunction with the HDD Data Erase feature to provide even greater security for data stored on the internal HDD. The HDD encryption chip is Common Criteria Certified (EAL level 3), and applies 256-bit AES (Advanced Encryption Standard) encryption to all data prior to being written on the HDD. This adds an additional layer of security to files stored on the HDD. For more information on the HDD Data Encryption Kit, see [“HDD Data Encryption Kit-C6,”](#) on p. 16.

C. Document Security

The imageRUNNER ADVANCE 500iF/400iF Series machines offer several document security modes to protect printed and distributed documents.

1. PDF Visible Digital Signature

The PDF Visible Signatures mode enables the user to view the device signature and user signature on a PDF file. Visible digital signatures and user signatures are displayed on the first page of the PDF file to account for the origin of the document. The System Administrator of the machine can set the Visible Signatures mode for all PDF documents or certain PDF documents created on the machine. This mode differentiates from the Digital Signature mode in that instead of having to access digital signature information from the document properties from the File menu, this information is displayed prominently on the first page of the document in the background, and is printed along with the document data, thereby deterring improper distribution of sensitive documents.

2. Adobe LiveCycle Rights Management ES Server Integration

Adobe LiveCycle enables System Administrators to set automatic document privileges and apply security policies by creating Policy Protected PDF files on the machine, even after document creation, using the Adobe LiveCycle Rights Management ES Server. Once a Policy Protected PDF document is created on the machine with this feature enabled, the PDF extension in Adobe Reader, upon attempt by a user to open a protected PDF, contacts the Rights Management Server to check the latest authorized users, expiration, auditing, and watermarking policies set by the System Administrator. These latest policies are then enforced by that application to ensure the information in that document remains secure.



IMPORTANT

- To generate a PDF linked with Adobe LiveCycle Rights Management ES Server, the Adobe LiveCycle Rights Management ES Server must be licensed, pre-configured by a System Administrator, and the machine must be connected to the Intranet or Internet.
- Encrypted PDF and PDF/A-1b documents are not compatible with Adobe LiveCycle Rights Management ES Server.

D. Network Security

The imageRUNNER ADVANCE 500iF/400iF Series machines secure network communications by using IPsec (IP Security), filtering by port number, wireless security, and network port and application control.

1. IPsec

The IPsec protocol is standard on the imageRUNNER ADVANCE 500iF/400iF Series machines. It ensures that information and communications over the network remain private by encrypting all inbound and outbound network traffic.

2. Filtering by Port Number

Port number filtering permits or rejects data packets from entering specific port numbers or a range of port numbers. Also, IP address filters to outbound connections can be applied. For example, if functions, such as Remote Copy and Universal Send are used, System Administrators can block or restrict users from sending files to specific IP addresses. This minimizes the risk of data from being sent out of the company to systems that are not trusted.

3. Wireless Security and Authentication

The imageRUNNER ADVANCE 500iF/400iF Series machines support IEEE 802.1x and IEEE 2600.1 (optional), which provide port-based authentication and security to WLANs (Wireless Local Area Networks).

Authentication involves communications between a supplicant, authenticator, and authentication server. The supplicant is authentication software on a client device. The client device (the imageRUNNER ADVANCE 500iF/400iF Series machine) needs the supplicant to provide credentials, such as user names/passwords or digital certificates, to the authenticator (a wireless access point). The authenticator then forwards the credentials to the authentication server (generally a RADIUS database) for verification. If the credentials are valid in the authentication server database, the client device is allowed to access resources located on the protected side of the network.

4. Network Port and Application Access Control

Network Port and Application Access Control enables System Administrators to set up only the necessary protocols, such as IPP, FTP, SMTP, SNMP, RAW, LPD, and others for transferring data. These protocols can be enabled or disabled. The System Administrator can also disable unneeded services, protocols, ports, and the potential paths of attack so that attacks on the machine can be minimized.

VI. Software Solutions

This chapter describes the optional software solutions that can be purchased to enhance the end user's experience and interaction with imageRUNNER ADVANCE machines. The various software solutions include document management and binding software, scan management, print/output management, device security, and business workflow software.

A. Document Management and Binding Software

1. imageRUNNER ADVANCE Desktop

A client-based device dashboard application to operate document publishing, management, and printing from an end-user's PC. In addition, this desktop application can be used with Canon's new imageWARE Document Server application in cases where customers want to share documents that are managed across workgroups or departments.

2. imageRUNNER ADVANCE Quick Printing Tool

The imageRUNNER ADVANCE Quick Printing Tool is a new standard feature within imageRUNNER ADVANCE Desktop. The Quick Printing Tool enables the end-user to print, fax, convert documents to PDF files, or open PDF documents in Desktop Binder via a drag-and-drop action without needing to open imageRUNNER ADVANCE Desktop. The user can also monitor the status of inbound and outbound print and fax jobs, as well as apply print templates automatically, or preview documents before printing via the Desktop Binder option.

3. imageWARE Document Server

imageWARE Document Server is an office document sharing server application. It connects multiple imageRUNNER ADVANCE Desktop utilities for end-users to collaborate and share information over the network. ImageWARE Document Server provides the following functionalities:

- Document Management
 - Check-in/check-out
 - Version control
 - Full text and index search capabilities
- User Authentication
 - User/group management
 - Simple user access control
 - Full control for System Administrators, such as editing, modifying, and reading documents
- Record a history of who accessed which documents (audit trail)
- Web-based administration tools accessible via Internet Explorer

4. **imageWARE Scan Manager DS**

imageWARE Scan Manager DS is a document capture solution that features transaction document archiving capabilities, work distribution capabilities that can be personalized according to the scan volume and skill level of each user, and one-step capture, processing, and release operations.

5. **eCopy PDF Pro Office**

ePPO (eCopy PDF Pro Office) is a network to desktop office scanning solution that enables end-users to create and share PDFs, edit PDF files, and convert PDF files into searchable, editable, and fully-formatted Microsoft Office or Corel WordPerfect files. ePPO also enables the user to tag PDF files for accessibility and Section 508 compliance.

B. **Scan Management Software**

1. **Workflow Composer and Connectors**

Workflow Composer enables the user to simplify imageRUNNER ADVANCE workflow processes by customizing multiple-step workflow functions into one-button operations. The one-button operations are available from the Quick Menu of the UI (User Interface). MEAP connectors for SMB (Server Message Block) and FTP (File Transfer Protocol) file delivery, inclusive of document indexing, come standard on the new imageRUNNER ADVANCE models, while connectors for imageWARE Document Server and SharePoint Server 2007 are available as options.

2. **Authorized Send**

Authorized Send is a MEAP application, which enables walk-up users to distribute documents quickly and securely. Authorized Send is an adaptable solution that integrates and authenticates with a wide variety of authentication servers and enterprise systems using common protocols. Authorized Send permits only authorized users to scan and send documents to e-mail addresses, network file servers/folders, and fax servers. An end-user is able to specify scan settings, such as the paper size, resolution, brightness, and file format.

3. **uniFLOW (Scanning)**

uniFLOW enables users to capture and compress scanned data, customize workflows for each document type or per user, and archive documents.

4. Cloud Portal for imageRUNNER ADVANCE

imageRUNNER ADVANCE office end-users have access to Google Docs and Microsoft SharePoint Online cloud services from the machine's UI. End-users can scan hard-copy documents into Google Docs or Microsoft SharePoint Online, as well as print documents stored in these programs. To scan, store, or print documents, users need to log on to the cloud service from the touch panel display of the imageRUNNER ADVANCE machine—no PC or laptop is required.

5. eCopy ShareScan

eCopy ShareScan is an enterprise-ready, office scanning software solution that enables imageRUNNER ADVANCE devices to turn paper documents into digital data that can be edited, managed, and stored electronically.

C. Print/Output Management Software

1. Direct Print & Scan for Mobile

Direct Print & Scan for Mobile is a combination of a MEAP application that runs on an imageRUNNER ADVANCE device and a client mobile application that runs on certain BlackBerry smartphones, Android smartphones and tablets, and Apple iPhone and iPad devices.

The Direct Print & Scan for Mobile application enables users to connect mobile devices to an imageRUNNER ADVANCE machine to print documents, e-mail messages, attachments, and images, as well as load scanned data from the imageRUNNER ADVANCE machine to their mobile device.

2. uniFLOW

uniFLOW is a print/output management solution that can be customized to meet the needs of an organization. uniFLOW offers an organization of any size, a way to track printing and copying costs, secure sensitive documents, and enable users to print from any available printer on the network.

3. AA-PRINT (Advanced Anywhere Print)

The AA-PRINT solution combines Universal Login Manager with secure anywhere printing. It is designed to provide a serverless print environment that enables end-users to print and track usage from anywhere within the network to any connected device by submitting their respective authentication credentials.

4. EFI PrintMe

EFI PrintMe is a cloud-based mobile print solution for the imageRUNNER ADVANCE Series that enables end-users to print electronic files from their mobile devices, such as smartphones, tablets, and laptops to a Canon imageRUNNER ADVANCE device through the EFI PrintMe Cloud Service. Files uploaded to the EFI PrintMe Cloud Server are secured with 128-bit encryption. Walk-up end-users can print documents from the EFI PrintMe Cloud Service to a registered imageRUNNER ADVANCE device that is connected to the Internet.

D. Device Security and Management Software

1. AA-PROX (Advanced Authentication – Proximity Card)

The AA-PROX solution is a login platform that authenticates walk-up end-users to the machine via a registered proximity card or by entering a user name and password. AA-PROX authenticates users against an Active Directory or local user database on devices, and can be combined with the AMS (Access Management System) and imageWARE ADVANCE Tracker to track usage and enforce access control to system functions.

2. uniFLOW Device Security & Management

uniFLOW, the print/output management solution, includes multiple authentication methods to enable an organization to restrict machine access and functions on a per user basis. uniFLOW end-users must authenticate themselves either by entering their user name and password, or by using a smart card, proximity or magnetic card.

3. uniFLOW Serverless Secure Print

uniFLOW Serverless Secure Print is a secure printing and follow-me printing option that utilizes the end-user's client PC to store secure print jobs until the end-user can authenticate and release the secure print jobs at an imageRUNNER ADVANCE device. The imageRUNNER ADVANCE device then pulls the print job from the end-user's client PC. uniFLOW Serverless Secure Print is scalable and upgradeable to the full version of uniFLOW.

4. imageWARE Enterprise Management Console and Plug-ins

iW EMC (imageWARE Enterprise Management Console) is a Web-based networked device management utility that enables IT managers to control and manage all devices installed on the network from one central location. IT managers can discover devices, view device status, manage device settings, and notify users of device errors via e-mail.

The capabilities of imageWARE Enterprise Management Console can be expanded by using optional plug-in applications, such as the Address Book Management Plug-In (enables an System Administrator to retrieve an address book from one imageRUNNER ADVANCE device and deliver it to other imageRUNNER ADVANCE devices across the network). The optional plug-ins are available for IT managers and dealers through <http://www.imageware.com>, or to the dealer only through Canon U.S.A.'s e-Support Center Web site <http://www.support.cusa.canon.com>.

5. imageWARE Secure Audit Manager Express

imageWARE Secure Audit Manager Express captures and archives the contents and attributes of all jobs performed on the device. This enables System Administrators to continuously track and archive network activities.

6. MEAP Web

MEAP Web is a MEAP application that serves as an online client management tool. MEAP Web helps end-users configure and manage imageRUNNER ADVANCE hardware and software resources via the Web Access Software.

E. Business Workflow Software**1. Forms and Print Services for Salesforce**

Forms and Print Services for Salesforce is a cloud service that enables users to print and store reports and graphic sales data directly to their imageRUNNER ADVANCE machine without the need for print drivers.

2. Canon Middleware Platform

Canon Middleware Platform enables users to automate document and image related business processes.

VII. Dealer Sales/Service Authorization

To obtain and maintain authorization to sell or service an imageRUNNER ADVANCE device, every Authorized Reseller's location must have at least one employee who has successfully completed the appropriate imageRUNNER ADVANCE device-training program, and who has been certified, as described in [Educational Training](#).

VIII. Educational Training

A. Training Program Overview

Technicians who want to be certified on the imageRUNNER ADVANCE 500iF/400iF Series machines must take the imageRUNNER 1750/40/30 Series Online Training e-Learning course. The imageRUNNER 1750/40/30 Series Online Training e-Learning course provides the technician with the knowledge required for installing, upgrading, servicing, and maintaining the imageRUNNER 1700 Series and imageRUNNER ADVANCE 500iF/400iF devices in the field.

The online e-Learning course also focuses on the features and functions, functional systems, disassembly, component identification, troubleshooting, and servicing procedures to support these devices in standalone and networked environments.

B. Prerequisites

Prior to taking the imageRUNNER ADVANCE 500iF/400iF Series Training program, technicians must successfully complete the Applied Technologies eLearning course.

Note: It is strongly recommended, not required, that technicians take the ADVANCE Systems training course. The imageRUNNER ADVANCE 500iF/400iF models use the ADVANCE Systems interface.

C. Certification

The successful completion of the imageRUNNER 1750/40/30 Series Online Training program is required to sell and service the imageRUNNER ADVANCE 500iF/400iF models. Technicians who have completed this training are auto-certified for the imageRUNNER ADVANCE 500iF/400iF models.

Certification includes the following devices:

- imageRUNNER 1750
- imageRUNNER 1750iF
- imageRUNNER 1740
- imageRUNNER 1740iF
- imageRUNNER 1730
- imageRUNNER 1730iF
- imageRUNNER ADVANCE 500iF
- imageRUNNER ADVANCE 400iF

D. Who Should Attend

It is highly recommended that any technician responsible for installing, servicing, or supporting the imageRUNNER 1700 and imageRUNNER ADVANCE 500iF/400iF Series machines successfully complete the online e-Learning training course.

Note: Our current support policy dictates that only those technicians who have completed the training program and pass the final assessment exam are entitled to live, phone-based support through our TSC (Technical Support Center). However, self-service support (software downloads, knowledgebase articles, support forums, technical publications) is available through our e-Support Center Web site for all technicians. (Refer to the Technical Support section on the e-Support Web site for entitlement details.)

E. What You Will Learn

The imageRUNNER 1750/40/30 Series Online Training program takes approximately 2 hours to complete. The items covered include:

- Product Overview
- Control System
- Original Exposure
- Media Transport
- Image Formation
- Fixing
- Servicing

F. Training Facilities

The online course is located in the e-Learning center on the Canon USA e-Support Center Web site: <http://www.support.cusa.canon.com>. Certification maps on the e-Support Center Web site provide easier access to the training. This e-Learning course can be conducted at any dealer facility that is suitable for online student learning. An imageRUNNER 1700 Series or imageRUNNER ADVANCE 500iF/400iF device must be available to complete the labs.

