PIXMA MP150

SERVICE MANUAL

Canon

1. PRODUCT LIST

1-1. Main Units

Product name	Product code	Sales territories	Remarks
Canon Ink Jet Printer MP150	0575B002AA	US	
	0575B003AA	CA	
	0575B004AA	LAM LTR	
	0575B005AA	EUM	
	0575B006AA	EMB	
	0575B007AA	GB	
	0575B008AA	AU	
	0575B009AA	ASA	
	0575B010AA	CN	
	0575B011AA	TW	
	0575B012AA	KR	
	0575B013AA	HK	
	0575B014AA	LAM A4	

1-2. Consumables

Product name	Product code	Sales territories	Remarks
Canon FINE Cartridge			
PG-40	0615B001AA~0615B005AA	001: EUR	
CL-41	0617B001AA~0617B005AA	002: AMR	
PG-50	0616B001AA~0616B005AA	003: ASIA	
CL-51	0618B001AA~0618B005AA	005: AMR S	

2. PRODUCT SPECIFICATIONS

2-1. Printer Main Unit Specifications

Paper feeding method	ASF
Resolution	4,800 x 1,200 dpi (max.)
Printing speed	Approx. 55 sec. (PP-101, 4 x 6, borderless printing, default print quality settings) For reference: Draft / Standard Black (J/E) 22 ppm 13.4 ppm Color (J/E) 17 ppm 7.8 ppm
Printing direction	Bi-directional / Uni-directional (automatically switched according to print data and print mod
Fast mode print duty	50% duty
Print width	203.2 mm (216 mm in borderless printing)
Interface	- USB 2.0 Hi-Speed - Direct print port (PictBridge, Bubble Jet Direct)
Supported ink cartridge	Consumable
ASF stacking capacity	Max. 10 mm (Approx. 100 pages of 75 g/m^2)
Paper weight	64 to 105 g/m^2
Plain paper	10 mm or less
High Resolution Paper	10 mm (Approx. 80 sheets) or less
Glossy Photo Paper	A4, LTR, 5x7: 10 sheets or less 4x6: 20 sheets or less
Photo Paper Pro, Photo Paper Plus Glossy, Matte Photo Paper	A4, LTR, 5x7: 10 sheets or less 4x6, 4x8: 20 sheets or less
Photo Paper Plus Double Sided	1 sheet
Photo Paper Plus Semi-gloss	A4, LTR: 10 sheets or less 4x6: 20 sheets or less
Transparency	30 sheets or less
Envelope	10 sheets or less
T-shirt Transfer	1 sheet
Photo Stickers	1 sheet
Borderless printing	Up to A4, LTR
Detection function	
Cover open	Available
Presence of ink cartridge	Available
Wrong installation of ink cartridge	Available
Presence of memory card	Available
Supported camera direct printing device	Available
Carriage position	Available
Presence of paper	Available
Head-to-paper distance	Available
Waste ink absorber full	Available
Internal temperature	Available
Remaining ink amount	Available (Detected by dot counting)
Print head alignment	Available (12 types) (Semiautomatic alignment / manual alignment from a computer)
Acoustic noise level	
Fine (Photo Paper Pro / Fine mode)	Approx. 44 dB (Sound pressure level ISO9296)
HQ	Approx. 45 dB
HS	Approx. 55 dB
Environmental requirements	
During operation	Temperature: 5C to 35C (41F to 95F) Humidity: 10% to 90%RH (no condensation)
Non-operation	Temperature: 0C to 40C (32F to 104F) Humidity: 5% to 95%RH (no condensation)

(2-1, Printer Main Unit Specifications cont'd)

Power supply		
Input voltage / Frequency		AC 100 to 240 V, 50/60Hz
Power consumption:	During printing	Approx. 13 W
	Stand-by status	Approx. 2 W
External dimensions		- With the paper support extended: Approx. 443 (W) x 436 (D) x 453 (H) mm - With the paper support retracted: Approx. 443 (W) x 381 (D) x 181 (H) mm
Weight		Approx. 5.4 kg (excluding the ink cartridges)
Related standards		
Electromagnetic radiance, Electrical safety		FCC, IC, CE Mark, Taiwan EMC, C-Tick, CCC (EMC), Korea MIC, Gost-R, *DENAN*, UL, C-UL, CB Report, GS, FT, SASO, SPRING, Korea EK, IRAM (Argentine)

Note: Not Blue Angel compliant.

Scanner	
Type	Flatbed type (fixed document reading by the read head movement)
Sensor type	CIS (Contact Image Sensor)
Optical resolution	1,200 x 2,400 dpi (max.)
Reading resolution	1,200 x 2,400 dpi (max.)
Tone (input / output)	Gray scale: 16 bit / 8 bit Color: 48 bit / 24 bit (RGB each color 16 bit / 8 bit)
Document size (max.)	A4 / LTR
Copy	
Image quality	MP150: 2 levels (Fast, Standard)
Intensity	5 levels
Magnification	25% - 400%
Copy speed	Draft
Image correction function	Monochrome (Fine, BK): 22 cpm
Image adjustment function	Color (Fine, CL): 17 cpm
Image processing function	Measuring condition: Conversion into cpm from the first sheet ejection to the eleventh sheets ejection in continuous copying
Copiable paper size (max)	A4/LTR
Magnification	Standardized scaling: Max. (400%), A5 -> A4, A5 -> B5, B5 -> A4, A4 -> B5, B5 -> A5, min. (25%) Zoom: 25% - 400% (on 1 % to 1% basis)
Number of continuous copying	MP150: Monochrome / color 1 to 9 sheets
Camera Direct Printing	
Supported digital cameras	Digital cameras and digital video cameras supporting Bubble Jet Direct or PictBridge
Supported print paper	PR-101 (A4 / LTR / 4" x 6" / 5" x7) PP-101 (A4 / LTR/ 4" x 6" / 5" x 7") SG-101 (A4 / LTR / 4" x 6") PS-101
Print layout	- 1 photo per page (borderless/with borders) - Index printing
Camera Direct Printing	
Supported digital cameras	Digital cameras and digital video cameras supporting Bubble Jet Direct or PictBridge
Supported print paper	PR-101 (A4 / LTR / 4" x 6" / 5" x7) PP-101 (A4 / LTR/ 4" x 6" / 5" x 7") SG-101 (A4 / LTR / 4" x 6") PS-101

Print layout	- 1 photo per page (borderless/with borders) - Index printing
Throughput	Approx. 69 seconds, with the following conditions and settings: - A photo from a 5 mega-pixel digital camera - PP-101 4” x 6” - ExifPrint/Standard - Process from pressing the printing start button to ejecting paper

2-2 Product Life

Specified print volume or the years of use, whichever comes first.

