

**i350 / i355
i250 / i255
SIMPLIFIED MANUAL**

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QY8-1389-000

Rev. 00

June 6, 2003

Canon Inc.

1. PRODUCT LIST

1-1. Main Units

Product name	Product code	Sales Territory	Remarks
Canon Bubble Jet Printer i350	8549A001AA 8549A002AA 8549A003AA 8549A004AA 8549A005AA 8549A006AA 8549A007AA 8549A009AA 8549A0011AA	US CA LAM LVT LAM HVT EUR DE FR AU GB	
Canon Bubble Jet Printer i355	8549A008AA 8549A010AA 8549A013AA 8549A014AA 8549A015AA	ASA HVT KR TW HK CN	
Canon Bubble Jet Printer i250	8550A001AA 8550A002AA 8550A003AA 8550A004AA 8550A005AA 8550A006AA 8550A007AA 8550A009AA 8550A0011AA	US CA LAM LVT LAM HVT EUR DE FR AU GB	
Canon Bubble Jet Printer i255	8550A008AA 8550A010AA 8550A013AA 8550A014AA 8550A015AA	ASA HVT KR TW HK CN	

1-2. Options None

1-3. Consumables

Product name	Product code	Sales Territory	Remarks
Canon Ink Tank BCI-24 Black	6881A001AA 6881A002AA 6881A003AA 6881A004AA	JPN EUR USA/CAN ASIA/AUST	Common with S200/S200x/S300 /S330/i320/PIXUS 320i
Canon Ink Tank BCI-24 Color	6882A001AA 6882A002AA 6882A003AA 6882A004AA	JPN EUR USA/CAN ASIA/AUST	
Canon Ink Tank BCI-24 Black Twin Pack	6881A008AA 6881A009AA 6881A010AA 6881A011AA	JPN EUR USA/CAN ASIA/AUST	
Canon Ink Tank BCI-24 Color Twin Pack	6882A008AA 6882A009AA 6882A010AA 6882A011AA	JPN EUR USA/CAN ASIA/AUST	

2-2. Product Life

3 years or 4,000 pages (2,500 pages of color printing and 1,500 pages of black printing), whichever comes first

2-3. Print Head Specifications

Structure	4-color integrated type (ink tank separate type)
Print head	Bk: 2 vertical lines, 320 nozzles C/M/Y: 2 vertical lines in each color, 128 nozzles Ink drop: Bk 30 pl, Col 5pl
Ink colors	Bk (new pigment ink) Cl: Y, M, C (high brilliance)
Ink tank	BCI-24 Bk, BCI-24 Color (common parts) (Common with S300/S330/i320)
Weight	Approx. 60g (excluding ink tanks)
Supply method	Service part (excluding ink tanks) Part number: QY6-0044-000 (common parts) Common to the i320, however, not compatible with the S300/S330 series.
Print head life	4,000 pages (Same as the printer main unit, Cl: 2,500 pages, Bk: 1,500 pages of black printing)

Note: The print head can be physically installed in the old models, however, it is incompatible with and cannot be used in the old models.

3. ERROR DISPLAY

Errors are displayed by the LEDs, and ink low warnings are displayed by the status monitor.

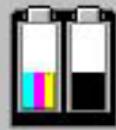
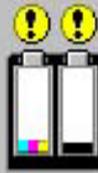
3-1. Operator Call Error (Orange LED blinking)

LED Display	Content	Corrective Action
Blinking 2 times	Paper out	Set paper, and press the RESUME button to feed the paper.
Blinking 3 times	Paper jam	Remove the jammed paper, and press the RESUME button.
Blinking 4 times	Ink tank not installed	Re-install the ink tank, and close the access cover.
Blinking 5 times	Print head not installed or failure has occurred in the print head. (Not-supported print head (see page 5) is installed or print head EEPROM data is abnormal.)	Re-install the print head, and close the access cover. Or confirm the print head is "QY6-0044-000" and perform re-installation. If not recovered with the cartridge installed, power the printer off and on.
Blinking 8 times	Waste ink full or platen waste ink full warning (Approx. 95% of acceptable amount)	Recoverable by pressing the RESUME button.

3-2. Service Call Error (Orange and green LEDs blink alternately)

LED Display	Content	Corrective Action
Blinking 2 times	Carriage error	Replace the printer as it has failed.
Blinking 6 times	Internal temperature abnormal error	Replace the printer as it has failed.
Blinking 7 times	Waste ink full or platen waste ink full error	Replace the printer as it has failed.
Blinking 8 times	Abnormal temperature rise	Replace the printer as it has failed.
Blinking 9 times	EEPROM error	Replace the printer as it has failed.
Blinking 10 times	No cartridge detected excepting print head replacement (during printing)	Replace the printer as it has failed.

3-3. Ink Low Warning (Ink low warnings are displayed by the status monitor only when the remaining ink level detection is on, and no status monitor display when off.)