G. Course Equipment

- imageRUNNER 1700 Series or imageRUNNER ADVANCE 500iF/400iF Series machine
- Windows workstation
- Flash-enabled Web browser (preferably Microsoft Internet Explorer)
- USB cable
- One USB Flash memory
- Service Tools

H. Service Materials

The materials required for the imageRUNNER 1750/40/30 Series Online Training program are listed in the table below.

Table 8 - Service Materials

Model/Accessory	Item	Location
imageRUNNER 1700 Series	e-Learning Training Program	Conducted online
	Service Manual	Downloadable from the e-Support Center Web site
	Parts Catalog	
imageRUNNER ADVANCE 500iF/400iF Series	Service Manual	Downloadable from the e-Support Center Web site
	Parts Catalog	

IX. Servicing Notes

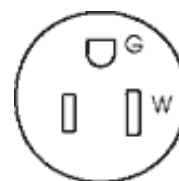
A. Power and Plug Requirements

Canon USA strongly suggests dedicated and properly grounded outlets be provided for the imageRUNNER ADVANCE 500iF/400iF Series devices.

The imageRUNNER ADVANCE 500iF/400iF Series devices require a NEMA 5-15 receptacle for proper operation. Before installation, confirm that the proper dedicated NEMA receptacles are available for these devices.

Table 9 – Main Unit Power and Plug Requirements

imageRUNNER ADVANCE 500iF/400iF Series Main Unit



NEMA 5-15 Receptacle



IMPORTANT

- We recommend an additional standard 120 V/15 A outlet for service tools, such as a laptop computer or vacuum that may be used when servicing or configuring the machine.
- Use only dedicated and properly grounded outlets for the main unit. It is also strongly suggested to use dedicated and properly grounded outlets for each optional accessory. Do not use extension cords. The ground connection serves to provide the internal electronics with a reference voltage. Faulty or poor ground sources will cause this reference voltage to fall into a range that no longer serves as a reliable reference voltage. The internal logic and programming of the imageRUNNER ADVANCE 500iF/400iF Series machines will not perform reliably because there is an insufficient difference between the internal operating signal voltages and the poor ground reference signal. A qualified electrician can measure and provide the ground source that the imageRUNNER ADVANCE 500iF/400iF Series machines or any computer controlled office equipment requires.
- Before installation, confirm that all necessary receptacles are available.

Table 10 – Power Requirements for the Main Unit and Optional Accessories

Part or Accessory	Power Supply	Power Supply Cord/Plug Specifications	Length of Power Cord
Main Unit	1-120 V/15 A outlet	NEMA 5-15	8.5' (2.6 m)
Cassette Module-AA1	From the main unit	—	—
Staple Finisher-R1	From the main unit	—	—
Copy Card Reader-F1	From the main unit	—	—

B. Installation Space Requirements

The imageRUNNER ADVANCE 500iF/400iF Series machine approximate installation space requirements may differ, depending on how the machine is configured and the optional accessories attached. Always ensure that there is enough space for service and operation of the device.



IMPORTANT

- Make sure to keep the back and sides of the machine approximately 4" (100 mm) away from a wall for the proper servicing of the equipment.
- The floor must be level (with no bows) and flat for the stabilization and support of the machine.
- The minimum doorway opening that the machine passes through prior to installation must be at least 30 1/2" wide.

Table 11 – Installation Space Requirements

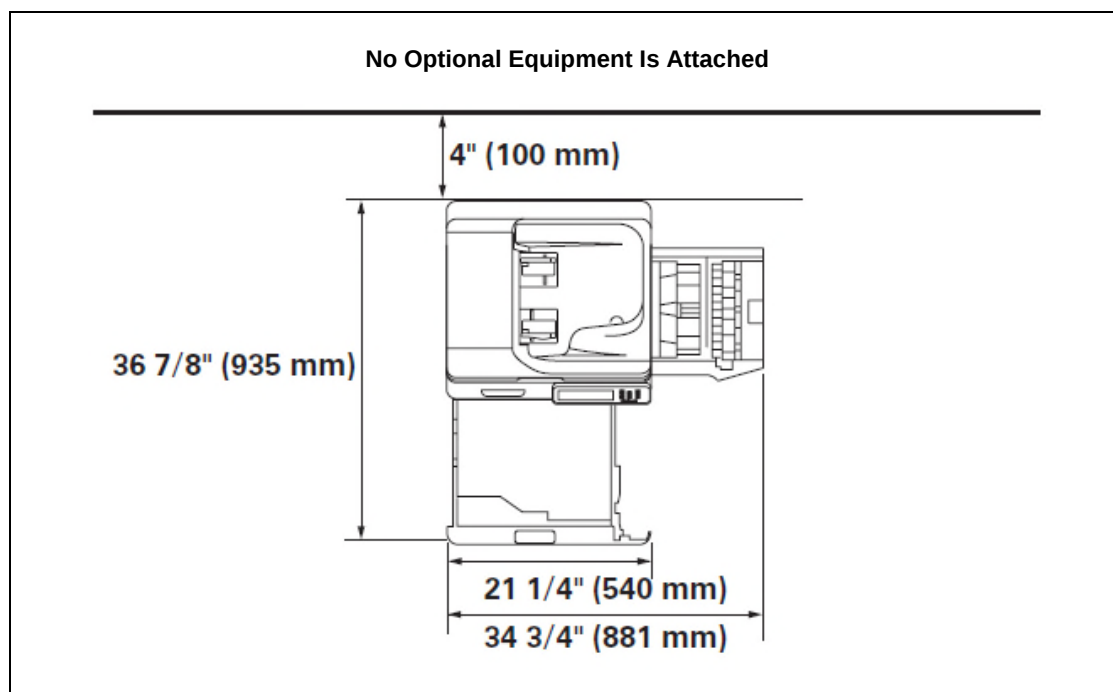
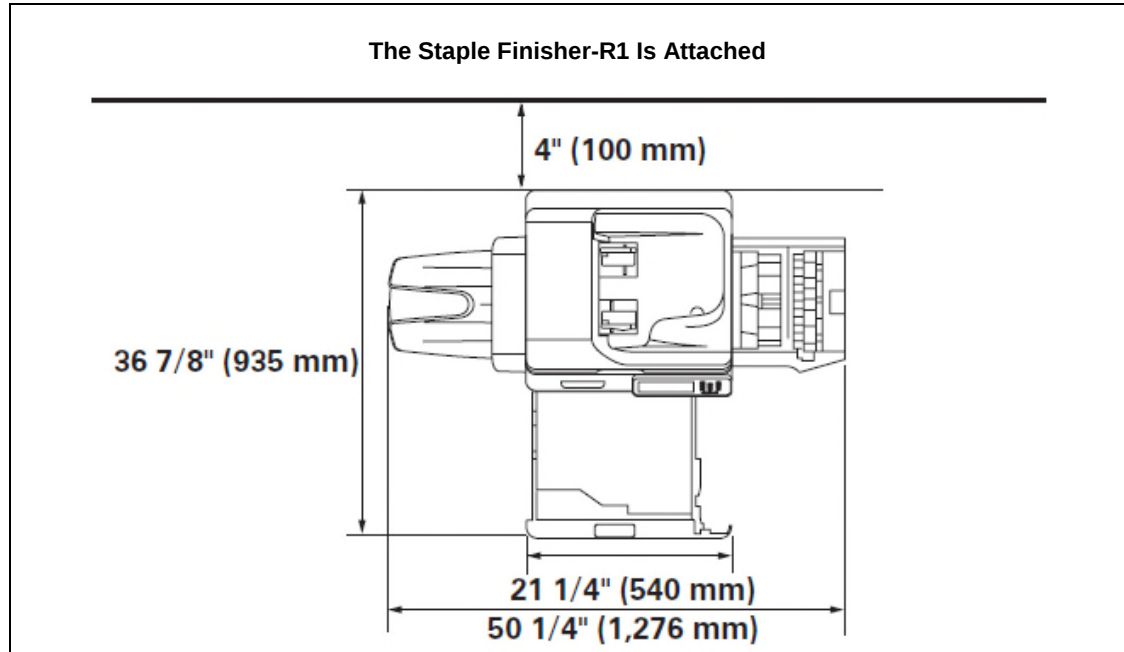


Table 15 – Installation Space Requirements Continued



C. Estimated Installation Times

The table below indicates the estimated length of time needed to unpack and install the main unit and optional accessories, and calculated from the average amount of labor hours. The estimated installation times are based on one (1) experienced technician.



IMPORTANT

The installation of the main unit on the optional Cabinet Type-H (Small) or Cabinet Type-L (Large) requires two (2) or more technicians.

Table 12 – Estimated Installation Times

Description	Estimated Time
imageRUNNER ADVANCE 500iF/400iF Series Main Unit	11 minutes
Cassette Module-AA1	3 minutes
FL Cassette-AS1	2 minutes
Envelope Cassette-E1	2 minutes
Staple Finisher-R1	4 minutes
Copy Card Reader-F1 and Copy Card Reader Attachment Kit-C2	37 minutes
IC Card Reader Box-A1	15 minutes
Super G3 FAX Board-AM1	14 minutes
Super G3 2 nd Line Fax Board-AM1	16 minutes
HDD Data Encryption Kit-C6	13 minutes

D. Remote Support Services

Remote support services consist of imageWARE Remote and the CDS (Content Delivery System).

1. imageWARE Remote

imageWARE Remote is a service that collects page counter, service parts counter, and alarm, jam, and error code data from Canon devices with the eRDS (Embedded Remote Diagnostic System).

The eRDS enables a device to transmit counter and error code data to a UGW (Universal Gateway) database that the dealership can retrieve via a Web portal. imageWARE Remote provides the following benefits to customers:

- The ability to communicate meter counter information to the UGW database for review by your dealership.
- The ability to communicate device alarm, jam, and error alert notifications to the UGW database. The notification settings can be adjusted by your dealership within the UGW.
- The ability to schedule a firmware download via the CDS (Content Delivery System).

2. Content Delivery System

The CDS is Canon's next generation system for the delivery and installation of firmware and MEAP (Multifunction Embedded Application Platform) applications to imageRUNNER ADVANCE devices. The advantages of the CDS include reduced service costs (labor and travel), and improved first-call resolution. Another benefit is that the latest version of firmware is always available to download and install on the imageRUNNER ADVANCE devices.

The CDS provides users the option to download select MEAP applications (.jar files and license files), select client applications, and related manuals from the CDS Web site (<http://www.canon.com/fau/downloads>). However, the value of using the CDS is realized when updating multiple imageRUNNER ADVANCE devices. You can save up to 40 minutes per machine for machine preparation and application downloading and installation.

There are three methods which helps you to deliver firmware updates and applications to imageRUNNER ADVANCE devices:

Table 13 – CDS Firmware Delivery Methods

Method		Download Firmware	Install Firmware	Frequency	Cost Savings
Method A	Scheduled Update (at device)	Automatic	Automatic	Rekurs periodically	Full, automatic and unattended firmware updates after an initial one-time setup (fewer than 5 minutes).
Method B	Remote Update via UGW + CDS	Up to 13 hours to 7 days in advance	Automatic	One time as scheduled	Eliminates technician visits.
			Manual		Reduces the duration of a technician's visit.
Method C	On Demand Update (at device)	Up to 7 days in advance	Automatic	One time as scheduled	Full, automatic and unattended firmware updates after configuring (fewer than 5 minutes).
			Manual	One time on demand	Requires a technician visit every time the firmware must be updated.

a. Method A – On-Site Scheduled Update

The On-site Scheduled Update method ensures that the device always has the latest version of firmware installed. After a one-time setup by a service technician, the imageRUNNER ADVANCE machine automatically downloads and installs new firmware as it becomes available. No further technician visits are required to update firmware.

b. Method B – Remote Update

The Remote Update method enables the dealership to arrange a scheduled firmware download to the imageRUNNER ADVANCE from the UGW, or it provides the option for a service technician to visit the site and upgrade the most recent firmware at the machine.

c. Method C – On Demand Update

The On Demand Update method provides the service technician with access to the most recent version of firmware on demand at the device. The technician also has the ability to schedule firmware installs. A service technician must visit the site every time the firmware must be updated; however, the technician does not need to maintain a library of firmware versions.

Notes:

- To utilize the CDS on an imageRUNNER ADVANCE, the device must have access to the Internet. The service technician should perform a communications test from the Service Mode of the device to validate the device's ability to communicate to the CDS Distribution Server.
- When using the Remote Update method, the service technician must enable eRDS and the CDS UGW switch on all imageRUNNER ADVANCE devices. In addition, the devices must be registered on the UGW. For more information on registering devices on the UGW, see the documentation that came with imageWARE Remote.
- The CDS Instruction Manual includes conditions for use and acceptance of the CDS Service. It also contains language to help the customer understand the conditions for use and acceptance of the third-party software that is embedded in the hardware. (These conditions are also addressed in the Limited Warranty for Embedded Software.)
- The Content Delivery System Software Solutions Guide (available on Canon USA's ISG Central and e-Support Web sites), contains additional language that Canon USA recommends your dealership include in the Maintenance Agreement with your customers as it pertains to the use of the CDS service.

E. Serviceability

The imageRUNNER ADVANCE products are designed to improve serviceability, quality, and deliver lower service costs, which result in increased dealer service profitability.

Enhanced serviceability, as part of the overall design of the imageRUNNER ADVANCE products, enables a reduction in the time required to service the machine's major components. Access to common parts and frequently-used components has been improved to enable technicians to perform tasks more efficiently.

In addition, technology improvements and the FRU (Field Replaceable Unit) Program have reduced parts pricing, improved the cost per copy, and reduced the price of the fixing roller.

Finally, the use of Remote Support Services provides your dealership with remote meter reading and service monitoring capabilities using imageWARE Remote, as well as the ability to maintain up-to-date machine firmware downloads remotely and unobtrusively by using the CDS. All of these factors combined, helps to reduce the overall cost per copy, and enables competitive suggested maintenance pricing and favorable margins.

F. Less Maintenance Strategy

The imageRUNNER ADVANCE 500iF/400iF Series machines are designed for ease of installation and parts replacement, thereby reducing dealer labor costs. Serviceability improves because these machines are equipped with the potential to reduce service operation costs for the dealer and maintain uptime for the customer by enabling a nontechnical person (end-user) to perform installation and replace parts. This includes trained delivery people, the person responsible for daily maintenance at the customer site, and end-users.