- 3 years of use
- Print volume: 6,000 pages
  - Black: 3,000 pages (A4, standard mode, 1,500 character pattern)
  - Color: 2,400 pages (A4, 7.5% duty per color pattern)
    100 pages (A4, photo, borderless printing)
    300 pages (4 x 6, photo, borderless printing)
    200 pages (Postcard, photo, borderless printing)

Note: The above print volume breakdown is estimated using average user consumption patterns of printing 6,000 pages.

<Ink cartridge yield>

Units: pages

	Standard		High Capacity	
	BK	CL	BK	CL
	PG-40 (overseas)	CL-40 (overseas)	PG-50 (overseas)	CL-51 (overseas)
1,500 character pattern plain paper / standard mode	490	-	750	-
ISO JIS-SCID No. 5 plain paper / standard mode (BK)	760	-	1170	-
ISO JIS-SCID No. 5 plain paper / standard mode (CL)	-	190	-	320
Digital camera 24 images PP-101 4x6	-	100	-	180

2-4. Ink Cartridge Specifications

	Ink cartridge
Type	Ink-tank-integrated print head
Print head	BK: 320 nozzles in 2 vertical lines C/M/Y: 192 nozzles in 2 vertical lines Ink droplet: BK 30 pl, Col 5 pl / 2 pl,
Ink color	BK: Pearl pigment-based, Col (Y/M/C): Super dye-based
Weight	PG-40: approx. 43 g, CL-41: approx. 45 g PG-50: approx. 51 g, CL-51: approx. 56 g
Supply method	As a consumable

<Supported ink cartridges by models>

Model	Ink cartridge			
	Standard		High capacity	
	PG-40 BK	CL-41 CL	PG-50 BK	CL-51 CL
MP150	Standard package	Standard package	Usable as an option	Usable as an option

3. ERROR DISPLAY

The errors / alarms occurred in the printer is displayed as follows:

1) In Operator Call Error, the Alarm LED is lit to display an error.
   (In a service mode, an error is displayed by the Alarm LED blinking.)
   Service Call Error is displayed by the number of the Alarm LED blinking.
2) An error / alarm is displayed on the LCD monitor of the operation panel.
3) An alarm is displayed on the status monitor of the printer driver.

3-1. Operator Call Error (Alarm LED Blinking in Orange)

LED display	Alarm LED blinking (Service mode)	Error (Error code)	Corrective action	Remarks
E2	2 times	No paper (ASF)[1000]	Set paper in ASF, and press the OK button.	
E3	3 times	Paper jam[1300]	Remove the jammed paper, and press the OK button.	
E4	-	No ink[1600]	Replace the ink cartridge(s), or press the OK button.	When selecting to press the OK button, ink may run out during printing.
E5	5 times	The ink cartridges are not installed[1401], or a non-supported ink cartridge is installed[1485], or the ink cartridges are not installed properly[1687].	Check if supported ink tank(s) is installed, and re-install them properly, and then close the scanning unit.	
E8	-	Waste ink absorber full[1700], or platen waste ink absorber full[1710].	Pressing the OK button will clean the error, and enable to print. In repair, <Replacement of Ink absorber kit (QY5-0149-000)> <Replacement of Platen waste ink absorber QC1-6014-000)>	Waste ink absorber full warning (service call error) may appear.
E9	-	The connected digital camera / video camera does not support Camera Direct Printing.[2001]	Disconnect the cable from a the digital camera/video camera, and press the Reset button, and then re-connect the cable.	
E14	-	The Ink cartridges whose destination are wrong.[1684]	Check if supported ink tank(s) is installed, and re-install it properly, and then close the scanning unit.	
E15	15 times	Ink cartridge is not installed.[1682]	Re-install the ink cartridge(s) properly and close the scanning unit. Or Turn on/off the machine with the ink cartridges installed.	
E16	-	Ink remaining is unknown. [1685/1686]	Install an new ink cartridge, or press the OK button. * When an cartridge that was once used (excluding the cartridge used just before) is installed, this error occurs.	When the error is resolved by pressing the OK button, the function for detecting the remaining ink level will be released.

(2-1, Printer Main Unit Specifications cont'd)

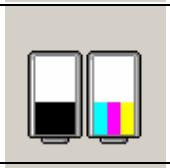
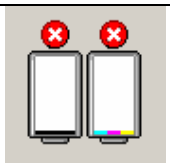
E19	-	Failed to scan head alignment sheet.	After releasing the error by pressing the OK button, do head alignment again. (Print the head alignment sheet again.) Check the followings. - The correct media type, size (plain paper, A4/LTR). - The head alignment sheet is printed properly. (There is non-ejection/ squeezeout of ink.) - All applicable boxes on the head alignment sheet are filled out. - After checking the applicable boxes, the alignment sheet is placed in the right orientation and location on the platen glass.	

3-2. Service Call Error

Error code		Error	Solution (Replacement of listed parts, which are likely to be faulty)
E,2,2	5100	Carriage error	- Carriage unit (Main unit) - Timing slit strip film - Logic board ass'y - Carriage motor (Main unit)
E,2,3	6000	Paper feed error	- Timing sensor ass'y - Timing slit disk film (Main unit) - Feed roller ass'y (Main unit) - Platen (Main unit) - Logic board ass'y - Paper feed motor (Main unit)
E,2,4	5C00	Purge cam sensor error	- Carriage unit (Main unit) - Timing slit strip film - Logic board ass'y - Carriage motor (Main unit)
E,2,5	5700	ASF cam sensor error	- Drive ass'y (Main unit) - PE sensor ass'y - Pressure roller ass'y (Main unit)
E,2,6	5400	Internal temperature rise error	- Logic board ass'y
E,2,7	5B00 5B01	Main waste ink absorber full [5B00] or platen waste ink absorber full [5B01]	Main waste ink absorber: - Bottom case unit (Main unit) - Ink absorber kit Platen waste ink absorber: - Ink absorber - Ink absorber kit
E,2,8	5200	Ink cartridge temperature rise error	- Print head - Logic board ass'y
E,2,9	6800	EEPROM error	- Logic board ass'y
E,3,2	6A00	AP position error	- Drive ass'y (Main unit) - PE sensor ass'y - Logic board ass'y
E,3,5	9000	USB Host VBUS overcurrent	- Logic board ass'y
E,3,7	6D00	Abnormal motor driver error	- Logic board ass'y
E,4,0	6500	Other hardware error	- Logic board ass'y
E,4,2	5010	Scanner error	- Scanner unit - Logic board ass'y

3-3. Ink Low Warning (Ink low warnings are displayed by the Status Monitor only when the remaining ink level detection is enabled, and no Status Monitor display when disabled.)

Note: The Status Monitor display in the table below is for Windows.