Content	Display by status monitor
Ink low warning 1 (approx. half level)	
Ink low warning 2 (low remaining ink)	
Ink low warning 3 (ink level unknown)	

4. SERVICE MODE

To conduct the following functions, a host computer (Windows98/Me, Win2k/XP), printer driver and service tool (QY9-0062/63) for the i350 are needed.

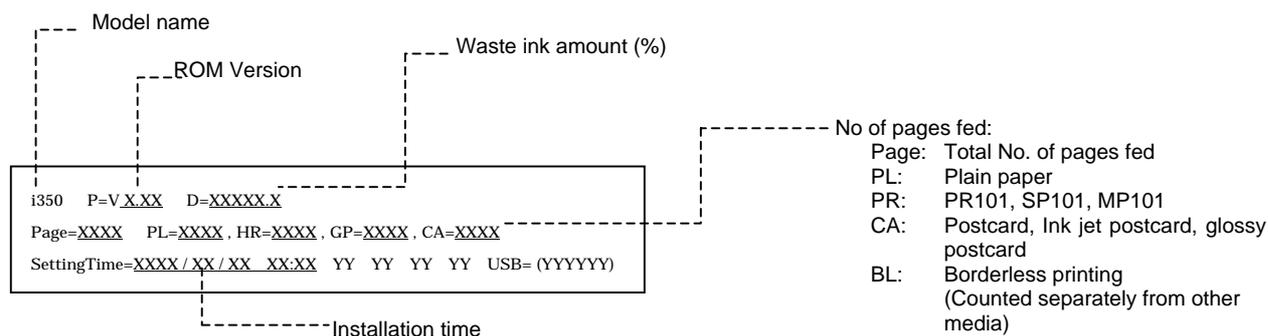
Function	Procedure	Remarks
Print head manual cleaning	Select "Cleaning" from the printer driver utility.	Cleaning time: Approx. 40 sec.
< For reference > Head refreshing (deep cleaning)	Select "Deep Cleaning" from the printer driver utility.	Cleaning time: Approx. 70 sec.
Paper feed roller cleaning	1. Remove the paper from the ASF. 2. Select "Feed Roller Cleaning" from the printer driver utility. 3. Following the instruction from the status monitor, load 3 pages of plain paper in the ASF, and feed them.	Cleaning time: Approx. 2 min.
Test printing		
1) Nozzle check pattern printing	Select "Nozzle Check" from the printer driver utility.	Nozzle check pattern printing
< For Reference > Head alignment	1. Select "Print Head Alignment" from the printer driver utility. 2. Select the optimal value using the printed head position adjustment pattern.	Significant misalignment can be adjusted.
2) Shipment pattern printing - ROM version - No. of pages fed - Waste ink amount	Refer to Shipment inspection pattern* ¹ below.	Refer to Shipment inspection pattern sample* ² below. Host computer and service tool are required.
EEPROM reset (Reset of waste ink counter etc.)	Refer to EEPROM reset / Destination setting* ³ below.	Host computer and service tool are required.
Destination setting (i350/i355/PIXUS 350i/ i250/i255)	Refer to EEPROM reset / Destination setting* ³ below.	Host computer and service tool are required.

*¹ Shipment inspection pattern

- With the printer powered on, install the print head (QY6-0044-000). (The green lamp lights.)
- Load A4-sized paper.
- Connect the printer to the computer, select "USB PORT" using the i350/i250 service tool (QY9-0062/0063). (Refer to Appendix 2, i350/i250 Service Tool.)
- Select "TEST PATTERN 1". The printer starts printing the shipment inspection pattern.

*² Shipment inspection pattern sample

EEPROM contents can be confirmed from the shipment inspection pattern printout. (top of the shipment inspection pattern)



*³ EEPROM reset / Destination setting

- With the printer powered on, install the print head (QY6-0044-000). (The green lamp lights.)
- Connect the printer to the computer, select "USB PORT" using the i350/i250 service tool (QY9-0062/0063). (Refer to Appendix 2, i350/i250 Service Tool.)
- <Destination setting>

Destination can be set by clicking each model name in "SET DESTINATION."

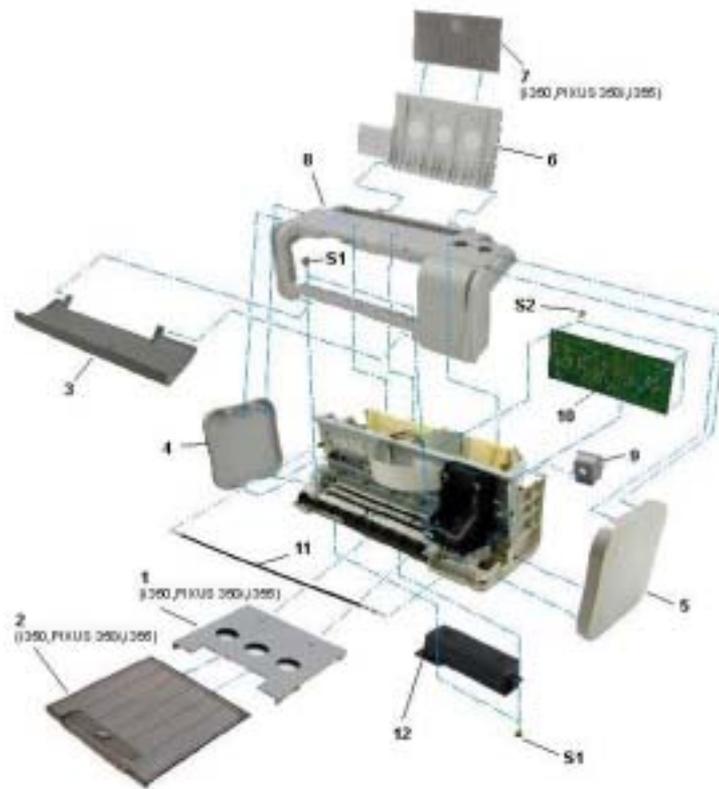
Setting can be changed from the i350 to the i250/i255 (vice versa). Confirm the model name by clicking "GET DEVICE ID" after setting change. (If incorrect, it can be changed before turning the unit OFF/ON.)

