# Technical Bulletin

Reissued: 19-Mar-03 Model: General RTB

Date: 4-Feb-03

#### **RTB Reissue**

| he items in <b>bold italics</b> have been corrected or updated. |                               |                  |                      |                         |  |
|---|-------------------------------|------------------|----------------------|-------------------------|--|
| Subject: Service remarks at installation                        |                               |                  | Prepared by: T. Itoh |                         |  |
| From: Technical   | Service Sec. Service Planning | Dept.            |                      |                         |  |
| Classification:   | Troubleshooting               | Part information | tion                 | Action required         |  |
|   | Mechanical                    | Electrical       |                      | Service manual revision |  |
|   | Paper path                    | Transmit/rec     | eive                 | Retrofit information    |  |
|   | Other (Specification changed) | ge)              |                      |                         |  |

Please note the following change in counter specification. Although a production line modification will not be applied to some products, the action described in *4. Important Notes for Installation* below <u>must be taken for **all products** at installation</u>.

# **Overview:**

Electronic counters will now be set to  $\underline{\mathbf{0}}$  when released from the factory, instead of being set to a negative value.

# Background:

Previously, counters were set to a negative value when shipped from the factory, and later set to "0" at installation, following installation test copies/prints. However this may cause confusion among some customers as to why the counter value at the commencement of the contract is "0", even though some installation test copies have already been made.

# **Details:**

## 1. Specification Change

|         | Specification  |
|---------|--|
| Current | • The initial value of the electrical counter is <b><u>negative</u></b> when products are shipped from the factory.          |
|         | <b>Note:</b> After making test samples at installation, the negative counter value can be set to "0" with SP mode.           |
| New     | • The initial value of the electrical counter is <u>"0"</u> when products are shipped from the factory.                      |
|         | <b>Note:</b> After making test samples at installation, the (positive) counter value cannot be set back to "0" with SP mode. |

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### 2. Firmware Modification

Due to the counter modification, SP5-849 has also been changed as follows for products that have this SP mode (listed below).

|         | SP mode name:        | Specification:   |
|---------|----------------------|--|
| Current | Counter Clear<br>Day | • When the electrical counter is changed <u>from a</u><br><u>negative value to 0</u> , the machine recognizes this<br>as the counter clear day and stores this date in the<br>NVRAM. |
| New     | Installation Date    | <ul> <li>When the electrical counter <u>reaches a value of</u><br/><u>20</u>, the machine recognizes this as the installation<br/>date and stores this date in the NVRAM.</li> </ul> |

**NOTE:** The following products have SP5-849. The new firmware for these products has not yet been released. However the release notes for each will clearly mention the new firmware version.

New products: Bellini-C2, Adonis C3 Current products: Martini C1, Model-U C1

### 3. Schedule for the Counter Modification

The following is the current schedule for when the counter modification will be applied. Please note that there are some models to which the change will not be applied (marked as "---"), due to production schedules, production lot quantities and sales figures.

**NOTE:** The actual cut-in months that have been confirmed appear in the "Cut-in production month" column below. This RTB will be reissued when these dates have been confirmed for the remaining products.

| Product Name  | Product | Target cut-in    | Cut-in production month   |
|---------------|---------|------------------|---------------------------|
|               | Code    | production month |                           |
| Bellini C2    | B070    | 2003.03          | April '03 production      |
| Adonis C3     | B079/82 | 2003.03          | First mass production lot |
| Model J-P2    | G080    | 2003.03          | March '03 production      |
| Model J-P2 CF | G367    | 2003.03          | March '03 production      |
| Model AR- P1  | G081/92 | 2003.03          | March '03 production      |
| Model K-C1a   | B120    | 2003.03          | March '03 production      |