Warning	Display by Status Monitor
Ink low warning 1 (approx. 70% of ink remaining)	
Ink low warning 2 (approx. 40% of ink remaining)	
Ink low warning 3 (low remaining ink)	
Ink low warning 4 (no ink remaining)	

4. REPAIR

4.1 Notes on Service Part Replacement (and Disassembling/Reassembling) in Asia

Service part	Notes on replacement	Adjustment/settings	Operation check
Logic board ass'y (QM2-3163)	- Detach the logic board ass'y about one minute after removing the power cord to prevent the logic board ass'y from being damaged. (to discharge the accumulated electricity in the capacitor) - If a waste ink amount is more than 7%, replacement of the ink absorber is necessary.	After replacement: 1. Initialize the EEPROM. 2. Reset the waste ink counter. 3. Set the destination in the EEPROM. See 4.2 SERVICE MODE. 4. Perform the print head alignment in the user mode.	- EEPROM print - Service test print - Printing via an USB connection - Camera Direct print
Operation panel unit (QM2-2788)		After replacement: 1. Check the buttons / the LCD See 4.2 SERVICE MODE.	
Absorber kit (QY5-0149) Platen ink absorber (QC1-6014)		After replacement: 1. Reset the waste ink counter. See 4.2 SERVICE MODE.	- Service test print

4.2 SERVICE MODE

Item	Timing	Objective	Remarks
Service test print - Model name - Rom version - USB serial number - Waste ink amount	At printer operation checking or parts replacement	Operation checking	See Service mode operation procedures. Load A4, LTR, or more large sized paper. Print sample: See APPENDIX 1: SHIPMENT INSPECTION PATTERN 1.
EEPROM reset	At Logic board replacement	Reset except for the followings. - USB serial number - Destination setting - Waste ink counter	See Service mode operation procedures.
Waste ink counter reset	At waste ink absorber replacement	Waste ink counter reset	See the waste ink counter reset procedures. (For Asia only)
Destination setting	At Logic board replacement	Destination setting	See Service mode operation procedures & Destination setting procedures. (For Asia only)
Button / LCD checking	At Operation panel operation checking (such as Operation panel unit replacement)	Button / LCD operation checking	See Button / LCD checking operation procedures. (For Asia only)

＜Service mode operation procedures＞

1) With the printer powered off but connected to a power source, press the Power button while pressing and holding the Stop/ Reset button.
2) When the Power LED is lit, press the Stop/Reset button two times while pressing and holding the Power button.
3) When releasing the Power button and the Stop / Reset button (regardless of order), the printer will move into a service mode. (Waiting for menu selection)
4) When the LED lights in green, press the Stop/Reset button the specified number of time(s) according to the function listed in the table below.(Each time the Stop/Reset button is pressed, the LED lights alternately in orange and green, starting with orange.)

The number of the Reset button pressing	LED	Function	Remarks
0 time	Green	Power off	
1 time	Orange	Service pattern print	See APPENDIX 1: SHIPMENT INSPECTION PATTERN 1: PRINT SAMPLE
2 times	Green	EEPROM print	See APPENDIX 2: EEPROM INFORMATION PRINT
3 times	Orange	EEPROM reset	
4 times	Green	Waste ink counter reset	See waste ink counter reset procedures below.
5 times	Orange	Destination setting	See Destination setting procedures below.
6 times	Green	Print head deep cleaning	
11 times	Orange	Button / LCD checking	
12 or more times		Returns to a menu selection	

<Destination setting procedures>

At Logic board replacement, make settings for each destination.

The number of the Reset button pressing	LED	Destination	Paper for defaulte setting
0 time	Green	No change	
1 time	Orange	Japan	A4
2 times	Green	Korea	A4
3 times	Orange	US/Canada	Letter
4 times	Green	Europe	A4
5 times	Orange	Australia	A4
6 or more times		Returns to a menu selection	A4

<Waste ink counter reset procedures>

At the waste ink absorber replacement, reset the waste ink counter for the replaced waste ink absorber.

Setting operation for the waste ink counter (The counter setting value is selected by pressing the Reset button.)

The number of the Reset button pressing	LED	
0 time	Green	Reset the main waste ink counter to 0%.
1 time	Orange	Reset the platen waste ink counter to 0%.
2 times	Green	Reset the Main & platen waste ink counter to 0%. (Reset collectively.)

<Button / LCD checking operation procedures>

At Operation panel unit replacement, check the button / LCD.

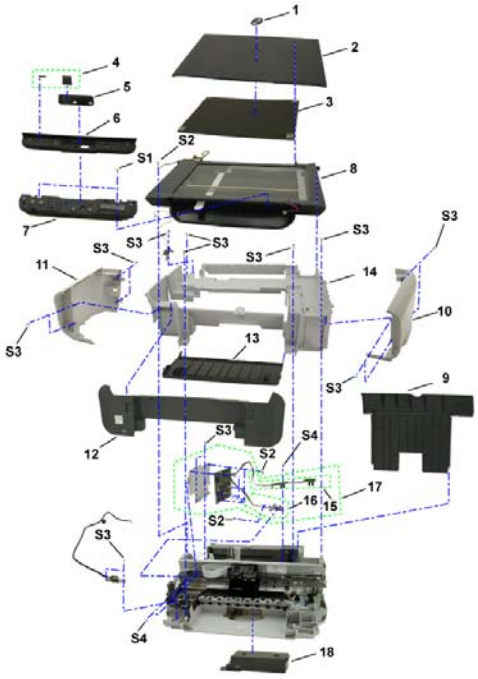
1. When pressing the Stop button two times, the machine will be moved into an LED confirmation mode.
2. As often as the Color button is pressed one time, each LED is lit one by one, and the machine get in the mode in which each button is acceptable.
3. As often as each buttons on the panel is pressed from the left to the right, the displayed number is counted up.

Pressed button	Display
Maintenance	1
Fit to Page	2
SCAN	3
Paper size	4
+	5
Black	6
Color	7
Stop / Reset	8
On / Off	9

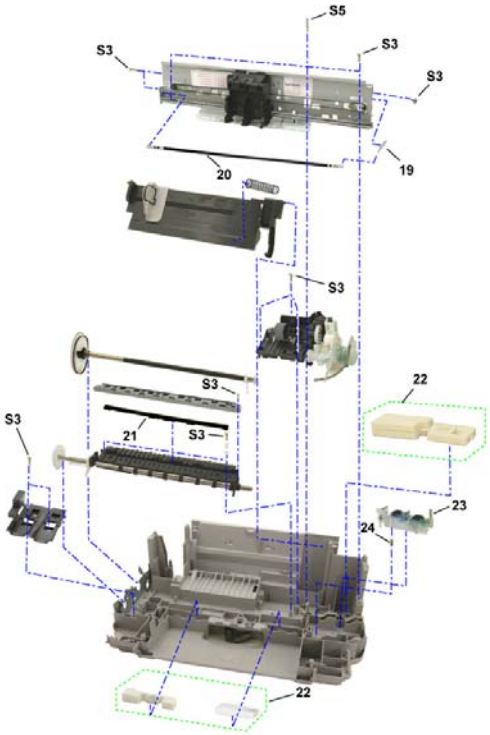
4. When all buttons are pressed, [1] will be displayed. Then, LED[8.5 x 11 Plain Paper] and LED[8.5 x 11 Photo Paper] will be lit on the panel, and the machine will be in a service mode menu selection mode.