<EEPROM reset>

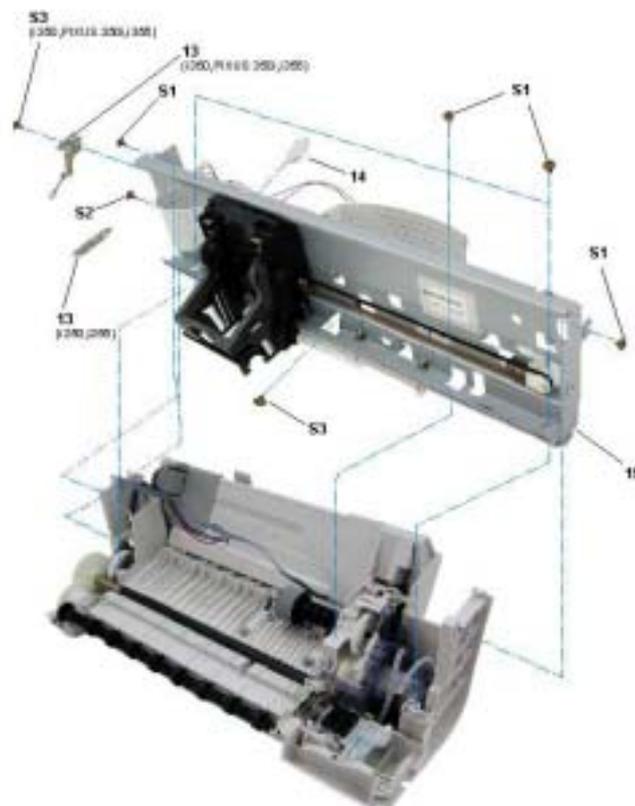
The EEPROM is reset after the shipment inspection pattern printing when "EEPROM CLEAR" is checked.