Canon USA suggests the following tasks as possible options designed to enable dealerships to reduce service costs and maintain uptime for the customer:

- Device installation by an end-user or a less-skilled person, such as a junior technician
- Select parts replacement by an end-user or a less-skilled person, such as a junior technician

The imageRUNNER ADVANCE 500iF/400iF Series machines provide dealers with more options for easy installation and parts replacement. The Less Maintenance strategy is solely at the discretion of the dealer, however, Canon USA encourages dealers to utilize this strategy as an opportunity to reduce service costs and maintain uptime for their customers.

Device Configuration Management

There are two tools to help a System Administrator manage device configuration settings from device to device, and they are standard tools on the imageRUNNER ADVANCE 500iF/400iF Series: DCM (Device Configuration Manager) and Device Migration Navigator.

1. DCM (Device Configuration Manager)

The DCM reduces the installation time for a new or replacement imageRUNNER ADVANCE device by enabling the user modes and service modes to be exported from the current device, and then imported to a new or replacement device.

The settings can be exported from the current device via the Remote UI or the Device Information Delivery Settings function, or via the Service Mode to USB memory media. To import these settings to a new or replacement device, use the Remote UI, or import them via the Service Mode from USB memory media. For more information on the DCM, see the *imageRUNNER ADVANCE 500iF/400iF Series Service Manual*.

2. Device Migration Navigator

The Device Migration Navigator is an application that helps the service technician select the best migration tool (Remote UI or USB memory media) to transfer device settings based on the source device, destination device, and the settings that need to be transferred.

The Device Migration Navigator delivers a printable report that shows the service technician the tools to use, the migration procedure, and the migration limitations. It is also available at no charge from CUSA's [e-Support Web site](#) Download Center.

Note: The Device Migration Navigator is only used to transfer device settings. It is not used to back up or restore RAM data.

G. LMS (License Management System)

To activate optional software programs, you must obtain a license through the LMS server. This replaces the need for additional hardware or dongles to activate new software.

The LMS is a server-based software license program. All purchased software application packages contain a license access number certificate with the documentation. The dealer must enter the license access number and the imageRUNNER ADVANCE device's serial number into the LMS server to generate a license key. The URL to access the LMS server is: <http://www.canon.com/lms/ir/>.

Figure 1 – License Management System

Canon

Language: English

License Management System

Welcome to License Management System.
This web site will assist you in issuing Licenses needed to install various Canon products.

License Issuance

License Access Number Entry

Enter the License Access Number of the Canon product you purchased.

License Access Number: 1234 - 1234 - 1234 - 1234

The License Access Number is packaged with the option you purchased.

Next →

Version 3.0 © CANON INC. 2009

If there are activation or installation issues, contact the Technical Support Center. Be prepared to provide the product's serial number, license access number, and license key.

Notes:

- The license access number comes with the software. Keep the license access number in a secure location, as it cannot be replaced if it is lost.
- The machine's serial number can be found on the Counter Check screen on the machine's UI.
- Activated software programs are not impacted by normal service activity.

H. Content Delivery System Web Site

The CDS Web site enables end-users to download, install, and activate select MEAP applications (.jar and license files) via the imageRUNNER ADVANCE device directly, without the need to go through the LMS and Service Management Service.

To manage licenses, register, and install MEAP applications, you can access the CDS directly from the imageRUNNER ADVANCE device's touch panel display, enter the LAN (License Access Number) of the MEAP application when prompted, and then follow the instructions on the touch panel display to install and register the MEAP application.

Some MEAP applications include a Software License Agreement to which you must agree before you can complete the installation and registration process.

Additionally, you can download select client applications and related manuals from the CDS Web site located at: <http://www.canon.com/fau/downloads>.

Figure 2 – Content Delivery System Web Site

If there are activation or installation problems, contact the Technical Support Center, and provide the product's serial number and LAN.

I. Recommended System Engineer Requirements

An SE (System Engineer)³⁶ is recommended to work with Canon's networked devices, and should have the following basic job functions:

- Systems integration (pre-sale and post-sale)
- Installation
- Education of customers and dealership personnel
- Troubleshooting

To perform the above tasks successfully, it is crucial that the SE have strong computer skills and working knowledge in the following areas (listed in order of importance):

1. The major computer platforms (IBM-compatible and Macintosh)
2. Computer hardware (including cabling)
3. Computer software (including drivers)
4. Operating systems:
 - Windows 2000 Professional/Server/Advanced Server
 - Windows XP Professional/Home Edition (32 bit)
 - Windows XP Professional x64 (64 bit)
 - Windows Server 2003 (32 and 64 bit versions)
 - Windows Vista (32 bit)
 - Mac OS versions 10.1.5 and up (for PS/PCL), and versions 10.2.8 – 10.4.2 (for UFR II)
5. Network Operating Systems:
 - Novell NetWare 3.x, 4.x, 5.x, and 6.x
 - Windows NT/2000/2003
 - Mac OS X
6. Protocols:
 - TCP/IP
 - IPX/SPX
 - NetBIOS
 - AppleTalk
7. Printing
8. Scanning

It is also important that the SE have computer skills and working knowledge in the following areas:

- Other computer platforms (mainframe and UNIX)
- Networking
- Basic electronics

³⁶ An SE (System Engineer) is a professional title often used by hardware vendors for individuals who perform systems related tasks, such as analysis, design, and programming. System Engineers are also often involved in pre-sales activities.

The Education/Training (listed in preferred order) of a successful Canon dealership's SE include:

1. Novell CNA or Novell CNE or Microsoft MCSE certification
2. Two years of experience being a Canon Copier Service Technician (training centered on connectivity products)
3. A degree in Computer Science or Engineering, or a computer technician with two years of experience is required in the above areas.

J. Firmware Upgrades Using the Service Support Tool

The SST (Service Support Tool) (version 4.73 or later) is available via Canon's e-Support Center Web site (<http://www.support.cusa.canon.com>) for upgrading the following system components:

- System Software stored on the HDD
- Main engine firmware
- Accessory firmware (Refer to the SST User Manual for a list of supported devices and accessories.)
- MEAP Contents
- Language
- HDD Format
- Clear the service mode password
- Initialize the HDD Encryption Board
- Temporary back up and restore the Flash PCB (Printed Circuit Board) and SRAM settings on the Main Controller PCB 2.
- Initialize the standard area on the Flash PCB

The imageRUNNER ADVANCE 500iF/400iF Series devices support firmware downloads from the SST and a USB memory stick. When the hard disk drive is replaced, the SST is used to format the new HDD and load software.



IMPORTANT

- The imageRUNNER ADVANCE Security Kit-H1 for IEEE 2600.1 Common Criteria Certification ships with certified device firmware to enable the imageRUNNER ADVANCE 500iF/400iF Series machines to be IEEE 2600.1 certified.
- Once the imageRUNNER ADVANCE Security Kit-H1 for IEEE 2600.1 Common Criteria Certification is installed, you can only upgrade imageRUNNER ADVANCE 500iF/400iF Series machines with firmware versions certified for the IEEE standard 2600.1-2009. Upgrading to non-certified firmware invalidates the IEEE standard 2600.1 certification, although the machine will continue to operate properly.

K. Computer Requirements for Downloading Firmware

The recommended desktop PC or laptop requirements³⁷ to download the firmware are:

- CPU: Celeron 400 MHz or higher (32-bit processor only)
- Memory: 512 MB of RAM or more
- Free HDD Capacity: 1 GB or more of available hard disk space
- High-Speed USB 2.0 (recommended) or 1.1
- Display: VGA 640 x 480 resolution or better, 256 colors or more
- Operating System (any of the following):
 - Microsoft Windows 2000 Server/Professional
 - Microsoft Windows XP Professional or Home Edition
- Network connection: 10Base-T/100Base-TX, or a PCMCIA slot for an Ethernet card
- Download Tool: SST version 4.73 or later
- Necessary Cables:
 - High-Speed USB 2.0-compliant cable (as short as possible to avoid connection problems). **Note:** Do not use extension cables.
 - Cross-over Ethernet cable

L. Hard Disk Drive Handling

The imageRUNNER ADVANCE 500iF/400iF Series machines use an HDD (Hard Disk Drive) for storing firmware and image data. The HDD is easily affected by shock, vibration, and static charge. Therefore, its handling requires special care. When transporting an HDD, which is available as a service part, it must be kept in its original package until it is installed in a machine.

CAUTION

Canon USA or any of its affiliates or dealers are not liable for any damages for loss of data received or stored on the hard disk, including loss arising from lost opportunity to use such data, even if Canon is informed of the possibility of such damages. Therefore, it is recommended not to permanently store data on the HDD without having secured copies or printouts of such data. (Review the terms of the product's Limited Warranty for more details.)



IMPORTANT

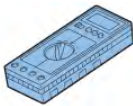
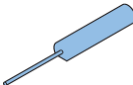
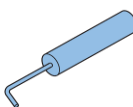
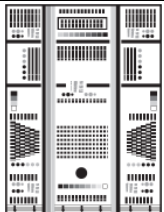
If an HDD must be replaced due to a fault, all MEAP application files stored on it will be lost, requiring all applications and their license files to be reinstalled, in addition to replacing the HDD. Refer to the *imageRUNNER ADVANCE 500iF/400iF Series Service Manual* for further details.

³⁷ Specifications are subject to change without notice.

M. Special Tools, Solvents and Oils

In addition to the standard tools used to service these devices, the following special tools should also be carried by a service technician, according to the tool's rank. For more information on the special tools, solvents, and oils below, see the *imageRUNNER ADVANCE 500iF/400iF Series Service Manual*.

Table 14 – Special Tools List

Description	Appearance	Rank	Part Number ⁶	Remarks
Digital Multimeter		A	FY9-2002-000	Used for electrical checks and adjustment of laser power with the laser power checker.
Tester Extension Pin		A	FY9-3038-000	Used as a probe extension when making electrical checks.
Tester Extension Pin (L-shaped)		A	FY9-3039-000	Used as a probe extension when making electrical checks.
NA-3 Test Chart		A	FY9-9196-000	Used for checking and adjusting images.
Rank Description				
A: Each service person must carry one.				

⁶ Part numbers are subject to change without notice.

Table 15 – Solvents and Oils

Type	Uses	Composition	Remarks
Alcohol	Cleaning glass, plastic, rubber, and external covers.	- Fluoride-family hydrocarbon - Alcohol - Surface activating agent - Water	- Keep away from flammable materials. - Purchase locally. - Substitute: IPA (Isopropyl Alcohol).
Solvent	Cleaning metal, oil, and toner stains.	- Fluoride-family hydrocarbon - Chlorine-family hydrocarbon - Alcohol	- Keep away from flammable materials. - Purchase locally. - Substitute: MEK (Methyl Ethyl Ketone)
Lubricating Oil (EM-50L)	To lubricate the gears.	- Special oil - Special solid lubricating agent - Lithium soap	Tool Number: HY9-0007
Lubricating Oil	To lubricate drive areas, friction areas, and the scanner rail.	Synthetic oil	Tool Number: FY9-6022

N. Consumables

Consumables are all products and materials that are consumed with regular use and cannot be reused. Such consumables include but are not limited to paper, chemicals, and toner.

A number of factors are considered to determine the approximate yield expectancy of a consumable item, including paper size and the amount of coverage per page.

Note: All consumables shown in the table below are estimates for reference purposes only, and are subject to change without notice.

Table 16 – Main Unit Consumables List

Description	Part Number ⁶	Quantity	Estimated Life (Pages) ³⁸		Remarks
			500iF	400iF	
GPR-39 Drum Unit	2773B004AA	1	Approx. 116,000	Approx. 102,000	Based on 6% toner coverage.
GPR-48 Black Toner	2788B003AA	1	Approximately 15,200 ³⁹		11,900 pages if this is the first time using the black toner cartridge on a brand-new machine.

⁶ Part numbers are subject to change without notice.

³⁸ Value is based on LTR paper. Estimated average values in the field are based on data from the supplier. Data is subject to change, depending on many factors, including, without limitation, the monthly copy volume, environment, type of image printed, and how the customer handles the equipment.

³⁹ The estimated life of the first toner bottle is shortened, as the toner is first supplied to the Developing Assembly and Buffer Unit.

O. Consumable Parts

Consumable parts are defined as those parts having a limited life that will be reached during a customer's specific machine operation, and should then be replaced as needed. Examples of consumable parts include, but are not limited to, feed rollers and cleaner blades.

An estimated consumable parts list is provided in the table below to assist in the initial parts/supplies planning. A consumable part's life expectancy is directly related to usage factors, such as paper size, paper quality, environment, usage application, and machine maintenance. Therefore, consumable parts do not have a warranty, and Canon USA cannot guarantee a minimum life.

Note: All consumable parts shown in the table below are for reference purposes only, and are subject to change without notice.

Table 17 – Main Unit Consumable Parts List

Description	Part Number ⁶	Quantity	Estimated Life ³⁸	Remarks
Waste Toner Container	FM4-8035-000	1	100,000 pages	Customer replaceable, if dealer chooses to allow.
Transfer Roller	FM4-6522-000	1	180,000 pages	
Static Eliminator	FM1-A131-000	1	90,000 pages	
Fixing Assembly (120 V)	FM1-A680-000	1	160,000 pages	
Cassette Feed Roller	FC6-7083-000	1	80,000 pages	
Cassette Separation Roller	FC6-6661-000	1	80,000 pages	
Multi-Purpose Tray Pickup Roller	FL2-3897-000	1	150,000 sheets	
Multi-Purpose Tray Separation Pad	FL3-4890-000	1	150,000 sheets	
ADF Pickup Roller Unit	FM4-7732-000	1	80,000 sheets	
ADF Separation Pad	FL3-7878-000	1	80,000 sheets	

⁶ Part numbers are subject to change without notice.

³⁸ Value is based on LTR paper. Estimated average values in the field are based on data from the supplier. Data is subject to change, depending on many factors, including, without limitation, the monthly copy volume, environment, type of image printed, and how the customer handles the equipment.

Table 18 – Cassette Module-AA1 Consumable Parts List

Description	Part Number ⁶	Quantity	Estimated Life ³⁸	Remarks
Cassette Feed Roller	FC6-7083-000	1	80,000 sheets	
Cassette Separation Roller	FC6-6661-000	1	80,000 sheets	

⁶ Part numbers are subject to change without notice.

³⁸ Value is based on LTR paper. Estimated average values in the field are based on data from the supplier. Data is subject to change, depending on many factors, including, without limitation, the monthly copy volume, environment, type of image printed, and how the customer handles the equipment.

P. Periodically Replaced Parts

The imageRUNNER ADVANCE 500iF/400iF Series does not have any periodically replaced parts.

Q. Periodic Maintenance

The following parts in the table below must be cleaned as needed to ensure a specific level of machine performance.