5. EXTERNAL VIEW / PARTS LIST (for Asia)

5-1. External Parts, Power Supply Unit, Logic Board Ass'y



5-2. Print Unit



Parts List

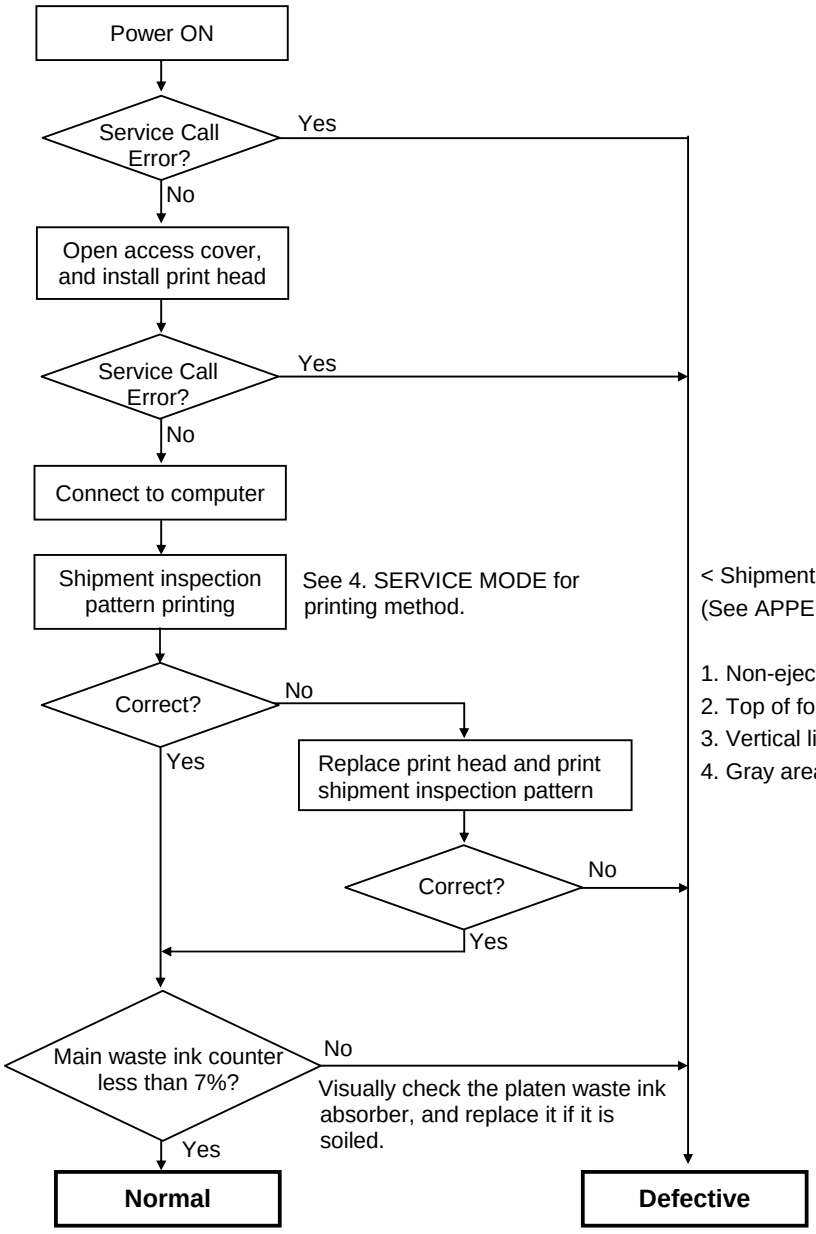
Key	Part Number	Rank	Q'ty	Description	Remark
1	QC1-7720-000	J	1	EMBLEM, PIXMA	
2	QM2-2786-000	J	1	DOCUMENT PRESSURE PLATE ASS'Y	
3	QC1-7588-000	I	1	SHEET, DOCUMENT PRESSURE	
4	QC1-7769-000	J	1	LABEL, PANEL	EUM, EMB
5	QC1-7617-000	J	1	COVER, LED	CA, LAM LTR
5	QC1-7758-000	J	1	COVER, LED	EUM, EMB, GB
5	QC1-8884-000	J	1	COVER, LED	CN
5	QC1-8885-000	J	1	COVER, LED	TW
5	QC1-8886-000	J	1	COVER, LED	KR
5	QC1-8888-000	J	1	COVER, LED	AU, ASA, HK, LAM A4
6	QC1-7604-000	J	1	COVER, PANEL	CA, AU, ASA, HK
6	QC1-7754-000	J	1	COVER, PANEL	LAM, EUM, EMB, GB
6	QC1-7770-000	J	1	COVER, PANEL	CN
6	QC1-7772-000	J	1	COVER, PANEL	TW
6	QC1-7774-000	J	1	COVER, PANEL	KR
7	QM2-2788-000	I	1	OPERATION PANEL UNIT	
8	QM2-2791-000	I	1	SCANNER UNIT	
9	QM2-2817-000	J	1	PAPER SUPPORT UNIT	
10	QC1-7645-000	J	1	COVER, SIDE R	
11	QC1-7647-000	J	1	COVER, SIDE L	
12	QC1-7654-000	J	1	COVER, FRONT	
13	QC1-7706-000	J	1	TRAY, OUTPUT	
14	QL2-1176-000	J	1	MAIN CASE UNIT	
15	QM2-3168-000	S	1	PE SENSOR ASS'Y	
16	QM2-3167-000	I	1	TIMING SENSOR ASS'Y	
17	QM2-3163-000	I	1	LOGIC BOARD ASS'Y	
18	QK1-1833-000	N	1	AC ADAPTER: 100V-240V 50/60HZ	JP,US,CA,EUM,EMB,GB,HK
18	QK1-1854-000	N	1	AC ADAPTER: 100V-240V 50/60HZ	LAM, AU, ASA, TW, KR
18	QK1-1855-000	N	1	AC ADAPTER: 100V-240V 50/60HZ	CN
19	QC1-6016-000	I	1	SPRING, TIMING SLIT STRIP FILM	
20	QC1-6015-000	I	1	FILM, TIMING SLIT STRIP	
21	QC1-6014-000	I	1	ABSORBER, INK, PLATEN	
22	QY5-0149-000	I	1	ABSORBER KIT	
23	QM2-2137-000	I	1	CAP-BLADE UNIT	
24	QC1-6021-000	I	1	SPRING, CAP SLIDE	
S1	XB4-7300-805	G		SCREW, TP, BH3X8	
S2	XB6-7300-605	G		SCREW, MACHINE, WASHER HEAD, M3x6	
S3	XA9-1493-000	G		SCREW, TP M3X8	
S4	XB1-2300-605	G		SCREW, MACHINE, BINDING HEAD, M3x6	
S5	QC1-6108-000	G	1	SCREW, B-TIGHT M3X44	

