

# Service Manual

**Canon BW**

**Remote Operators Software Kit-A1**

**Canon**



## Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

## Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

## Trademarks

The product names and company names used in this manual are the registered trademarks of the individual companies.

## Copyright

This manual is copyrighted with all rights reserved. Under the copyright laws, this manual may not be copied, reproduced or translated into another language, in whole or in part, without the written consent of Canon Inc.

***COPYRIGHT © 2001 CANON INC.***

*Printed in Japan*

## Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

---

## Symbols Used

---

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
 Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
 REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

In the diagrams,  represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow  indicates the direction of the electric signal.

The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (\*) as in "DRMD\*" indicates that the DRMD signal goes on when '0'.

In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."



# Contents

## Chapter 1 Specifications

1.1 Product composition .....	1- 1
1.1.1 Product configuration .....	1- 1
1.2 Specifications .....	1- 3
1.2.1 Specifications in Detail .....	1- 3
1.2.2 Limitations .....	1- 3

## Chapter 2 Functions

2.1 Basic Function .....	2- 1
2.1.1 Overview of the Functions .....	2- 1
2.1.2 Starting and Stopping .....	2- 1

## Chapter 3 Installation

3.1 Installation procedure .....	3- 1
3.1.1 Overview of the Installation Procedure .....	3- 1

## Chapter 4 Maintenance

4.1 Related Service Mode .....	4- 1
4.1.1 Invalidating the License for Transfer to a Different Device (Level 2) .....	4- 1



---

# Chapter 1 Specifications

---



# Contents

1.1 Product composition.....	1-1
1.1.1 Product configuration .....	1-1
1.2 Specifications .....	1-3
1.2.1 Specifications in Detail .....	1-3
1.2.2 Limitations.....	1-3



---

## 1.1 Product composition

---

### 1.1.1 Product configuration

0008-4667

**This kit consists of:**

- License access number certificate sheet
- Sending and Facsimile Guide
- License Key notice

Using this kit, you can get a license key from the License Management System (LMS) and register it in an iR/imageRUNNER to activate the specific feature included in the System Software.

**Note:What's LMS?**

A license server system to activate software options of iRs/imageRUNNERS, provided by Canon Inc. Collectively manages options in the form of licenses and protects copy rights of optional products. The options are activated with license keys being different from conventional activation measures that use dongles and PCs. Whereas the details of its management differ among countries and regions, it is designed assuming the users access it and activate licenses by themselves respectively. Per optional product, the license access number certificate sheet is supplied. Per license access number, a user can get a license key and activate the feature on an iR/imageRUNNER. To get a license key, a user accesses the Web server of the LMS.

**URL for LMS:**

<http://www.canon.com/lms/ir/>

When a user enters the license access number and the serial number for an iR/imageRUNNER in the LMS, 24-digit figure of a license key is generated. The license key includes the information of serial number for the iR/imageRUNNER so that the key cannot be used for iRs/imageRUNNERS. Once the option is activated, the option information is saved as the backup in the iR/imageRUNNER. Parts replacement will not deactivate the feature.

The staff in each regional headquarters can access the administrator's pages of the LMS. They can view the license number issued for each iR/imageRUNNER and can reissue the license. The procedures are the same as the license management system for MEAP except for the point the license key is used instead of the license file.

**Transfer of a License**

An optional function that has been enabled by the LMS may be used on a different device by transferring its license, as when the original iR device needs to be replaced, say at the end of its lease arrangement. Specifically, individual licenses registered for optional functions must first be invalidated in Additional Functions before transfer may take place. Doing so will invalidate the optional functions on the source iR device and, at the same time, proof of invalidation will be generated within the device in the form of an invalidation license key. The user may then communicate the indicated invalidation license key, the serial number of the original iR device, and the serial number

of the new iR device to the Sales Company, which in turn may issue a new license key for the new iR device. The user now may register the new license key to the new iR device in Additional Functions, thereby enabling the optional function on the new iR device. For details of transferring a license in service mode, see the descriptions of service mode that come later.

## 1.2 Specifications

### 1.2.1 Specifications in Detail

0009-8401

#### Specifications in Detail:

T-1-1

Number of concurrent client connections	1 (priority on most recent client)
Refresh rate	transmit only when updated
Update area	smallest square that covers the updated area
Display number	0 (fixed)
Port number	5900 (fixed)
Number of display covers	256
Compressed transmission	not supported
HTTP	not supported

#### Password Setting:

On the Remote Operation Settings screen, set an appropriate password using the field 'System Administrator Settings'; the password must consist of 1-byte alphanumeric characters.

### 1.2.2 Limitations

0009-8402

#### Client Software:

The client software must be software available from Canon, designed to run with the following operating system: Windows 2000, Windows XP, Windows Server 2003; all versions including Server/Professional/Client.

#### Soft Switch:

The remote UI on the PC cannot point to (i.e., transfer a press to) any of the soft switch keys on the iR machine's control panel.