Table 19 – Periodic Maintenance List

Item	Maintenance Interval (Sheets)	Remarks
	As Needed	
Transfer Guide	✓	Clean with a dry, lint-free cloth.
Developing Roller	✓	
Fixing Inlet Guide	✓	
Multi-Purpose Tray Pickup Roller	✓	
Multi-Purpose Tray Separation Pad	✓	
Pre-Registration Guide Static Elimination Fabric	✓	
ADF Pickup Roller	✓	
ADF Separation Pad	✓	
ADF Separation Roller	✓	
ADF Registration Roller	✓	
ADF Feed Guide/Rib	✓	
ADF Delivery Roller/Roller	✓	
ADF Rollers/Slave Roller	✓	
Reader Stream Reading Glass	✓	Clean with lubricating oil (Tool Number: FY9-6022).

R. Soft Counter

The imageRUNNER ADVANCE 500iF/400iF Series machines use soft counters to track their functional copy use. The control panel displays up to six counters on the Counter Status Check screen (when the Counter Check key on the control panel is pressed). By default, the imageRUNNER ADVANCE 500iF/400iF Series machines display 2 out of 6 counters on the Counter Status Check screen.

The table below indicates the default counter configurations of the imageRUNNER ADVANCE 500iF/400iF Series machines displayed on the Counter Status Check screen. For more information on the soft counter configurations, see the *imageRUNNER ADVANCE 500iF/400iF Series Service Manual*. Specifically, refer to the Service Mode section of the Service Manual that covers the setting under COPIER > OPTION > USER.

Table 20 – Soft Counter Configuration

Counter	Description	Default Display	Default Switch
1	101: Total 1	On	Fixed
2	201: Copy (Total 1)	On	May be changed via Service Mode setting to any available counter.
3	Not Displayed	Off	
4	Not Displayed	Off	
5	Not Displayed	Off	
6	Not Displayed	Off	

The displayed counters can be changed, enabled, or disabled in the Service Mode, except for Counter 1. Counter 1 cannot be changed under any circumstances.

The table below indicates the specific soft counter available for the imageRUNNER ADVANCE 500iF/400iF Series that may be important to your dealer's click charge scheme.

Table 21 - Important Soft Counter Available

Description	Meaning
501: Scan (Total 1)	Total scans

Since the imageRUNNER ADVANCE 500iF/400iF Series does not support 11" x 17" paper, you cannot use a double-click charge scheme.

S. MEAP Counter

The MEAP application counter counts the number of prints and scans made per MEAP application. You can view the MEAP counter by logging on to the MEAP SMS (Service Management Service) Application/License Information page via a Web browser. (The computer you are using must be connected to the machine and network.) You can also view the MEAP counter from the MEAP device. Press the Counter Check button on the device's control panel, and then press the MEAP Counter key on the touch panel display.

There are three types of MEAP applications:

- Applet: Contains a user interface on the touch panel display of the device. Up to nine applet tabs can be displayed on the touch panel display of the device.
- Servlet: Contains a remote, programmable user interface for the application via a Web browser.
- Esplet: The application does not contain a user interface.

Each MEAP application has its own counter. There are 20 counters available for MEAP applications on the imageRUNNER ADVANCE 500iF/400iF Series machines. However, one of these 20 counters is used for Universal Send.

X. Suggested End-User Customer Service Offerings

A. Monthly Copy/Print Volume

The maximum print/copy monthly volume is the maximum number of pages the machine can produce within a one-month period (based on letter size paper). However, the device should not be used to produce the maximum number of pages, or a greater volume, on a consistent monthly basis.

The optimum performance range is the volume range that the equipment was intended to run on a regular basis to maintain a high-level of performance and print/copy quality.

Table 22 – Monthly Copy/Print Volume

Model	Optimum Performance Range	Maximum Monthly Copy/Print Volume
imageRUNNER ADVANCE 500iF	Approximately 3,000 to 35,000	Up to 140,000 copies/prints
imageRUNNER ADVANCE 400iF	Approximately 3,000 to 30,000	Up to 120,000 copies/prints

B. Limited Warranty Support

1. End-User Limited Warranty Conditions

Ninety (90) days after delivery to the original purchaser or 100,000 prints/copies, or a combination of both, whichever comes first.

This limited warranty covers the compatible Canon brand product accessories. For detailed warranty information, please refer to the imageRUNNER ADVANCE 500iF/400iF Series Limited Warranty located in the [Appendix](#).

Note: There is no warranty on any consumable items or consumable parts, such as paper, toner, chemicals, or pick-up rollers.

2. GPR-39 Drum Unit Limited Warranty

Full Credit: 30 days from the date of the original purchase, or 18,000 prints or copies (or a combination of both), whichever comes first.

For detailed warranty information, please refer to the GPR-39 Drum Unit Limited Warranty located in the [Appendix](#).

3. Flat-Rate Program

The Flat-Rate Program provides a flat-rate credit to Canon USA's full-line dealers as compensation for warranty expenses that they may incur. Dealers who purchase an imageRUNNER ADVANCE 500iF/400iF Series device will receive a Flat-Rate Program credit during the month following their purchase. This credit covers the dealer's cost of defective parts and drums with a dealer cost **under \$300.00** that have been replaced during the term of the end-user's Limited Warranty.

The Flat-Rate Program enables the dealer to return the more expensive machine parts to receive reimbursement for in-warranty part failures. The flat-rate credit is a percentage of your eligible machine purchases, drums, and accessories. Flat-rate credits are posted monthly in the CNA (Canon Network Access) section of Canon USA's ISG Central Web site. Refer to the [Online Limited Warranty Credit Inquiry](#) section for more information.

Original defective parts with a dealer cost **over \$300.00** that have been replaced during the term of the end-user warranty are eligible to receive reimbursement credit through the e-Tag process. Parts that are listed on the Canon USA Repairable Parts List should be sent to an APRF (Authorized Parts Repair Facility) to be repaired at no charge.

To request a part reimbursement credit, complete the e-Tag warranty claim form in the Warranty section of the e-Support Center Web site at <http://www.support.cusa.canon.com>. Refer to the [e-Tag](#) section of this Service Guide for further details and instructions.

Additional information on the Flat-Rate Program is located on the Canon USA's e-Support Web site at <http://www.support.cusa.canon.com>, as shown in Figure 3.

Figure 3 – e-Support: Flat-Rate Program

e-support center Canon ENGINEERING SERVICES & SOLUTIONS DIVISION

Home Tech Support Field Support Training ATSP Warranty Video Communication Center Major Accounts Management Center

Info Center Flat-Rate Program e-Tag Part Repair Facilities Refurbished Subassembly Program ASCR Product Advisories

Flat-Rate Program

Once per month, Canon's Systems & Technical Support Division issues credit under the Flat-Rate warranty program to cover the cost of defective parts and drums with a dealer cost under \$300.

No documentation or part/drum returns are required in order to receive the monthly Flat-Rate credit. This credit is calculated using purchases of machines, accessories and drums from the previous month. For example, May 2012 represents credit for purchases made in April 2012.

Product shipments to dealers of National Account and Government Marketing Division placements are treated as if the dealer had purchased the machine. They are added to the total number of wholesale purchases the dealer made.

The Flat-Rate Program applies to full-line dealers of imagePRESS (iP), imageRUNNER (iR), Color imageRUNNER (CiR), imageRUNNER ADVANCE (iR ADV), Color imageRUNNER ADVANCE (CiR ADV) and Océ VarioPrint products.

To view on-line Flat-Rate warranty credits, log onto the ISG Central website at www.isgcentral.cusa.canon.com. Go to the Canon Network Access (CNA) site and select Warranty Credit Inquiry -> Flat Rate Warranty Reimbursement.

Flat-Rate Program Links

- Flat-Rate Warranty Reimbursement Program Changes 08/06/09 (PDF: 124KB)
- FAQ's Viewing Flat-Rate Credits on CNA 05/30/08 (PDF: 24KB)

Flat-Rate Reference Table

Covered Products

- imagePRESS (iP)
- Monochrome (iR)
- Business Color (CiR)
- imageRUNNER ADVANCE (iR ADV)
- imagePASS A1, B1, B2, C1, C2, D1, E1, G1, H1, J1
- imagePRESS Server T1

Non-Covered Products

- Facsimile
- ImageCLASS
- Micrographics/DR Scanners/imageFORMULA
- imagePROGRAF
- imagePASS L-1, M-1, M-2, M-3, S-1, S-2, U-1, U-2
- ColorPASS, GX-100, GX-200, GX-300, GX-400
- imagePRESS Server Q1, Q2, A1100, A2000, A2100, A3000, A3100, A3200, J100, J200
- imagePRESS Creo Server A7000, A7500

4. Warranty Parts for Repair

The APRFs (Authorized Parts Repair Facilities) are authorized by Canon USA to repair circuit boards for various Canon products. The APRF program is designed to help your dealership reduce service costs by having circuit boards repaired instead of purchasing brand new boards. Each circuit board is live tested and updated to the latest firmware version prior to returning it to your dealership.

Parts specified on the Canon USA Repairable Parts List must be prepaid and shipped directly to one of the following Authorized Parts Repair Facilities. Log on to the Canon USA e-Support Web site at <http://www.support.cusa.canon.com> to view the Canon USA Repairable Parts List. Go to the Warranty tab, Part Repair Facilities, Repairable Parts List. See [Figure 4 – e-Support: Authorized Parts Repair Facilities](#) for more details.

Hytec Dealer Services, Inc. 3600 Vineland Road (Suite 121) Orlando, FL 32811 Telephone: 1-407-297-1001 Customer Service: 1-800-883-1001 Technical Support: 1-888-883-2001 Fax: 1-407-297-4310	Nation-Wide Repair Service, Inc. 16151 Foster Street Overland Park, KS 66085 Customer Service: 1-866-655-8676 Technical Support: 1-800-798-1814 Fax: 1-913-631-8372
--	---

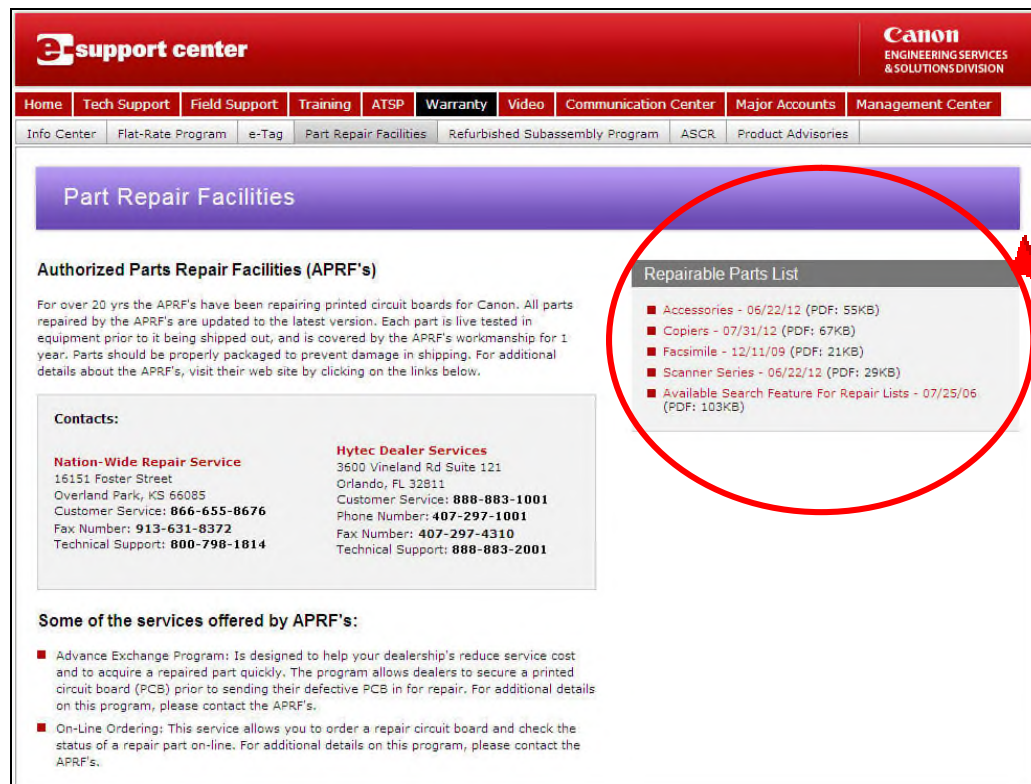
Repairable parts (under warranty) are repaired free-of-charge by the APRFs. Usually, the turnaround time is approximately five (5) business days. Once repaired and tested, the parts are shipped back to your dealership via UPS Ground.

If a part is not repairable, the APRF will contact your dealership, and Canon USA's Warranty Control Section will issue a credit to your account.

To check the status of your part, please contact the APRF.

The Repairable Parts List index is in the Warranty section of the e-Support Center Web site at <http://www.support.cusa.canon.com>. Select from the Repairable Parts List, as shown below, for the most current list.

Figure 4 – e-Support: Authorized Parts Repair Facilities



The screenshot shows the Canon e-Support Center website. The top navigation bar includes links for Home, Tech Support, Field Support, Training, ATSP, Warranty, Video, Communication Center, Major Accounts, and Management Center. Below this is a secondary navigation bar with links for Info Center, Flat-Rate Program, e-Tag, Part Repair Facilities, Refurbished Subassembly Program, ASCR, Product Advisories, and a link to the Repairable Parts List. The main content area is titled 'Part Repair Facilities' and contains information about Authorized Parts Repair Facilities (APRF's), including a description of the program and a list of contacts. A red circle highlights the 'Repairable Parts List' link in the right-hand column.

Part Repair Facilities

Authorized Parts Repair Facilities (APRF's)

For over 20 yrs the APRF's have been repairing printed circuit boards for Canon. All parts repaired by the APRF's are updated to the latest version. Each part is live tested in equipment prior to it being shipped out, and is covered by the APRF's workmanship for 1 year. Parts should be properly packaged to prevent damage in shipping. For additional details about the APRF's, visit their web site by clicking on the links below.

Contacts:

Nation-Wide Repair Service 16151 Foster Street Overland Park, KS 66085 Customer Service: 866-655-8676 Fax Number: 913-631-8372 Technical Support: 800-798-1814	Hytec Dealer Services 3600 Vineland Rd Suite 121 Orlando, FL 32811 Customer Service: 888-883-1001 Phone Number: 407-297-1001 Fax Number: 407-297-4310 Technical Support: 888-883-2001
--	---

Repairable Parts List

- Accessories - 06/22/12 (PDF: 55KB)
- Copiers - 07/31/12 (PDF: 67KB)
- Facsimile - 12/11/09 (PDF: 21KB)
- Scanner Series - 06/22/12 (PDF: 29KB)
- Available Search Feature For Repair Lists - 07/25/06 (PDF: 103KB)

Some of the services offered by APRF's:

- Advance Exchange Program: Is designed to help your dealership's reduce service cost and to acquire a repaired part quickly. The program allows dealers to secure a printed circuit board (PCB) prior to sending their defective PCB in for repair. For additional details on this program, please contact the APRF's.
- On-Line Ordering: This service allows you to order a repair circuit board and check the status of a repair part on-line. For additional details on this program, please contact the APRF's.