<Power supply cord>

Part Number	Rank	Q'ty	Description	Remark
QK1-0278-000	S	1	CORD, POWER	100V-120V
QK1-0279-000	S	1	CORD, POWER	220V-240V
QK1-1061-000	S	1	CORD, POWER	220V-240V(AU)
QK1-1903-000	S	1	CORD, POWER	120V-240V(LAM)
WT3-5156-000	S	1	CORD, POWER	220V-240V(GB, HK)
WT3-5160-000	S	1	CORD, POWER	220V-240V(KR)
WT3-5182-000	S	1	CORD, POWER	220V-240V(CHN)

6. TROUBLESHOOTING FLOWCHART

6-1. Printer Main Unit Troubleshooting Flowchart (how to confirm printer operation at refurbishment)

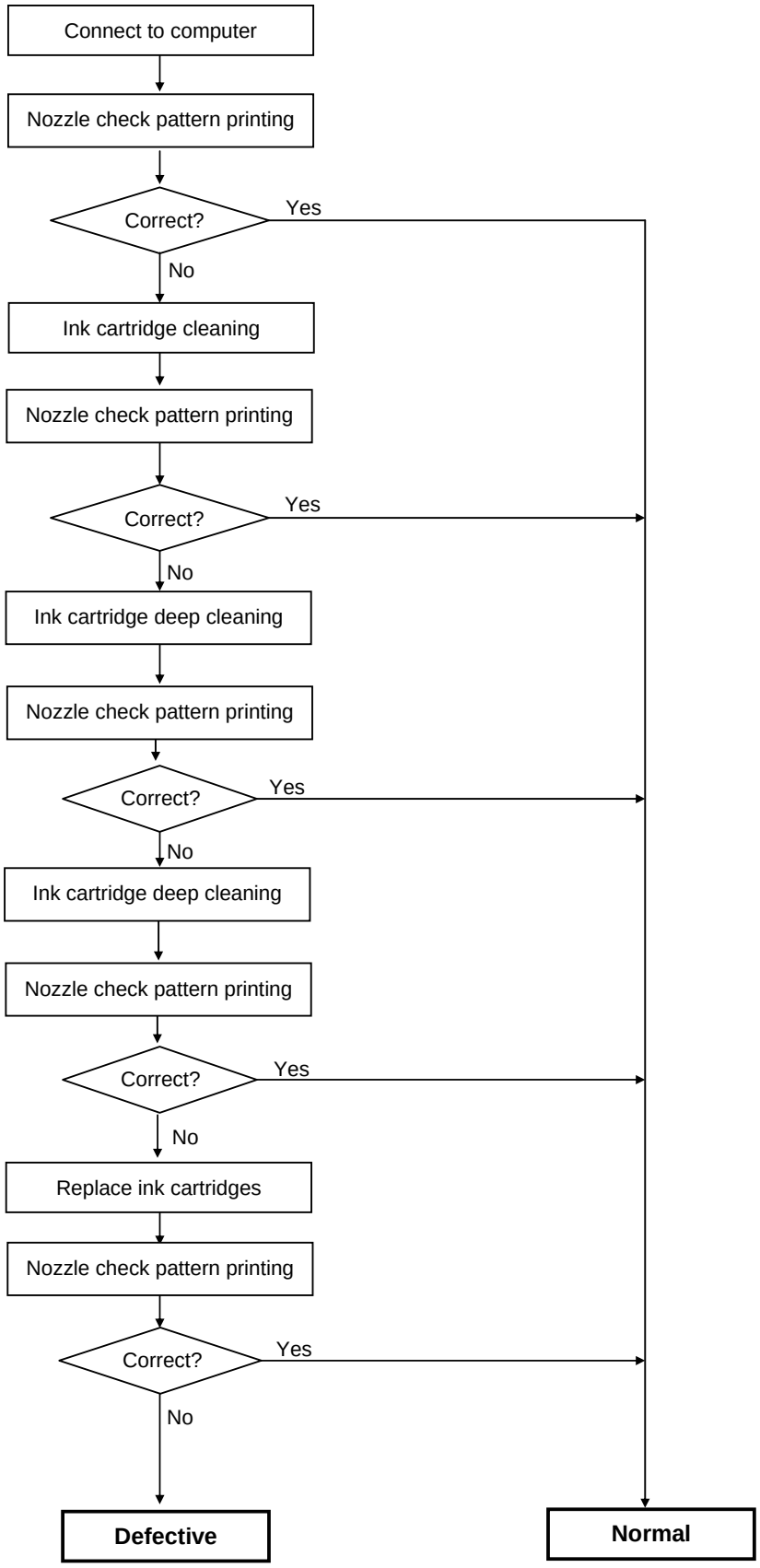


<Note for normal printer refurbishment>

At end of refurbishment, set the printer to the default shipment conditions (with the paper lifting plate in the raised position, and the carriage locked in the home position), following the steps below.

1. Install the ink cartridges, and while pressing and holding the Power button, connect the AC plug. After the Power LED lights in green, with the Power button still pressed, press the Resume/Cancel button 2 times, and release both the Power and Resume/Cancel buttons. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)
2. Print the shipment inspection pattern, and reset the EEPROM, following the procedures in 4. SERVICE MODE.
3. Press the Power button to turn off the printer. (The paper lifting plate is raised, and the carriage moves to the print head replacement position.) Remove the ink cartridges. (DO NOT print after this point.)