#### Sleep Mode (power save)

Once a connection is made to a PC, the remote operation function will retain the connection even after the iR machine enters sleep (power save) mode.

The iR machine accepts a request for a connection issued by a PC while it is in sleep (power save) mode.

The iR machine will not start 1W sleep mode while the remote operation function remains enabled.

### **Panel Operation**

When operating the control panel by means of a mouse (from a PC), the key repeat mechanism (activated by a prolonged click) is not supported.

No prolonged click performed on the client is supported (e.g., held down so as to activate voice mode).

---

# Chapter 2    Functions

---



# Contents

2.1 Basic Function.....	2-1
2.1.1 Overview of the Functions .....	2-1
2.1.2 Starting and Stopping .....	2-1



## 2.1 Basic Function

### 2.1.1 Overview of the Functions

0009-8403

The Remote Operation Kit enables server functions to start on an iR machine, displaying the machine's control panel on a PC connected to the same network.

Moreover, it enables communication of inputs made on the PC (using the mouse or keyboard) to the iR machine so that the operations normally performed on the machine's control panel may remotely be executed.

The machine's control panel may be brought up on the PC display by merely starting up the client software that comes with the Remote Operation Kit.

### 2.1.2 Starting and Stopping

0009-8405

#### Starting and Stopping:

To start up or stop the Remote Operation Kit, enable or disable the Kit on the Remote Operation screen that appears as part of 'System Administrator Settings' in additional functions mode. New setting becomes valid when the iR machine has been turned off and then back on.

The Remote Operation Kit detects the setting (enable/disable) when its power is returned.

#### Key Assignment:

T-2-1

iR machine control panel	PC keyboard key
Start	's'
Stop	't'
Reset	'r'
Guide	'g'
Additional functions mode	'u'
Keypad	'0'-'9'
Clear	Delete
ID	'i'
Power Save	'y'
Counter	'c'
*	'*'
#	'#'

#### Security:

Once the client software has been started, the communications between the iR machine and the PC will not use any means of encryption for image data or command data.

The transmission/reception of passwords, however, will be encrypted using DES.

---

# Chapter 3    Installation

---



# Contents

3.1 Installation procedure .....	3-1
3.1.1 Overview of the Installation Procedure.....	3-1



---

## 3.1 Installation procedure

---

### 3.1.1 Overview of the Installation Procedure

0008-5793

As a rule, the user is expected to obtain a license key and register it to the device. Detailed instructions are found in the User's Guide. The following is an outline of the instructions:

1. Using the following URL, access the LMS, and obtain the license key by following the instructions shown on the screen:

<http://www.canon.com/lms/ir/>

**Memo:**

A license key is issued in exchange for the 24-digit number indicated on the License Access Number Certificate and the serial number of the device (e.g., ABC01234) to which the license will be registered. The device serial number will be indicated in response to a press on the Counter key on the iR device (under [Serial Number]).

2. Copy the 24-digit number shown on the Web browser screen in the space given for the purpose on the License Access Number Certificate sheet.

**Caution:**

Be sure to double-check the number to avoid an error. Be sure that the user is aware of the importance of the License Access Number Certificate and that it must be stored away in a safe place.

3. Make the following selections: user mode>system control setup>license control. Then, type in the 24-digit number, and click [Execute]. In response, the license key will be registered and the appropriate functions will be enabled. Otherwise, any of the following error messages will appear:

"The number of the license key is not correct. Check the license key."

>> Make sure that the license key is not issued for a different device.

>> Make sure that the number has been correctly typed in.

>> Make sure that the license key is the correct one.

"The function has already been enabled."

>> Make sure that the Kit has not already been enabled.

4. Hold down the control panel power switch for 3 sec or more. Follow the instructions shown on the screen for shut-down sequence so that the main power switch may be turned off. Turn off the main power switch, wait for 10 sec, and turn it back on.

5. The registered license will become valid when the device is turned back on. When it has started normally, press

the Counter key, and click the Device Configuration button to make sure that the Kit is indicated as part of the options.

---

# Chapter 4 Maintenance

---



# Contents

4.1 Related Service Mode .....	4-1
4.1.1 Invalidating the License for Transfer to a Different Device (Level .....	4-1



---

## 4.1 Related Service Mode

---

### 4.1.1 Invalidating the License for Transfer to a Different Device (Level 2)

0008-5796

#### Service Mode Item Used to Invalidate a License for Transfer to a Different Device (Level 2)

##### Possible Situation

A license may be used on a different device through transfer, as when replacing the device at the end of a lease agreement. To do so, the user must first invalidate the existing license by performing a set of steps referred to as "invalidation of a license" using service mode. At times, both source and target of transfer may be the same device, and a license therefore may also be invalidated only temporarily. It is important to note that the user must contact the Sales Company to make a license good regardless of whether it has been invalidated intentionally or inadvertently.

