

**SUBJECT:** Service Manual Correction

**DATE:**

October 25, 1993

PREPARED BY: A. Ishiyama

FROM: 1st T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required

☒ Revision of service manual

☐ Troubleshooting

☐ Information only

☐ Retrofit Information

☐ Other

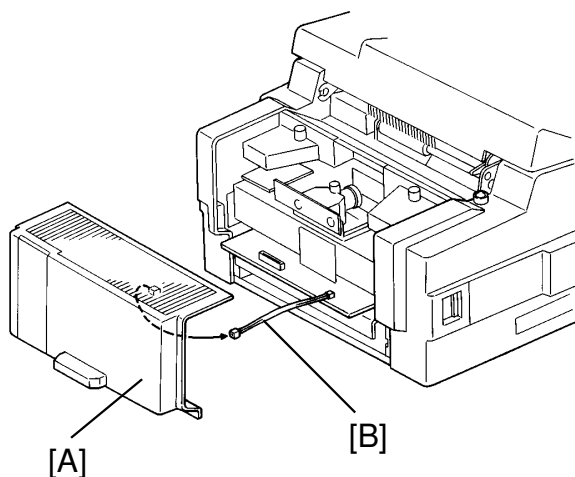
MODEL: CRO Europe and Asia  
Version

This information includes corrections to the CRO service manual.

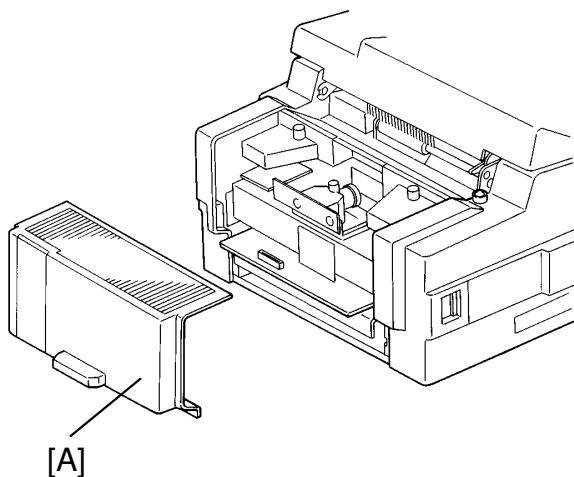
### 1. Section 3.2.4. (Page 3-6)

The item 4 has been changed, because the CRO does not have the monitor speaker.

4. Take off the rear cover [A] and  
disconnect the monitor speaker [B].



4. Take off the rear cover [A].





## Technical Bulletin

No. CRO-002

**SUBJECT:** Service Manual Correction

**DATE:** Nov. 2, 1993  
Reissued Jan.10. 19994

PREPARED BY: H. Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

**CLASSIFICATION:**

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☒ Revision of service manual

☐ Information only

☐ Other

**MODEL:**

CRO Europe and Asia version.

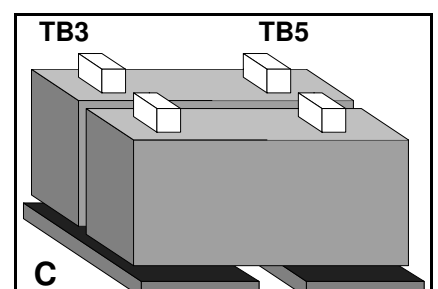
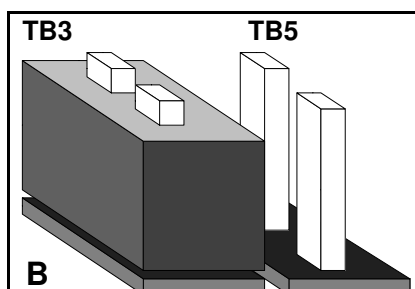
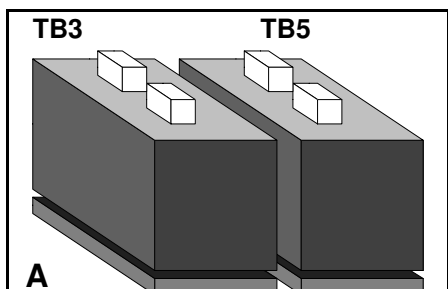
The attached page is additional information for the service manual.

## 2-1-2. NCU

### 1. Signal and Jumper Settings

The following table shows the jumper positions for each country, and the status of the relay control signals (CN3-A7, B7 and A8). The country is selected by the Country Code for NCU Parameters (NCU Parameter 00; use Function 96 ).

	Standby Mode			After Ring Detection			Jumper Tips and Wires							
	CN-3			CN-3			TB1	TB2	TB3	TB5	TB4	TB7	TB8	TP2-3
Country	A7	B7	A8	A7	B7	A8								
Germany	L	L	L	H	H	L	O	S	A	S	O	S	S	
U.K.	L	H	L	H	H	L	O	S	A	S	O	S	S	
Italy	H	H	L	H	H	L	O	S	B	S	O	S	S	
Austria	H	H	L	L	L	L	O	S	A	S	O	S	S	
Belgium	H	H	L	L	L	L	O	S	A	S	O	S	S	
Denmark	H	H	L	L	L	L	O	S	A	O	O	S	S	
Finland	H	H	L	H	H	L	O	S	A	S	O	S	S	
Ireland	H	H	L	L	L	H	O	S	C	S	O	S	S	
Norway	L	H	L	L	L	H	O	S	A	S	O	S	S	
Sweden	H	L	L	L	L	L	O	S	A	S	O	S	S	
Switzerland	L	H	L	L	L	L	S	S	A	O	S	S	O	
Portugal	H	H	L	L	L	L	O	S	A	S	O	S	S	
Holland	H	H	L	L	L	H	O	S	A	S	O	S	S	
Spain	H	H	L	L	L	L	O	S	B	S	O	S	S	
Israel	H	H	L	H	H	L	O	S	A	S	O	S	S	
Asia	L	H	L	H	H	L	O	S	A	S	O	S	S	
Hong Kong	L	H	L	H	H	L	O	S	A	S	O	S	S	
S. Africa	H	H	L	H	H	L	O	S	C	S	O	S	S	
Australia	L	H	L	H	H	L	O	S	A	S	O	O	S	
New Zealand	L	H	L	H	H	L	O	S	A	S	O	S	S	
Singapore	H	H	L	H	H	L	O	S	A	S	O	S	S	
Malaysia	L	H	L	H	H	L	O	S	A	S	O	S	S	
Turkey (U.K.)	L	H	L	H	H	L	O	O	A	S	O	S	S	
Keys	H = High; L = Low						O = Open; S = Short. For "A", "B" and "C" in the TB3/TB5 columns, refer to the following diagrams.							



**SUBJECT:** Paper not lifted up

**DATE:** Dec. 10. 1993

PREPARED BY: H. Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

MODEL: CRO

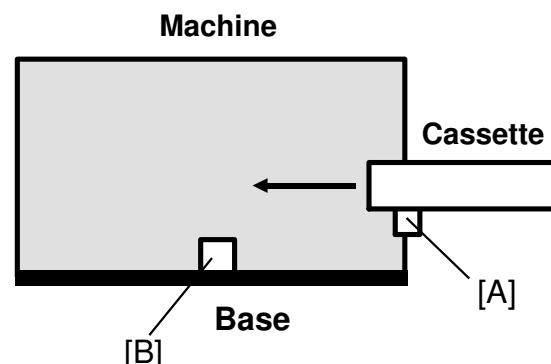
### [Problem]

The bottom plate of the A4 (letter) size standard cassette is not lifted up even if the cassette is inserted into the machine.

### [Reason]

When installing the cassette, the slider [A] should contact the Boss [B] on the base.

However [A] does not contact [B], because of the warp of the cassette and the base plate of the machine.



### [Modification]

Temporary: Insert a washer (t=0.5mm, P/N: 07010030B) between the Boss [B] and the Base plate of the machine

<Effective Date>

- H510-20: R8831000001~
- H510-21: 6403100136~
- H510-22: L4231000309~
- H510-27: 0831000146~
- H510-30: 4671130001~
- H510-40: U2731100001~
- H510-51: A1431000001~
- H510-60: 6353110001~

Permanent: The height of the Boss [B] (P/N: H0813561) has been changed from 6mm to 7mm.

<Effective Date>

- From December 1st production

### [Countermeasure]

- Install a plastic cap (which packed with this RTB) onto the Boss.  
Use a glue for plastic.  
or
- Insert a washer(P/N: 07010030B) or an M4 E-ring (P/N: 07200040E) between the Boss and the Base Plate.

**SUBJECT:** Paper not lifted up

**DATE:**

Dec. 15. 1993

PREPARED BY: A. Ishiyama

FROM: 1st T.S. Section

CHECKED BY:

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

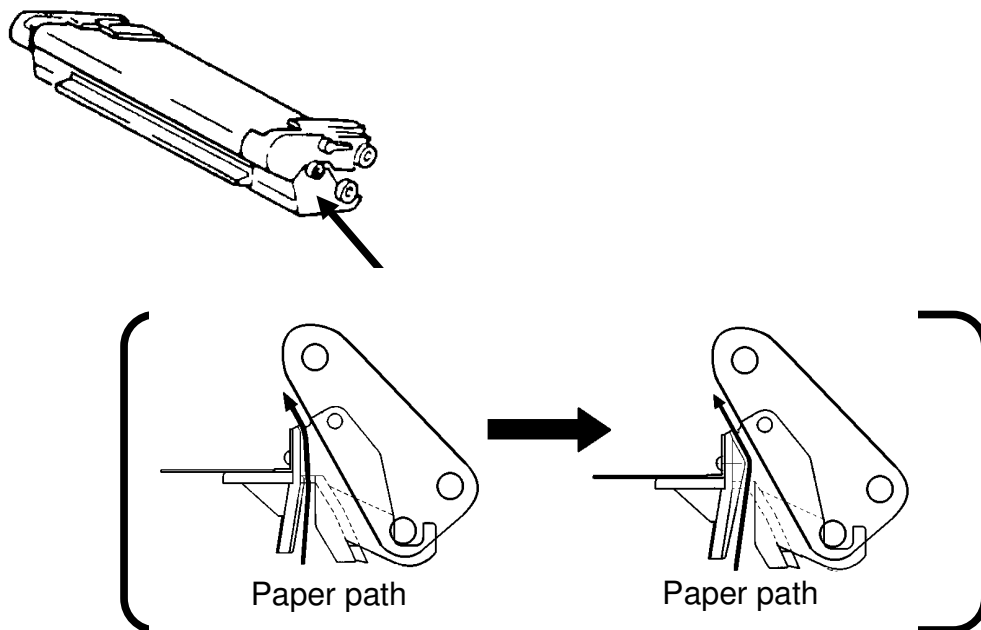
☐ Revision of service manual

☒ Information only

☐ Other

MODEL: CRO/ CS1

To improve image quality, the OBM (master unit) has been modified, as shown below.



When the paper passes over the master belt, toner sometimes does not transfer to the paper properly.

Therefore, the paper path inside the master has been changed, and the paper makes better contact with the master.

This has been executed from October production.

**SUBJECT:** Hot Roller Down**DATE:**

Apr, 11th, 1994

PREPARED BY:H Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required☒ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☐ Other

MODEL:

CRO(Europe &amp; Asia)

**<Problem>**

Auto service call (Hot Roller Down) may occur during standby mode.

**<Cause>**

TRC (Triac)1 and/or 2 on the PSU may be damaged (shorted) in the field by severe impulse noise or power supply drop out. (The TRCs switch the ac power supply to the fusing lamp on/off.)

This may cause continuous power supply to the fusing lamp and this will generate the above auto service call condition.

(There are two safety circuits for the power supply to the fusing lamp. The safety circuits cut the power supply to the fusing lamp.)

**<Modification>**

Change the capacitors (C8 and C9) to the surge killers ( $100\Omega + 0.01\mu\text{F}$ ) to increase the safety margin against unstable ac power conditions in the field.

This will be effective from Feb. 1994 production.

Europe: H510 5601B → C

Asia: H510 5602B → C



**SUBJECT:** Rx problem from PC Fax modems  
"Paper Size Error" indication

**DATE:**  
May 26th, 1994.

PREPARED BY: H.Yokoyama  
CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

**CLASSIFICATION:**

- |   |   |
|---|---|
| <input type="checkbox"/> Action Required            | <input type="checkbox"/> Revision of service manual |
| <input checked="" type="checkbox"/> Troubleshooting | <input type="checkbox"/> Information only           |
| <input type="checkbox"/> Retrofit Information       | <input type="checkbox"/> Other                      |

**MODEL:**

CRO (Europe only)

### <Rx problem from PC Fax modems>

**-Problem-**

CRO may not receive messages from PC Fax modems.

**-Cause-**

Some PC Fax modems can not recognize the extended DIS frame (6 bytes) which was recently recommended by CCITT.

**-Action-**

Ask your customer to request the sender (PC Fax modem owner) to contact a service engineer to modify their software to solve the problem.

However we have prepared a countermeasure ROM for this problem. This ROM should be used only when the problem is not solved even if the sender contacts the PC Fax board maker. When this ROM is used, the DIS frame is fixed at 4 bytes so that the Fine Resolution (8 X 15.4 l/mm) will not be used for transmission.

### <"Paper Size Error" indication>

**-Problem-**

The machine may display "Paper Size Error" in the following conditions.

- Machine Software : H5107130C, D or E
- Printer Firmware : 930801 or 930319

**-Cause-**

Software of the machine

**-Action-**

We have prepared a countermeasure ROM for this problem.

