

# Service Bulletin

|            |  |                               |
|------------|--|-------------------------------|
| SB Number: | <b>SB 2AV-008</b>                                    | Issue Date: <b>22/06/2001</b> |
| Subject:   | Overview of firmware upgrades since first production |                               |
| Model:     | <b>KM-1530 / 2030, Fax System (B)</b>                |                               |

This service bulletin will inform you about the various firmware upgrades since the first production of the KM-1530 / 2030 and Fax system (B) until ROM Main version '2AV6806BT' (KM-1530) and '2AX68090A'.

As for the later ROM versions suitable for the installation of the **Scan system (A)** to the KM-2030 (ROM Main: '2AX68091B'), please refer to **SB 2AV-009**.

Since the first production of the KM-1530 / 2030 until the ROM versions mentioned in this service bulletin, the following maintenance modes have been newly added.

- U089:** Outputting MIP-PG
- U215:** Checking FAX panel key (KM-2030 only)
- U237:** Adjusting finisher limit (KM-2030 only)
- U246:** Adjusting finisher (KM-2030 only)
- U918:** Setting printer total counter

See page 5 and later for more details about these added maintenance modes.

## **FAX SYSTEM (B) (KM-2030)**

Firmware to install in order to use Fax System (B) in the KM-2030:

- 'IC ROM Main SP': 2AX68018U (Checksum = E378)
- 'IC ROM Operation ROM 1, SP': 2AX68045P (Checksum = C371)

**Please upgrade to above version or later when installing Fax System (B) to the KM-2030 !**

If the machine firmware versions are not updated to above version or later, the FAX may lock regularly and not function properly!

Above ROM versions are installed in machines with serial number 37003077 or higher.

## **PRINTING SYSTEM (K) (KM-1530 / 2030)**

Firmware to install in order to use Printing system (K) in the KM-1530 or KM-2030:

KM-1530:

- 'IC ROM MAIN 1 SP': 2AV68067P (Checksum = BC15)

KM-2030:

- 'IC ROM MAIN SP': 2AX68019V (Checksum = 2B58)

**Please upgrade to above version or later when installing Printing System (K) to the KM-1530 / 2030!**

If the machine firmware versions are not updated to above version or later, the following malfunction may occur:

If the machine is in sleep mode and data is transferred from the PC, the print output may have an unusual image (leading edge part is missing) and/or the print image is not output at all. (If machine is not in sleep mode, printing is done normally).

Above ROM versions are installed in machines with the following serial numbers or higher:

- KM-1530:** 37008277 and later
- KM-2030:** 37008991

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Details about various firmware upgrades since first production of KM-1530

|          |           |         |
|----------|-----------|---------|
| Main ROM | 2AV6806xx | KM-1530 |
|----------|-----------|---------|

## '3K'

First Main ROM version installed in KM-1530 since first production.

## '8Q'

- Addition of **U089** (MIP-PG output)  
See page 4 for more details about this maintenance mode.
- The default value of the trailing edge copy registration in **U071** (= 'Adjustment of DF scanning timing) has been changed.  
*Before upgrade:*                      0  
*After upgrade:*                      - 20

## '9R'

- The fixing control when copy starts has been changed.  
*Before upgrade:*  
Fixing is controlled based on the temperature of copying immediately after the print key is pressed.  
*After upgrade:*  
Fixing is controlled based on the temperature of copying when the main motor has started rotating (after pressing the print key).

## 'AS'

- **Phenomenon**  
If a copy is made under the following conditions, the 2<sup>nd</sup> sheet will come out as a blank paper.  
*Conditions:* Fed through bypass, paper size is not specified, one original sheet, preset sort copy of multiple sheets.  
Firmware has been corrected so that the second page will be output normally under the conditions mentioned.

## 'BT'

- The setting in **U250** (= 'Setting the maintenance cycle) has been changed as follows.  
After firmware upgrade, the maintenance cycle in U250 can be set at every 500 sheets. (Before upgrade, this could be set at every 1000 sheets). See page 4 and later for more details about this maintenance mode.
- **Phenomenon**  
The period of time before the lamp lights after the machine was switched off for several hours, may be too long. Because of this, the AGC (Auto Gain Control) may detect an error and C104 ('Optical system problem) may arise.  
**Correction**  
Firmware has been corrected so that the machine will use prepared fixed data to prevent the occurrence of the service call.
- **Phenomenon**  
When printing is interrupted because there is an overflow of paper on the inner tray, pressing the print key can restart the printing, but the drive does not stop rotating. After that printing is not done normally.  
**Correction**  
Printing starts normally after printing was interrupted due to the overflow of paper in the inner tray.