Warranty Parts over \$300.00 that are not on the Repairable Parts List

All original defective parts with a dealer cost valued over \$300.00, that are not specified on the Repairable Parts List, must be submitted to Canon Virginia, Inc. with a completed e-Tag warranty claim form, and a handwritten or computer-generated copy of the machine's service history.

Canon Virginia, Inc.
12000 Canon Boulevard
Newport News, VA 23606
Attention: Warranty Returns

The service history log must include the following:

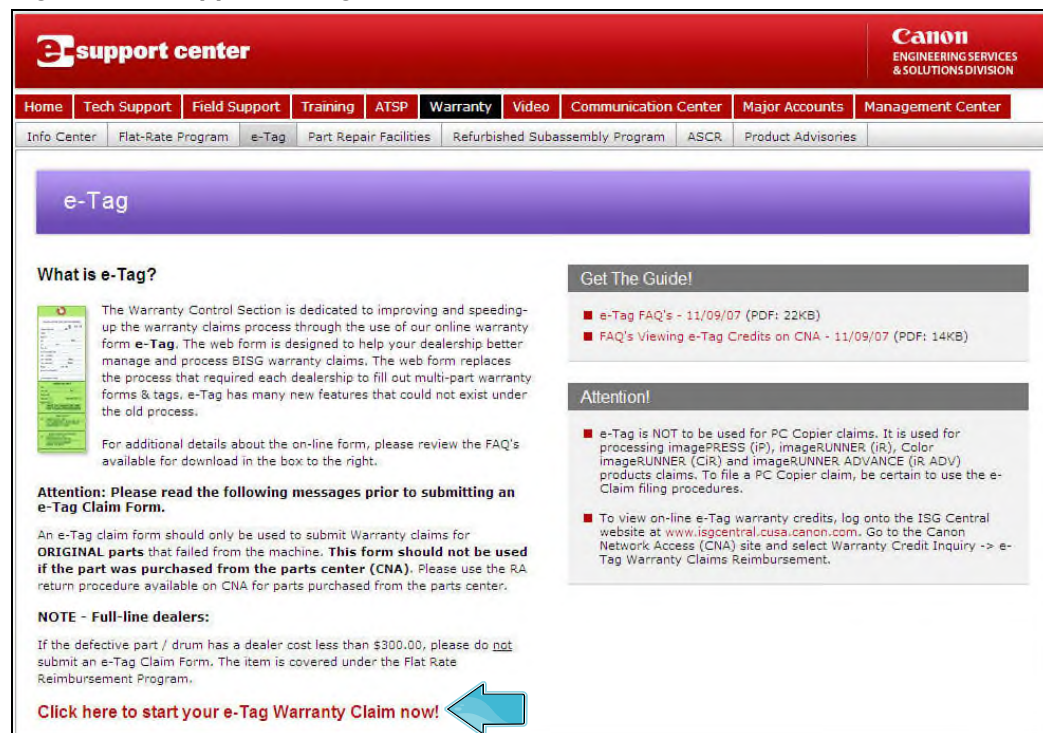
- Dealer Name
- Machine's Installation Date
- Machine's Serial Number
- Part Number
- Work Performed (Highlight Current Service Call)
- Part Description
- Date Part Was Removed
- Machine Copy Count
- Reason for Removal

5. e-Tag

e-Tag is an electronic limited warranty claim form that is completed online, printed out, and accompanied by the original defective part or defective drum that is being returned to the Warranty Control Section for warranty compensation.

The e-Tag warranty claim form can be accessed in the Warranty section of the e-Support Center Web site at:
<http://www.support.cusa.canon.com>.

Figure 5 — e-Support: e-Tag



To submit a new warranty claim, select the type of claim from the drop-down list, shown below, and complete the required sections of the e-Tag limited warranty claim form.

Figure 6 – e-Support: e-Tag Claim Console

A copy of the e-Tag warranty claim form and the machine's service history must be returned with the original defective parts to the address provided on the bottom of the e-Tag warranty claim form.

The service history log can be handwritten or computer-generated, and must include the following information:

- Dealer Name
- Machine's Installation Date
- Machine's Serial Number
- Part Number
- Work Performed (Highlight Current Service Call)
- Part Description
- Date Part Was Removed
- Machine Copy Count
- Reason for Removal

For defective drums, ship the drum to the address provided on the bottom of the e-Tag warranty claim form, accompanied by a copy of the e-Tag warranty claim form, the machine's service history log, a "before" sample copy that depicts the problem, and an "after" sample copy that shows that the problem has been resolved.

After a claim form is authorized, parts, drums, and labor credits are posted on the CNA Web site the following business day.

6. Online Limited Warranty Credit Inquiry

The Online Warranty Credit Inquiry enables your dealership to check, download, and print the details of your e-Tag and Flat-Rate Program credits on the CNA (Canon Network Access) Web site.

a. e-Tag Inquiry

To view your e-Tag warranty claim credits online, log on to the ISG Central Web site at <http://www.isgcentral.cusa.canon.com>, and select “Canon Network Access (CNA)”, as shown below.

Figure 7 – ISG Central



On the CNA Web site, select “Warranty Credit Inquiry”, and then select “e-Tag Warranty Claims Reimbursement” to perform an e-Tag Warranty claims search, as shown in the following screen shots.

Figure 8 – CNA: Warranty Credit Inquiry

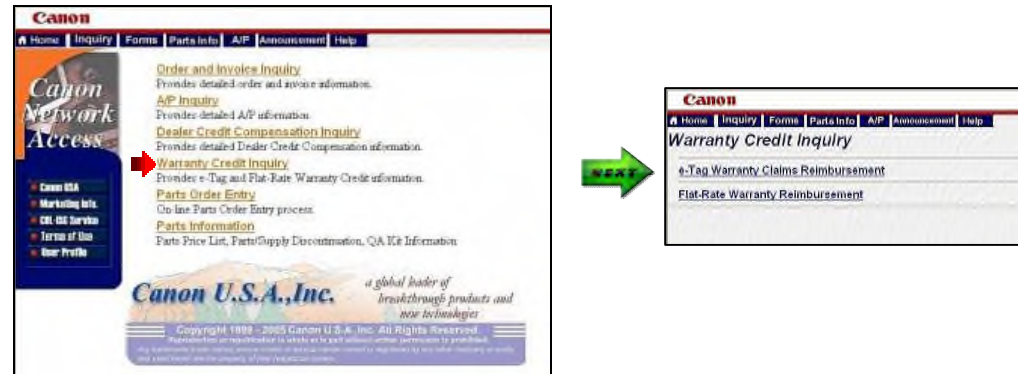


Figure 9 – CNA: e-Tag Warranty Claims Search



To check the status of the e-Tag warranty claims already submitted:

Go to the e-Tag Warranty Claim Console, as shown at the bottom of the screen shot in [Figure 6 – e-Support: e-Tag Claim Console](#). This console enables you to check the status of your claims. To view the details of the e-Tag limited warranty claim form, double-click any record.

Note: e-Tag warranty claims are connected to the e-Support ID number that is entered. Therefore, it is highly recommended that only one person enter and manage the e-Tag warranty claims from your dealership.

b. Flat-Rate Inquiry

To view your Flat-Rate warranty reimbursements online, log on to the ISG Central Web site at <http://www.isgcentral.cusa.canon.com>, and select “Canon Network Access (CNA)”, as shown below.

Figure 10 – ISG Central



On the CNA Web site, select “Warranty Credit Inquiry”, and then select “Flat-Rate Warranty Reimbursement” to perform a Flat-Rate Warranty claims search, as shown in the following screen shots.

Figure 11 – CNA: Warranty Credit Inquiry

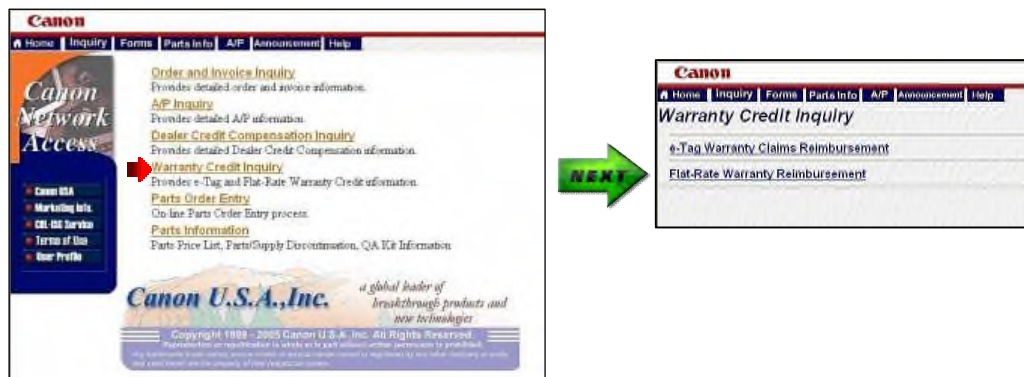


Figure 12 – CNA: Flat-Rate Warranty Reimbursement Search



XI. Product Technical Support Offerings

A. Dealer Support Requirements

imageRUNNER ADVANCE 500iF/400iF Series Technical Training is required to receive technical support for these machines. Refer to the [Canon USA Technical Support Center](#) section for further details.

To ensure that every dealer receives the highest level of support and help to resolve the end user's problems quickly and accurately, we recommend the following to maximize your technical support request:

- Your support personnel should check technical documentation (User Manuals, Technical Publications, etc.) and the e-Support Web site (24 hours a day, 7 days a week) before calling Canon USA's TSC (Technical Support Center), since your concern may have already been addressed and documented.
- Have your Support ID number ready when you call the TSC, and make sure that you are where the engine or application is located and accessible. This dramatically improves the TSC's ability to help troubleshoot the problem, and eliminate the "guesswork" when answering a specific question. This also helps to supply you with answers that are more accurate.
- Provide the serial number of the installed engine or application you want to troubleshoot. While the serial number is required to access support, it also provides the Support Specialist with information about previous calls for support.
- Make sure to provide environment-specific information, and any other site-specific variables.
- Submit and update your profile information, such as cell phone number, e-mail address, and company address on the e-Support Web site in the Current Profile section. You can also call Canon USA's TSC. Accurate profile information enables you to contact support personnel faster, and is necessary, if more information is required from the caller later.
- At the completion of each call, a ticket number is provided. If the Support Specialist does not provide a number, the caller should ask for it.
- Have a Dealer Technician or Systems Engineer call Canon USA with what resolved your issue. This information is helpful, and enables a Support Specialist to assist other callers who may have the same problem.

B. Canon USA Support Offerings

The following support offerings were established to deliver high-quality, timely technical support services, and product information to Canon dealerships. These support services cover areas, such as system and user software, networking and connectivity issues, electro-mechanical operations, and other hardware servicing.

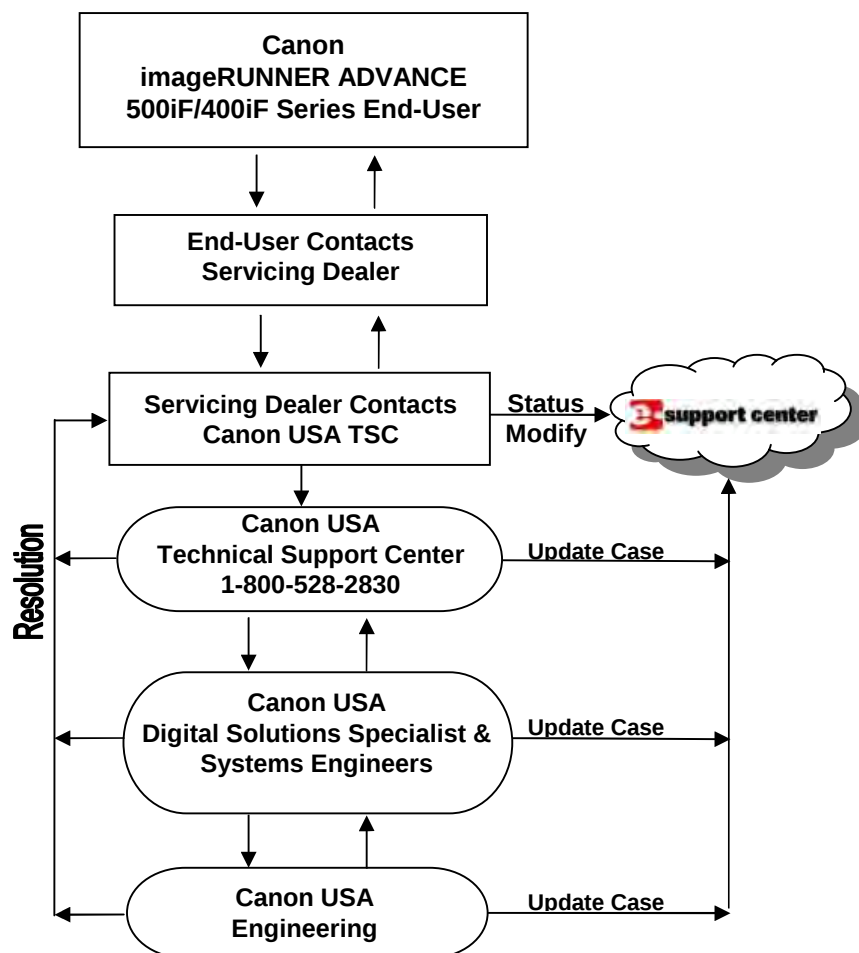
1. Canon USA Technical Support Center

Canon USA provides a time-sensitive call escalation process for all authorized imageRUNNER ADVANCE 500iF/400iF Series dealers. The TSC is the single-point of entry for this process. Once a call is placed to the TSC and information is logged into the call management system, a case number is assigned to the call. Every effort is made to resolve the problem during the call. Calls that cannot be resolved during the initial call and require escalation, must follow the process below. The status of all escalated cases can be viewed via e-Support or by calling the TSC.

Canon USA's TSC support responsibilities are as follows:

- The contracted servicing dealer solely provides all technical support for the end-user.
- The Canon USA TSC is the central contact/escalation for the reporting of all known outstanding hardware and software issues to Canon USA's engineering and software development groups.
- The Canon USA TSC is available to all Authorized Dealers, Systems Engineers, and Technicians who have successfully completed the training program.
- The TSC provides technical information regarding all Canon associated hardware and software products.
- The TSC deploys, as required through proper escalation procedures, all on-site Canon USA Digital Solutions Specialists and Systems Engineers.