**SUBJECT:** Rx problem from PC Fax modems  
"Paper Size Error" indication

**DATE:**  
May 26th, 1994.

---

There are two kinds of problem for the CRO, so the following is a summary of the countermeasure ROMs.

Checksum	Indication on the System Parameter List	Contents
EB51	H5107130E 24 DEC. '93	Normal mass production ROM
E64F	Same as above	PC Fax problem
E387	Same as above	"Paper Size Error" problem
E305	Same as above	PC Fax problem and "Paper Size Error" problem

The solution for the "Paper Size Error" indication problem will be introduced into the production machines from September production. (This is not fixed yet.)



**SUBJECT:** Rx problem from PC Fax modems  
"Paper Size Error" indication**DATE:**  
July, 30, 1994.PREPARED BY: H.Yokoyama  
CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

**CLASSIFICATION:**

- |   |   |
|---|---|
| <input type="checkbox"/> Action Required            | <input type="checkbox"/> Revision of service manual |
| <input checked="" type="checkbox"/> Troubleshooting | <input type="checkbox"/> Information only           |
| <input type="checkbox"/> Retrofit Information       | <input type="checkbox"/> Other                      |

**MODEL:**

CRO (Asia only)

**<Rx problem from PC Fax modems>****-Problem-**

CRO may not receive messages from PC Fax modems.

**-Cause-**

Some PC Fax modems can not recognize the extended DIS frame (6 bytes) which was recently recommended by CCITT.

**-Action-**

Ask your customer to request the sender (PC Fax modem owner) to contact a service engineer to modify their software to solve the problem.

However we have prepared a countermeasure ROM for this problem. This ROM should be used only when the problem is not solved even if the sender contacts the PC Fax board maker. When this ROM is used, the DIS frame is fixed at 4 bytes so that the Fine Resolution (8 X 15.4 l/mm) will not be used for transmission.

**<"Paper Size Error" indication>****-Problem-**

The machine may display "Paper Size Error" in the following conditions.

- Machine Software : H5107132C, D or E
- Printer Firmware : 930801 or 930319

**-Cause-**

Software of the machine

**-Action-**

We have prepared a countermeasure ROM for this problem.  
Please contact us if this problem happened.

**SUBJECT:** Rx problem from PC Fax modems  
"Paper Size Error" indication**DATE:**  
July, 30, 1994.PREPARED BY: H.Yokoyama  
CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

**CLASSIFICATION:**

- |   |   |
|---|---|
| <input type="checkbox"/> Action Required            | <input type="checkbox"/> Revision of service manual |
| <input checked="" type="checkbox"/> Troubleshooting | <input type="checkbox"/> Information only           |
| <input type="checkbox"/> Retrofit Information       | <input type="checkbox"/> Other                      |

**MODEL:**

CRO (USA only)

**<Rx problem from PC Fax modems>****-Problem-**

CRO may not receive messages from PC Fax modems.

**-Cause-**

Some PC Fax modems can not recognize the extended DIS frame (6 bytes) which was recently recommended by CCITT.

**-Action-**

Ask your customer to request the sender (PC Fax modem owner) to contact a service engineer to modify their software to solve the problem.

However we have prepared a countermeasure ROM for this problem. This ROM should be used only when the problem is not solved even if the sender contacts the PC Fax board maker. When this ROM is used, the DIS frame is fixed at 4 bytes so that the Fine Resolution (8 X 15.4 l/mm) will not be used for transmission.

Please contact us if this problem happened.

**<"Paper Size Error" indication>****-Problem-**

The machine may display "Paper Size Error" in the following conditions.

- Machine Software : CS1: H5117140 E, F or G  
CRO: H5107140 D, E or F
- Printer Firmware : 930801 or 930319

**-Cause-**

Software of the machine

**-Action-**

Use the following ROMs if this problem happened.

CS1: H5117140H  
CRO: H5107140G

The above ROMs will be used for massproduction from July production.

**SUBJECT:** Printing Problem

DATE:

July, 30th, 1994

PREPARED BY: Y.Okunishi

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

■ Troubleshooting

#### ☐ Retrofit Information

☐ Revision of service manual

Information only

☐ Other

MODEL:

CS1 America version

CRO America and Europe  
version

[Problem]

Intermittent residue image on receptions and reports **when the unit has a PIF60 installed.**  
See below.

```

ID NUMBERS
ROM VERSION
CCITT
PAPER CODE
ID CODE
CONFIDENTIAL ID
LOOK ID
SECURE ID
COUNTERS
CURRENT
DEFAULT
PRINTER COUNTER
PRINT COUNTER
TONE COUNTER
OPS COUNTER
UNIT COUNTER
COPY COUNTER
PRINTER COUNTER
COPY JAM
DOC JAM
PM JAM
DO OPEN - JAM MONITOR
COPY JAM MONITOR
PARAMETER
PRINTER (L,M,H)
PRINTER (K)

```

[Cause]

Incomplete switching at the clock to the fax and report page memory.

The clock to the printer page memory may be mixed with the clock to the fax and report page memory sometimes.

[Countermeasure]

The following ROMs will be changed.

<America>

H5117140G → H    Programmed ROM - CS1 (From July production)

H5107140F → G      Programmed ROM - CRO (From July production)

**<Europe>**

H5107130E → F    Programmed ROM - EUR -CRO (From Aug. production)

H5107133B → C      Programmed ROM - FRN -CRO (From Aug. production)



## Technical Bulletin

No. CRO-010

SUBJECT: New CRO Information

DATE:

Aug 30th, 1994

PREPARED BY: M. Tasaka

CHECKED BY:

FROM: Over Sea T.S. Section

CLASSIFICATION:

☐ Action Required

☐ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☒ Information only

☐ Other

MODEL:

New CRO

The New CRO will be launched from Sept. '94 production.

Please find the attached sheets which are described the additional information and the difference of the parts numbers for the old CRO product.

FAX 2500L/2600L/3500L

## SERVICE MANUAL

Throughout this manual, the machines are referred to as follows:

CRO: FAX2500L

CS1: FAX3500L

New CRO: FAX2600L

## Additional Information for New CRO

The new CRO is a successor to the CRO. Therefore, most features of the new CRO are the same as the old CRO.

The differences between the new CRO and old CRO are listed below.

### 1. Hardware

Items	New CRO	Old CRO
1.1 Specification *Memory Capacity *Paper Size	256 Kbytes Letter, Legal	128 Kbytes Letter
2.1.1 FCU *SAF Memory	Battery back-up(1H)	No battery back-up

### 2. Software

Almost same as the CRO, except the following

- The Direct Number Entry feature is available by pressing the quick dial key(8).  
This feature is programmed in the quick dial key, as a default setting.

## Part Number Information for FAX2600L Parts Catalog

Item	New CRO	CRO	Parts Catalog Index
1. Cassette	H081 3350	H081 3355	1-13- 8
2. Paper Size Detector Pin-LG	H081 3388	—	1-13-28
3. PCB - FCU	H081 6064	H510 6110	1- 5-49
4. Operators Manual	H081 4444	H510 4300	1- 3- *
5. Op-Port ass'y	H081 4725	H510 4200	1- 3-11
6. Standard Pin	H081 3409	—	1-11-78
7. Film - Regist Guide Rail - Left	H081 3521	—	1-13-17
8. Connector - Cover	H081 3558	—	1-11-82
9. Quick Dial List: NA	H081 4728	H510 4255	1- 3- 2



# Technical Bulletin

# No. GENERAL-004

**SUBJECT:** Black bands/lines on the received copy

**DATE:**

November 11th, 1993

PREPARED BY: H.Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

**CLASSIFICATION:**
☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

**MODEL:** USA only

CSO, CFO, CS1/CRO

## [Problem]

On the received copies, black bands or lines may be printed, especially on the right hand side.

## [Cause]

Toner or dust is attached to the charge corona wire.

## [Modification]

The electric current of the charge corona will be increased to avoid applying uneren charg to the master which is caused by a dirty corona wire. Because of the increase of the electric current, the distance between the grid plate and the corona wire will be changed to keep the charge on the master belt the same as before modification.

- H081 2870 → H081 2854 Eraser Ass'y
- H081 5030 → H081 5020 Power pack (CSO/CFO)
- H510 5030 → H510 5020 Power pack (CRO/CS1)

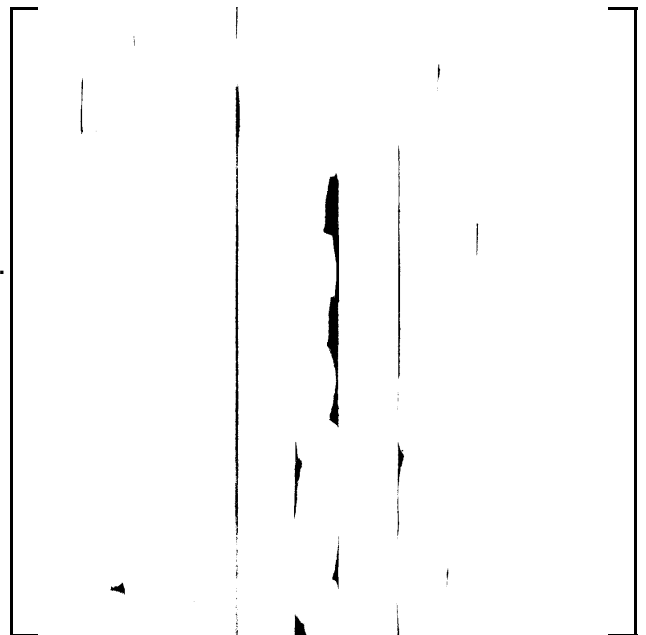
### <Eraser Ass'y>

- The thickness of the cleaning blade of the cleaner will be changed to increase the cleaning ability (4mm → 5mm)
- The distance between the grille plate and charge wire will be changed (6mm → 8mm)

### <Power pack>

- The range and initial value of the VRC (VR for the charge corona) will be changed.

The above modification will take place from the December 1st production.



**SUBJECT:** Black bands/lines on the received copy**DATE:**  
November 11th, 1993

---

## **[Countermeasure in the field]**

The countermeasure method depends on the CV (Copy Volume) of the machine.

- If the CV is less than 400 sheets/month  
Turn VRC on the power pack to the maximum (Turn the VR clockwise until it stops)
- If the CV is more than 400 sheets/month  
Change the Eraser to the modified one and turn VRC on the power pack to the maximum.

Note: The increase in the power of VRC may decrease the life time of the master unit, so for customers whose ACV/month is more than 400 sheets, the Eraser should be changed.

## **[Request]**

The essence of this problem is a dirty charge corona wire, so please do the following

- When a sales or service person visits a customer (at PM or EM), clean the charge corona wire with the built-in cleaner
- Advise the customer to clean the charge corona wire at a certain interval or if the customer sees black bands/lines on the received copy.





# Technical Bulletin

# No. GENERAL-005

**SUBJECT:** Black bands/lines on the received copy

**DATE:**

Feb. 3rd, 1994

PREPARED BY: H.Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

**CLASSIFICATION:**
☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

**MODEL:** Europe, Asia

CSO, CFO, CRO

## [Problem]

On the received copies, black bands or lines may be printed, especially on the right hand side.

## [Cause]

Toner or dust is attached to the charge corona wire.

## [Modification]

The electric current of the charge corona will be increased to avoid applying uneren charg to the master which is caused by a dirty corona wire. Because of the increase of the electric current, the distance between the grid plate and the corona wire will be changed to keep the charge on the master belt the same as before modification.

- H081 2870 → H081 2854 Eraser Ass'y
- H081 5030 → H081 5020 Power pack (CSO/CFO)
- H510 5050 → H510 5051 Power pack (CRO)

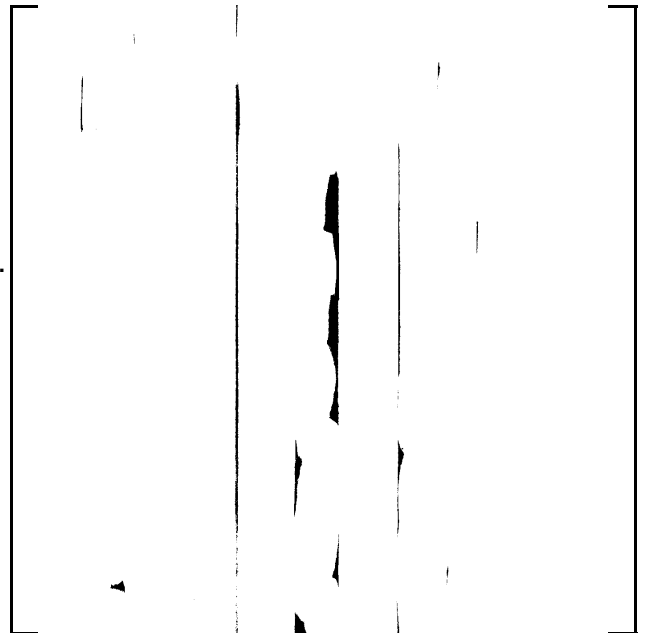
### <Eraser Ass'y>

- The thickness of the cleaning blade of the cleaner will be changed to increase the cleaning ability (4mm → 5mm)
- The distance between the grille plate and charge wire will be changed (6mm → 8mm)

### <Power pack>

- The range and initial value of the VRC (VR for the charge corona) will be changed.

The above modification will take place from the Feb. 1st production.