#### (1) New products

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(2) Current products

| Droduct Nomo     | Draduat             | Torget out in    | Cut in production month         |  |  |
|------------------|---------------------|------------------|---------------------------------|--|--|
| Product Name     | Product             | Target cut-in    | Cut-in production month         |  |  |
|                  | Code                | production month |                                 |  |  |
| Digital B&W Cop  | Digital B&W Copiers |                  |                                 |  |  |
| Bellini C1       | A294                |                  |                                 |  |  |
| Martini C1       | B064/65             | 2003.03          | April '03 production (see Note) |  |  |
| Model M-C2b      | B098                | 2003.03          | March '03 production            |  |  |
| Adonis C2        | B003/04/06/07       |                  |                                 |  |  |
| Russian C2       | B022/27/31          | 2003.03          | February '03 production         |  |  |
| Model K-C1       | B039/40/43          | 2003.03          | March '03 production            |  |  |
| Stella C1        | B044/45/46/49       | 2003.03          | March '03 production            |  |  |
| Digital WF Copie | rs                  |                  |                                 |  |  |
| Dolphin          | B010                | 2003.03          | March '03 production            |  |  |
| Analog Copiers   |                     |                  |                                 |  |  |
| All products     | -                   |                  |                                 |  |  |
| J2SS-C3          | B047/48             | (See Note)       | March '03 production            |  |  |
| Whale            | A174                |                  | March '03 production            |  |  |
| Color Copiers    | Color Copiers       |                  |                                 |  |  |
| Model I2         | B018                |                  |                                 |  |  |
| Model L2         | B017                |                  |                                 |  |  |
| Model C2         | B023                | 2003.02          | February '03 production         |  |  |
| Model U-C1       | B051/52             | 2003.03          | April '03 production            |  |  |
| Color Printers   |                     |                  |                                 |  |  |
| Model J-P1       | G060                |                  |                                 |  |  |
| Model J-P1 CF    | G570                |                  |                                 |  |  |
| Model U-P1       | G071                | 2003.03          | March '03 production            |  |  |
| Pomelo P3        | G063                | 2003.03          | March '03 production            |  |  |

- **NOTE:** The counter change will be applied as a running change to production units only. For machines already shipped out or in the field, please be sure to take the action described below in Section 4.
- NOTE: For Martini-C1 mainframes assembled in Japan, the counter change will be applied from the first unit of April '03 production. For mainframes assembled at REI, the change will be applied midway through April production. These cut-in serial numbers will be announced as soon as they have been confirmed.
- NOTE: The change will also be applied to analog models J2SS-C3 and Whale, as production will continue for a while. However, as these models use only mechanical counters, the initial value when shipped from the factory will be 1 or 2 (not 0), following the 1 or 2 factory test copies.

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#### 4. Important Notes for Machine Installation – All Products

Please be sure to perform the following at machine installation:

1. If the product is from before the counter modification, i.e. the counter is at a negative value, be sure to <u>set the counter value to 0 first</u>, then make the installation test <u>samples</u>.

| Digital products | Set the electrical counter to 0 with SP mode.            |
|------------------|--|
| Analog products  | Set the mechanical counter to 0 with a reset key (tool). |

- 2. If the product is modified, i.e. the counter is already at 0 (or above 0 following preinstallation at a service depot), simply make the installation test samples.
- 3. After completing the installation, make sure to **record the counter value**. This is very important, as this value will be used for billing with Meter Click contracts. Also, inform the customer of the value along with the reason why the counter does not start from "0".

# Technical Bulletin

| Model: Model AR-P1 Da                              |                 |          | Dat    | e: 30-May-03    | No.: RG081001       |
|--|-----------------|----------|--------|-----------------|---------------------|
| Subject: Engine firmware release note for AR-P1    |                 |          |        | Prepared by: K. | Moriizumi           |
| From: 1st Tech. Support Sec. Service Support Dept. |                 |          |        |                 |                     |
| Classification:                                    | Troubleshooting | Part inf | ormat  | tion 🗌 Actio    | on required         |
|  | Mechanical      | Electric | al     | 🗌 Serv          | ice manual revision |
|  | Paper path      | Transm   | it/rec | eive 🗌 Retro    | ofit information    |
|  | Other ( )       |          |        |                 |                     |

Firmware release information for the Model AR-P1 engine controller board.

# **Engine Controller**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.02    | G0815980    | 82D5   | 1st mass production |

# **Engine Controller**

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 1.02    |       | 1st mass production |

# Technical Bulletin

| Model: Model AR-P1                                  |                 |          | Dat               | e: 30-May-03  | No.: RG081002      |
|---|-----------------|----------|-------------------|---------------|--------------------|
| Subject: Controller firmware release note for AR-P1 |                 |          | Prepared by: K. I | Moriizumi     |                    |
| From: 1st Tech. Support Sec. Service Support Dept.  |                 |          |                   |               |                    |
| Classification:                                     | Troubleshooting | Part inf | ormat             | tion 🗌 Action | n required         |
|   | Mechanical      | Electric | al                | 🗌 Servi       | ce manual revision |
|   | Paper path      | Transm   | it/rec            | eive 🗌 Retro  | fit information    |
|   | Other ( )       |          |                   |               |                    |

Firmware release information for the Model AR-P1 controller board.