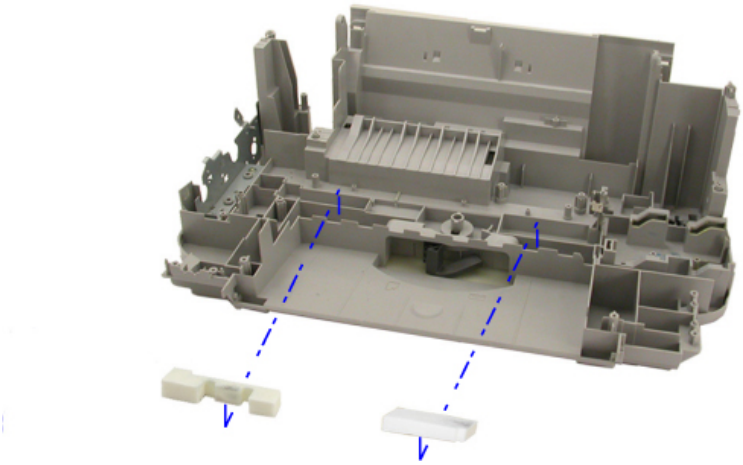
6-2. Ink Cartridge Troubleshooting Flowchart (ink cartridge operation confirmation)



7. SPECIAL NOTES ON SERVICING

7-1. Notes on the Waste Ink Absorber (for absorbing waste ink when doing borderless printing) Replacement.

After the waste ink absorber shown below was replaced, check if head-to-paper distance between the chassis and platen is correct.



Because the chassis and platen (or other parts) have to be removed to replace the ink absorber, head-to-paper distance may be misaligned.
Check the print result with the following procedures to confirm that there is no problem.

<Check procedure>

1) Print images on Photo Paper Pro to confirm that the print result has no problem and that the print head does not contact paper.
   When doing printing, set the paper thickness lever to the left (normal position).

When print quality deterioration and print head contact are found, adjust head-to-paper distance with the following procedures.

1) Make marks under red screws located at both sides of the chassis.


2) Loosen red screws to adjust head-to-paper distance.


When the print head contacts paper: Move the chassis rail towards the marks.
When print quality deteriorates: Move the chassis rail towards the marks.

8. PRODUCT TECHNICAL INFORMATION

8-1. FAQ (Problems specific to the iP150, and their corrective actions)

No.	*	Function	Phenomenon	Possible Call / Claim	Corrective action	Cause
1	A	Installation	Carriage error (Alarm and Power LEDs blink alternately 2 times).	- The LEDs blink alternately in orange and green, 2 times (carriage error).	Remove the packing material fixing the carriage.	The user may not have removed the packing material at unpacking and installation. Note: Even if the packing material remains, no parts are damaged.
2	A		Ink cartridge installation error	- LED display in the LCD (As this occurs at printer installation, the user cannot recognize the error.)	Open the access cover, and install the ink cartridge(s) properly.	The user did not install the ink cartridges completely at unpacking, installation, or ink cartridge replacement.
3	B	Paper feeding	No paper feeding	- Paper out error - Paper cannot be fed - Cannot print	1. Perform roller cleaning from the printer driver. 2. Clean the paper feed roller with pre-moistened wipe or moistened cloth.	The paper feed roller slips on the paper at paper feeding.
4	C		Multi-feeding	- Multiple sheets of paper are fed simultaneously. -Blank paper is ejected.	1. Fan the paper and set them in the ASF. 2. In case of PR-101, set the paper sheet by sheet in the ASF.	In the high temperature and high humidity environment, the frictional force between the front and back sides of paper becomes high, and sheets stick to each other, contributing to multi-feeding.
5	B		Envelope not feeding	- Paper out error - Paper cannot be fed - Cannot print	1. Perform roller cleaning from the printer driver. 2. Clean the paper feed roller with pre-moistened wipe or moistened cloth. 3. Reduce the number of envelopes loaded in the ASF. 4. Flatten the envelope (with a pen).	The paper feed roller slips on the paper at paper feeding. Note: Depending on the paper lots.
6	C		Paper jam	- Paper jam error - Paper cannot be fed - Cannot print	1. Remove the jammed paper from the paper pick-up side.	As the LF roller slips on the paper, the paper is not fed, causing the jam error at paper ejecting.
7	B		Paper jam and paper feeding failure in printing on Credit card sized paper	- Paper jam error - Feeding failure - Cannot print	1. Open the front cover and remove the jammed paper. 2. Load the same type of paper as jammed paper in the portrait orientation and press the Reset button.	If paper is loaded in the landscape orientation, paper cannot be fed because the paper does not reach the LF roller at paper feeding.

(8-1. FAQ (Problems specific to the iP150 and corrective actions) cont'd)

No.	*	Function	Phenomenon	Possible Call / Claim	Corrective action	Cause
8	B	Image quality	Smearing on printed side.	- Smear on the printed side of paper - Cannot print properly - Paper edge crease	1. Correct the paper curl. 2. Set the paper thickness lever to the right. 3. Recommend the user to conduct printing in the print quality assurance area.	The edge of paper rises due when paper is curled, causing the ink cartridge to rub against the printed surface of paper, resulting in smearing.
9	B		Smearing on the backside, or address side of postcards	<Photo Paper Plus Double Sided> Smears on the already printed side when printing the other side	1. Perform bottom plate cleaning from the printer driver. 2. Clean the ribs on the platen with cotton swabs/buds.	When borderless printing is conducted continuously, ink mist attaches to the ribs on the platen, and is transferred to the backside of the following paper.
10	C		Horizontal lines or uneven print density at the trailing edge of paper	- Cannot print to the bottom edge of paper - Lines or uneven print density appear in the trailing edge of paper - Cannot print properly	1. Recommend printing in the print quality assurance area. 2. Change the print quality from Standard to High mode. 3. Try other paper (PP-101)	When the paper end comes off the pinch roller, printing is performed without the paper being held, preventing the ink drops from being ejected in the correct positions, resulting in unevenness.
11	C		When printing using one ink cartridge only, horizontal lines or uneven print density occurs due to LF roller feeding at small pitch	- Lines or uneven print density (on skin tones and background) - Cannot print properly	1. Perform print head alignment. 2. Change the print quality from Standard to High mode.	As the print media slightly slips while being fed by the LF roller, printed areas overlap, causing the problem.

*Occurrence level:

A: The phenomenon is likely to occur frequently. (Caution required).
B: The phenomenon may occur under certain conditions, but likeliness is assumed very low in practical usage.
C: The phenomenon is unlikely to be recognized by the user, and no practical issues are assumed.

8-2. Major Functions

(1) Quiet mode

The printer has a quiet mode function.

Compared with the normal mode,

Acoustic noise level: HS normal approx. 55.0 dB, Quiet approx. 46.9 dB
Audible overtone level: Sound quality changes, and sound becomes quieter.
Print speed: Slows.

<Possible problems with this function>

- The operation sound does not become quieter.
  -> The audible sound becomes only slightly quieter.
- Printing is slow.
  -> Disable the Quiet mode.

(2) Remaining ink level detection function

The printer has a function to detect the remaining ink level.

Detection method: Dot counting (Counted for each Black/CL ink cartridge)
CL cartridge: The remaining ink level is detected by total counted dot values of CL three colors.