**SUBJECT:** Black bands/lines on the received copy**DATE:**  
Feb. 3rd, 1994

---

## **[Countermeasure in the field]**

The countermeasure method depends on the CV (Copy Volume) of the machine.

- If the CV is less than 400 sheets/month  
Turn VRC on the power pack to the maximum (Turn the VR clockwise until it stops)
- If the CV is more than 400 sheets/month  
Change the Eraser to the modified one and turn VRC on the power pack to the maximum.

Note: The increase in the power of VRC may decrease the life time of the master unit, so for customers whose ACV/month is more than 400 sheets, the Eraser should be changed.

## **[Request]**

The essence of this problem is a dirty charge corona wire, so please do the following

- When a sales or service person visits a customer (at PM or EM), clean the charge corona wire with the built-in cleaner
- Advise the customer to clean the charge corona wire at a certain interval or if the customer sees black bands/lines on the received copy.

**Technical Bulletin****No. GENERAL-008****SUBJECT:** Replacing the toner cassette**DATE:**

April, 11th, 1994

PREPARED BY:H. Yokoyama

CHECKED BY:

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required☐ Troubleshooting☐ Retrofit Information☐ Revision of service manual☒ Information only☐ Other

MODEL:

CSO, CFO, CRO, CS1

The instruction of the operator's manual for replacing the toner cassette (CTM) is wrong.  
We will insert the errata sheet to the operator's manual.

**Wrong:** 1. Switch off the machine.**Correct:** Keep the power switch on when replacing the toner cassette.



# Technical Bulletin

# No. GENERAL-009

**SUBJECT:** Vertical Black Lines

**DATE:**

July. 30, 1994

PREPARED BY: H.Yokoyama

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

**CLASSIFICATION:**
☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

**MODEL:**

CSO, CFO, CRO, CS1

## [Problem]

Vertical black lines appear on the printed image.

## [Cause]

The toner may stick on the Hot Roller, Fusing Stripper, Thermistor, and Thermostat and this toner may damage the surface of the Hot Roller. Then, during copying toner is transferred by the scratched part of the roller to cause vertical black lines on the printed image.

## [Countermeasure]

The material of the surface of the Hot Roller has been changed to prevent the toner from sticking on the Roller by the following modification

H0812100D → E

Because of the above modification, the vender has been changed.

## [Effective S/N]

H081-24, 40, 46, 51, 54, 59, 60: Oct., 1993 ~

H510-20: R8831000609 ~

21, 22, 27, 30, 40, 51, 59, 60: Nov., 1993 ~

H082-20, 23, 30, 40, 51, 59, 60: Nov., 1993 ~

H511-20, 21, 22, 27: Nov., 1993 ~

## [Action]

Clean the Fusing Stripper, Thermistor and Thermostat and take out the toner from them when visit the customer.

**SUBJECT:** Memory Back-up Battery

**DATE:**

Jan. 19, 1995

PREPARED BY: Y.Okunishi

CHECKED BY: S.Hamano

FROM: 2nd T.S. Section

CLASSIFICATION:

☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

MODEL:

CSO, CFO, CS1, LHO

### [Symptom]

Stored documents in the memory might be erased when the main power goes down.

A power failure report is printed with the following information.

- Memory Tx Files: Destination names or fax numbers are printed.
- Substitute Reception Files: The Sender's RTI or CSI is printed if they are programmed.  
CSO rejects incoming messages without RTI or CSI because of the factory setting.
- Memory Lock Files: Programmed Quick Numbers are printed.

### [Cause]

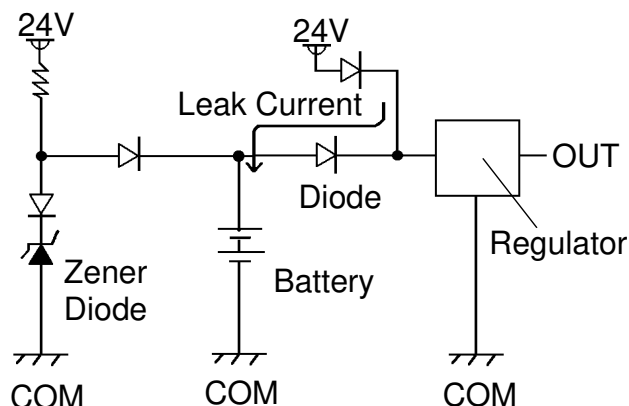
Power loss from the memory back-up battery on FCU caused by excessive charge current, for the following reasons.

(1) Leak current from Diode

The battery is charged after it is already fully charged. This type of battery is damaged if this occurs.

- (2) Excessive charge voltage (CFO, CS1, LHO) The target charge voltage was 6.2V against 6.4V or under which is recommended by the battery maker. This margin was too small for this battery.

(On CFO / CS1 FCU)



### [Modification]

See MB C Series-048A.



**SUBJECT:** Memory Back-up Battery

**DATE:**

Jan. 19, 1995

---

**[Action Taken]**

1. Install the modified FCU to deal with customer claims.
2. Request technicians not to turn off the main power if a document is stored in the memory.

**[Note]**

- Stored data other than documents is not erased even if the main power goes down.

**SUBJECT:** Toner Spillage during Transportation**DATE:**

Jul. 15.1995

PREPARED BY: Y. Okunishi

CHECKED BY: M. Iwasa

FROM: 2nd T.S. Section

**CLASSIFICATION:**☐ Action Required☐ Troubleshooting☐ Retrofit Information☐ Revision of service manual☐ Information only☒ Preventive Action**MODEL:**

All laser plain paper fax machines

**Background:** Machines have been sent to customers after pre-installation and sent back to the service center for repair.

**Problem:** Toner had spread inside the machine during transportation.

**Cause:** Toner leaked from the development unit, the toner cartridge, or somewhere in the toner path during transportation.

**Preparation for transportation:**

## (1) Transportation without heavy vibration

(Example: A technician should carry the machine with care.)

## • F/L series fax machines:

The development unit can be connected to a CTM with toner.

However, the toner path under the CTM must be covered by some adhesive tape. See the attached illustration.

## • C series fax machines:

Follow RTB No. CSO-006

## • Other order machines:

Follow (2) below.

## (2) Transportation with heavy vibration

(If a third party handles the transportation, follow this procedure.)

## • F/L series fax machines:

Remove the development unit and the CTM from the machine if toner has been installed. They must not be delivered in the same box as the machine, because they contain toner which may spill out. The toner inside the machine must be cleaned away or the toner path under the CTM must be covered with tape.

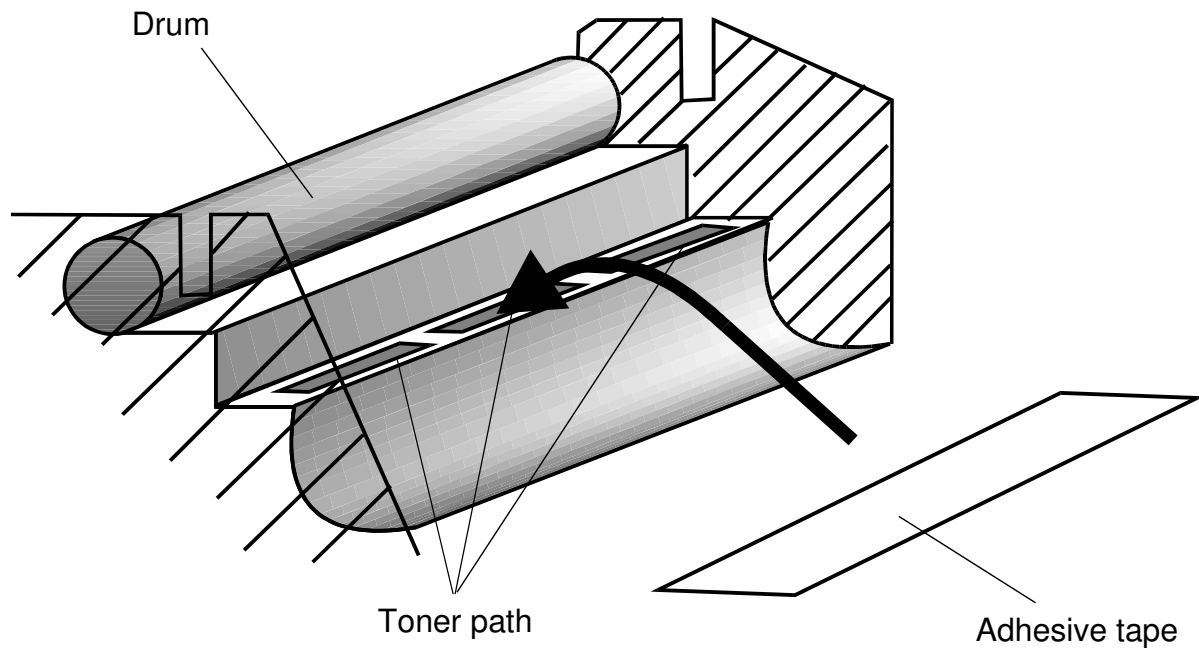
## • C series fax machines and others:

Remove the development unit and CTM (or Toner Cartridge) from the machine if toner has been installed, and clean the toner from inside the machine.

The removed development unit and CTM must not be delivered in the same box as the machine.

**SUBJECT:** Toner Spillage during Transportation**DATE:**

Jul. 15.1995

**Inside of FX6 and LSO**

Note: Adhesion of the tape should not be strong. Otherwise, it may not be taken off cleanly from the machine, or the toner path may be damaged when it is taken off.

Please request tape samples for the FX6 and LSO from Ricoh.





# Technical Bulletin No. Multi-003

**SUBJECT:** Harness for PFU

**DATE:**

July 31, 1995

PREPARED BY: Y. Okunishi

FROM: 2nd T.S. Section

CHECKED BY: M. Iwasa

**CLASSIFICATION:**
☒ Action Required

☐ Revision of service manual

☐ Troubleshooting

☐ Information only

☐ Retrofit Information

☐ Other

 MODEL: Fax3500L(USA),  
 NRG9665(USA), Savin Fax3670  
 Fax5600L(USA),  
 Lanier Fax7550, Omnifax L540

**Problem:** The Paper Feed Unit may not work correctly.

**Cause:** Wires of the harness (H511 5528) from the FCU to the relay connectors for the paper feed unit (PFU) are not allocated properly.

**Affected machines:**

Fax 3500L	S/N R8750600001 ~ R8750700600
NRG9665	S/N 6355060620 ~ 6355060671
Savin Fax 3670	S/N 0950600001 ~ 0950700120
Fax 5600L	S/N M2050600001 ~ M2050700500
Lanier Fax 7550	S/N L7555060677 ~ L7555060780
Omnifax L540	S/N L5405060271 ~ L5405060330

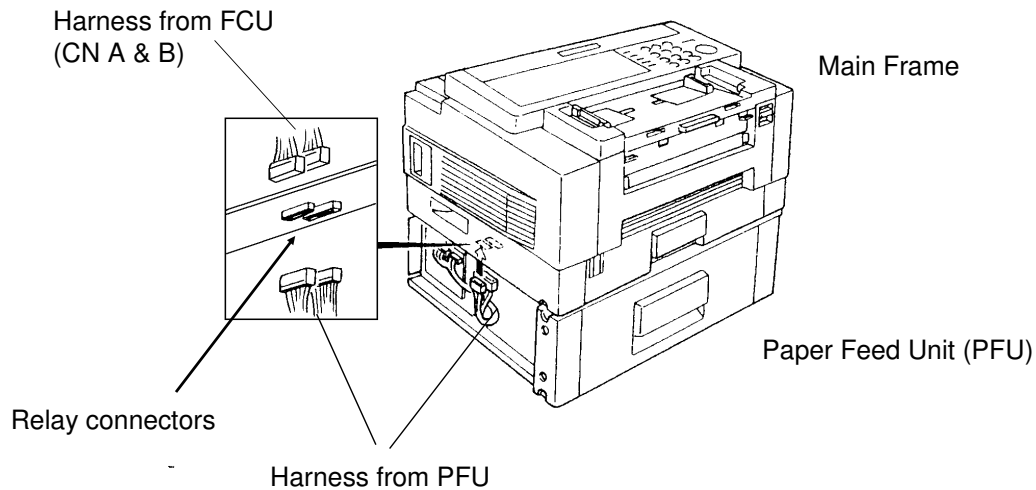
**Action Required:**

The harness should be checked before the start of the PFU installation because the FCU or the PFU PCB may become damaged.

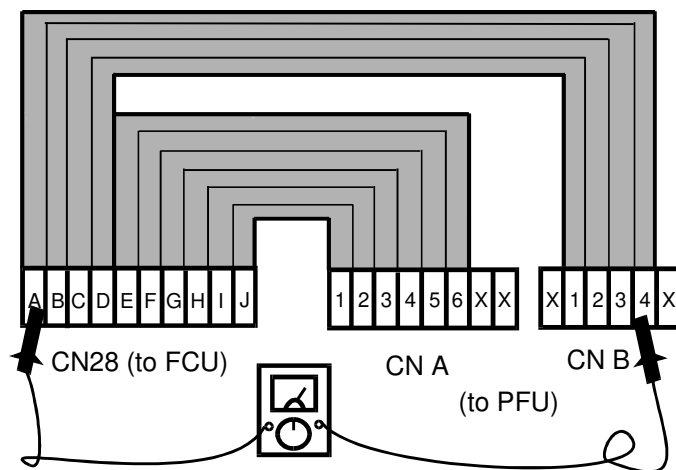
Follow the attached procedure before PFU installation and change the harness to a new one if it is bad.