5. EXTERNAL VIEW / PARTS LIST

1. External parts, Power supply unit, Logic Board Ass'y



2. Print Unit



Parts List

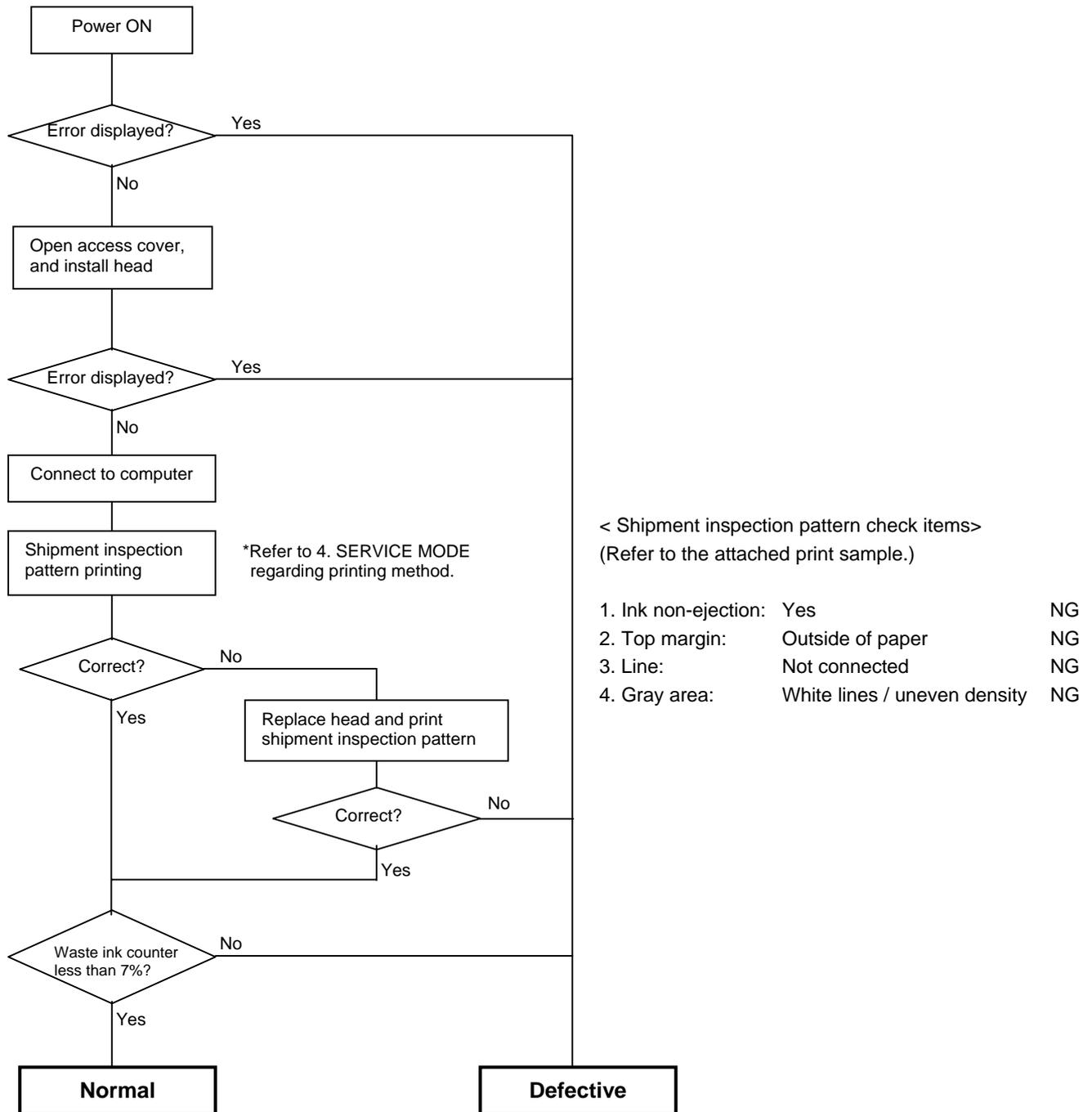
Key	Part Number	Rank	Q'ty	Description	Remark
	QY6-0044-000	K	1	PRINT HEAD	i350/i355/PIXUS350i, i250/i255
1	QA4-1285-000	J	1	SCREW, PAN HEAD SELF-TAPPING, M3X6	i350/PIXUS 350i/i355
2	QC1-1701-000	J	1	EXTENSION OUTPUT TRAY	i350/PIXUS 350i/i355
3	QC1-1707-000	J	1	FRONT COVER	i350
	QC1-1708-000	J	1	FRONT COVER	PIXUS 350i (J)
	QC1-1715-000	J	1	FRONT COVER	i355 (CHN/ASIA/TWN/KRN)
	QC1-1709-000	J	1	FRONT COVER	i250
	QC1-1716-000	J	1	FRONT COVER	i255 (CHN/ASIA/TWN/KRN)
4	QC1-1703-000	J	1	SIDE COVER L	i350/PIXUS 350i/i355
	QC1-1705-000	J	1	SIDE COVER L	i250/i255
5	QC1-1704-000	J	1	SIDE COVER R	i350/PIXUS 350i/i355
	QC1-1706-000	J	1	SIDE COVER R	i250/i255
6	QA4-1283-000	J	1	PAPER SUPPORT	i350/PIXUS 350i/i355
	QC1-1699-000	J	1	PAPER SUPPORT	i250/i255
7	QC1-1700-000	J	1	EXTENSION PAPER SUPPORT	i350/PIXUS 350i/i355
8	QG4-0331-000	J	1	UPPER COVER UNIT, WITH BUTTON	
9	QA4-1275-000	J	1	COVER, I/F	
10	QM2-0497-000	M	1	LOGIC BOARD ASS'Y	
11	QA4-1268-000	C	1	FILM, TIMING SLIT STRIP	
12	QK1-0058-000	D	1	AC ADAPTER: 100/127V 50/60HZ	LV (USA,CANADA,JAPAN)
	QK1-0060-000		1	AC ADAPTER: 220/240V 50/60HZ	HV (EUR)
	QK1-0127-000		1	AC ADAPTER: 220/240V 50/60HZ, CHN/ASIA/AUS	HV (CHN/ASIA/AUS)
	QK1-0064-000		1	AC ADAPTER: 100/127V 50/60HZ, TWN	LV (TWN)
	QK1-0062-000		1	AC ADAPTER: 220/240V 50/60HZ, KRN	HV (KRN)
13	QC1-1695-000	C	1	SPRING, TIMING SLIT STRIP FILM	i350/PIXUS 350i/i355
	QC1-1696-000		1	SPRING, TIMING SLIT STRIP FILM	i250/i255
14	WT2-5694-000	F	1	CLAMP, CABLE	
15	QM2-0476-000	K	1	PRINT UNIT	
S1	XA9-1493-000	G	9	SCREW, TP M3X8	FOR AC ADAPTER FOR UPPER CASE UNIT FOR PRINT UNIT
S2	XB6-7300-605	G	4	SCREW, TP M3X6 MM	FOR LOGIC BOARD ASS'Y FOR PRINT UNIT/LF MOTOR
S3	XB1-2300-405	G	2 (1)	SCREW, M3X4	i350/PIXUS 350i/i355 (i250/i255) FOR PRINT UNIT FOR TIMINGSLIT STRIP FILMSPRING

Power cords are as listed below.