Display method: Displayed on the Status Monitor (at 4 levels listed below for each BK/CL ink cartridge)
Level 1: Approx. 70% of ink remaining
Level 2: Approx. 40% of ink remaining
Level 3: Indication of "!" mark (Remaining ink level is low)
Level 4: Indication of "X" mark (No ink remaining)
Note: Remaining ink detection function displays the status only, and does not cause errors.

Accuracy: The margin of error of detection accuracy is +/-10% in normal printing.
The margin of error is likely to be large in the following specific print patterns:
When printing continuously using any one of the CL three colors of ink
-> As the remaining ink level is calculated by the counted dot value of the least remaining ink of the CL three colors, if any of the C/M/Y inks is heavily consumed, the margin of error for remaining CL ink increases.
When printing continuously using Black ink only
-> As refilling ink in the ink tank becomes slow, ink flow channel is cut off, and ink in the ink tank cannot be finished up, the margin of error for remaining BK ink increases.

<Possible problems with this function>

- When a once-used ink cartridge is installed, the actual remaining ink level is not detected, and an error indicating the remaining ink amount is unknown occurs.
  Pressing the OK button will clear the error, and printing can be done. However, the function to detect the remaining ink amount is disabled (ink status is not displayed).
  e.g.: An ink cartridge was once used in another printer.
  A current ink cartridge is removed from the printer. -> A new ink cartridge is installed. -> The removed ink cartridge is installed again after removing the new ink cartridge.

- Due to the specific print pattern, the actual remaining ink level does not match the indicated remaining ink level.
  This is because a detection error can be large in specific print patterns (such as continuous printing using any one of the BK /CL of ink or continuous solid printing, etc.).

(3) Deep cleaning

The printer has a deep cleaning (refreshing) function.

Deep cleaning (refreshing):

This is a deep cleaning function in order to resolve print failure due to ink clogging the nozzles.

<Possible problems with this function>

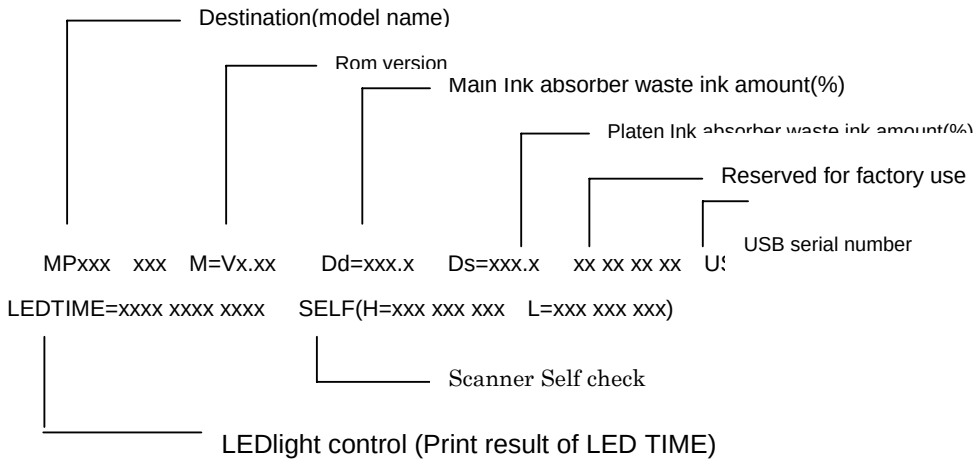
- Excessive ink consumption when conducting deep cleaning repeatedly. (The amount of ink used is approx. 4 times the normal manual cleaning amount.)

<Reference> Cleaning types, amount of ink used, and time required

Cleaning type	Amount of ink used	Time required
Manual cleaning Dot count cleaning Timer cleaning (24 hours to 2 months) CL ink cartridge replacement (8 months or less)	BK: Approx. 0.10 g CL: Approx. 0.10 g	Approx. 40 sec.
Timer cleaning (2 to 3 months) Cleaning when the print head is not capped at printer power on BK ink cartridge replacement (8 months or less)	BK: Approx. 0.15 g CL: Approx. 0.15 g	Approx. 45 sec.
CL ink cartridge replacement (8 months or more)	BK: Approx. 0.20 g CL: Approx. 0.20 g	Approx. 55 sec.
Cleaning on arrival at user Timer cleaning (3 months or more) BK ink cartridge replacement (8 months or more)	BK: Approx. 0.30 g CL: Approx. 0.30 g	Approx. 60 sec.
Deep cleaning Timer cleaning (6 months or more)	BK: Approx. 0.45 g CL: Approx. 0.45 g	Approx. 60 sec.

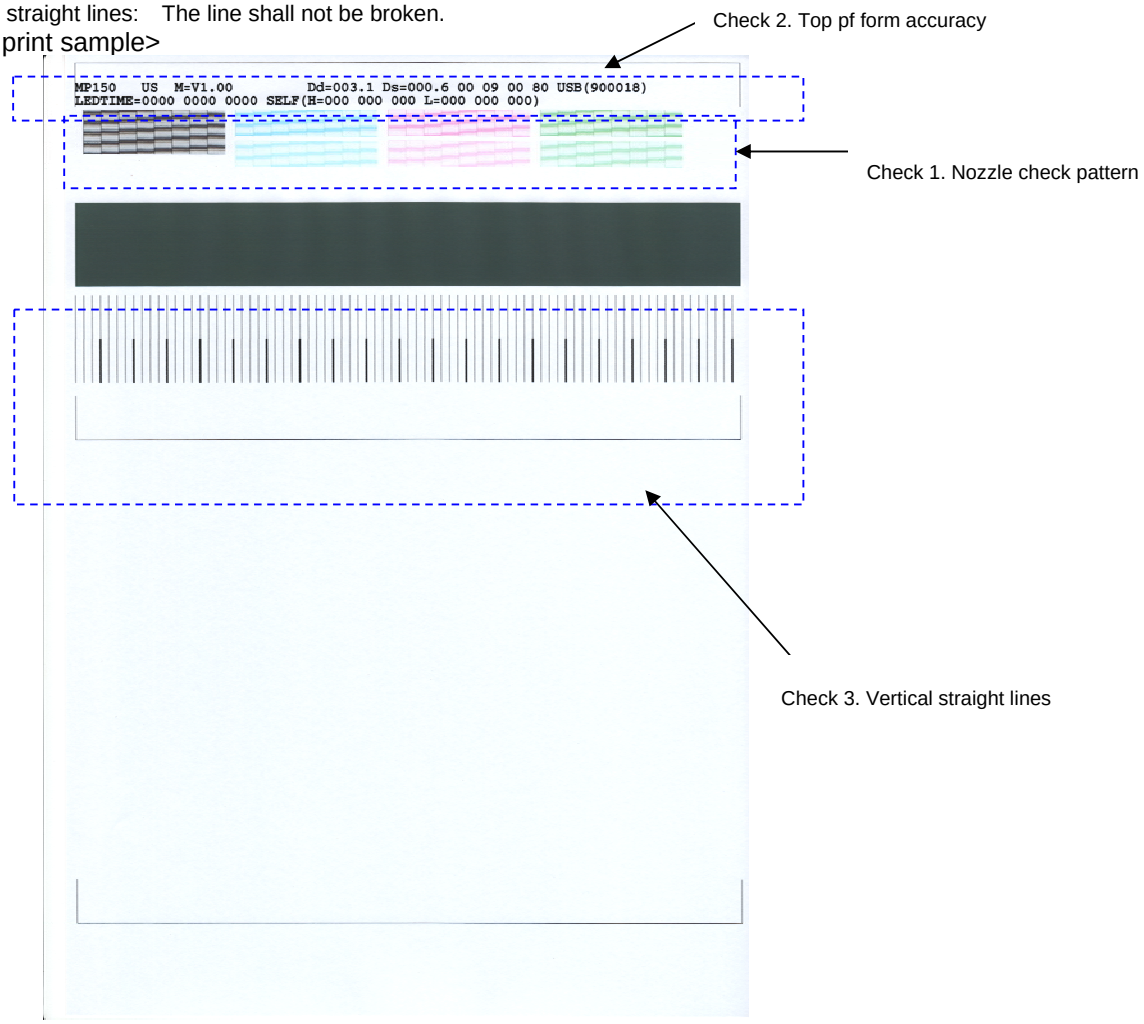
APPENDIX 1: SHIPMENT INSPECTION PATTERN 1