## Harness Check Procedure

1. Remove the Rear Cover and Left Cover.
2. Unplug the connector CN28 on the FCU.
3. Unplug the connectors CN A and CN B on the relay connector board located at the bottom of Main Frame.



4. Check the continuity of the harness pin by pin using a multimeter.  
See below for what the correct allocation of all wires of the harness should be.



View from the side without the plastic cover

### Check the continuity of the following.

A of CN28	to	4 of CN B	E of CN28	to	6 of CN A
↓		↓	↓		↓
D of CN28	to	1 of CN B	J of CN28	to	1 of CN A



# Technical Bulletin No. Multi - 004A

**SUBJECT: Fusing Unit**
**DATE:**

Oct. 15, 1996

PREPARED BY: Y.Okunishi

CHECKED BY: S.Fujii

FROM: Quality Assurance Center

**CLASSIFICATION:**
☐ Action Required

☒ Troubleshooting

☐ Retrofit Information

☐ Revision of service manual

☐ Information only

☐ Other

**MODEL:**

 CSO, CRO, CS1, CFO,  
CGO

A: "NOTE" is added to page 2/3.

## SYMPTOM:

Background on received and copied documents.

## Cause:

Hot Roller failure as a result of not changing the Cleaning Pad at the 10K PM. Failure to change the Cleaning Pad results in dirty Strippers and Thermostat and then Hot Roller failure.

As the machine warms up from the standby temperature to the fusing temperature, it is exposed to slight overheating before the temperature levels off. This leads to softening of the Teflon layer on the Hot Roller. As a result, the Teflon layer peels off in the areas where the Strippers and other parts come in contact with it. Dirty Strippers and Thermostat put more stress on the Hot Roller and cause premature Hot Roller failure.

Also, the dirty Thermistor causes the Hot Roller to overheat and fail prematurely.

A second cause can be a damaged (bent ) Thermistor from a previous service visit. The damaged Thermistor causes the Hot Roller to overheat and fail prematurely.

## SOLUTION:

Ricoh recommends replacing the Cleaning Pad at the 10K PM. However, this is sometimes ignored. Realizing this, Ricoh will conduct the following modifications to protect the Hot Roller from the failure mentioned above.

No.	Old Part	New Part	Description	Qty Used	Interchangeability
1	H0812121	H0812123	Stripper Spring	2 → 2	X / O
2	H0812120	H5132119	Stripper (Separation Pawl)	2 → 2	X / O
3	H0812137	H0815035 H0812141 03130080B	Thermistor Assembly Thermistor Bracket Screw - M3x8	1 → 0 1 → 1 1 → 1 0 → 1	X / O as an assembly
4	H0812100	H0819600	Hot Roller Kit	1 → 1	X / O



# Technical Bulletin

# No. Multi - 004A

**SUBJECT: Fusing Unit**
**DATE:**

Oct. 15, 1996

## Hot Roller Kit:

The hot rollers shipped from the SPC in Japan will be replaced by the Hot Roller Kit in July.

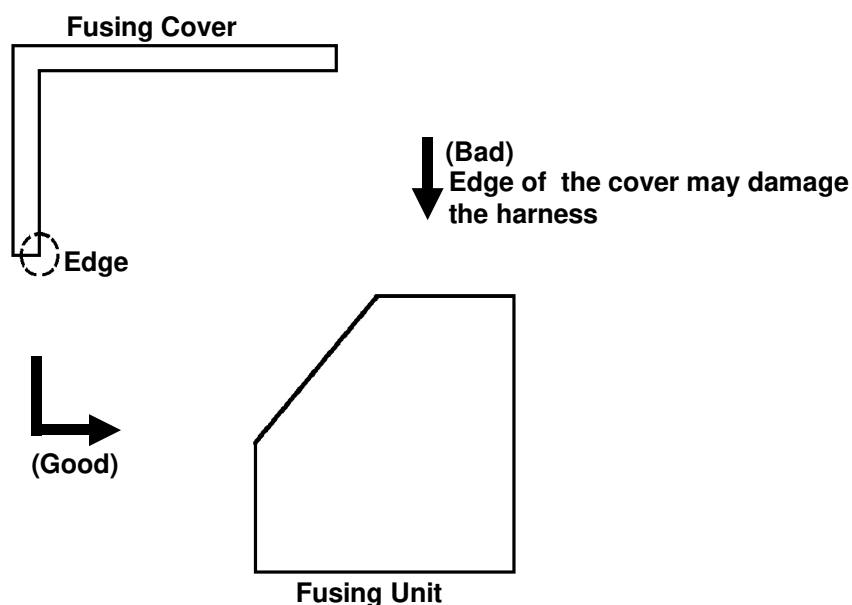
This kit will be comprised of the following: Hot Roller, Cleaning Pad, Thermistor, Thermistor Bracket, Screw, Strippers (2), Stripper Springs (2) and Installation Sheet. The individual Hot Roller will be no longer available. The Cleaning Pad will continue to be a Service Part.

Ricoh recommends change of the above modified parts and Cleaning Pad when the failed Hot Roller is replaced with the new one.

## NOTE

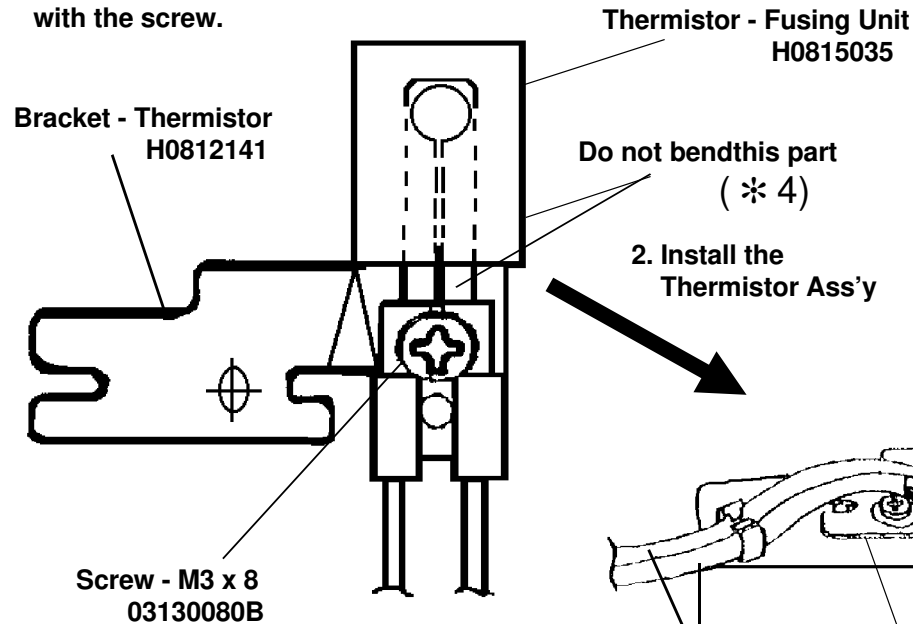
**(A): Please refer to the following instructions and fix the cover to the fusing unit and check that the harness is not pinched before installing the fusing unit in the machine.**

**If the metal wire of the harness contacts the thermistor bracket, a no power condition may occur. Please check the thermistor harness if this occurs.**

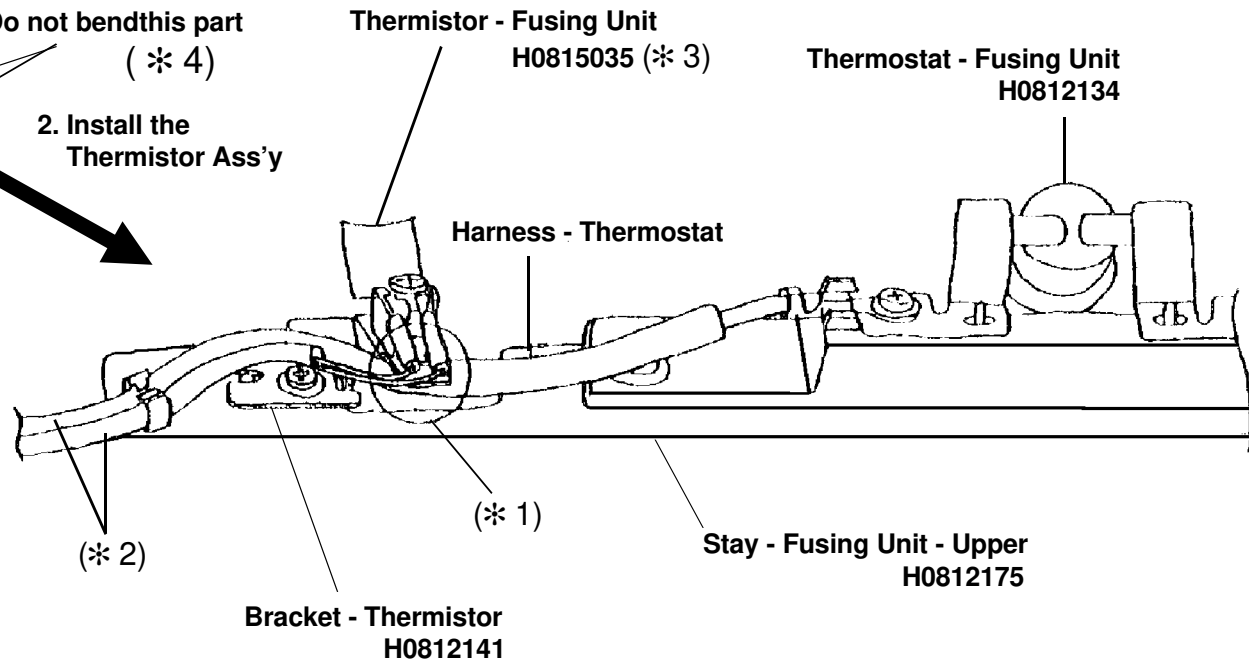


## Installation Procedure for the Thermistor

1. Assemble the thermistor and the bracket with the screw.



2. Install the Thermistor Ass'y



- Note: \* 1 Place the thermostat harness under the part of the bracket.
- \* 2 Do not cross the thermostat harness and the thermistor harness.
- \* 3 Push the thermistor head (sensor) gently against the hot roller with a finger to make sure that the thermistor head touches the hot roller surface. Do not push it strongly.
- \* 4 Do not bend the thermistor neck (spring plate) when installing or cleaning it .  
If the thermistor is bent, replace it.

Model: K105 (FAX4000L)		Date: 15-Sep-97	No: 015
Subject: 14.4 Kbps Modem		Prepared by: Y.Okunishi	
From: QAC 2nd Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting <input type="checkbox"/> Mechanical <input type="checkbox"/> Paper path <input type="checkbox"/> Other (      )	<input type="checkbox"/> Part information <input type="checkbox"/> Electrical <input checked="" type="checkbox"/> Transmit/receive	<input type="checkbox"/> Action required <input type="checkbox"/> Service manual revision <input type="checkbox"/> Retrofit information

The V.33 standard for 14.4 kbps modems has not been supported by FX4 and FX6MK2 because V.33 has been deleted from the ITU (CCITT) recommendations.

So, data transfer at 14.4 kbps speed between a FAX4000L which supports only V.33 and products which support only V.17 will not be successful, and 9.6 kbps is the highest speed for data transfer between them .

See the following list.

Only V.33 is supported	V.33 and V.17 are supported	Only V.17 is supported
K105 (FAX4000L)	CFO, CS1, CGO	FX6MK2, FX4

RC	RE	ASIA	
★			

Model: General		Date: 31-Oct-97	No: 011
Subject: Year 2000 Problem		Prepared by: Y.Okunishi	
From: QAC 2nd Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input type="checkbox"/> Other (       )		

### Check Items

The following functions for which the clock timer is used were checked to see whether or not they will function correctly at 0:00 on Jan. 1, 2000.

- 1) Display and print of the date and time  
The year must be changed to 2000 or 00 from 1999 or 99 and the date must be kept correctly after the start of the year 2000.
- 2) Clock adjustment  
The date and time can be adjusted after the start of the year 2000.
- 3) Send later mode with memory and without memory  
The dialling time must be at the set time after the start of the year 2000.
- 4) Automatic re-transmission.  
When a communication error happens, the machine dials the same destination again automatically at an interval. This must function correctly after the start of the year 2000.
- 5) Weekly timer and night timer  
The energy saver mode (fusing unit) control must work correctly.
- 6) Displayed date after a power failure  
The correct date must be kept by the battery back-up feature.

### Models Checked

- 1) K50 series (FAX10, 20, 60, etc.)
- 2) K70 series (FAX90, 95, 105, etc.)
- 3) K90 series (FAX80, 85, 75, 86, etc.)
- 4) LE series (FAX08, 09, Phone fax for ATT, etc.)
- 5) B series (B1, RF810, FAX12, FAX300, etc.)
- 6) ZB series (FAX220, FAX240, Innfax, etc.)
- 7) BARBARA series (RF01, 02, 03, 05, 06, etc.)
- 8) OX series (FAX21, 22)
- 9) PF series (PF-1, PF-2)
- 10) A series (FAX500, 550, etc.)