Table 23 – Canon USA Support Escalation Flow Chart



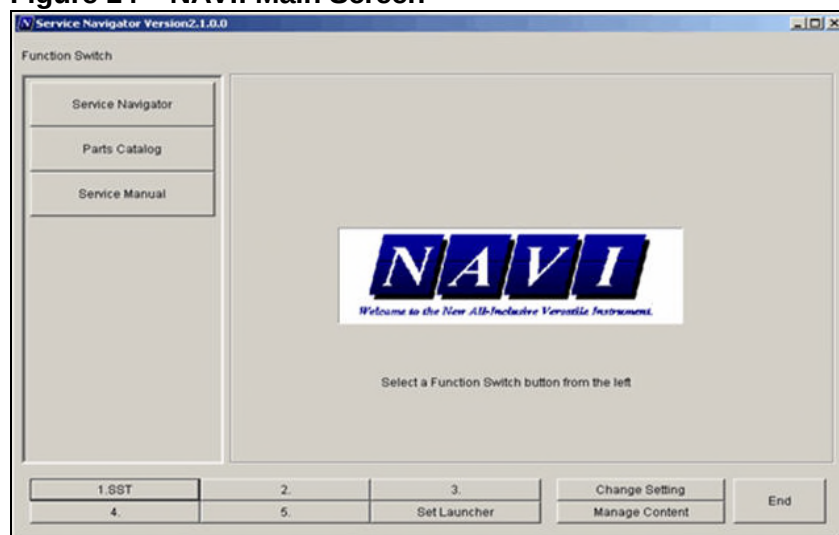
2. NAVI

NAVI is a computer-based application that is designed to function as both an information resource and diagnostic tool for Canon dealership technicians (equipped with a laptop) or dealer in-house help desk environments.

Figure 13 – NAVI: Login Screen



Figure 14 – NAVI: Main Screen



a. Benefits

- Improves the time to resolution for the more challenging technical situations faced in the field.
- Increases customer satisfaction by increasing the number of first visit problem resolutions, thereby reducing the number of required second visits.
- Reduces the chances of incorrect or unnecessary parts usage with NAVI's diagnostic abilities and reference information.
- Enables device engine reporting to aid in service costs forecasting.

b. Features

- Detects the device's engine status.
- Enables you to research a knowledge base of known problem case data to solve a current machine problem when connected directly to the machine or offline (connection to the machine has not been established).
- Provides access to model servicing information, such as work procedures and electromechanical component references.
- Provides a link to Canon Technical Documentation, which is offered to dealers for sale on a CD-ROM.
- Provides a link to Canon Service Tools, such as the SST (Service Support Tool) and PDL Downloader.
- Enables you to access the machine's Service Mode from a computer running the NAVI application, and perform the Auto Reset function (returns all machine settings back to their initial or default values).
- Enables you to adjust the machine's error and jam thresholds.
- Enables you to lookup replacement parts via a Web browser.
- Provides access to Knowledge PAKS (on the e-Support Web site), which enables you to download offline technical reference documents. See [Figure 15 – e-Support: Knowledge PAKS](#).

Figure 15 – e-Support: Knowledge PAKS

Canon
ENGINEERING SERVICES
& SOLUTIONS DIVISION

[Home](#)
[Tech Support](#)
[Field Support](#)
[Training](#)
[ATSP](#)
[Warranty](#)
[Video](#)
[Communication Center](#)
[Major Accounts](#)
[Management Center](#)

[NAVI](#)
[Parts Lookup](#)
[Support & Download Center](#)
[System Software](#)
[Support Tickets](#)
[Discontinued](#)
[The GRID](#)

Downloadable Knowledgebase

Now you can take the e-Support Knowledgebase with you into the field! Canon is making the Knowledgebase available off-line in easy to download Knowledge PAKS. Just choose from your available* Knowledge PAKS selections from the list below and click to download. It's that easy!

* Based on Dealer Service Authorization

How To Install

The Knowledge PAKS will be downloaded in Windows CHM format, the same type of file used by the Windows Help system. To use each Knowledge PAK, simply double-click on the downloaded file. Once the Help application starts, you can browse or search for all KB articles related to the product PAK you downloaded.

[NAVI KnowledgePAKS Installation Procedure](#)

FAQ

If you are having problems installing or using the Knowledge PAK's, read our FAQ below for help.

- Error message when opening a Knowledge PAK
- Why can't I see attachments in the Knowledge PAK?
- How do I get updates?
- How will I know that a new update is available?
- What is the difference between a Standalone and NAVI version?
- How do I use KnowledgePAK's with NAVI?

Mobile Knowledgebase

Now you can take the e-Support Knowledgebase with you into the field using your wireless mobile device!

[Click here for more details.](#)

ATTENTION: Effective 10/22/2012 the Downloadable Knowledgebase will be discontinued and no additional PAK updates will be uploaded to e-Support. All future efforts will be directed at delivering a smartphone/tablet optimized KB experience for the Technician community. Thank you for your support!

Name	Standalone	NAVI	Date
C Series	■ CHM (7 MB)	■ NAVI (37 MB)	12/07/11
CLC Series	■ CHM (37 MB)	■ NAVI (37 MB)	04/17/12
ColorPASS Series	■ CHM (15 MB)	■ NAVI (15 MB)	10/22/12
Facsimile Series	■ CHM (19 MB)	■ NAVI (19 MB)	10/22/12
GP Series	■ CHM (21 MB)	■ NAVI (21 MB)	03/04/11
Image Filing Systems Series	■ CHM (28 MB)	■ NAVI (28 MB)	10/22/12
imageCLASS Series	■ CHM (4.3 MB)	■ NAVI (4.3 MB)	10/22/12
imagePASS Series	■ CHM (22 MB)	■ NAVI (22 MB)	10/22/12
imagePRESS Color Series	■ CHM (176MB)	■ NAVI (176MB)	10/22/12
imageRUNNER Series (B&W) Low/Segment 1-3	■ CHM (225MB)	■ NAVI (225MB)	10/22/12
imageRUNNER Series (B&W) Mid/Segment 4-5	■ CHM (362MB)	■ NAVI (362MB)	10/22/12
imageRUNNER Series (B&W) High/Segment 6	■ CHM (58 MB)	■ NAVI (58 MB)	10/22/12
imageRUNNER Color Series	■ CHM (219MB)	■ NAVI (219MB)	10/22/12
NP Series	■ CHM (13 MB)	■ NAVI (13 MB)	10/22/12
Scanners Series	■ CHM (76 MB)	■ NAVI (76 MB)	10/22/12
Software Products Series	■ CHM (21 MB)	■ NAVI (21 MB)	10/22/12
Large Format Series	■ CHM (25 MB)	■ NAVI (25 MB)	10/22/12
imageRUNNER ADVANCE Color Series	■ CHM (244MB)	■ NAVI (244MB)	10/22/12
imageRUNNER ADVANCE B&W Series	■ CHM (83 MB)	■ NAVI (83 MB)	10/22/12
imageRUNNER LBP Series	■ CHM (12 MB)	■ NAVI (12 MB)	10/22/12
imagePRESS B&W Series	■ CHM (43 MB)	■ NAVI (43 MB)	10/22/12

c. Getting Started with NAVI

i. Participate in Training

The NAVI e-Learning course is available on e-Support for those technicians who have computer skills and use the SST. The NAVI e-Learning course is interactive, and contains guided simulations that show the technician how to use NAVI to service, maintain, and troubleshoot Canon devices. Technicians taking the NAVI e-Learning course will also learn how to make NAVI an integral part of their tool kit.

After the successful completion of the NAVI e-Learning course, technicians can begin to use NAVI as the tool to help them resolve field issues in a timely manner.

ii. Get the NAVI Files

There are two ways to get the files to start using NAVI:

- Download the necessary files from the e-Support Web site free-of-charge. It is recommended to download these files via a high-speed Internet connection, as the files are large.
- Purchase the NAVI Catch-Up CD Set. The Catch-Up CD Set contains the basic NAVI program, documentation, and model files to add previously introduced models to a computer with NAVI installed.

iii. Install NAVI and Use the Program

Use the following procedure to install and use NAVI:

- Install the core NAVI program and any patches.
- Add model support, as necessary.
- Add any updated model case data.
- If you have previously issued technical documentation on CD-ROMs, you can link these files with NAVI.

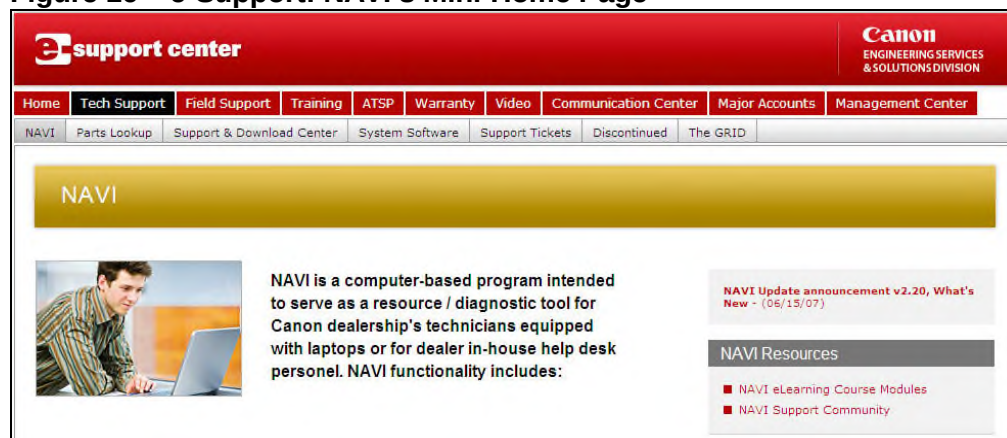
d. Updates

Continuous updates to each imageRUNNER ADVANCE model's Update Data Pack are available for download from the e-Support Web site free-of-charge.

e. NAVI Support

For additional details and information on NAVI, refer to the NAVI mini-home page on the e-Support Web site, located in the "Tech Support" tab.

Figure 16 – e-Support: NAVI's Mini-Home Page



3. Internet Support

a. Canon USA's e-Support Center Web Site

Canon USA's Engineering Services and Solutions Division provides high-quality e-Support via the Internet, and is only available for Canon USA's Authorized Servicing Dealers.

Canon USA's e-Support is designed to provide Systems Engineers and Technicians access to technical support information via the Worldwide Web.

The following functions and information can be accessed:

- Proactive notification of new releases, patches, Technical Publications, and other information via e-mail message
- Search for technical solutions with the Integrated Knowledge Management System through a natural language query
- Read or download on-line documentation
- Download patches and their Readme files
- Download firmware and software drivers
- Track and modify logged cases
- Review all open cases

To access e-Support, you must first register for an e-Support ID Number. To register for an e-Support ID number, go to the Canon USA's e-Support Center Web site at <http://www.support.cusa.canon.com>. Click on the "Register" button, and follow the instructions. This service is available at no additional charge to all authorized dealers.

Figure 17 – e-Support: Login Screen

e-support center **Canon**
ENGINEERING SERVICES & SOLUTIONS DIVISION

Log In

This website is designed to provide Technical Support, Service, Documentation, Warranty, and Educational Information services to **Authorized Canon Dealers** and **Servicers** of Canon Digital Imaging Products. Please log in below...

E-SUPPORT CENTER LOGIN
e-Support ID Number
Password
LOGIN **REGISTER**
Forgot your password? [Click Here](#)

AUTHORIZED SERVICE FACILITY LOGIN
ASF Access ID
Password
LOGIN
including e-Claim Service | [More Info](#)

SMART CALL CENTER PILOT LOGIN
Smart Call Center ID
Password
LOGIN
For Approved Pilot Candidates Only

Site Tools
This Site requires Adobe Acrobat Reader in order to view PDF documents. If you don't have the Acrobat Reader software, click on the link below to download a free copy. Additionally, certain areas of the eSupport website require the use of Internet Explorer 7 or higher. Click the link below to download Internet Explorer.

Other Canon Websites

- [Canon U.S.A. Site](#)
- [Reseller Info Center](#)
- [Developer Support Site](#)
- [ISG Central \(ISG Marketing\)](#)
- [imageRUNNER Marketing Site](#)
- [imageWARE Marketing Site](#)
- [ISG Learning Zone \(Sales Training\)](#)
- [EFI - Electronics for Imaging](#)
- [eCopy, Inc.](#)

b. Canon USA's ISG Central Web Site

Complete Service Guide versions are available on the Canon USA's ISG Central Web site (<http://isgcentral.cusa.canon.com>).

Access is limited to an Authorized Dealer's Management staff. Please contact your Dealer System Administrator to request access to the Engineering Services and Solutions section of ISG Central.

Figure 18 – ISG Central: Login Screen

Canon **ISG CENTRAL**

Welcome to Canon ISG Central - Your Resource for Accessing the Imaging Systems Group Extranets!

The ISG Central website enables you to log into all of the ISG web resources with a single UserID and Password. In addition, we will be posting information about product updates, site revisions, and Canon events on the ISG Central page, all with the goal of keeping you up to date with the most recent ISG information.

ISG Central Login **Assistance**

Please enter your UserID and Password to gain access to ISG Central.

UserID:

Password:

(Reminder: Your Password is Case Sensitive)

[Forgot Password / Reset Password](#)

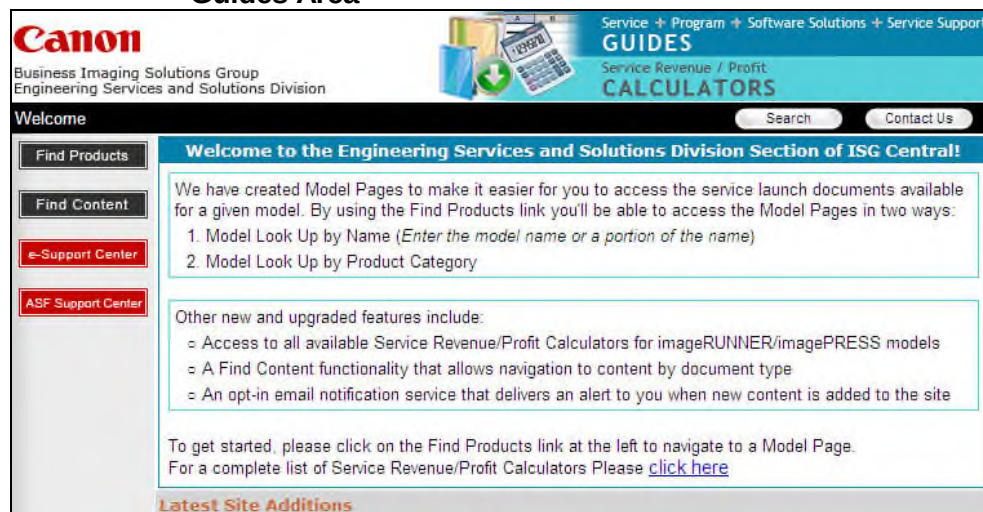
Having difficulty logging in, please read [Login Issues / Contact Us](#)

When an end-user logs on to the ISG Central Web site, he/she must select the “Engineering Services & Solutions” button to access the Service Guides area of the Web site, as shown below.