#### **Printer Controller**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.02    | G0815940E   | 6ABB   | 1st mass production |

#### **PS/PCL**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.02    | G0815941E   | D0CA   | 1st mass production |

#### **Network PHY**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 0.62    | G0815920B   | E730   | 1st mass production |

#### **Printer Controller**

| Version | Title | Symptom Corrected   |  |
|---------|-------|---------------------|--|
| 1.02    |       | 1st mass production |  |

#### **PS/PCL**

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 1.02    |       | 1st mass production |

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 0.62    |       | 1st mass production |

# Technical Bulletin

Reissued: 27-Jun-03 Model: Model AR-P1

Date: 30-May-03

No.: RG081001a

# **RTB** Correction

| The items in bold italics have been corrected or added. |  |
|---|--|
|   |  |
|   |  |

| Subject: Engine firmware release note for AR-P1    |   |   | Prepared by: K. Moriizumi |  |
|--|---|---|---------------------------|--|
| From: 1st Tech. Support Sec. Service Support Dept. |   |   |                           |  |
| Classification:                                    | <ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul> | Part informat     Electrical     Transmit/rec | tion<br>eive              | <ul> <li>Action required</li> <li>Service manual revision</li> <li>Retrofit information</li> </ul> |

This RTB has been issued to announce the firmware release information for the Model AR-P1 engine controller board.

#### **Engine Controller**

| Version  | Program No. | C. SUM | Effective Date      |
|----------|-------------|--------|---------------------|
| 10201700 | G0815980    | 82D5   | 1st mass production |
| 10201800 | G0815980A   | AD49   | June production     |

#### **Engine Controller**

| Version  | Title                          | Symptom Corrected   |  |
|----------|--------------------------------|---|--|
| 10201700 |                                | 1st mass production   |  |
| 10201800 | SC471                          | <ul> <li>SC471 conditions changed as follows to<br/>minimize unnecessary occurrences:</li> <li>Previous: Triggered when the belt tension cam<br/>does not move.</li> <li>New: Triggered when the belt tension cam does<br/>not move even after attempting to return to the<br/>home position</li> </ul> |  |
|          | Color<br>registration<br>error | home position.<br>Error conditions changed as follows to minimize<br>unnecessary occurrences:<br>Previous: Triggered when any one of the color<br>registration patterns cannot be detected.<br>New: Triggered when none of the color<br>registration patterns can be detected.                          |  |
|          | Fusing<br>temperature          | Fusing temperature warm-up changed for when<br>recovering from Energy Saver Mode 1 so that the<br>curve does not depend on the initial fusing belt<br>temperature detected.   |  |
|          | Paper tray full                | Sometimes the machine prints out an incoming<br>job ahead of the current job, if the incoming data<br>is received just after removing the stack from the<br>exit tray to clear the tray full condition.   |  |

# Technical Bulletin

Reissued: 27-Oct-03 Model: Model AR-P1

Date: 30-May-03

#### **RTB Reissue**

| The items in bold italics have been added.          |   |  |              |  |  |
|---|---|--|--------------|--|--|
| Subject: Controller firmware release note for AR-P1 |   |  | Prepare      | d by: K. Moriizumi   |  |
| From: 1st Tech. Support Sec. Service Support Dept.  |   |  |              |  |  |
| Classification:                                     | <ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul> | <ul> <li>Part information</li> <li>Electrical</li> <li>Transmit/rec</li> </ul> | tion<br>eive | <ul> <li>Action required</li> <li>Service manual revision</li> <li>Retrofit information</li> </ul> |  |

This RTB is issued to announce the firmware release information for the Model AR-P1 controller board.

#### **Printer Controller**

| Version | Program No. | C. SUM | Effective Date           |
|---------|-------------|--------|--------------------------|
| 1.02    | G0815940E   | 6ABB   | 1st mass production      |
| 1.05    | G0815940F   | 3022   | From Oct. '03 production |

#### **PS/PCL**

| Version | Program No. | C. SUM | Effective Date           |
|---------|-------------|--------|--------------------------|
| 1.02    | G0815941E   | D0CA   | 1st mass production      |
| 1.05    | G0815941F   | 9CF9   | From Oct. '03 production |

| Version | Program No. | C. SUM | Effective Date           |
|---------|-------------|--------|--------------------------|
| 0.62    | G0815920B   | E730   | 1st mass production      |
| 3.01    | G0815920C   | 6C7E   | From Oct. '03 production |