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Details about various firmware upgrades since first production of KM-2030

**Main ROM 2AV680xxx KM-2030**

## '14Q'

First Main ROM version installed in KM-2030 since first production.

## '18U'

Addition of **U215** (= 'Checking FAX panel key').

Used for checking the FAX operation section. See page 4 and later for more details.

## '1AW'

- Addition of **U089** (= 'Output of MIP-PG pattern'). See page 4 and later for more details.
- A limitation in the number of ejected sheets on the main tray has been set to prevent any paper jams near the main tray and finisher. If the set limited number of sheets is exceeded, printing will stop once and restarts by pressing the print key. The limitation in the number of sheets can be set at 250 or 500 sheets in **U237**. See page 4 and later for more details about this maintenance mode.
- The default value of the trailing edge copy registration in **U071** (= 'Adjustment of DF scanning timing') has been changed.  
*Before upgrade:*                      **0**  
*After upgrade:*                        **- 10**

## '1DZ'

- **Phenomenon**  
 If a copy is made under the following conditions, the 2<sup>nd</sup> sheet will come out as a blank paper.  
*Conditions:* Fed through bypass, paper size is not specified, one original sheet, preset sort copy of multiple sheets.  
 Firmware has been corrected so that the second page will be output normally under the conditions mentioned.

## '90A'

- The setting in **U250** (= 'Setting the maintenance cycle') has been changed as follows.  
 After firmware upgrade, the maintenance cycle in U250 can be set at every 500 sheets. (Before upgrade, this could be set at every 1000 sheets). See page 4 for more details about this maintenance mode.
- **Phenomenon**  
 The period of time before the lamp lights after the machine was switched off for several hours, may be too long. Because of this, the AGC (Auto Gain Control) may detect an error and C104 ('Optical system problem') may arise.  
**Correction**  
 Firmware has been corrected so that the machine will use prepared fixed data to prevent the occurrence of the service call.
- **Phenomenon**  
 If 5 sheets of originals are copied, the first set is not shifted when it is ejected to the finisher.  
 Software has been corrected so that this first set is shifted and ejected normally.
- **Phenomenon**  
 When printing is interrupted because there is an overflow of paper on the inner tray, pressing the print key can restart the printing, but the drive does not stop rotating. After that printing is not done normally.  
**Correction**  
 Printing starts normally after printing was interrupted due to the overflow of paper in the inner tray.

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|                    |                        |         |
|--------------------|------------------------|---------|
| Operation Unit ROM | 2AV6802xx or 2AX6804xx | KM-2030 |
|--------------------|------------------------|---------|

**‘4N’**

First Operation Unit ROM version installed since first production.

**‘5P’**

Addition of **U215** (= ‘Checking FAX panel key’).

Used for checking the FAX operation section. See page 4 for more details.

**‘6Q’**

- **Phenomenon**

After entering a maintenance mode related to FAX matter (U600 ~), the machine may not go back to the normal display, but remain in the maintenance mode screen.

Software has been changed to solve this malfunction.

- **Phenomenon**

If the output of the status report is interrupted by for example paper shortage (‘paper empty’) and at that same time an original is placed on the DF, E72 (= ‘Remove original’) will be displayed. Then the report is not output until the original is removed.

**Correction**

Software has been corrected so that the DF condition is not checked during report output.

- **Phenomenon**

When setting ‘auto shut-off’ to ‘ON’ while this setting was already set to ‘ON’ before, the ‘auto shut-off’ time will be set to 60 min.

**Correction**

Software has been corrected so that when the ‘auto shut-off’ setting is ‘ON’ and the setting is done again, the first ‘auto shut-off’ time is kept.

**‘7R’**

The setting in **U250** (= ‘Setting the maintenance cycle’) has been changed as follows.

After firmware upgrade, the maintenance cycle in U250 can be set at every 500 sheets. (Before upgrade, this could be set at every 1000 sheets). See page 4 for more details about this maintenance mode.

|                 |                        |                |
|-----------------|------------------------|----------------|
| FAX Control ROM | 2AW6801xx or 2AX6802xx | Fax System (B) |
|-----------------|------------------------|----------------|

**‘3D’**

First Fax Control ROM version installed since first production.