WT3-5122-000	E	1	CORD, POWER	100V-120V (J)
WT3-5131-000	E	1	CORD, POWER	100V-120V
WT3-5132-000	E	1	CORD, POWER	220V-240V
WT3-5133-000	E	1	CORD, POWER	220V-240V (AUS)
WT3-5165-000	E	1	CORD, POWER	220V-240V (AR)
WT3-5135-000	E	1	CORD, POWER	250V (CN)
WT3-5137-000	E	1	CORD, POWER	220V-240V (GB, HK)
WT3-5158-000	E	1	CORD, POWER	220V-240V (KR)
WT3-5159-000	E	1	CORD, POWER	220V-240V (LAM-LV)

6. TROUBLESHOOTING FLOWCHART

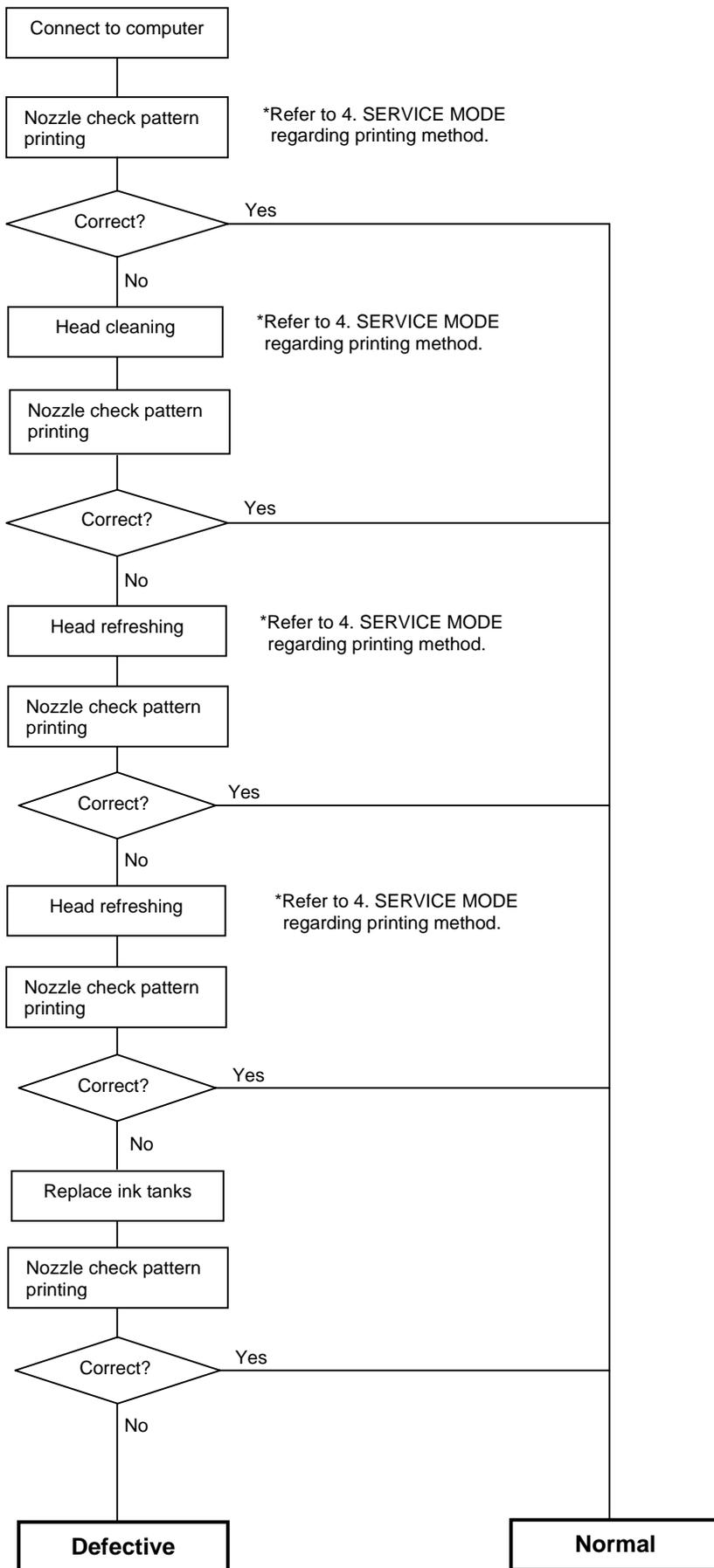
6-1. Printer Main Unit Troubleshooting Flowchart (how to confirm printer operation at refurbishment)



< Note for normal printer refurbishment >

At refurbishment, install the print head, connect the AC plug while holding down the POWER button, and after the LED lights green press the RESUME button twice and release it while pressing the POWER button. (The LED lights in orange first, and then green whenever the RESUME button is pressed.) With this condition, be sure to reset the EEPROM in accordance with 4. SERVICE MODE, the EEPROM reset procedure. Since the printer becomes in shipping mode (carriage in replacing position, raised paper lifting plate) by powering off with POWER button, remove the print head, unplug the power cord immediately, and do not print afterwards.