Model: General

Date: 31-Oct-97

No: 011

- 11) B60 series (FAX170, 180, etc.)
- 12) K100 series (FAX1000L, 1010L, etc.)
- 13) K105 series (FAX4000L, etc.)
- 14) K200 series (FAX7000L, etc.)
- 15) KV series (FAX2800L, 1200L, etc.)
- 16) C series (FAX3000L, 4500L, 5600L, etc.)
- 17) L80 (MV715)
- 18) I series (FAX800, 880, 680, etc.)
- 19) FL series (FAX2700L, 4700L, MV310, etc.)
- 20) FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.)
- 21) L20 series (Aficio FX10)

#### Problems found

- 1) AF0 (FAX500, 550, etc.), CS0 (FAX3000L, 3100L, 3200L, etc.)
  - a) The day of week that appears on the display only in the clock adjustment mode goes back to SUNDAY every time the clock is adjusted after the start of the year 2000.  
  
So, the programmed weekly timer does not work correctly.  
  
If the clock is not adjusted after the start of the year 2000, the date and the day of the week are kept correctly.
  - b) Clock adjustment is available only for years 91 through 99. The other years cannot be set. (Month, day, and time can be adjusted.)
- 2) K200 (FAX7000L)
  - a) Clock adjustment is available only for years 88 through 99. The other years cannot be set. (Month, day, and time can be adjusted.)
  - b) The send later mode does not function (no dialling occurs) if it passes the time into the year 2000.  
No report is printed and the remaining message in the memory is not cleared automatically but it can be cleared by user operation.
  - c) Automatic re-transmission is not done if the year 2000 starts after the transmission failure.  
The remaining message in the memory is not cleared automatically but it can be cleared by user operation.
  - d) The display year is returned back to 88 after a power failure after the start of the year 2000.



Model: General

Date: 31-Oct-97

No: 011

The other functions in these models work correctly.

Schedule for the countermeasure ROMs

- 1) AF0 (FAX500, 550, etc.), CS0 (FAX3000L, 3100L, 3200L, etc.)  
In January 1998.
- 2) K200 (FAX7000L)  
In April 1998.

RC	RE	ASIA	

**MB Correction**

Reissue date: 15-Nov-97

The items in bold italic have been corrected or added.

Model: General		Date: 31-Oct-97	No: 011A
Subject: Year 2000 Problem		Prepared by: Y.Okunishi	
From: QAC 2nd Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input checked="" type="checkbox"/> Other ( <b><i>Info only</i></b> )		

Check Items

The following functions for which the clock timer is used were checked to see whether or not they will function correctly at 0:00 on Jan. 1, 2000.

- 1) Display and print of the date and time  
The year must be changed to 2000 or 00 from 1999 or 99 and the date must be kept correctly after the year 2000.
- 2) Clock adjustment  
The date and time can be adjusted after the time becomes the year 2000.
- 3) Send later mode with memory and without memory  
The calling time must be the set time after the time becomes the year 2000.
- 4) Automatic re-transmission.  
When the communication error happens, the machine calls to the same destination again automatically with an interval. This must function correctly after the time becomes the year 2000.
- 5) Weekly timer and night timer  
The energy saver mode (heater) control must work correctly.
- 6) Displayed date after a power failure  
The correct date must be kept by the battery.

Models Checked

- 1) K50 series (FAX10, 20, 60, etc.)
- 2) K70 series (FAX90, 95, 105, etc.)
- 3) K90 series (FAX80, 85, 75, 86, etc.)
- 4) LE series (FAX08, 09, Phone fax for ATT, etc.)
- 5) B series (B1, RF810, FAX12, FAX300, etc.)
- 6) ZB series (FAX220, FAX240, Innfax, etc.)
- 7) BARBARA series (RF01, 02, 03, 05, 06, etc.)

Model: General	Date: 31-Oct-97	No: 011A
----------------	-----------------	----------

- 8) OX series (FAX21, 22)
- 9) PF series (PF-1, PF-2)
- 10) A series (FAX500, 550, etc.)
- 11) B60 series (FAX170, 180, etc.)
- 12) K100 series (FAX1000L, 1010L, etc.)
- 13) K105 series (FAX4000L, etc.)
- 14) K200 series (FAX7000L, etc.)
- 15) KV series (FAX2800L, 1200L, etc.)
- 16) C series (FAX3000L, 4500L, 5600L, etc.)
- 17) L80 (MV715)
- 18) I series (FAX800, 880, 680, etc.)
- 19) FL series (FAX2700L, 4700L, MV310, etc.)
- 20) FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.)
- 21) L20 series (Aficio FX10)

#### Problem found

Most of the models except the following models, will not experience any problems.

- 1) AFO (FAX 500/550/580, NGR 9620, Infotec 3301/3305, Nashua F492)  
CSO (FAX 3000/3100/3200, NGR 9660/9661/9662, Omnifax L40/41,  
Savin FAX 3660/3620, Infotec 3660)  
CS1 (FAX 3500L, NRG 9665, Omnifax L46, Savin FAX 3670)  
CRO (FAX 2500L/2600L, NRG 9650, Omnifax L42, Savin FAX 3630, Infotec 3661)
  - a) The day of week, that appears on the display only in the clock adjustment mode, is returned back to SUNDAY every time when the clock adjustment is done after the time becomes the year 2000.  
  
So, the programmed weekly timer does not work correctly. **(AFO' s do not have the weekly timer.)**  
  
If the clock adjustment is not done after the time becomes the year 2000, the date and the day of week is kept correctly.
  - b) Clock adjustment is available only for the year 91 through 99. The other years cannot be set. (Month, day and time can be adjusted.)

Model: General

Date: 31-Oct-97

No: 011A

- 2) K200 (FAX7000L)
- a) Clock adjustment is available only for the years 88 through 99. The other years cannot be set. (Month, day and time can be adjusted.)
  - b) The send later mode does not function (no calling happens) if it passes the time into the year 2000.  
No report is printed and the rest message in the memory is not cleared automatically but it is cleared by the user operation.
  - c) Automatic re-transmission is not done if the time becomes the year 2000 in the interval after the transmission failure.  
The rest message in the memory is not cleared automatically but it is cleared by the user operation.
  - d) The display year is returned back to 88 after the power failure after the time becomes the year 2000.

The other functions in these models work correctly.

Schedule of the countermeasure ROMs

- 1) AFO, CSO, CS1, CRO:  
In January 1998.
- 2) K200(FAX7000L):  
In April 1998.

RC	RE	ASIA	
*	*	*	

**MB Correction**

Reissue date: 15-Jan-98

The items in bold italic have been corrected or added.

Model: General		Date: 15-Jan-98	No: 011 <i><b>B</b></i>
Subject: Year 2000 Problem		Prepared by: Y.Okunishi	
From: QAC 2nd Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input checked="" type="checkbox"/> Other (Info only)		

Check Items

The following functions for which the clock timer is used were checked to see whether or not they will function correctly at 0:00 on Jan. 1, 2000.

- 1) Display and print of the date and time  
The year must be changed to 2000 or 00 from 1999 or 99 and the date must be kept correctly after the year 2000.
- 2) Clock adjustment  
The date and time can be adjusted after the time becomes the year 2000.
- 3) Send later mode with memory and without memory  
The calling time must be the set time after the time becomes the year 2000.
- 4) Automatic re-transmission.  
When the communication error happens, the machine calls to the same destination again automatically with an interval. This must function correctly after the time becomes the year 2000.
- 5) Weekly timer and night timer  
The energy saver mode (heater) control must work correctly.
- 6) Displayed date after a power failure  
The correct date must be kept by the battery.

Models Checked

- 1) K50 series (FAX10, 20, 60, etc.)
- 2) K70 series (FAX90, 95, 105, etc.)
- 3) K90 series (FAX80, 85, 75, 86, etc.)
- 4) LE series (FAX08, 09, Phone fax for ATT, etc.)
- 5) B series (B1, RF810, FAX12, FAX300, etc.)
- 6) ZB series (FAX220, FAX240, Innfax, etc.)
- 7) BARBARA series (RF01, 02, 03, 05, 06, etc.)

Model: General

Date: 15-Jan-98

No: 011 **B**

- 8) OX series (FAX21, 22)
- 9) PF series (PF-1, PF-2)
- 10) A series (FAX500, 550, etc.)
- 11) B60 series (FAX170, 180, etc.)
- 12) K100 series (FAX1000L, 1010L, etc.)
- 13) K105 series (FAX4000L, etc.)
- 14) K200 series (FAX7000L, etc.)
- 15) KV series (FAX2800L, 1200L, etc.)
- 16) C series (FAX**2500L**, 3000L, **3500L**, 4500L, 5600L, etc.)
- 17) L80 (MV715)
- 18) I series (FAX800, 880, 680, **MV74**, etc.)
- 19) FL series (FAX2700L, **3700L**, 4700L, MV310, etc.)
- 20) FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.)
- 21) L20 series (Aficio FX10)

#### Problem found

Most of the models except the following models, will not experience any problems.

- 1) AFO (FAX 500/550/580, **NRG** 9620, Infotec 3301/3305, Nashua F492)  
CSO (FAX 3000/3100/3200, **NRG** 9660/9661/9662, Omnifax L40/41,  
Savin FAX 3660/3620, Infotec 3660)  
CS1 (FAX 3500L, NRG 9665, Omnifax L46, Savin FAX 3670)  
CRO (FAX 2500L/2600L, NRG 9650, Omnifax L42, Savin FAX 3630, Infotec 3661)
  - a) The day of week, that appears on the display only in the clock adjustment mode, is returned back to SUNDAY every time when the clock adjustment is done after the time becomes the year 2000.  
  
So, the programmed weekly timer does not work correctly. (AFO's do not have the weekly timer.)  
  
If the clock adjustment is not done after the time becomes the year 2000, the date and the day of week is kept correctly.
  - b) Clock adjustment is available only for the year 91 through 99. The other years cannot be set. (Month, day and time can be adjusted.)

Model: General

Date: 15-Jan-98

No: 011 **B**

- 2) K200 (FAX7000L)
- a) Clock adjustment is available only for the years 88 through 99. The other years cannot be set. (Month, day and time can be adjusted.)
  - b) The send later mode does not function (no calling happens) if it passes the time into the year 2000.  
No report is printed and the rest message in the memory is not cleared automatically but it is cleared by the user operation.
  - c) Automatic re-transmission is not done if the time becomes the year 2000 in the interval after the transmission failure.  
The rest message in the memory is not cleared automatically but it is cleared by the user operation.
  - d) The display year is returned back to 88 after the power failure after the time becomes the year 2000.

The other functions in these models work correctly.

Schedule of the countermeasure ROMs

- 1) AFO, CSO, CS1, CRO:  
In January 1998.
- 2) K200(FAX7000L):  
In April 1998.

RC	RE	ASIA	
*	*	*	

Model: General		Date: 15-Apr-98	No: 014
Subject: Action Plan for the Year 2000 Issues		Prepared by: Y.Okunishi	
From: QAC Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input checked="" type="checkbox"/> Other (Info only)		

The year 2000 issue was explained in RTB No. General-011B.

That RTB explains only the technical matters of what will happen after the year 2000 in some models, and the countermeasures.

At this time, we would explain how to talk with customers about the year 2000 issues related to fax machines.

Basically, we can say to the customers that there is no major issue related to basic operation after the year 2000, and they don't need to take any preventative action before the year 2000.

The only thing that the customers need to know is that the following operations will be changed after the year 2000.

1. AF0 (FAX 500/550/580, NRG 9620, Infotec 3301/3305, Nashua F492)  
 CS0 (FAX 3000/3100/3200, NRG 9660/9661/9662, Omnifax L40/41,  
 Savin FAX 3660/3620, Infotec 3660)  
 CS1 (FAX 3500L, NRG 9665, Omnifax L46, Savin FAX 3670)  
 CR0 (FAX 2500L/2600L, NRG 9650, Omnifax L42, Savin FAX 3630, Infotec 3661)

First, please do not forget to inform the customers that they don't need to do anything if they do not go into the clock adjustment mode.

## A) Adjustment of the year

### A-1) For the year 2000

- ① Set the clock to 11:59 PM (or 23:59) on December 31 1999, and wait for one minute.
- ② The year changes to 2000 automatically, then set the current time.  
 (Do not change the year.)

### A-2) For the year 2001

- ③ After the above step ①, set the clock to 11:59 PM (or 23:59) on December 31 2000, and wait for one minute.
- ④ The year changes to 2001 automatically, then set the current time.  
 (Do not change the year.)

### A-3) For years 2002 and later, repeat the same procedure as above.



Model: General

Date: 15-Apr-98

No: 014

**B) Adjustment of the weekly timer (Heater timer) ....Except AF0**

This is only for customers who use the weekly timer. (We do not think that many customers are using this function.)

Please recommend adjusting the timer on Sunday if the customer can do it.

If they cannot do it on Sunday, the ROM should be changed to the new one.

The new ROM includes the countermeasure for the above A) also.

**2. K200 (FAX7000L)****A) Adjustment of the year**

First, please do not forget to inform the customers that they don't need to do anything if they do not go into the clock adjustment mode.

**A-1) For the year 2000**

①Set the clock to 11:59 PM (or 23:59) on December 31 1999, and wait for one minute.

②The year changes to 2000 automatically, then set the current time.

(Do not change the year.)

**A-2) For the year 2001**

③After the above step ①, set the clock to 11:59 PM (or 23:59) on December 31 2000, and wait for one minute.

④The year changes to 2001 automatically, then set the current time.

(Do not change the year.)

**A-3) For years 2002 and later**

Repeat the same procedure as above.