**‘4E’**

Improving FAX transmission quality

Software has been upgraded to prevent following malfunctions and to improve overall quality.

- Occurrence of U01113 which arose during a test with multiple lines.
- Improving transmission quality if there is impulse noise.
- Preventing misdetection of abbreviated protocols (SPR / SPA signals).
- Preventing misdetection of CED signal during transmission.

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## Overview of added / changed maintenance modes since first production

**U089** = 'Outputting MIP-PG'  
Output of MIP-PG pattern on copier

### Running U089 (KM-1530)

1. Choose with the 'copy density control key' the 'output MIP-PG pattern'.
2. Change the setting value with the magnification Up & down key. (Mono-level only)
3. Press the print key to fix the setting.

| Copy exposure indicator | Display                     | Description | Setting range |
|-------------------------|-----------------------------|-------------|---------------|
| Exp.1                   | "G - S"                     | Gray scale  | -             |
| Exp.2                   | Decimal 3 digits indication | Mono-level  | 0 - 255       |
| Exp.3                   | "FFL"                       | 256 level   | -             |
| Exp.4                   | "1 - d"                     | 1 dot level | -             |

### Running U089 (KM-2030)

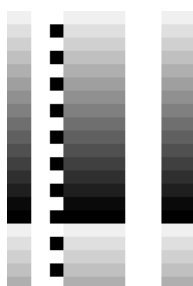
1. Select 'output MIP-PG pattern' with the up & down cursor key.
2. Change the setting value with the right/left cursor keys. (Mono-level only)
3. Press the print key to fix the setting.

| Display      | Description | Setting range |
|--------------|-------------|---------------|
| "GRAYSCALE"  | Gray scale  | -             |
| "MONO-LEVEL" | Mono-level  | 0 - 255       |
| "256-LEVEL"  | 256 level   | -             |
| "1dot-LINE"  | 1 dot level | -             |

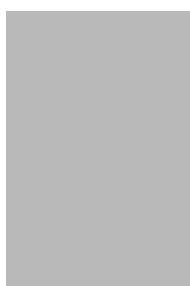
4. Press the interrupt key and enter pattern output mode.
5. Press the print key and output pattern.

4. Press interrupt key and enter pattern output mode.
5. Press the print key and output pattern.

### Patterns



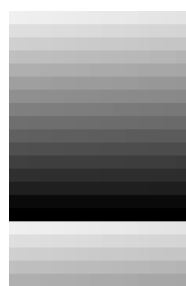
Gray scale



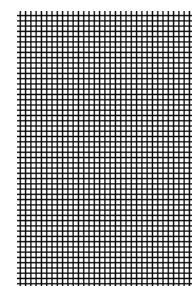
Mono-level

Density can be altered according to the setting value.

0: white 255: black



256 level



1 dot level

**U215** = 'Checking FAX panel key' (KM-2030 only)  
Check of FAX operation panel keys and LED's.

### Running U215

1. '1' is indicated on the LCD and both the LED of 'Copy' and 'FAX' should be lit.
2. If the key beneath the 'Copy' and 'Fax' LED is pressed, the number on the LCD should increase to '2'.
3. Then press all keys at the right hand side on the FAX operation panel separately starting with the keys at the top of the left column and proceeding at the top of the right hand side column. The value on the LCD should increase with steps of '1'. If after that the cover of the fax operation panel is opened, all LED's of the FAX operation panel should light up for 10 sec.
4. If the start key is pressed after these LED's stop lighting, the LED's on the FAX operation panel should all light up again for 10 sec.

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**U237** = 'Adjusting finisher limit' (**KM-2030 only**)  
Set stacking limit on main tray of finisher

## Setting U237

1. Change the setting value with the right/left cursor key.

| Setting value | Description                |
|---------------|----------------------------|
| 0             | 250 sheets (Default value) |
| 1             | 500 sheets                 |

2. Press start key to fix the setting.

**U246** = 'Adjusting finisher' (**KM-2030 only**)  
Check of each cursor position on middle tray of finisher  
(Possible to adjust matching of sets / bundles and staple position)

## Setting U246

1. Press start key while the indication 'Adjusting cursor position' is highlighted.
2. Press the up/down cursor key and select changed item.
3. Press right/left cursor key and change the setting value.

| Display                | Description  | Setting range | Default value |
|------------------------|--|---------------|---------------|
| Adjusting front jogger | Adjusting the position of the front side registration frames | 0 – 8         | 4             |
| Adjusting rear jogger  | Adjusting the position of the rear side registration frames  | 0 – 8         | 4             |
| Adjusting end jogger   | Adjusting the position of the trailing edge cursor           | 0 – 8         | 4             |

**one step = 0.5 mm**

If the value is decreased, the jogger position moves towards the center of the machine.  
If the value is increased, the jogger position moves to the outside of the machine.