<EEPROM information contents>
On the service test print(sample below), confirm the EEPROM information as shown below. (The information Is given in the upper portion of the printout.)



<Print check items>
On the service test print(sample below),confirm the following items.
-Check 1,nozzle check patten: Ink shall be ejected from all nozzles.
-Check 2,top of form accuracy: The line shall not extend off the paper.
-Check 3,vertical straight lines: The line shall not be broken.

<Service Test print sample>



APPENDIX 2: EEPROM INFORMATION PRINT

<How to read EEPROM information print>

Print sample:

```
i MP150    US   V1.00   IF(USB2=1)   D=008.0   Ds 000.0   ST=2005/06/25-16:41
ER(ER0=1000 ER1=5100)   LPT=2006/07/04-10:25
PC(M=000 R=000 T=011 D=000 C=000)
CLT(2005/06/30-11:34)
CT(BK_ST=002 BK_HC=002 CL_ST=000 CL_HC=000)   IS(BK=0 M=0 C=0 Y=0)
IC(BK=02150 M=02435 C=02001 Y=02081)   P_ON(S=00115)   M_REG=1
UR(A(CLsi)=000   B(BKoe)=000   C(BKsi)=000   D(BKbi)=000   E(BkClx)=+04   F(BkCly)=000
G(Cbi)=+01   H(SCbi)=+01   I(C-SC)=000
J(Mbi)=000   K(SMbi)=000 L(M_SM)=000)

WP=0039   CDIN(LG=034 PB=000 OPB=000)   MSD(255)
TPAGE=00145   (TTL=00022   COPY=00000)
PAGE(All=00145 PP=00112 HR+MP=00000 PR+SP+SG=00033 GP=00000 PC=00000 EV=00000)
CDPAGE(All=00010)   EDGE=00000   L=00031
<Direct>
LG=00   Unknown      SC=000     Seal=000
CDD-PR(L=020   2L=000   PC=000   A4=000)
DCD-FPP(L=000   2L=000   PC=000   A4=000)   DCD=MPP(L=000   2L=000   PC=000   A4=000)
<Scanner>
SC=00000
SC-dpi(75=00000   150=00000   300=00000   600=00000   1200=00000   2400=00000)
SG(GY=00000   CL=00000)
<Copy>
MCASF(PP=00000   SP+PR+GP=00000   OTH=00000)
CCASF(PP=00000   HR+MP=00000   PR+SP+SG=00000   GP=00000   PC=00000)

Head TempBK=36.0   Head TempC=34.0   Env Temp=27.0   FF(80 00 09)
<SCAN ERROR HISTORY>
0000   0000
- EEPROM Information <Hex.> -
```

Printed items:

1: Model name
2: ROM version
3: I/F connection (USB2)
4: Waste ink amount (main, platen)
5: Installation date
6: Operator call / service call error record
7: Last printing time
8: Purging count (manual cleaning, (refreshing) deep cleaning, timer cleaning, cleaning by dot count, cleaning at ink tank / print head)
9: Last cleaning time
10: Print head replacement count (Black standard, black high capacity, color standard, color high capacity)
11: Ink status (BK/M/C/Y)

12: Total ink consumption amount (BK/M/C/Y)
13: Power-on count (S = soft-power-on)
14: Manual print head alignment by user
15: User print head alignment value
(CLsi/BKoe/BKsi/Bkbi/BkClx/BkCly/Cbi/SCbi/C-SC/Mbi/Smbi/M-SM)
16: Wiping count
17: Camera Direct Print-supported device connection record
(LG, Canon PictBridge, Other PictBridge)
18: Longest period of non-printing
19: Number of all pages fed (total, number of copying sheets)
20: Number of pages fed from ASF (total, plain paper, High Resolution Paper6Matte Photo Paper, Photo Paper Pro6Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard, envelope)
21: Camera Direct print pages in total
22: Borderless print pages
23: L & 4x6 print pages
<Direct>
24: Language setting
25: Name card- / Credit Card-sized paper pages fed
26: Stickers pages fed
27: Memory Card Direct print pages: Photo Paper Pro (4x6, 5x7, A4/LTR)
28: Camera Direct print pages: Fast Photo Paper (4x6, 5x7, card, A4/LTR)
29: Camera Direct print pages: Matte Paper (4x6, 5x7, card, A4/LTR)
<Scanner>
30: Total number of scanning
31: Number of scanning according to read resolution (75/150/300/600/1200/2400 dpi)
32: Number of scanning according to read tone (grayscale / color)
<Copy>
33: Number of pages of monoclonal copy fed from ASF (plain paper, Photo Paper Plus Glossy , Photo Paper Pro, Glossy Photo Paper, other paper)
34: Number of pages of color copy fed from ASF (plain paper, High Resolution Paper&Matte Photo Paper, Photo Paper Pro&Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard)
35: Print head temperature (BK)
36: Print head temperature (CL)
37: inside temperature
38: Line inspection information
<Scan Error History>
39: Scanning error status history

- Printer EEPROM information Dump-
(Displayed DUMP List in the printer EEPROM in HEX)