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Reissued: 27-Oct-03 Model: Model AR-P1

Date: 30-May-03

No.: RG081002a

# **Printer Controller**

| Version | Title  | Symptom Corrected   |
|---------|--|---|
| 1.02    |  | 1st mass production   |
| 1.05    | Listed option on<br>the configuration<br>sheet               | The installed options are not listed on the<br>configuration sheet when the Plug and Play<br>name is changed to Lanier, NRG or Gestetner.   |
|         | SP modes   | The following SP modes were added, but they<br>are for the Japanese model only. Do not use<br>them for overseas models.<br>SP2-311: STR bias setting<br>SP5-997: Engine type selection<br>The following SP mode was deleted. The print<br>counter starts from "0", so the print counter<br>cannot be reset.<br>SP7-825: Counter Reset |
|         | "Others" size<br>counter<br>Misfeed Recovery<br>Double sided | The "Others" size counter on SMC report is not<br>increased.<br>Continuously "Printing" displays if the misfeed<br>recovery function is off and paper is emptied.<br>Abnormal double sided printing process   |
| -       | printing<br>Bluetooth  | (interleave).<br>Bluetooth ver3 is now supported.   |

# PS/PCL

| Version | Title | Symptom Corrected                              |
|---------|-------|--|
| 1.02    |       | 1st mass production                            |
| 1.05    | PCL   | Merged PCL job does not print (TechMail        |
|         |       | #TS030100)                                     |
|         | PS    | When a PDF file consisting of many graphics is |
|         |       | printed with Windows XP and Acrobat 5.0, the   |
|         |       | job may be reset.                              |

| Reissued: | 〕<br>: 27-Oct-03 | Technical B     | ulletin           | PAGE: 3        |
|-----------|------------------|-----------------|-------------------|----------------|
| Model: Mo | odel AR-P1       |                 | Date: 30-May-03   | No.: RG081002a |
| Network F | РНҮ              |                 |                   |                |
| Version   | Title            |                 | Symptom Corrected |                |
| 0.62      |                  | 1st mass produc | ction             |                |

| 0.62   |   | 1st mass production  |  |
|--|---|--|--|
| 3.01 Bug fixed When the printer seeks the lo<br>server, the printer does not d<br>target local Netware file serve<br>RE020229) |   | When the printer seeks the local Netware file<br>server, the printer does not directly access the<br>target local Netware file server. (TechMail #:<br>RE020229) |  |
|  | If the SAP setting is unchecked in the server, the printer cannot log on to the server. |  |  |
|  |   | When browsing devices with SmartNetMonitor<br>for Client using NetBEUI protocol, SC819 might<br>occur.   |  |

| RICOLI Technical Bulletin PAGE                     |                 |           |                    |          | PAGE: 1/1     |                    |
|--|-----------------|-----------|--------------------|----------|---------------|--------------------|
| Model: Model AR-P1 Date                            |                 |           | ate: 5-Mar-04 No.: |          | No.: RG081003 |                    |
| Subject: SP5-833: Job log ON/OFF                   |                 |           |                    | Prepared | by: к. м      | Moriizumi          |
| From: 1st Tech. Support Sec. Service Support Dept. |                 |           |                    |          |               |                    |
| Classification:                                    | Troubleshooting | Part info | ormat              | tion     | Actior        | n required         |
|  | Mechanical      | Electric  | al                 |          | 🛾 Servio      | ce manual revision |
|  | Paper path      | 🗌 Transm  | it/rec             | eive [   | Retro         | fit information    |
|  | Other ( )       |           |                    |          |               |                    |

Please apply the following revision to your Model AR-P1 (G081/G092) Service Manuals.

Model AR-P1 Service Manual, pg. 5-16:

# SP5-833: Job Log ON/OFF

# Not used. Do not change the settings.

**Note:** The Job Log cannot be stored in the HDD, even if this SP is changed to "Job log ON".

The *Job History* on the Web Status Monitor is different from the *Job Log*, in that the *Job History is* stored in volatile RAM memory, and the 16 most recent job entries can be viewed by anyone with access to the Web Status Monitor. However, the entire history is then cleared when the machine main power is turned off.