6-2. Print Head Troubleshooting Flowchart (print head operation confirmation)



7. SERVICE INFORMATION

7-1. Print Unit Replacement (Asia only)

When the print unit is exchanged, re-affix a Serial number label affixed to the Chassis.

7-2. Product Technical Information

1) FAQ (Problems specific to the i350/i355, i250/i255 and corrective actions)

No.	Rank*	Function	Phenomenon	Cause	Corrective action	Possible Call / Claim
1	A	Installation	Carriage error (LED blinks alternately in orange and green twice).	The user may not have removed the packing material at unpacking and installation. Although a caution sheet is packaged together with the printer, the user may not have noticed it. Note: Even if the packing material remains, no parts are damaged.	Remove the packing material fixing the carriage.	-LED blinks alternately in orange and green, twice (carriage error)
2	A		Ink tank installation error (orange LED blinks 4 times.)	Since the user did not fully seat the ink tank completely at unpacking, installation, and ink tank replacement, the ink tank contacts the main case.	Open the Access Cover, and install the ink tank properly.	-Orange LED blinks 4 times (ink tank installation error) (As this occurs at printer installation, the user cannot recognize the error.)
3	B	Paper feedability	Paper not feeding when lots of paper/media is loaded. (PC101/PR101)	When the paper is curled and many sheets are loaded, the loaded page limit level in the ASF creates friction at paper feeding.	1. Decrease the number of pages loaded in the ASF. 2. Flatten curled paper.	-Paper out error -Paper cannot be fed -Cannot print
4	B		Multi-feeding.	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.	1. Set the paper in the ASF 2. In case of PR101, set the paper sheet by sheet in the ASF.	-Multiple pages of paper are fed -Paper is delivered without printing
5	B		Envelope not feeding.	The paper feed roller slips on the paper at paper feeding. Note: Depending on the paper lots. This phenomenon may occur in DL envelope.	1. Perform roller cleaning from the printer driver. 2. Decrease the number of envelopes loaded in the ASF. 3. Flatten the paper (with a pen).	-Paper out error -Paper cannot be fed -Cannot print
6	B		Envelope jam at feeding	When the paper is fed by the slightly-slippery paper feed roller, the flap is caught in the return position of the claw.	1. Perform roller cleaning from the printer driver. 2. Decrease the number of envelopes loaded in the ASF.	-Paper jam error -Paper cannot be fed -Cannot print
7	B		Paper jam.	As the LF Roller slips on the paper, the paper is not fed, causing the jam error at paper ejecting.	1. Remove the jammed paper from the paper pick-up side.	-Paper jam error -Paper cannot be fed -Cannot print

8	B	Image quality	Smearing on printed side.	The edge of paper rises due when paper is curled, causing the print head to rub against the printed surface of paper, resulting in smearing.	1. Correct the paper curl. 2. Recommend the user to conduct printing in the print quality assurance area. (In the i350/i355, i250/i255, the head-to-paper distance cannot be changed.) Note: In borderless printing (to 4X6/5X7), correct the paper curl.	-Smear on the printed side of paper -Cannot print properly -Paper edge crease
9	B		Smearing on the backside of paper, or smear on address side of postcards.	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.	Clean the ribs on the platen with cotton swabs/buds.	<When printing address side of postcards> -Smears on the address side <When printing correct side (message side) of paper> -Smears on the backside
10	C		Horizontal lines and uneven print density at the trailing edge of paper	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. Note: The problem is more severe than that of the i320/PIXUS 320i.	Recommend printing in the print quality assurance area.	-Cannot print to the bottom edge of paper -Lines and uneven print density appear in the trailing edge of paper -Cannot print properly
11	C		Horizontal lines and uneven print density due to LF roller feeding at small pitch.	As the print media slightly slips while being fed by the LF roller, printed areas overlap, causing the problem.	Change the print quality from standard to high mode.	-Lines and uneven print density (on flesh tones and background) -Cannot print properly

*Rank

- A: The phenomenon may occur at a relatively high occurrence ratio. (Caution needed)
- B: The phenomenon may occur in specific conditions, however the occurrence ratio is expected to be considerably low in the actual usage.
- C: As the phenomenon is unlikely to be recognized by general users, it is expected to cause no claims from the users.

2) New functions

1. Borderless printing (4"x6", 5"x7" size only)

The i350/i355 support borderless printing only for 4"x6", 5"x7" size paper. Borderless printing is not supported with other paper sizes (A4, LTR, etc.) and with the i250/i255.

< Possible problems with this function >

- Smearing on the message side of postcards, and smearing on the address side in continuous borderless printing
 - > Clean the ribs on the platen
- Smearing on the backside of paper in continuous borderless printing
 - > Clean the ribs on the platen
- Ink mist on the platen
 - > Clean the ribs on the platen

2. No paper selection lever

The printer does not need adjustment via a paper selection lever. (Adjustment of the head-to-paper distance when printing envelopes is not necessary.)