If the customer switches off the machine after the year 2000, the year displayed returns to 1988. In this case, follow the above procedure to adjust the clock.

**B) Send later mode**

Please notify the customer that they should not use send later mode on December 31st 1999, if the transmission will be done on the next day.

If the customer cannot guarantee that they will follow this advice, the ROM should be changed.

Model: General	Date: 15-Apr-98	No: 014
----------------	-----------------	---------

Schedule of the countermeasure ROMs

- 1) AFO, CSO, CS1, CRO:  
In May 1998.
- 2) K200 (FAX7000L):  
In May 1998.

\*Both are delayed.

RC	RE	ASIA	
*	*	*	

Model: LSO, CRO, CS1, AFO, AF2, K200		Date: 31-May-98	No: Multi - 008
Subject: ROMs for the year 2000 problem		Prepared by: Y.Okunishi	
From: QAC Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input checked="" type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input type="checkbox"/> Other (      )		

Attached please find the list of the ROMs for the year 2000 problem and the procedure for making R200 ROMs from the ROM files.

Note:

- Please refer to RTB nos. General 11 and 14 for details.
- 8 ROMs for the K200 are combined in one file.

RC	RE	ASIA	
*	*	*	

Model: LSO, CRO, CS1, AFO, AF2, K200	Date: 31-May-98	No: Multi - 008
--------------------------------------	-----------------	-----------------

ROMs for the year 2000

May 29, 1998  
Y.Okunishi

Product Code	New ROM No.	Test	File name	Check sum	ROM Code	Model code	Model	Brand	Area	Sold from	Sold by	No. of sold units	Note
CSO	H0817138	yes	CSO7138	8552	c30usa	H081-20	3000L	RICOH	US	91/12	93/4	16,747	2M ROM (1ROM/unit)
						23	3200L			91/12	95/11	18,242	
						24	3100L			93/2	95/2	21,863	
						21	9660	NRG		92/3	92/7	71	
						22	9661			92/3	94/2	1,651	
						26	3660	SAVIN		92/2	93/4	1,372	
						27	3620			92/1	93/4	1,917	
						TOTAL							
	H0817136A	yes	CSO7136S	77A7	c30usa•	25	2600L	RICOH	US	94/9	95/3	8,000	
	H0817139E	yes	CSO7139E	3C77	c30tel	28	L40 L41	Omnifax	US	92/1	93/5	5,181	
						29	L41			92/1	93/5	8,008	
						TOTAL							
	H0817124A	yes	CSO7124A	0772	c30eur	40	3000L 3000L	RICOH	Europe	92/3	95/11	37,716	
						46	3000L	RICOH	Switzerland	92/10	95/6	4,179	
						60	9660	NRG	Europe	93/3	95/8	15,659	
						TOTAL							
	H0817123A	no	CSO7123A	0078	c30fra	70	3000LF	RICOH	France	93/4	95/9	393	
						80				92/4	95/9	6,206	
						90	9660F	NRG		92/4	95/9	2,164	
						TOTAL							
	H0817121A	yes	CSO7121A	FA57	c30hcs	30	3660	Infotec	Europe	92/10	94/8	15,528	
	H0817122A	yes	CSO7122A	D225	c30asi	51	3000L	RICOH	Asia	92/3	96/10	18,523	
						59	9660	NRG		94/3	96/4	2,837	
						55	-	Ricoh	Korea			?	
						TOTAL							
	H0817140M	yes	CSO7140M	859C	c30tai	23	3000L	RICOH	Taiwan	92/3	95/11	1,251	
	H0817128B	no	CSO7128B	E8C5	c30chi	54	3000L	RICOH	China	93/7	95/11	981	
	H0817159N	yes	CSO7159N	C3CE	c30opt	H151-65•SW:HCS•,H151-73(•:RE),H151-83(•:GES)		Option	Europe			?	
CS1	H5117150B	yes	CS17150B	6A91	c31usa	H511-20	3500L	RICOH	US	93/6	96/3	31,766	
						21	9669	NRG		93/6	95/9	700	
						22	L46	Omnifax		93/6	95/12	11,472	
						27	3670	SAVIN		93/7	95/9	3,106	
						TOTAL							
CRO	H5107121B	yes	CRO7121B	23AB	c60usa	H510-20	2500L	RICOH	US	93/5	95/4	26,535	
						21	9650	NRG		93/7	95/7	832	

						22	L42	Omnifax		93/9	95/3	6,848	
						27	3630	SAVIN		93/7	95/3	2,136	
						TOTAL						36,351	
	H5107120B	yes	CRO7120B	F5BF	c60eur	30	3661	Infotec	Europe	93/9	94/9	5,564	
						40	2500L	RICOH		93/9	95/7	11,418	
						60	9650	NRG		93/9	95/8	5,632	
						TOTAL						22,614	
	H5107123B	yes	CRO7123B	0E88	c60fra	33	3661F	Infotec	France	94/4	95/9	242	
						43	2500LF	RICOH		93/10	95/9	2,012	
						63	9650F	NRG		93/10	95/9	931	
						TOTAL						3,185	
	H5107132G	yes	CRO7132G	37F5	c60asi	51	2500L	RICOH	Asia	93/12	96/1	5,955	
						59	9650	NRG		94/1	95/9	1,107	
						TOTAL						7,062	
	H5107131B	yes	CRO7131B	23A3	c60tai	53	2500L	RICOH	Taiwan	94/10	97/6	777	
AFO	H0847130K	yes	AFO7130K	D8D3	a20usa	H084-20	500	RICOH	Taiwan	92/4	93/4	365	
	H0847140L	yes	AFO7140L	6B6A	a20eur	44	500	RICOH	Europe	91/8	94/10	6,817	
	H0847142H	no	AFO7142H	94D0	a20fra	83	500	RICOH	France	92/4	94/3	1,231	
	H0847143L	yes	AFO7143L	350F	a20hcs	34	3301	Infotec	Europe	91/8	95/4	2,892	
	H0847141L	yes	AFO7141L	3F13	a20asi	51	500	RICOH	Asia	91/10	96/11	13,696	
						56	500	RICOH	Vietnam	92/11	94/5	1,650	KD
						TOTAL						15,346	
	H0847150K	yes	AFO7150K	2A40	a20opt	H15146(•:RICOH),H151-54(SW:HCS)	-	Option	Europe			?	Language Kit
AF1	H0857135B	yes	AF17135B	FCDF	a21chi	H085-54	580	RICOH	China	93/8	96/5	5,040	
AF2	H0867130K	yes	AF27130K	9BDF	a22usa	20	550	RICOH	US	92/1	96/2	14,934	
	H0867140L	yes	AF27140L	3C35	a22eur	44	550	RICOH	Europe	91/8	95/3	10,824	
						90	9620	NRG		92/4	93/9	1,446	
						TOTAL						12,270	
	H0867142H	checki ng	AF27142H	583D	a22fra	73	3305	Infotec	France	-	-	0	RIF is checking the ROM.
						83	550	RICOH		95/4	95/9	100	
						93	9620	NRG		92/4	94/9	170	
						TOTAL						270	
	H0867143L	yes	AF27143L	0CE0	a22hcs	34	3305	Infotec	Europe	91/8	95/9	6,583	
	H0867141L	yes		DAD8	a22asi	51	550	RICOH	Asia	92/2	96/2	12,181	
						59		Nashua	Asia	92/2	96/1	1,662	
						TOTAL						13,843	
	H0867131A	yes	AF27131A	9BC3	a22tai	53	550	RICOH	Taiwan	94/8	96/2	109	
	H0867150L	yes	AF27150L	E725	a22opt	H15147(•:RICOH),H151-55(SW:HCS),H151-93(•:NASHUA)	-	Option	Europe			?	Language Kit

K200	H0087260J H0087261J H0087262J H0087263J H0087264J H0087265J H0087266J H0087267J	yes	H0087260	FC1E EBE0 B88F 08B2 7AA0 C2F0 28D7 CE5E	USA	20	7000L	RICOH	US	89/9	95/6	<b>790</b>	1M ROM (8 ROMs/unit)
	H0087270F H0087271F H0087272F H0087273F H0087274F H0087275F H0087276F H0087277F	yes	H0087270	451C 78BA 3FA2 C44F 7B14 4DA3 7C16 380B	GMN	30	7000L	RICOH	Germany	89/10	93/7	<b>119</b>	
	H0087320F H0087321F H0087322F H0087323F H0087324F H0087325F H0087326F H0087327F	yes	H0087320	4527 7967 3FA2 C44F 7B14 4DA3 7C16 380B	GMN	40	6765	Infotec	Germany	89/9	90/8	<b>180</b>	
	H0087280H H0087281H H0087282H H0087283H H0087284H H0087285H H0087286H H0087287H	yes	H0087280	1956 CB16 4E46 C3F4 799D 33A8 3EE5 6478	ENG	41	7000L	RICOH	UK	89/10	94/8	<b>85</b>	
	H0087330H H0087331H H0087332H H0087333H H0087334H H0087335H H0087336H H0087337H	yes	H0087330	1D20 64B7 4FAF D4A1 7830 1EBB C591 854A	ENG	31	6765	Infotec	UK	89/10	92/12	<b>125</b>	
	H0087290C H0087291C H0087292C H0087293C H0087294C H0087295C H0087296C H0087297C	yes	H0087290	4A5D 5B24 416A C54D 8882 683D D331 E525	ITY	42	7000L	RICOH	Italy	89/10	91/10	<b>29</b>	

H0087340C H0087341C H0087342C H0087343C H0087344C H0087345C H0087346C H0087347C	yes	H0087340	4A68 5BD1 416A C54D 8882 683D D331 E525	ITY	32	6765	Infotec	Italy	89/10	92/9	41
H0087300E H0087301E H0087302E H0087303E H0087304E H0087305E H0087306E H0087307E	yes	H0087300	4A2A 3680 403B 9F7C 8900 DB80 6C4A 1B91	FRN	43	7000L	RICOH	France	89/10	92/3	137
H0087350E H0087351E H0087352E H0087353E H0087354E H0087355E H0087356E H0087357E	yes	H0087350	4A35 372D 403B 9F7C 8900 DB80 6C4A 1B91	FRN	33	6765	Infotec	France	90/7	91/3	156
H0087310H H0087311H H0087312H H0087313H H0087314H H0087315H H0087316H H0087317H	yes	H0087310	196E CB4C 4E46 C3F4 799A 3385 3EE5 6478	UNV	44	7000L	RICOH	Europe/Asia	89/9	94/1	387
H0087360H H0087361H H0087362H H0087363H H0087364H H0087365H H0087366H H0087367H	yes	H0087360	1D38 64ED 4FAF D4A1 782D 1E98 C591 854A	UNV	34	6765	Infotec	Europe	90/1	92/11	38

END

## ROM writing procedure for K200 ROMs

### 1. ROM Writing

This will vary depending on the ROM writer buffer capacity.

This is an example with a buffer RAM capacity of 512KB.

During the first load, 512KB is sent.

During the first load, 0H~7FFFFH can be loaded.

During the second, 800000H~FFFFFH can be loaded.

Since the K200 is 1MB, the sending is completed after 512KB worth has been sent twice.

#### First Time

##### 1-1) Transfer to the ROM writer.

Motorola-S Format

Receiving location address 00000000

Send/Receive buffer RAM start 00000000

Sending buffer RAM end Device capacity

##### 1-2) Program on the ROM

Set program 16-bit series

Device Count 4

Device Start 00000000

Buffer RAM Start 00000000

Data Type BIGENDIAN

#### Second Time

##### 2-1) Transfer to the ROM writer.

Motorola-S Format

Receiving location address 00080000

Send/Receive buffer RAM start 00000000

Sending buffer RAM end Device capacity

##### 2-2) Program on the ROM

Set program 16-bit series

Device Count 4

Device Start 00000000

Buffer RAM Start 00000000

Data Type BIGENDIAN

When the buffer RAM capacity is 1MB, the RAM writing is as follows.

1MB can be sent during the first load.

0H~FFFFFH can be loaded.

Since the K200 is 1MB, it can be transferred all at once.



## First Time

### 1-1) Transfer to the ROM writer.

Motorola-S Format

Receiving location address	00000000
Send/Receive buffer RAM start	00000000
Sending buffer RAM end	Device capacity

### 1-2) Program on the ROM

Set program	16-bit series
Device Count	4
Device Start	00000000
Buffer RAM Start	00000000
Data Type	BIGENDIAN

## Second Time

### 2-1) Transfer to the ROM writer.

Since 1MB can be sent the first time, this is not necessary.

### 2-2) Program on the ROM

Set program	16-bit series
Device Count	4
Device Start	00000000
Buffer RAM Start	00080000
Data Type	BiGENDIAN

## ROM locations (Top view of MBU)

3-8 (3')	3-0 (4')
2-8 (1')	2-0 (2')
1-8 (3)	1-0 (4)
0-8 (1)	0-0 (2)

() The number in the parentheses is the ROM writer socket number.

['] The second time is indicated.

The ROM part numbers start from 0-8.