# Technical Bulletin

Reissued: 29-Jun-05 Model: Model AR-P1

Date: 28-Apr-04

No.: RG081004a

# **RTB Correction**

| Subject: Engine                                    | firmware release note for AR-F  | Prepared by: K. Moriizumi  |                       |
|--|---|--|-----------------------|
| From: 1st Tech. Support Sec. Service Support Dept. |   |  |                       |
| Classification:                                    | <ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul> | <ul> <li>Part information</li> <li>Electrical</li> <li>Transmit/rec</li> </ul> | ation Action required |

This RTB has been issued to announce the firmware release information for the Model AR-P1eL engine controller board.

## P1e

| Version  | Program No. | C. SUM | Effective Date              |
|----------|-------------|--------|-----------------------------|
| 10401100 | G1205930    | 1901   | 1st mass production         |
| 10401200 | G1205930A   |        | November 2004<br>production |

| Version  | Title                          | Symptom Corrected   |
|----------|--------------------------------|---|
| 10401100 | P1e                            | 1st mass production   |
| 10401200 | Jam from by-<br>pass tray      | The control for the bypass tray motor was changed to minimize bypass tray jams.           |
|          | Color<br>registration<br>error | A color registration error is displayed when the machine recovers from Energy Saver mode. |

## P1L

| Version  | Program No. | C. SUM | Effective Date      |
|----------|-------------|--------|---------------------|
| 10451100 | G1205940    | 01F4   | 1st mass production |
| 10451200 | G1205940A   |        | 1st mass production |

| Version  | Title                              | Symptom Corrected  |
|----------|------------------------------------|--|
| 10451100 | P1L                                | 1st mass production  |
| 10451200 | Jam from by-<br>pass tray<br>Color | The control for the bypass tray motor was<br>changed to minimize bypass tray jams.<br>A color registration error is displayed when the |
|          | registration<br>error              | machine recovers from Energy Saver mode.   |

# Technical Bulletin

Reissued: 18-May-04 Model: Model AR-P1

Date: 28-Apr-04

No.: RG081005a

# **RTB Correction**

| The items in bold italics have been corrected or | added. |
|--|--------|
|--|--------|

| Subject: Controller firmware release note for AR-P1eL |   | Prepared by: K. Moriizumi                     |                     |  |
|---|---|---|---------------------|--|
| From: 1st Tech. Support Sec. Service Support Dept.    |   |   |                     |  |
| Classification:                                       | <ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul> | Part informat     Electrical     Transmit/rec | tion  <br> <br>eive | Action required<br>Service manual revision<br>Retrofit information |

This RTB has been issued to announce the firmware release information for the Model AR-P1*eL* controller board.

#### **Printer Controller**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.00    | G0815960A   | C776   | 1st mass production |

#### PS/PCL

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.00    | G0815961A   | 87EE   | 1st mass production |

#### **Network PHY**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 3.03.1  | G0815970    | 7ABE   | 1st mass production |

#### **Printer Controller**

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 1.00    |       | 1st mass production |

#### PS/PCL

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 1.00    |       | 1st mass production |

| Version | Title | Symptom Corrected   |
|---------|-------|---------------------|
| 3.03.1  |       | 1st mass production |

| RIGOH  | <b>Technical Bulletin</b>     |                           |                    | <b>PAGE:</b> 1/4 |               |
|--|-------------------------------|---------------------------|--------------------|------------------|---------------|
| Model: Model Al                                    | R-P1                          |                           | Dat                | e: 7-May-04      | No.: RG081006 |
| Subject: Model AR-P1e/L technical change points    |                               | Prepared by: K. Moriizumi |                    |                  |               |
| From: 1st Tech. Support Sec. Service Support Dept. |                               |                           |                    |                  |               |
| Classification:                                    | Troubleshooting Part informat |                           | tion Actior        | n required       |               |
|  | Mechanical     Electrical     |                           | Service manual rev |                  |               |
|  | Paper path Transmit/rece      |                           | eive 🗌 Retro       | fit information  |               |
|  | Other ( )                     |                           |                    |                  |               |

This RTB has been issued to announce the technical information for the Model AR-P1e/L.