< Possible problems with this function >

- The head rubs against the paper when paper curl is curled.
 - > Flatten curled paper. (To less than 3mm)
 - > In print modes other than borderless printing, conduct printing in the print quality assurance area of the top and bottom edges. (Top margin: 28mm; bottom margin: 26.5mm)

3. Quiet mode

The printer has a quiet mode function.

Compared with the normal mode,

Acoustic noise level:	Slightly lower. (HQ, normal: Approx. 50dB, Quiet: Approx. 49dB)
Audible overtone level:	Sound quality changes, and sound becomes quieter.
Print speed:	Slows. (Bk printing in HQ/HS mode using an acoustic noise measurement pattern: Approx. 1.3 times)

3) Other functions

1. Remaining ink level detection function

The printer has a function to detect the remaining ink level. (Default setting: ON)

Detection method: Dot counting (Counted for each Bk/Cl ink tank).

Cl tank: The remaining ink level is detected by total counted dot values of 3 color ink tanks.

Display method: Displayed on the status monitor (at 3 levels shown below for each Bk/Cl ink tank)

Level 1: Half level of remaining ink level (Approx. 40% of ink remaining)

Level 2: Indication of "!" mark (Approx. 10% of ink remaining)

Level 3: Indication of "?" mark (Remaining ink level is unknown)

*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 CMY ink tanks

-> As the remaining ink level is calculated by total counted dot values of 3 color ink tanks, if any of the C/M/Y inks is heavily consumed, the margin of error for remaining ink increases.

When performing continuous Bk solid printing

-> With continuous printing, ink flow from the tank to the ink chamber can be interrupted, after which ink remains unused in the tank.

Reset procedure: Perform the following operations from the printer driver utility.

1. Set the indication of the remaining ink level in "Low Ink Warning Setting".

2. Reset the ink counter in "Ink Counter Reset".

Note: Be sure to reset the ink counter from the printer driver utility after replacing ink tanks.

< Possible problems with this function >

- Due to user error, the actual remaining ink level does not match the indicated remaining ink level, resulting in “ink out”, etc.

User error: Forgetting to reset ink counter / ink counter reset other than when replacing ink tanks.

- Due to the specific print pattern, the actual remaining ink level does not match the indicated remaining ink level, resulting in “ink out”.

Specific print pattern: Continuous printing using any one of the CMY ink tanks / continuous Bk solid printing, etc.

2. Head refreshing

The printer has a head refreshing function.

Head refreshing: This is a deep cleaning function in order to resolve print failure due to ink clogging the print head. (The black ink is pigment-based, and clogs easier than the current dye-based ink.)

*Perform from the printer driver utility.

< Possible problems with this function >

- Excessive ink consumption when conducting head refreshing repeatedly. (The amount of ink used is approx. 10 to 15 times the normal manual cleaning amount.)

< Reference >

Cleaning types, amount of ink used and time required *Bk and Cl ink suction is simultaneously performed.

Cleaning type	Amount of ink used	Time required
Manual cleaning Dot count cleaning Timer cleaning (24 hours to 2 weeks)	Bk: Approx. 0.15g Cl: Approx. 0.15g	Approx. 40 sec.
Head replacement Ink tank replacement Cleaning when the head is not capped at printer power on	Bk: Approx. 0.30g Cl: Approx. 0.30g	Approx. 45 sec.
Cleaning on arrival at user Timer cleaning (2 weeks to 3 months)	Bk: Approx. 0.45g Cl: Approx. 0.45g	Approx. 60 sec.
Head refreshing Timer cleaning (3 months or more)	Bk: Approx. 1.5g Cl: Approx. 2.2g	Approx. 70 sec.

3. Head alignment

The printer has a head alignment function (head position adjustment function). (The adjustment is needed at the initial set-up by the user.)

Head alignment: This is a function to correct the displacements between the nozzle lines of the print head, and incorrect print position at bi-directional printing. The adjustment is conducted using the printed head position adjustment pattern.

A: Head alignment between black nozzle lines

B: Head alignment between cyan nozzle lines

C: Head alignment between magenta nozzle lines

D: Head alignment in bi-directional black printing

E: Head alignment in bi-directional color printing

F: Head alignment between black and color printing

*Perform from the printer driver utility.

(At initial set-up by the user, notice to perform the head alignment is displayed in the status monitor.)