Figure 19 – ISG Central: Systems and Technical Support Web Page



Figure 20 – ISG Central: Engineering Services and Solutions Service Guides Area



XII. Appendix

A. Specifications

Note: All specifications are for reference purposes only, and are subject to change without notice.

Table 24 – imageRUNNER ADVANCE 500iF/400iF Series Main Unit Specifications

Item		Specifications	
		imageRUNNER ADVANCE	
		500iF	400iF
Type		Desktop	
Developing System		Dry Single-Component Toner Projection System	
Fixing System		On-Demand	
Printer Memory		1.5 GB RAM	
Hard Disk Drive ¹		80 GB	
First Copy Output Time (LTR)		Up to 5 seconds	
Warm Up Time (at a room temp. of 68°F (20°C)) ²	From Power ON ³	Approximately 34 seconds	
	From Sleep Mode	Approximately 10 seconds	
	From the Quick Startup Settings for Main Power Mode ⁴	Approximately 7 seconds	
Resolution for Writing		Up to 1,200 dpi x 1,200 dpi (Print) Up to 600 dpi x 600 dpi (Copy)	
Resolution for Reading		Up to 600 dpi x 600 dpi (B&W) Up to 300 dpi x 300 dpi (Full Color)	
Halftone		256 Gradations	
Acceptable Originals		Sheet, book, three-dimensional objects (up to 4 lb (2 kg))	
Paper Sizes	Paper Drawer 1	LGL, LTR, STMT, EXEC, and Custom Size (5 1/2" x 8 1/4" to 8 1/2" x 14" (139.7 mm x 210 mm to 216 mm x 355.6 mm))	
	Multi-Purpose Tray	LGL, LTR, STMT, EXEC, and Custom Size (3 7/8" x 5 1/2", to 8 1/2" x 14" (99 mm x 139.7 mm to 216 mm x 355.6 mm)), and Envelopes ⁴⁰	

¹ The HDD capacity is subject to change in a future release.

² Activation time may vary, depending on the environment and conditions under which the machine is used.

³ The Quick Startup Settings for Main Power mode is set to 'Off'.

⁴ Even if the Quick Startup Settings for Main Power mode is set to 'On', the Warm-Up time may be longer, depending on the conditions under which the machine is used.

⁴⁰ Kakugata 2 envelopes can only be loaded horizontally.

**Table 24 – imageRUNNER ADVANCE 500iF/400iF Series Main Unit
Specifications Continued**

Item		Specifications	
		imageRUNNER ADVANCE	
		500iF	400iF
Paper Weight/Type	Paper Drawer 1	Weight: 17 to 28 lb bond (64 to 105 g/m ²) Type: Plain 1 (17 to 21 lb bond (64 to 80 g/m ²)), Plain 2 (22 to 24 lb bond (81 to 90 g/m ²)), Recycled, Color, Pre-Punched, Heavy 1 (25 to 28 lb bond (91 to 105 g/m ²))	
	Multi-Purpose Tray	Weight: 17 to 34 lb bond (64 to 128 g/m ²) Type: Plain 1 (17 to 21 lb bond (64 to 80 g/m ²)), Plain 2 (22 to 24 lb bond (81 to 90 g/m ²)), Recycled, Color, Pre-Punched, Bond, Heavy 1 (25 to 28 lb bond (91 to 105 g/m ²)), Heavy 2 (29 to 34 lb bond (106 to 128 g/m ²)), Labels, Transparency, and Envelopes	
Paper Capacity	Paper Drawer 1	Approximately 550 sheets (20 lb bond (80 g/m ²))	
	Multi-Purpose Tray	Approximately 100 sheets (20 lb bond (80 g/m ²))	
Copy Speed ⁴¹ (Except When Paper Is Fed from the Multi-Purpose Tray) (Sheets/Minute)	LGL	43	40
	LTR	52	42
	STMT	25	25
	EXEC	25	25
Margin		Top: 1/4" (5.0 mm) Left/Right: 1/4" (5.0 mm) Bottom: 1/4" (5.0 mm)	
Multiple Copies		1 to 999 sheets	
Magnification	Reduction	1:0.78 (LGL → LTR) 1:0.64 (LTR → STMT) 1:0.50 1:0.25	
	Enlargement	1:1.29 (STMT → LTR) 1:2.00 1:4.00	
	Copy Ratio	25% to 400% (in 1% increments)	
Power Requirements		120 to 127 V AC, 60 Hz, 10.5 A	
Plug		NEMA 5-15	
Power Consumption	Maximum	Approximately 1.5 kW	
	In the Sleep Mode	Approximately 1.0 W	
	Main Power Is OFF	Quick Startup Settings for Main Power is set to 'On': Approximately 0.45 W Quick Startup Settings for Main Power is set to 'Off': Approximately 0.19 W	
Dimensions (H x W x D)		24 7/8" x 22 1/8" x 22 3/8" (633 mm x 560 mm x 567 mm)	
Weight		Approximately 107 lb (48.7 kg)	
Installation Space (W x D)		When the Multi-Purpose tray is extended: 31" x 22 3/8" (787 mm x 567 mm)	

41 The copy speed may vary, depending on the settings for the paper type, paper size, and sending method. Copying continuously may slow the copy speed, as adjustments are made to the machine's temperature and image quality.

Table 25 – Duplexing Automatic Document Feeder Specifications

Item		Specifications
Original Feeding Mechanism		Automatic Document Feeder
Size and Weight of Originals	Size	LGL, LTR, and STMT
	Weight	B&W Originals: 1-sided scanning: 11 to 34 lb bond (42 to 128 g/m ²) 2-sided scanning 13 to 34 lb bond (50 to 128 g/m ²)
		Color Originals: 17 to 34 lb bond (64 to 128 g/m ²)
Original Tray Capacity		Up to 100 sheets (20 lb bond (80 g/m ²))
Original Scanning Speed (LTR, Sheets/Minute)	Copying	1-sided scanning (B&W at 600 dpi): Approximately 52
	Scanning	1-sided scanning (B&W at 600 dpi/Full Color at 300 dpi): Approximately 52
		1-sided scanning (Color at 600dpi x 300 dpi): Approximately 26
Power Source		From the main unit
Power Consumption		Approximately 30 W
Dimensions (H x W x D)		5 1/2" x 22 1/4" x 21 1/4" (138 mm x 565 mm x 540 mm)
Weight		Approximately 17.4 lb (7.9 kg)

Table 26 – Cassette Module-AA1 (Optional) Specifications

Item	Specifications
Paper Sizes	LGL, LTR, STMT, EXEC, and Custom Size (5 1/2" x 8 1/4" to 8 1/2" x 14" (139.7 mm x 210 mm to 216 mm x 355.6 mm))
Paper Drawer Capacity	550 sheets (20 lb bond (80 g/m ²))
Power Source	From the main unit
Maximum Power Consumption	Approximately 20 W
Dimensions (H x W x D)	4 3/4" x 21 1/4" x 19 3/4" (119 mm x 540 mm x 500 mm)
Weight	Approximately 17 lb (7.7 kg)

Table 27 – Envelope Cassette-E1 (Optional) Specifications

Item	Specifications
Acceptable Envelopes	COM10 No. 10, Monarch, DL, and ISO-C5
Capacity	Up to 50 envelopes (or stacked to a height of 1 1/4" (30 mm))
Feeding Speed	Approximately 12 cpm
Dimensions (H x W x D)	3 3/4" x 21 1/4" x 18 7/8" (96 mm x 540 mm x 480 mm)
Weight	Approximately 5.5 lb (2.5 kg)

Table 28 – Staple Finisher-R1 (Optional) Specifications

Item	Specifications
Paper Size/Weight/Type	Size: LGL, LTR, STMT, EXEC, Custom Size (3 7/8" x 5 1/2", to 8 1/2" x 14" (99 mm x 139.7 mm to 216 mm x 355.6 mm)), and Envelopes Weight: 17 to 34 lb bond (64 to 128 g/m²) Type: Plain 1 (17 to 21 lb bond (64 to 80 g/m²)), Plain 2 (22 to 24 lb bond (81 to 90 g/m²)), Recycled, Color, Pre-Punched, Bond, Heavy 1 (25 to 28 lb bond (91 to 105 g/m²)), Heavy 2 (29 to 34 lb bond (106 to 128 g/m²)), Labels, Transparency, and Envelopes
Capacity Per Tray	No Finishing Modes, Collate, Group Mode Set 500 sheets (or 2 7/8" (73.5 mm) in height) Collate + Offset, Group + Offset Modes Set 500 sheets (or 2 7/8" (73.5 mm) in height) Staple Mode Set 20 sets (or 2 7/8" (73.5 mm) in height)
Maximum Stapling Capacity/Available Staple Size ⁴²	Corner Staple Mode: 50 sheets (17 to 24 lb bond (64 to 90 g/m²)) 50 sheets (25 to 28 lb bond (91 to 105 g/m²)) 30 sheets (29 to 34 lb bond (106 to 128 g/m²))
Power Source	From the main unit
Maximum Power Consumption	Approximately 50 W
Dimensions (H x W x D)	10 3/8" x 31 3/8" x 15 5/8" (263 mm x 798 mm x 395 mm)
Weight	Approximately 23.1 lb (10.5 kg)
Installation Space (W x D) Including the Main Unit	46 1/2" x 22 3/8" (1,182 mm x 567 mm) (When the multi-purpose tray is extended)

Table 29 – Copy Card Reader-F1 (Optional) Specifications

Item	Specifications
Available Cards	Magnetic
Card Readout Method	Magnetic readout
Magnetic Card Reading Direction	Face up
Store/Replay	Replay
Power Source	From the main unit
Dimensions (H x W x D)	1 5/8" x 3 1/2" x 3 3/4" (40 mm x 88 mm x 96 mm) (Excludes the attachment kit and cable)
Weight	Approximately 7.1 oz (200 g) (Including the attachment kit and cable)

⁴² The maximum stapling capacity may vary, depending on the paper type and weight.

Table 30 – Fax Functions Specifications

These specifications are the same when the Super G3 2nd Line Fax Board is installed.

Item	Specifications
Telephone Line Used ⁴³	Public Switched Telephone Network
Scan Line Density (Scan, Transmission)	Normal: 8 pels ⁴⁴ /mm x 3.85 line/mm Fine: 8 pels/mm x 7.7 line/mm Super-Fine: 8 pels/mm x 15.4 line/mm Ultra-Fine: 16 pels/mm x 15.4 line/mm
Transmission Speed	Super G3: 33.6 kbps G3: 14.4 kbps
Compression Method	MH, MR, MMR, JBIG
Transmission Type	Super G3, G3
Sending Original Sizes	LGL to STMT
Receiving Original Sizes	11" x 17" to STMT
Transmission Times	ECM-MMR: Approximately 3.2 seconds G3 MR: Approximately 13 seconds G3 MH: Approximately 13 seconds JBIG: Approximately 2.6 seconds
Auto Dial Function	Address Book: 1,800 destinations (including destinations stored in one-touch buttons)
Image Memory	Approximately 6,000 pages

⁴³ When using an IP telephone service, facsimile communication via an IP telephone line, may not be performed normally. It is recommended to use a general telephone (Public Switched Telephone Network) line for facsimile communication.

⁴⁴ Pels stands for picture elements (pixels).

Table 31 – Send Function: Scan Specifications

Item		Specifications
Communication Protocol		FTP (TCP/IP), SMB (TCP/IP), WebDAV
Data Format		TIFF, JPEG, PDF, XPS, OOXML (PowerPoint)
Resolution		B&W: 100 x100 dpi, 150 x 150 dpi, 200 x 100 dpi, 200 x 200 dpi, 200 x 400 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi Color: 100 x 100 dpi, 150 x 150 dpi, 200 x 100 dpi, 200 x 200 dpi, 300 x 300 dpi
System Environment		Windows 2000 Server (SP4), Windows XP Professional (SP3), Windows Vista (SP2), Windows 7, Windows 8, Windows Server 2003 R2 (SP2), Windows Server 2008 (SP2), Windows Server 2008 R2 (SP2), Windows Server 2012 Mac OS X, 10.4.x, 10.5.x, 10.6.x, 10.7.x, 10.8.x, Red Hat Linux 9, Solaris 10
Interface		1,000Base-T, 100Base-TX, 10Base-T
Color Mode		Automatic-Color Select (Full Color/Grayscale), Automatic-Color Select (Full Color/Black-and-White), Full Color, Grayscale, Black-and-White
Original Type		Text, Text/Photo, Photo
Other		Preview, Browse Windows (SMB) File Server
Optional PDF/XPS/OOXML Functions	PDF	Compact, Trace and Smooth, Encryption, OCR, Device Signature, User Signature, Optimization for Web ⁴⁵ , PDF/A-1b, Policy Applied
	XPS	Compact, OCR, Device Signature, User Signature
	OOXML	PowerPoint, OCR

⁴⁵ PDF files optimized for Web viewing.

Table 32 – Send Function: E-Mail and I-Fax Specifications

Item		Specifications
Communication Protocol		SMTP, POP3
I-Fax Communication Mode		Simple, Full
Resolution	For Sending E-Mail (B&W)	100 x100 dpi, 150 x 150 dpi, 200 x 100 dpi, 200 x 200 dpi, 200 x 400 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi
	For Sending E-Mail (Color)	100 x 100 dpi, 150 x 150 dpi, 200 x 100 dpi, 200 x 200 dpi, 300 x 300 dpi
	For Sending I-Fax (B&W)	200 x 100 dpi, 200 x 200 dpi, 200 x 400 dpi ⁴⁶ , 300 x 300 dpi ⁴⁶ , 400 x 400 dpi ⁴⁶ , 600 x 600 dpi ⁴⁶
Format	E-Mail	TIFF, JPEG, PDF, XPS, OOXML (PowerPoint)
	I-Fax (B&W)	TIFF (MH, MR ⁴⁶ , MMR ⁴⁶)
Original Size	E-Mail	LGL, LTR, STMT
	I-Fax	LGL ⁴⁷ , LTR, STMT ⁴⁷
Server Software		Microsoft Exchange 2003 and 2007 (SP2), Sendmail 8.14.4, Lotus Domino R7.0
Other		Search for a destination via an LDAP Server, Preview
Optional PDF/XPS/OOXML Functions (E-Mail Only)	PDF	Compact, Trace and Smooth, Encryption, OCR, Device Signature, User Signature, Optimization for Web ⁴⁵ , PDF/A-1b, Policy Applied
	XPS	Compact, OCR, Device Signature, User Signature
	OOXML	PowerPoint, OCR

⁴⁵ PDF files optimized for Web viewing.