# **Product Configuration:**

- Model AR-P1e: Enhanced version
- Model AR-P1L: Low-cost version

|  | AR-P1e                       | AR-P1L      | AR-P1                        |
|--|------------------------------|-------------|------------------------------|
| Print speed (Continuous<br>A4 SEF): Mono/Color | 21ppm/17ppm                  | 16ppm/16ppm | 20ppm/16ppm                  |
| CPU  | 400MHz                       | 350Mhz      | 400Mhz                       |
| Standard RAM                                   | 128Mb                        | 64Mb        | 64Mb                         |
| RAM slots                                      | 2 slots                      | 1 slot      | 2 slots                      |
|  | (1 slot for optional memory) |             | (1 slot for optional memory) |

# **Consumables:**

Interchangeability of consumables between Models AR-P1 and AR-P1e/L:

|                 | Model AR-P1            | Model AR-P1e/L         |
|-----------------|------------------------|------------------------|
| Old Waste Toner | Usable                 | Not useable            |
| Bottle          | (Expected yield: 24KD) |                        |
| New Waste Toner | Usable                 | Usable                 |
| Bottle          | (Expected yield: 36KD) | (Expected yield: 44KD) |
| Old Fusing Unit | Usable                 | Not useable            |
| New Fusing Unit | Not useable            | Usable                 |

Model: Model AR-P1

Date: 7-May-04

No.: RG081006

# **Technical Changes, Units**

# Toner transfer method

Model AR-P1: Fixed-voltage transfer

Model AR-P1e/L: Fixed-current transfer

The high voltage unit and transfer roller have been changed.

# [Purpose]

Improve image quality with thick and small paper types.

[Description]

-On the AR-P1, the operator needs to set the paper type in UP Mode (Normal, Other1 or Other2) to obtain the optimal transfer current.

-On the AR-P1e/L, the three paper type settings above are combined into one. The machine automatically adjusts to the optimal transfer current/voltage.

# PCU

The material of the quenching sheet has been changed.

[Purpose]

To minimize the appearance of vertical lines.

[Description]

Scratches or indentations develop on the quenching sheet due to arcing between the sheet and development roller, after which toner fills in these areas. This in turn scratches and shows up on the outputs as vertical lines. The new material prevents arcing between the sheet and development roller, minimizing the appearance of vertical lines.

Applied from: February 2004 production.

# Toner bottle

The shape of the agitator has been changed.

[Purpose]

To minimize the amount of "dead" toner in the toner bottle.

[Description]

The agitator has been changed to minimize remaining toner in the hopper at the time that Toner End is detected.

Applied from: April 2004 production.

| RIGOH              | Technical Bulletin |                | <b>PAGE: 3/4</b> |
|--------------------|--------------------|----------------|------------------|
| Model: Model AR-P1 |                    | Date: 7-May-04 | No.: RG081006    |

#### Machine internal temperature

Openings have been added to the machine frame.

## [Purpose]

To provide for a lower machine internal temperature.

[Description]

This reduction in machine internal temperature will help further minimize symptoms caused by higher temperature levels (e.g. darkened yellow areas, brush marks, partial blank lines).

#### Main drive unit

The unit's mechanism has been simplified.

#### [Purpose]

To further improve image quality.

#### [Description]

The planetary gears have been removed from the main driver unit. The unit's mechanism has been simplified in order to reduce the internally generated vibrations, which can contribute to poor image quality.

## Optimal image density

The image density has been optimized (slightly lowered compared to the AR-P1).

## [Purpose]

To improve overall image quality and toner yield.

## [Description]

The overall image density on this model has been slightly lowered, as the solid area ID on Model AR-P1 was slightly dark, which improves both image quality and toner yield.

# Technical Bulletin

Reissued: 15-Jun-04 Model: Model AR-P1

Date: 28-Apr-04

# **RTB** Correction

| Subject: Controller firmware release note for AR-P1eL |   |               | Prepared by: K. Moriizumi  |  |  |
|---|---|---------------|--|--|--|
| From: 1st Tech. Support Sec. Service Support Dept.    |   |               |  |  |  |
| Classification:                                       | <ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul> | Part informat | ation Action required<br>Service manual revision<br>ceive Retrofit information |  |  |

This RTB has been issued to announce the firmware release information for the Model AR-P1eL controller board.

#### **Printer Controller**

| Version | Program No. | C. SUM | Effective Date      |  |
|---------|-------------|--------|---------------------|--|
| 1.00    | G0815960A   | 9173   | 1st mass production |  |
| 1.01    | G0815960B   | 2097   | July production     |  |

#### PS/PCL

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 1.00    | G0815961A   | EEC9   | 1st mass production |
| 1.01    | G0815961B   | F0DB   | July production     |

#### **Network PHY**

| Version | Program No. | C. SUM | Effective Date      |
|---------|-------------|--------|---------------------|
| 3.03.1  | G0815970    | 7ABE   | 1st mass production |