(Ex: For the FAX7000L(US), 0-8:H00872**60**, 3-0:H00872**67**)

## Check Sum Chart

ROM location Model	0-8	0-0	1-8	1-0	2-8	2-0	3-8	3-0
K200USA	FC1E	EBE0	B88F	08B2	7AA0	C2F0	28D7	EC5E
K200GMN-R	451C	78BA	3FA2	C44F	7B14	4DA3	7C16	380B
K200G<M-K	4527	7967	3FA2	C44F	7B14	4DA3	7C16	380B
K200ENG-R	1956	CB16	4E46	C3F4	799D	33A8	3EE5	6478
K200ENG-K	1D20	64B7	4FAF	D4A1	7830	1EBB	C591	854A
K200ITY-R	4A5D	5B24	416A	C54D	8882	683D	D331	E525
K200ITY-K	4A68	5BD1	416A	C54D	8882	683D	D331	E525
K200FRN-R	4A2A	3680	403B	9F7C	8900	DB80	6C4A	1B91
K200FRN-K	4A35	372D	403B	9F7C	8900	DB80	6C4A	1B91
K200UNV-R	196E	CB4C	4E46	C3F4	799A	3385	3EE5	6478
K200UNV-K	1D38	64ED	4FAF	D4A1	782D	1E98	C591	854A

R: Ricoh, K : Kalle (Infotec)

**RTB Correction**

Reissue date: 30-Jun-98

The items in bold italic have been corrected or added.

Model: General		Date: 15-Jan-98	No: 011C
Subject: Year 2000 Problem		Prepared by: Y.Okunishi	
From: QAC 2nd Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting	<input type="checkbox"/> Part information	<input type="checkbox"/> Action required
	<input type="checkbox"/> Mechanical	<input type="checkbox"/> Electrical	<input type="checkbox"/> Service manual revision
	<input type="checkbox"/> Paper path	<input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Retrofit information
	<input checked="" type="checkbox"/> Other (Info only)		

Check Items

The following functions for which the clock timer is used were checked to see whether or not they will function correctly at 0:00 on Jan. 1, 2000.

- 1) Display and print of the date and time  
The year must be changed to 2000 or 00 from 1999 or 99 and the date must be kept correctly after the year 2000.
- 2) Clock adjustment  
The date and time can be adjusted after the start of the year 2000.
- 3) Send later mode with memory and without memory  
The calling time must be the set time after the start of the year 2000.
- 4) Automatic re-transmission.  
When a communication error occurs, the machine calls the same destination again automatically after an interval. This must function correctly after the start of the year 2000.
- 5) Weekly timer and night timer  
The energy saver mode (heater) control must work correctly.
- 6) Displayed date after a power failure  
The correct date must be kept by the battery.

Models Checked

- 1) K50 series (FAX10, 20, 60, etc.)
- 2) K70 series (FAX90, 95, 105, etc.)
- 3) K90 series (FAX80, 85, 75, 86, etc.)
- 4) LE series (FAX08, 09, Phone fax for ATT, etc.)
- 5) B series (B1, RF810, FAX12, FAX300, etc.)
- 6) ZB series (FAX220, FAX240, Innfax, etc.)
- 7) BARBARA series (RF01, 02, 03, 05, 06, etc.)

Model: General	Date: 15-Jan-98	No: 011C
----------------	-----------------	----------

- 8) OX series (FAX21, 22)
- 9) PF series (PF-1, PF-2)
- 10) A series (FAX500, 550, etc.)
- 11) B60 series (FAX170, 180, etc.)
- 12) K100 series (FAX1000L, 1010L, etc.)
- 13) K105 series (FAX4000L, etc.)
- 14) K200 series (FAX7000L, etc.)
- 15) KV series (FAX2800L, 1200L, etc.)
- 16) C series (FAX2500L, 3000L, 3500L, 4500L, 5600L, etc.)
- 17) L80 (MV715)
- 18) I series (FAX800, 880, 680, MV74, etc.)
- 19) FL series (FAX2700L, 3700L, 4700L, MV310, etc.)
- 20) FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.)
- 21) L20 series (Aficio FX10)
- 22) K10 series (FX120, Rapicom120, FX210/230, Rapicom210/230, etc.)**
- 23) K20 series (FX5000, Rapicom5000, etc.)**
- 24) K60 series (FAX610, Rapicom610, etc.)**
- 25) K83 series (FAX830, Rapicom830, etc.)**
- 26) FR4, FR6 (FAX4800L, FAX3800L, etc.)**

## Problem found

Most models, except the following models, will not experience any problems.

- 1) AFO (FAX 500/550/580, NRG 9620, Infotec 3301/3305, Nashua F492)  
CSO (FAX 3000/3100/3200, NRG 9660/9661/9662, Omnifax L40/41,  
Savin FAX 3660/3620, Infotec 3660)  
CS1 (FAX 3500L, NRG 9665, Omnifax L46, Savin FAX 3670)  
CRO (FAX 2500L/2600L, NRG 9650, Omnifax L42, Savin FAX 3630, Infotec 3661)
  - a) The day of week, that appears on the display only in the clock adjustment mode, is returned back to SUNDAY whenever the clock adjustment is done after the start of the year 2000.  
  
So, the programmed weekly timer does not work correctly. (AFO's do not have the weekly timer.)  
  
If the clock adjustment is not done after the start of the year 2000, the date and the day of week is kept correctly.
  - b) Clock adjustment is available only for the year 91 through 99. The other years cannot be set. (Month, day and time can be adjusted.)

Model: General	Date: 15-Jan-98	No: 011C
----------------	-----------------	----------

- 2) K200 (FAX7000L)
  - a) Clock adjustment is available only for the years 88 through 99. The other years cannot be set. (Month, day, and time can be adjusted.)
  - b) The send later mode does not function (no calling happens) if it passes the time into the year 2000.  
No report is printed. The message in the memory is not cleared automatically but must be cleared by user operation.
  - c) Automatic re-transmission is not done if the year 2000 starts in the interval after the transmission failure.  
The message in the memory is not cleared automatically but must be cleared by user operation.
  - d) The display year is returned back to 88 after a power failure after the start of the year 2000.
  
- 3) **K60 series (FAX610, Rapicom610, Infotec6550)**  
**K83 series (FAX830, Rapicom830, Infotec6750)**
  - a) **The day of week is not displayed correctly after the start of the year 2000.**
  - b) **The send later mode does not function (calling at 0:00AM January 1st 2000).**
  - c) **The display year is returned back to 85 when the power fails after the start of the year 2000.**

The other functions in these models work correctly.

## Schedule for the countermeasure ROMs

- 1) AFO, CSO, CS1, CRO:  
In **April** 1998.
- 2) K200 (FAX7000L):  
In May 1998 (**The corrected version will be in July 1998.**)
- 3) **K60, K83: A ROM will not be available.**

RC	RE	ASIA	
*	*	*	

## RTB Correction

Reissue date: 30-Jun-98

The items in bold italic have been correction or added.

Model: CSO, CRO, CS1, AFO, AF2, K200		Date: 31-May-98	No: Multi-008A
Subject: ROMs for the year 2000 problem		Prepared by: Y. Okunishi	
From: QAC Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting <input type="checkbox"/> Mechanical <input type="checkbox"/> Paper path <input type="checkbox"/> Other (      )	<input checked="" type="checkbox"/> Part information <input type="checkbox"/> Electrical <input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Action required <input type="checkbox"/> Service manual revision <input type="checkbox"/> Retrofit information

Attached please find the list of ROMs for the year 2000. ***(The list was updated.)***

***The ROM files have been saved in the Ricoh QAC server except for the K200 ROMs.  
(EP ROMs for the K200 will be prepared by the beginning of June.)***

Note:

- Please refer to RTB nos. General 11 and 14 for details.

RC	RE	ASIA	
*	*	*	

Model: CSO, CRO, CS1, AFO, AF2, K200	Date: 31-May-98	No: Multi-008
--------------------------------------	-----------------	---------------

## ROMs for the year 2000

25-Jun-98

Product Code	New ROM No.	Check sum	Model code	Model	Brand	Area	Note	
CSO	H0817138	8552	H081-20	3000L	RICOH	US	2M ROM (1ROM/unit)	
			23	3200L				
			24	3100L				NRG
			21	9660	SAVIN			
			22	9661				
			26	3660				
			27	3620				
	H0817136A	77A7	25	2600L	RICOH	US		
	H0817139E	3C77	28	L40	Omnifax	US		
			29	L41				
	H0817124A	0772	40	3000L	RICOH	Europe		
			46	3000L	RICOH	Switzland		
			60	9660	NRG	Europe		
	H0817123A	0078	70	3000LF	RICOH	France		
			80					
			90	9660F	NRG			
	H0817121A	FA57	30	3660	Infotec	Europe		
	H0817122A	D225	51	3000L	RICOH	Asia		
			59	9660	NRG			
			55	-	Ricoh	Korea		
	H0817140M	859C	23	3000L	RICOH	Taiwan		
	H0817128B	E8C5	54	3000L	RICOH	China		
	H0817159N	C3CE	H151-65•SW:HCS• H151-73(FRN:Ricoh) H151-83(FRN:GES)			Option		Europe
CS1	H5117150B	6A91	H511-20	3500L	RICOH	US		
			21	9669	NRG			
			22	L46	Omnifax			
			27	3670	SAVIN			
CR0	H5107121B	23AB	H510-20	2500L	RICOH	US		
			21	9650	NRG			
			22	L42	Omnifax			
			27	3630	SAVIN			
	H5107120B	F5BF	30	3661	Infotec	Europe		
			40	2500L	RICOH			
			60	9650	NRG			
	H5107123B	0E88	33	3661F	Infotec	France		
			43	2500LF	RICOH			
			63	9650F	NRG			
	H5107132G	37F5	51	2500L	RICOH	Asia		
			59	9650	NRG			
H5107131B	23A3	53	2500L	RICOH	Taiwan			

Model: CSO, CRO, CS1, AFO, AF2, K200	Date: 31-May-98	No: Multi-008
--------------------------------------	-----------------	---------------

AFO	H0847130K	D8D3	H084-20	500	RICOH	Taiwan	KD Language Kit
	H0847140L	6B6A	44	500	RICOH	Europe	
	H0847142H	94D0	83	500	RICOH	France	
	H0847143L	350F	34	3301	Infotec	Europe	
	H0847141L	3F13	51	500	RICOH	Asia	
			56	500	RICOH	Vietnam	
	H0847150K	2A40	H151-46(FRN:RICOH) H151-54(SW:HCS)		Option	Europe	KD Language Kit
AF1	H0857135B	FCDF	H085-54	580	RICOH	China	
AF2	H0867130K	9BDF	20	550	RICOH	US	
	H0867140L	3C35	44	550	RICOH	Europe	
			90	9620	NRG		
	H0867142H	583D	73	3305	Infotec	France	
			83	550	RICOH		
			93	9620	NRG		
	H0867143L	0CE0	34	3305	Infotec	Europe	
	H0867141L	DAD8	51	550	RICOH	Asia	
			59	9620	NRG	Asia	
	H0867131A	9BC3	53	550	RICOH	Taiwan	
	H0867150L	E725	H151-47(FRN:RICOH) H151-55(SW:HCS) H151-93(FRN:NASHUA)		Option	Europe	Language Kit

K200	H0087260J	FC1E	H008-20	7000L	RICOH	US	1M ROM (8 ROMs/unit)
	H0087261J	EBE0					
	H0087262J	B88F					
	H0087263J	08B2					
	H0087264J	7AA0					
	H0087265J	C2F0					
	H0087266J	28D7					
	H0087267J	CE5E					
	H0087270F	451C	30	7000L	RICOH	Germany	
	H0087271F	78BA					
	H0087272F	3FA2					
	H0087273F	C44F					
	H0087274F	7B14					
	H0087275F	4DA3					
	H0087276F	7C16					
	H0087277F	380B					
	H0087320F	4527	40	6765	Infotec	Germany	
	H0087321F	7967					
	H0087322F	3FA2					
	H0087323F	C44F					
	H0087324F	7B14					
	H0087325F	4DA3					
	H0087326F	7C16					
	H0087327F	380B					



Model: CSO, CRO, CS1, AFO, AF2, K200

Date: 31-May-98

No: Multi-008

H0087280H H0087281H H0087282H H0087283H H0087284H H0087285H H0087286H H0087287H	1956 CB16 4E46 C3F4 799D 33A8 3EE5 6478	41	7000L	RICOH	UK
H0087330H H0087331H H0087332H H0087333H H0087334H H0087335H H0087336H H0087337H	1D20 64B7 4FAF D4A1 7830 1EBB C591 854A	31	6765	Infotec	UK
H0087290C H0087291C H0087292C H0087293C H0087294C H0087295C H0087296C H0087297C	4A5D 5B24 416A C54D 8882 683D D331 E525	42	7000L	RICOH	Italy
H0087340C H0087341C H0087342C H0087343C H0087344C H0087345C H0087346C H0087347C	4A68 5BD1 416A C54D 8882 683D D331 E525	32	6765	Infotec	Italy
H0087300E H0087301E H0087302E H0087303E H0087304E H0087305E H0087306E H0087307E	4A2A 3680 403B 9F7C 8900 DB80 6C4A 1B91	43	7000L	RICOH	France
H0087350E H0087351E H0087352E H0087353E H0087354E H0087355E H0087356E H0087357E	4A35 372D 403B 9F7C 8900 DB80 6C4A 1B91	33	6765	Infotec	France
H0087310H H0087311H H0087312H H0087313H H0087314H H0087315H H0087316H H0087317H	196E CB4C 4E46 C3F4 799A 3385 3EE5 6478	44	7000L	RICOH	Europe/Asia

	H0087360H	1D38	34	6765	Infotec	Europe	
	H0087361H	64ED					
	H0087362H	4FAF					
	H0087363H	D4A1					
	H0087364H	782D					
	H0087365H	1E98					
	H0087366H	C591					
	H0087367H	854A					

END

## RTB Correction

Reissue date: 31-Jul-98

The items in bold italic have been correction or added.