##### Invalidation Procedure

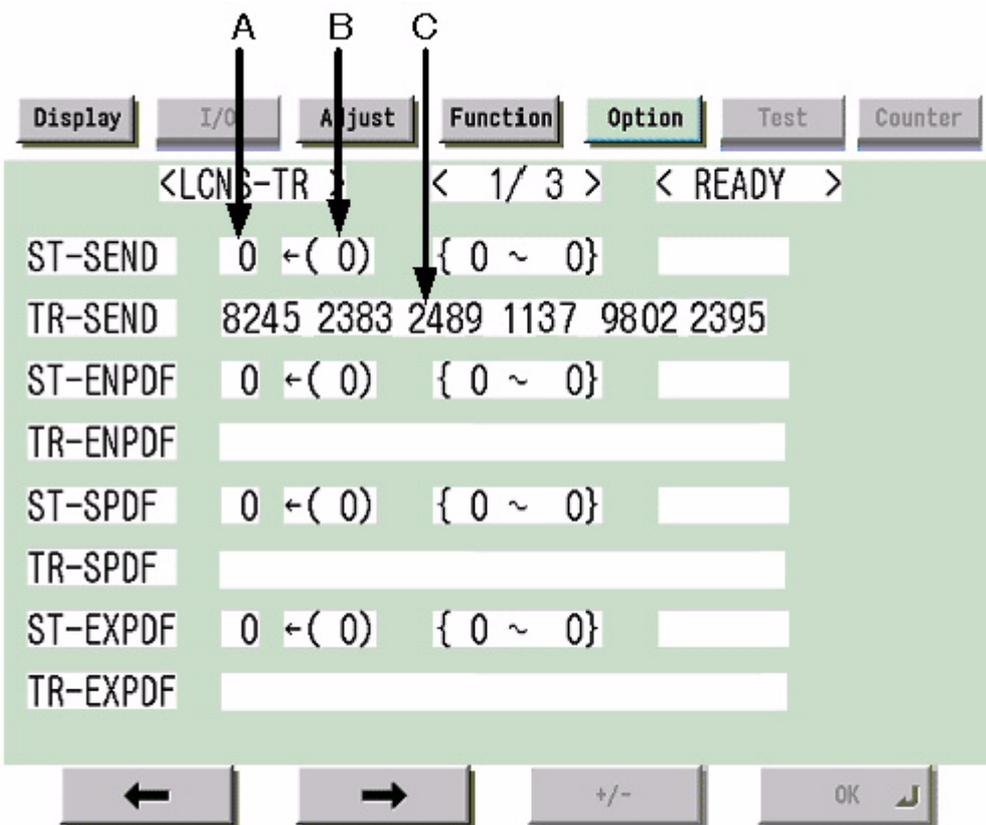
Invalidation consists in invalidating the license in service mode and generating an invalidation certificate that proves the completion of invalidation. Invalidation may take place for individual optional functions, and a specific function becomes no longer available as soon as an invalidation certificate is issued. The user contacts the Sales Company and provides the following: the invalidation certificate, the device serial number of the source of transfer, the device serial number of the target of transfer, reason of transfer. In response, the Sales Company may issue a license key for new installation on a different device. The user must take note of the new license key in writing, and keep it as a record after registering it to the target device.

##### Installation Procedure

1. Start service mode, and activate Level 2 so that the following is true:

```
COPIER>OPTION>LCNS-TR
```

The following screen appears, showing the current status of various options:



F-4-1

**Screen Design:**

**SET-xxxx:** indicates the license status. If installed, the option is identified as '1' under A.

To invalidate an option for transfer, select it, and type in '0' under B; then, click [OK] so that the option will be invalidated and an invalidation certificate will be issued.

**TR-xxxx:** indicates any invalidation certificates that have been generated under C.

**xxxx may be any of the following:**

**SEND:** SEND function

**ENPDF:** encryption PDF

**SPDF:** searchable PDF

**EXPDF:** PDF function expansion (encryption PDF + searchable PDF)

**LIPS:** LIPS function

**PDFDR:** PDF Direct print function

**SCR:** encryption secured printing (for future use)

**HDCLR:** HDD encryption + full deletion (Security Kit)

**BRDIM:** BarDIMM (for future use)

**VNC:** Remote Operators Software

**WEB:** Web Browser

**Memo:**

Not all foregoing options are available in all countries and regions.

2. If an option has already been installed, '1' will be indicated under A. If you want to invalidate it, select it, and type in '0' so that the indication under B will change to '0'.
  
3. Thereafter, when [OK] is pressed, the indication under A will change to '0' and, at the same time, an invalidation certificate will be indicated in the form of a number. Take note of it in writing together with the serial number of the target device.
  
4. When the target device is ready, check its serial number.
  
5. Contact the Sales Company, and provide the following: invalidation certificate for transfer, serial number of the source device, serial number of the target device. The Sales Company, in response, may issue a new license key that may be registered on the target device.
  
6. Register the new license key to the target device, and check to make sure that the function has been enabled.



Feb 21 2005

**Canon**