**Note:** The firmware of Network PHY is not changed at this release.

| Technical Bulletin PAG                             |   |           |                   |               |                    |
|--|---|-----------|-------------------|---------------|--------------------|
| Model: Model AR-P1 Date                            |   |           | e: 29-Jun-05      | No.: RG081007 |                    |
| Subject: Vertical thin line problem                |   |           | Prepared by: K. I | Moriizumi     |                    |
| From: 1st Tech. Support Sec. Service Support Dept. |   |           |                   |               |                    |
| Classification:                                    | ification: 🖾 Troubleshooting 🗌 Part information |           | tion Action       | n required    |                    |
|  | Mechanical                                      | Electrica | al                | 🗌 Servi       | ce manual revision |
|  | Paper path                                      | 🗌 Transmi | it/rec            | eive 🗌 Retro  | fit information    |
|  | Other ()  |           |                   |               |                    |

# Symptom

There are three main types of vertical thin lines and white lines problems.

## Case 1

After printing about 8,000 pages, the vertical thin lines appear.

- At first, the vertical thin lines appear in the image area, and do not appear in the background area. Especially, the lines are visible easily in halftone image areas.
- Then, vertical thin lines appear in the background area, too. But the line width will not increase.
- This problem occurs with black and magenta only.
- Mostly, there are lines on the left side of the paper.
- In some cases, white lines will occur.

Black thin lines:



## Case 2

After printing about from 500 to 2,000 pages, vertical white lines appear.

- At first, the image becomes low in density.
- Then, the white lines will appear. Mostly, the lines are in the center of the paper.



## Case 3

The timing of the problem occurrence is random.

- A vertical line appears suddenly. Mostly, there is only one vertical line.



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|--------------------|--------------------|-----------------|---------------|
| Model: Model AR-P1 |                    | Date: 29-Jun-05 | No.: RG081007 |

### <u>Cause</u>

# Case 1

Scratches or indentations develop on the quenching sheet due to foreign particles stuck to the sheet, after which toner fills in these areas. This in turn scratches the development roller surface and shows up on the outputs as vertical lines.

# Case 2

The toner is not supplied. The protection sheets for the toner supply holes must be removed at installation, as shown in the following drawing. If the protection sheet is not removed and the toner bottle is installed, the toner cannot be supplied. The low toner condition will damage the PCU surface.



# Case 3

There is a small object inside the PCU, and it will damage the PCU surface.

# **Troubleshooting**

*Case 1* Replace the PCU.

Case 2

Replace the PCU and add toner.

Case 3

Replace the PCU.

# Technical Bulletin

Model: Model AR-P1

Date: 29-Jun-05

No.: RG081007

# **Countermeasures**

# Case 1

The diagram on the right shows the inside of the PCU.

There is a potential difference of about 63V between the development roller and the quenching sheet because of a zener diode (Tz).

The toner will be gathered on the surface of the quenching sheet because of the potential difference. Then, the toner will be fixed on the quenching sheet.

This toner scratches the development roller surface.



A: Toner supply roller, B: Quenching sheet C: Development roller, D: Doctor blade

The resistor that connects the quenching sheet to the ground will be removed. The electric level of the quenching sheet will be same as the development roller in order to prevent toner from gathering on the sheet.



This modification was available from the September 2004 production.

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|--------------|--|-----------------|---------------|--|--|--|
| Model: Mod   | lel AR-P1  | Date: 29-Jun-05 | No.: RG081007 |  |  |  |
| Cut-in Seria | l Numbers  |                 |               |  |  |  |
| Machine:     | G081-17: All   |                 |               |  |  |  |
|              | G120-17: Q20409XXXXX                                       |                 |               |  |  |  |
|              | G121-17: Q18409XXXXX                                       |                 |               |  |  |  |
|              | G122-17: Q19409XXXXX                                       |                 |               |  |  |  |
|              | G081-22, 27: All   |                 |               |  |  |  |
|              | G092-22, 27: All   |                 |               |  |  |  |
|              | G120-22, 27: Q20409XXXXX                                   |                 |               |  |  |  |
|              | G121-22, 27: Q18409XXXXX                                   |                 |               |  |  |  |
|              | G123-22, 27: Q21409XXXXX                                   |                 |               |  |  |  |
| PCUs: Bk:    | 4IAMH05086   |                 |               |  |  |  |
| Colc         | or: 4IAMH04413   |                 |               |  |  |  |
| 4: Year      |  |                 |               |  |  |  |
| I: Month (A: | Jan, B: Feb, I: Sep)                                       |                 |               |  |  |  |
| A: Beginnin  | A: Beginning of month, B: Middle of month, C: End of month |                 |               |  |  |  |