Model: CSO, CRO, CS1, AFO, AF2, K200		Date: 31-May-98	No: Multi-008 <b><i>B</i></b>
Subject: ROM's for the year 2000		Prepared by: Y.Okunishi	
From: QAC Field Information Dept.			
Classification:	<input type="checkbox"/> Troubleshooting <input type="checkbox"/> Mechanical <input type="checkbox"/> Paper path <input type="checkbox"/> Other (      )	<input checked="" type="checkbox"/> Part information <input type="checkbox"/> Electrical <input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Action required <input type="checkbox"/> Service manual revision <input type="checkbox"/> Retrofit information

***(B) : The attached ROM List has been corrected.***

Attached please find the list of the ROM's for the year 2000 problem. (The list was updated.)

The ROM files have been saved in the Ricoh QAC server, except for the K200 ROMs. (EPROMs for the K200 will be prepared by the beginning of June.)

Note:

- Please refer to RTBs General 11 and 14 for details.

RC	RE	ASIA	
*	*	*	

Model: CSO, CRO, CS1, AFO, AF2, K200

Date: 31-May-98

No: Multi-008B

## ROMs for the year 2000

25-Jun-98

Product Code	New ROM No.	Check sum	Model cord	Model	Brand	Area	Note
CSO	H0817138	8552	H081-20	3000L	RICOH	US	2M ROM (1ROM/unit)
			23	3200L			
			24	3100L			
			21	9660	NRG		
			22	9661			
			26	3660	SAVIN		
			27	3620			
	H0817136A	77A7	25	2600L	RICOH	US	
	H0817139E	3C77	28	L40 L41	Omnifax	US	
			29	L41			
	H0817124A	0772	40	3000L 3000L	RICOH	Europe	
			46	3000L	RICOH	Switzerland	
			60	9660	NRG	Europe	
	H0817123A	0078	70	3000LF	RICOH	France	
			80				
			90	9660F	NRG		
	H0817121A	FA57	30	3660	Infotec	Europe	
	H0817122A	D225	51	3000L	RICOH	Asia	
			59	9660	NRG		
			55	-	Ricoh	Korea	
H0817140M	859C	23	3000L	RICOH	Taiwan		
H0817128B	E8C5	54	3000L	RICOH	China		
H0817159N	C3CE	H151-65 (SW:HCS) , H151-73(FRN:Ricoh) H151-83(FRN:GES)			Option	Europe	Language Kit
CS1	H5117150B	6A91	H511-20	3500L	RICOH	US	
			21	9669	NRG		
			22	L46	Omnifax		
			27	3670	SAVIN		
CR0	H5107121B	23AB	H510-20	2500L	RICOH	US	
			21	9650	NRG		
			22	L42	Omnifax		
			27	3630	SAVIN		
	H5107120B	F5BF	30	3661	Infotec	Europe	
			40	2500L	RICOH		
			60	9650	NRG		
	H5107123B	0E88	33	3661F	Infotec	France	
			43	2500LF	RICOH		
			63	9650F	NRG		
H5107132G	37F5	51	2500L	RICOH	Asia		
		59	9650	NRG			
H5107131B	23A3	53	2500L	RICOH	Taiwan		

Model: CSO, CRO, CS1, AFO, AF2, K200	Date: 31-May-98	No: Multi-008B
--------------------------------------	-----------------	----------------

AFO	H0847130K	D8D3	H084-20		500	RICOH	Taiwan	KD	
	H0847140L	6B6A	44		500	RICOH	Europe		
	H0847142H	94D0	83		500	RICOH	France		
	H0847143L	350F	34	3301	Infotec	Europe			
	H0847141L	3F13	51	500	RICOH	Asia			
			56	500	RICOH	Vietnam			
H0847150K	2A40	H151-46(FRN:RICOH) H151-54(SW:HCS)		-	Option	Europe	Language Kit		
AF1	H0857135B	FCDF	H085-54		580	RICOH	China		
AF2	H0867130K	9BDF	20		550	RICOH	US	Language Kit	
			H0867140L	3C35	44	550	RICOH		Europe
					90	9620	NRG		
	H0867142H	583D	73	3305	Infotec	France			
			83	550	RICOH				
			93	9620	NRG				
			H0867143L	0CE0	34	3305	Infotec		Europe
	H0867141L	DAD8	51	550	RICOH	Asia			
			59		Nashua	Asia			
	H0867131A	9BC3	53	550	RICOH	Taiwan			
	H0867150L	E725	H151-47(FRN:RICOH), H151-55(SW:HCS), H151-93(FRN:NASHUA)		-	Option	Europe		
	K200	H0087260J	FC1E	20	7000L	RICOH	US		1M ROM (8 ROMs/unit)
H0087261J		E886							
H0087262J		B88E							
H0087263J		084C							
H0087264J		7ABF							
H0087265J		C07F							
H0087266J		29B0							
H0087267J		F658							
H0087270F		451C	30	7000L	RICOH	Germany			
H0087271F		7566							
H0087272F		3FA2							
H0087273F		C2ED							
H0087274F		7A62							
H0087275F		1C05							
H0087276F		7D08							
H0087277F		2830							
H0087320F		4527	40	6765	Infotec	Germany			
H0087321F		7613							
H0087322F		3FA2							
H0087323F		C2ED							
H0087324F		7A62							
H0087325F		1C05							
H0087326F		7D08							
H0087327F		2830							
H0087280H		1956	41	7000L	RICOH	UK			
H0087281H		C7BC							
H0087282H		4E45							
H0087283H		C394							
H0087284H		7A16							
H0087285H		2A4E							
H0087286H		3F82							
H0087287H		56B3							

Model: CSO, CRO, CS1, AFO, AF2, K200

Date: 31-May-98

No: Multi-008B

H0087330H H0087331H H0087332H H0087333H H0087334H H0087335H H0087336H H0087337H	1D20 615D 4FAE D441 78A7 1761 C62A 7B85	31	6765	Infotec	UK
H0087290C H0087291C H0087292C H0087293C H0087294C H0087295C H0087296C H0087297C	4A5D 57CA 4169 C4EB 889D 69BC D427 D12D	42	7000L	RICOH	Italy
H0087340C H0087341C H0087342C H0087343C H0087344C H0087345C H0087346C H0087347C	4A68 5877 4169 CE4B 889D 69BC D427 D12D	32	6765	Infotec	Italy
H0087300E H0087301E H0087302E H0087303E H0087304E H0087305E H0087306E H0087307E	4A2A 3326 403B 9E1A 8968 CC0C 6DF3 18D7	43	7000L	RICOH	France
H0087350E H0087351E H0087352E H0087353E H0087354E H0087355E H0087356E H0087357E	4A35 33D3 403B 9E1A 8968 CC0C 6DF3 18D7	33	6765	Infotec	France
H0087310H H0087311H H0087312H H0087313H H0087314H H0087315H H0087316H H0087317H	196E C7F2 4E45 C394 7A13 2A2B 3F82 56B3	44	7000L	RICOH	Europe/Asia
H0087360H H0087361H H0087362H H0087363H H0087364H H0087365H H0087366H H0087367H	1D38 6193 4FAE D441 78A4 173E C62A 7B85	34	6765	Infotec	Europe

Reissued: 30-Apr-99

Model: General	Date: 15-Jan-99	No.: RGene011d
----------------	-----------------	----------------

## RTB Correction

The items in bold italics have been corrected or added.

Subject: Year 2000 Problem		Prepared by: Y. Okunishi	
From: Technical Service Dept., GTS Division			
Classification:	<input type="checkbox"/> Troubleshooting <input type="checkbox"/> Mechanical <input type="checkbox"/> Paper path <input checked="" type="checkbox"/> Other (      )	<input type="checkbox"/> Part information <input type="checkbox"/> Electrical <input type="checkbox"/> Transmit/receive	<input type="checkbox"/> Action required <input type="checkbox"/> Service manual revision <input type="checkbox"/> Retrofit information

### Check Items

The following functions for which the clock timer is used were checked to see whether or not they will function correctly at 0:00 on Jan. 1, 2000.

- 1) Display and printing of the date and time  
The year must be changed to 2000 or 00 from 1999 or 99 and the date must be kept correctly after the year 2000.
- 2) Clock adjustment  
The date and time can be adjusted after the year 2000.
- 3) Send later mode with memory and without memory  
The calling must be made at the set time after the year 2000.
- 4) Automatic re-transmission.  
When a communication error occurs, the machine calls the same destination again automatically after an interval. This will function correctly after the year 2000.
- 5) Weekly timer and night timer  
The energy saver mode (fusing unit) control will work correctly.
- 6) Displayed date after a power failure  
The correct date will be kept by the battery.
- 7) ***Leap year***  
***Machines must recognize the year 2000 as a leap year and the above 1) – 6) will function.***
- 8) ***The year 2001***  
***The above 1) – 6) will function in the year 2001.***

**Reissued: 30-Apr-99**

Model: General

Date: 15-Jan-99

No.: RGene011d

Models Checked

- 1) K50 series (FAX10, 20, 60, etc.)
- 2) K70 series (FAX90, 95, 105, etc.)
- 3) K90 series (FAX80, 85, 75, 86, etc.)
- 4) LE series (FAX08, 09, Phone fax for ATT, etc.)
- 5) B series (B1, RF810, FAX12, FAX300, etc.)
- 6) ZB series (FAX220, FAX240, Innfax, etc.)
- 7) BARBARA series (RF01, 02, 03, 05, 06, etc.)
- 8) OX series (FAX21, 22)
- 9) PF series (PF-1, PF-2)
- 10) A series (FAX500, 550, etc.)
- 11) B60 series (FAX170, 180, etc.)
- 12) K100 series (FAX1000L, 1010L, etc.)
- 13) K105 series (FAX4000L, etc.)
- 14) K200 series (FAX7000L, etc.)
- 15) KV series (FAX2800L, 1200L, etc.)
- 16) C series (FAX2500L, 3000L, 3500L, 4500L, 5600L, etc.)
- 17) L80 (MV715)
- 18) I series (FAX800, 880, 680, MV74, etc.)
- 19) FL series (FAX2700L, 3700L, 4700L, MV310, etc.)
- 20) FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.)
- 21) L20 series (Aficio FX10)
- 22) K10 series (FX120, Rapicom120, FX210/230, Rapicom210/230, etc.)
- 23) K20 series (FX5000, Rapicom5000, etc.)
- 24) K60 series (FAX610, Rapicom610, etc.)
- 25) K83 series (FAX830, Rapicom830, etc.)
- 26) FR4, FR6 (FAX4800L, FAX3800L, etc.)
- 27) Schmidt 1(FAX2000L)**
- 28) Schmidt 3**



Reissued: 30-Apr-99

Model: General	Date: 15-Jan-99	No.: RGene011d
----------------	-----------------	----------------

## Problems found

Most models, except the following, will not experience any problems.

- 1) AFO (FAX 500/550/580, NRG 9620, Infotec 3301/3305, Nashua F492)  
 CSO (FAX 3000/3100/3200, NRG 9660/9661/9662, Omnifax L40/41,  
 Savin FAX 3660/3620, Infotec 3660)  
 CS1 (FAX 3500L, NRG 9665, Omnifax L46, Savin FAX 3670)  
 CRO (FAX 2500L/2600L, NRG 9650, Omnifax L42, Savin FAX 3630, Infotec 3661)
  - a) The day of the week that appears on the display only in the clock adjustment mode is returned back to SUNDAY every time the clock adjustment is done after the year 2000.  
 So, the programmed weekly timer does not work correctly. (AFO does not have the weekly timer.)  
 If the clock adjustment is not done after the year 2000, the date and the day of week is kept correctly.
  - b) Clock adjustment is available only for the year 91 through 99. The other years cannot be set. (Month, day and time can be adjusted.)
- 2) K200 (FAX7000L)
  - a) Clock adjustment is available only for the years 88 through 99. The other years cannot be set. (Month, day and time can be adjusted.)
  - b) The send later mode does not function (no calling happens) if time passes into the year 2000.  
 No report is printed and the rest of the message in the memory is not cleared automatically, but it is cleared by user operation.
  - c) Automatic re-transmission is not done if the year 2000 starts in the interval after the transmission failure.  
 The rest of the message in the memory is not cleared automatically but it is cleared by user operation.
  - d) The displayed date is reset and turned back to '88 in the event of a power failure after the year 2000.
  - e) ***The day of the week will be wrong if the clock or date information is adjusted after the year 2000.***

**Reissued: 30-Apr-99**

Model: General	Date: 15-Jan-99	No.: RGene011d
----------------	-----------------	----------------

- 3) K60 series (FAX610, Repicom610, Infortec6550)  
K83 series (FAX830, Repicom830, Infortec6750)
  - a) The day of the week is not displayed correctly after the year 2000.
  - b) The send later mode does not function (calling at 0:00AM January 1st 2000)
  - c) The display year is returned back to 85 when the power fails after the year 2000.

The other functions in these models work correctly.

#### Schedule of the countermeasure ROMs

- 1) AFO, CSO, CS1, CRO:  
In April 1998.
- 2) K200(FAX7000L):  
In May 1998. (Corrected version will be in July 1998.)
- 3) K60, K83:  
The ROM will not be available.

RC	REBV	ASIA	
*	*	*	