APPENDIX 1: SHIPMENT INSPECTION PATTERN 1

Check item 1 (Ink non-ejection): Total area of the sample below

Check item 2 (Top margin)

Paper size: A4

APPENDIX 2: i350/i250 SERVICE TOOL

< How to use the i350/i250 Service Tool (QY6-0062/0063) >

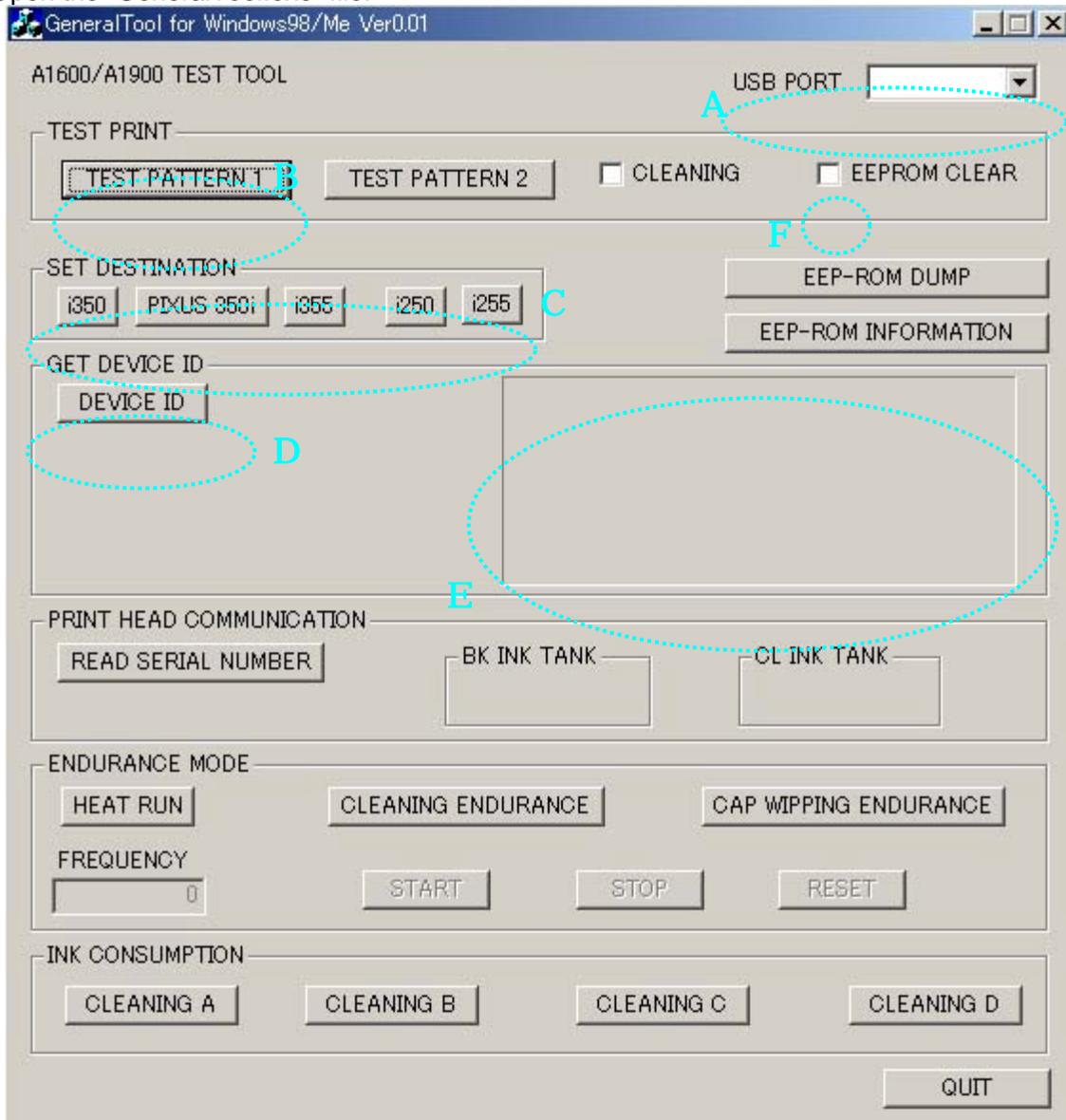
Usage: Shipment inspection pattern printing
Destination setting in EPROM
EEPROM reset

Supported OS: Windows 98/Me (J/E version) : QY9-0062
Windows 2000/XP (J/E version) : QY9-0063

Distribution method: Provided by SSIS (Download "i350/i250 Service Tool" from software download in SSIS.)

< Usage procedures >

1. Unzip the "i350tool_Win98V100.EXE/i350tool_Win2kV100.EXE" file. (Automatically unzipped by double-click)
2. Open the "i350tool_Win98V100.EXE/i350tool_Win2kV100.EXE" folder created after unzipping.
3. Open the "GeneralTool.exe" file.



4. Select the connected USB PORT No. from "USB PORT" (A).

< How to print the shipment inspection pattern >

Select "TEST PATTERN 1" (B), and the shipment inspection pattern 1 will be printed.
(Refer to APPENDIX 1, SHIPMENT INSPECTION PATTERN.)

< How to set the destination >

1. Select either of "1" or "2" from "SET DESTINATION" (C), and the destination will be set.
"PIXUS 350i": Japan
"i355/i255": Asia
"i350/i250": Other than the above area
2. Confirm that the model name is indicated in the (E) area when clicking "DEVICE ID" (D).
Or, confirm the model name by performing the shipment pattern printing.

< EEPROM reset >

When printing the shipment pattern after the "EEPROM CLEAR" (F) check box is marked, the EEPROM will be reset.