M: Factory code

H: Suffix

5 digits: lot number for first mass production

# **RICOH** Technical Bulletin PAGE: 1/2

Reissued: 06-Oct-08

| Model: Model AR-P1 Da   |                             | Dat | e: 30-May-03 | No.: RG081002b |                    |
|---|-----------------------------|-----|--------------|----------------|--------------------|
| RTB Reissue<br>The items in bold italics have been added.                     |                             |     |              |                |                    |
| Subject: Controller firmware release note for AR-P1 Prepared by: K. Moriizumi |                             |     |              |                | Moriizumi          |
| From: 1st Tech. Support Sec. Service Support Dept.                            |                             |     |              |                |                    |
| Classification:   | Troubleshooting Part inform |     | orma         | tion 🗌 Actior  | n required         |
|   | Mechanical     Electrical   |     | al           | Servic         | ce manual revision |
|   | Paper path Transmit/re      |     | it/rec       | eive 🗌 Retro   | fit information    |
|   | Other ()                    |     |              |                |                    |

This RTB is issued to announce the firmware release information for the Model AR-P1 controller board.

#### **Printer Controller**

| Version | Program No. | C. SUM | Effective Date          |
|---------|-------------|--------|-------------------------|
| 1.06    | G0815940F   | 565C   | October 2008 production |
| 1.05    | G0815940F   | C022   | October 2003 production |
| 1.02    | G0815940E   | 6ABB   | 1st mass production     |

#### **PS/PCL**

| Version | Program No. | C. SUM | Effective Date          |
|---------|-------------|--------|-------------------------|
| 1.06    | G0815941G   | EF1D   | October 2008 production |
| 1.05    | G0815941F   | 9CF9   | October 2003 production |
| 1.02    | G0815941E   | DOCA   | 1st mass production     |

| Version | Program No. | C. SUM | Effective Date          |
|---------|-------------|--------|-------------------------|
| 3.01    | G0815920C   | 6C7E   | October 2003 production |
| 0.62    | G0815920B   | E730   | 1st mass production     |

# **RICOH** Technical Bulletin PAGE: 2/2

Reissued: 06-Oct-08

Model: Model AR-P1 Date: 30-May-03 No.: RG081002b

# **Printer Controller**

| Version | Title                                    | Symptom Corrected  |
|---------|--|--|
| 1.06    | Other changes:                           | The firmware was modified to support the new Fujitsu hard disk drive.  |
| 1.05    | Listed option on the configuration sheet | The installed option is not listed on the configuration sheet when the Plug and Play name is changed to Lanier, NRG or Gestetner.  |
|         | SP modes                                 | The following SP modes were added, however they are<br>for the Japanese model only. Do not use them for<br>overseas models.<br>SP2-311: STR bias setting<br>SP5-997: Engine type selection |
|         |  | The following SP mode was deleted. The print counter<br>has been started from "0", therefore the print counter<br>cannot be reset.<br>SP7-825: Counter Reset                               |
|         | "Others" size counter                    | The "Others" size counter on SMC report is not increased.  |
|         | Misfeed Recovery                         | Continuously "Printing" displays if the misfeed recovery function is off and paper is emptied.   |
|         | Double sided printing                    | Abnormal double sided printing process (interleave).   |
|         | Bluetooth                                | Bluetooth ver3 is now supported.   |
| 1.02    |  | 1st mass production  |

## **PS/PCL**

| Version | Title          | Symptom Corrected   |
|---------|----------------|---|
| 1.06    | Other changes: | The firmware was modified to support the new Fujitsu hard disk drive.   |
| 1.02    |                | 1st mass production   |
| 1.05    | PCL            | Merged PCL job does not print (TechMail #TS030100)  |
|         | PS             | When a PDF file consisting of many graphics is printed with Windows XP and Acrobat 5.0, the job may be reset. |
| 1.02    |                | 1st mass production   |

| Version | Title     | Symptom Corrected   |
|---------|-----------|---|
| 0.62    |           | 1st mass production   |
| 3.01    | Bug fixed | When the printer seeks local Netware file server, the<br>printer does not directly access target local Netware file<br>server. (TechMail #: RE020229)<br>If SAP setting is unchecked in NetWare server, the<br>printer cannot log on Netware server.<br>When browsing devices by SmartNetMonitor for Client<br>using NetBEUI protocol, SC819 might occur. |