3. Press start key and fix the setting.

**U250** = 'Setting the maintenance cycle'  
Changing the maintenance cycle from every 1,000 sheets to every 500 sheets

### KM-1530 Setting U250

1. Select the setting with the copy density control keys.
2. Change the setting value with the magnification up/down key.

| Copy exposure indicator | Description    | Setting range |
|-------------------------|----------------|---------------|
| Exp.1                   | First 3 digits | 000 — 999     |
| Exp.2                   | Last 3 digits  | 000, 500      |

3. Press start key to fix the setting.

### KM-2030

By changing the value with 1 step, the volume will change from 1,000 sheets to 500 sheets.  
(See Service Manual for details)

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**U918** = 'Setting the printer total counter'  
 Checking, changing or clearing the total counter value (data for printer control system).

## KM-1530 Setting of U918

1. Select the setting with the copy density control keys.
2. Change the setting value with the magnification up/down key.

| Copy exposure indicator | Description    | Setting range |
|-------------------------|----------------|---------------|
| Exp.1                   | First 3 digits | 000 — 999     |
| Exp.2                   | Last 3 digits  | 000 — 999     |
| Exp.3                   | Clear          | —             |

3. Press start key to fix the setting.

## KM-2030

### Clearing the total counter

Press up/down cursor key and select 'CLEAR'.  
 Press start key to clear total counter value.

### Setting U918

1. Input 6 digits count value with the numeric keys.
2. Press start key to fix the total counter.

### Note:

Difference between U918 and U908 (= 'Setting total counter', KM-2030 only)

**U908** is the data which is sent when FAX PC remote diagnostics is used.

**U908/U918** are counted both simultaneously, but the default settings of both maintenance modes show the following differences.

**U908:** same value as mechanical total counter

**U918:** '000000'



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## ROM Table

| Item No. | Parts No. OLD | Parts No. NEW | Description                       | Q'ty old-new | SP |
|----------|---------------|---------------|-----------------------------------|--------------|----|
| 1        | 2AV68060      | 2AV6806B      | IC, ROM MAIN 1 SP                 | 1 / 1        | X  |
| 2        | 2AX68010      | 2AX68090      | IC, ROM MAIN 1 SP                 | 1 / 1        | X  |
| 3        | 2AX68040      | 2AX68047      | IC, ROM OPERATION UNIT 1 SP (EUR) | 1 / 1        | X  |
| 4        | 2AW29310      | 2AW68014      | IC 1, ROM CONTROL(S P)            | 1 / 1        | O  |
| 5        | 2AW29320      | 2AW68024      | IC 2, ROM CONTROL(S P)            | 1 / 1        | O  |

## ROM Details

|       | Type                       | Seal No.  | Checksum (Gang / pecker) | ROM speed | Notes                       |
|-------|----------------------------|-----------|--------------------------|-----------|-----------------------------|
| No.1  | MAIN ROM 1                 | 2AV6806BT | 2998                     | 100 ns    | For KM-1530                 |
| No. 2 | MAIN ROM 1                 | 2AX68090A | BF8A                     |           | For KM-2030                 |
| No. 4 | ROM OPERATION UNIT 1 (EUR) | 2AX68047R | B7A8                     |           | For KM-2030                 |
| No. 5 | ROM CONTROL 1              | 2AW68014E | FD08/74AC                |           | Fax System (B)<br>Ver. 0.77 |
| No. 6 | ROM CONTROL 2              | 2AW68024E | 4D95/B439                |           |                             |

| Fax System (B)                                | 'Control ROM'<br>2AW6801xx, 2AW6802xx |
|---|---------------------------------------|
| From first production and later (37001200 ~ ) | '3D' (Ver.0.75)                       |
| 37002766 and later                            | '4E' (Ver.0.77)                       |