⁴⁶ Available after setting the RX conditions for the destination.

⁴⁷ Sent as LTR.

Table 33 – Connectivity and Software Specifications

Item		Specifications
Network Interface		1,000Base-T, 100Base-TX, 10Base-T (RJ-45)
TCP/IP	Frame Type	Ethernet II
	Print Applications	LPD, Raw, IPP, IPPS, FTP, WSD, SMB
IPX/SPX	Frame Type	Ethernet II, Ethernet 802.2, Ethernet 802.3, Ethernet SNAP, Auto Detect
	Print Applications	Bindery PServer, NDS PServer, RPrinter, NPrinter
AppleTalk	Frame Type	Ethernet SNAP
	Print Application	PAP (Printer Access Protocol)
Command Languages		PCL5e, PCL6, PostScript 3
Resident Fonts	PCL	93 Scalable fonts, 2 OCR fonts, and 10 Bitmap fonts
	PS	136 Scalable Adobe fonts
Printable Area	PCL5e, PCL6	Reduced to 1/6" (4.23 mm) from the top, bottom, left, and right edges of the paper.
	PostScript 3	Reduced to 1/8" (2.5 mm) from the top, bottom, left, and right edges of the paper.

Note: When printing in the 0" mode, the printable area is enlarged. The upper margin becomes 1/8" (2.5 mm), the lower margin becomes 1/8" (2.5 mm), and the side margins become 1/8" (2.5 mm).

B. Warranty

1. Main Unit Limited Warranty

CANON imageRUNNER ADVANCE 500/400 SERIES LIMITED WARRANTY

Canon U.S.A., Inc. or Canon Canada Inc. (as applicable, "Canon") warrants the imageRUNNER ADVANCE 500/400 Series product and Canon brand options designed for use with the imageRUNNER ADVANCE product (collectively the "Product") to be free from defects in workmanship and materials under normal use and service for a period of 90 days after delivery to the original purchaser ("Purchaser") or 100,000 prints or copies (or a combination of both), whichever comes first. During such warranty period, Canon shall replace, without charge, any defective part with a new or comparable rebuilt part. This warranty shall not extend to consumables such as paper, chemicals, and toner as to which there shall be no warranty or replacement. Warranty replacement shall not extend the original warranty period of the Product.

This limited warranty shall only apply if the Product is used in conjunction with compatible computers, peripheral equipment and software. Canon shall have no responsibility for such items except for compatible Canon brand peripheral equipment covered by a separate warranty ("Separate Warranty"). Repairs of such Canon brand peripheral equipment shall be governed by the terms of the Separate Warranty. Non-Canon brand equipment that may be distributed with the Product is sold "AS IS" and without warranty of any kind by Canon, including any implied warranty regarding merchantability or fitness for a particular purpose, and all such warranties are disclaimed. The sole warranty, if any, with respect to such non-Canon brand items is given by the supplier or producer thereof. For further information on software, see below.

This warranty shall be void and of no force and effect if the Product is damaged as a result of (a) abuse, neglect, mishandling, alteration, electric current fluctuation or accident, (b) improper use, including failure to follow operating or maintenance instructions or environmental conditions prescribed in Canon's operator's manual or other documentation, (c) installation or repair by other than authorized service representatives qualified by Canon who are acting in accordance with Canon's service bulletins, (d) use of supplies or parts (other than those distributed by Canon) which damage the Product or cause abnormally frequent service calls or service problems, or (e) use of the Product with non-compatible computers, peripheral equipment or software, including the use of the Product in any system configuration not recommended in any manual distributed with the Product. Nor does this warranty extend to any Product on which the original identification marks or serial numbers have been defaced, removed, or altered.

ANY SOFTWARE THAT IS DISTRIBUTED WITH THE PRODUCT AND HAS AN ASSOCIATED END USER AGREEMENT IS LICENSED, WARRANTED AND PROVIDED ACCORDING TO THE TERMS OF THAT AGREEMENT, INCLUDING ANY LIMITATIONS AND DISCLAIMERS THEREIN. SUCH SOFTWARE IS SOLD WITHOUT WARRANTY OF ANY KIND BY CANON. PLEASE CONTACT CANON IMMEDIATELY IF YOU HAVE NOT RECEIVED A COPY OF THE SOFTWARE SUPPLIER'S END USER AGREEMENT. CANON RECOMMENDS THAT DATA STORED ON THE PRODUCT'S HARD DISK DRIVE BE DUPLICATED OR BACKED UP TO PREVENT ITS LOSS IN THE EVENT OF FAILURE OR OTHER MALFUNCTION OF THE HARD DISK DRIVE.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES AND CONDITIONS REGARDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, RELATING TO THE USE OR PERFORMANCE OF A PRODUCT OR ANY ASSOCIATED COMPONENT, AND ALL SUCH OTHER WARRANTIES AND CONDITIONS ARE DISCLAIMED. NO OTHER EXPRESS WARRANTY, CONDITION OR GUARANTEE, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THE PRODUCT SHALL BIND CANON ANY SUPPLIER OR ANY AUTHORIZED SERVICE PROVIDER. NO WARRANTY IS GIVEN ON ANY USED PRODUCT.

NEITHER CANON OR ITS SUPPLIERS NOR ANY AUTHORIZED SERVICE PROVIDER SHALL BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE (UNLESS CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER), LOSS OF REVENUE OR PROFIT, FAILURE TO REALIZE SAVINGS OR OTHER BENEFITS, EXPENDITURES FOR SUBSTITUTE EQUIPMENT OR SERVICES, LOSS OR CORRUPTION OF DATA, INCLUDING, WITHOUT LIMITATION, DATA STORED ON THE PRODUCT'S HARD DISK DRIVE, STORAGE CHARGES OR OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THE PRODUCT, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED AND EVEN IF CANON OR ITS SUPPLIERS OR ANY AUTHORIZED SERVICE PROVIDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST CANON OR ITS SUPPLIERS OR ANY AUTHORIZED SERVICE PROVIDER BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, THE PURCHASER ASSUMES ALL RISKS AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO PERSONS AND PROPERTY OF THE PURCHASER OR OTHERS ARISING OUT OF THE POSSESSION, USE, MISUSE, OR INABILITY TO USE THE PRODUCT NOT CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER. THIS WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF THE PRODUCT AND STATES SUCH PURCHASER'S EXCLUSIVE REMEDY.

CONDITIONS OF WARRANTY

Defective parts must be returned to Canon or an Authorized Service Provider with all necessary documentation and will become the property of Canon.

THIS WARRANTY APPLIES TO PRODUCTS SOLD AND USED IN THE U.S.A. AND CANADA ONLY.

2. GPR-39 Drum Unit Limited Warranty

CANON GPR-39 DRUM UNIT LIMITED WARRANTY

Canon U.S.A., Inc. and Canon Canada, Inc. (collectively "Canon") warrant the Drum Unit incorporated into the imageRUNNER Series product (the "Product") packaged with this Limited Warranty (the "Drum Unit") to be free from defects in workmanship and materials under normal use and service, other than exterior defects, such as nicks, scratches, or dents, for a period of 30 days after delivery to the original purchaser of the Drum Unit or use of it to make 18,000 prints or copies (or a combination of both), whichever comes first. If the Drum Unit proves to be defective within this warranty period, Canon shall, at its sole option, replace it without charge.

Following the expiration of the 30 day warranty period, and continuing for a period of ONE YEAR after delivery to the original purchaser of the Drum Unit or use of it to make 72,000 prints or copies (or a combination of both), whichever comes first, Canon shall provide a credit ("Credit") to the original purchaser toward a replacement Drum Unit if the Drum Unit fails to operate under normal use and service by reason of any defect in workmanship and materials, other than exterior defects, such as nicks, scratches or dents. The Credit shall be a percentage of Canon's then current dealer price for the replacement Drum Unit determined as set forth in the example below.

Warranty replacement shall not extend the original warranty period of the Drum Unit.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES AND CONDITIONS REGARDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, RELATING TO THE USE OR PERFORMANCE OF THE DRUM UNIT. NO OTHER EXPRESS WARRANTY, CONDITION OR GUARANTEE, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THE DRUM UNIT SHALL BIND CANON OR ANY AUTHORIZED SERVICE PROVIDER. NO WARRANTY IS GIVEN ON ANY USED DRUM UNIT.

This warranty shall be void and of no force and effect if the Drum Unit is damaged as a result of (a) abuse, neglect, mishandling, or alteration of the Drum Unit, a Product Accessory or a Product in which the Drum Unit is incorporated, electric current fluctuation, exposure to light, or accident, (b) improper use, including failure to follow operating or maintenance instructions in, or environmental conditions prescribed in, Canon's operator's manual or other documentation, (c) installation or repair by other than service representatives qualified by Canon who are acting in accordance with Canon's service bulletins, or (d) use of supplies or parts (other than those distributed by Canon) which damage the Drum Unit or cause abnormally frequent service calls or service problems. Nor does this warranty extend to any Drum Unit on which the original identification marks or serial numbers have been defaced, removed, or altered.

NEITHER CANON NOR ANY AUTHORIZED SERVICE PROVIDER SHALL BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE (UNLESS CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER), LOSS OF REVENUE OR PROFIT, FAILURE TO REALIZE SAVINGS OR OTHER BENEFITS, EXPENDITURES FOR SUBSTITUTE EQUIPMENT OR SERVICES, LOSS OR CORRUPTION OF DATA, STORAGE CHARGES OR OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THE DRUM UNIT, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED AND EVEN IF CANON OR ANY AUTHORIZED SERVICE PROVIDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST CANON OR ANY AUTHORIZED SERVICE PROVIDER BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE DRUM UNIT CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, THE PURCHASER ASSUMES ALL RISKS AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO PERSONS AND PROPERTY OF THE PURCHASER OR OTHERS ARISING OUT OF THE POSSESSION, USE, MISUSE, OR INABILITY TO USE ANY DRUM UNIT NOT CAUSED SOLELY AND DIRECTLY BY THE NEGLIGENCE OF CANON OR ANY AUTHORIZED SERVICE PROVIDER. THIS WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF THE DRUM UNIT AND STATES SUCH PURCHASER'S EXCLUSIVE REMEDY. CONDITIONS OF WARRANTY

CONDITIONS OF WARRANTY

The defective Drum Unit must be returned to Canon, freight prepaid, in the original packaging with all necessary documentation (machine log, a sample copy, warranty claim tag or other documents as required from time to time) to receive the Credit or replacement Drum Unit.

Credits will be based on the then current dealer price for the replacement Drum Unit, and will be pro-rated based on the copies made as indicated by the service report submitted by the Canon Authorized Service Representative.

EXAMPLE OF CREDIT

Drum Unit inoperative after 36,000 prints or copies (or a combination of both) in less than ONE YEAR of use.

Calculation of the Credit may be illustrated by the following example:

Calculation:
$$\frac{72,000 - 36,000}{72,000} = \frac{36,000}{72,000} = 50\%$$
 of the dealer price of the replacement Drum

THIS WARRANTY APPLIES TO DRUMS SOLD AND USED IN THE U.S.A. AND CANADA ONLY.



Canon U.S.A., Inc. One Canon Park, Melville, New York 11747-3336
 Canon Canada, Inc. 6390 Dixie Road Mississauga, Ontario L5T 1P7 Canada

Canon is a registered trademark of Canon Inc.

C. List of Tables

Table 1 - imageRUNNER ADVANCE 500iF/400iF Series Comparison	3
Table 2 – imageRUNNER ADVANCE 500iF/400iF Series Box Contents	5
Table 3 – Configuration	6
Table 4 – Hardware Accessories	7
Table 5 – System Accessories	8
Table 6 – Integrated and imageRUNNER ADVANCE Solutions	9
Table 7 – Supplies and Consumables	11
Table 8 - Service Materials	35
Table 9 – Main Unit Power and Plug Requirements	36
Table 10 – Power Requirements for the Main Unit and Optional Accessories	37
Table 11 – Installation Space Requirements	38
Table 12 – Estimated Installation Times	40
Table 13 – CDS Firmware Delivery Methods	42
Table 14 – Special Tools List	52
Table 15 – Solvents and Oils	52
Table 16 – Main Unit Consumables List	53
Table 17 – Main Unit Consumable Parts List	54
Table 18 – Cassette Module-AA1 Consumable Parts List	55
Table 19 – Periodic Maintenance List	56
Table 20 – Soft Counter Configuration	57
Table 21 - Important Soft Counter Available	57
Table 22 – Monthly Copy/Print Volume	59
Table 23 – Canon USA Support Escalation Flow Chart	73
Table 24 – imageRUNNER ADVANCE 500iF/400iF Series Main Unit Specifications	82
Table 25 – Duplexing Automatic Document Feeder Specifications	84
Table 26 – Cassette Module-AA1 (Optional) Specifications	84
Table 27 – Envelope Cassette-E1 (Optional) Specifications	84
Table 28 – Staple Finisher-R1 (Optional) Specifications	85
Table 29 – Copy Card Reader-F1 (Optional) Specifications	85
Table 30 – Fax Functions Specifications	86
Table 31 – Send Function: Scan Specifications	87
Table 32 – Send Function: E-Mail and I-Fax Specifications	88
Table 33 – Connectivity and Software Specifications	89

D. List of Figures

Figure 1 – License Management System	47
Figure 2 – Content Delivery System Web Site	48
Figure 3 – e-Support: Flat-Rate Program	61
Figure 4 – e-Support: Authorized Parts Repair Facilities	63
Figure 5 – e-Support: e-Tag	65
Figure 6 – e-Support: e-Tag Claim Console	66
Figure 7 – ISG Central.....	67
Figure 8 – CNA: Warranty Credit Inquiry.....	68
Figure 9 – CNA: e-Tag Warranty Claims Search	68
Figure 10 – ISG Central.....	69
Figure 11 – CNA: Warranty Credit Inquiry	70
Figure 12 – CNA: Flat-Rate Warranty Reimbursement Search	70
Figure 13 – NAVI: Login Screen	74
Figure 14 – NAVI: Main Screen	74
Figure 15 – e-Support: Knowledge PAKS.....	76
Figure 16 – e-Support: NAVI's Mini-Home Page	77
Figure 17 – e-Support: Login Screen.....	79
Figure 18 – ISG Central: Login Screen.....	80
Figure 19 – ISG Central: Systems and Technical Support Web Page	81
Figure 20 – ISG Central: Engineering Services and Solutions Service Guides Area	81