Software problem

Model(s): FAX3000L

FAX T.S. Section T.S. Department Assistant General Manager H. Motojima

Control No. for Each Area

R.C.	 Asia	001
SAVIN	 LAM	
Europe	 AT&T	
HCS		

#### 1. Problem

Classification

#### Phenominon

- 1. The RX image may be reduced (3/4).
- 2. The end of the RX image (after B5 length) may be blurred.
- 3. The parts (left side) of the RX image may be repeated on the right.

#### • Conditions

- 1. The specified cassette selection is on.
- 2. More than 2 pages are received.
- 3. The PFU is installed.
- 4. Memory RX (substitute reception, night timer, etc).

Under all of the above conditions, the problem may occur.

#### 2. Cause.

Software mistake.

#### 3. Countermeasure

When installing the PFU (Paper Feed Unit) replace the ROM on the machine.

(The ROMs will be provided from Ricoh Tokyo (FTSG).)

After replace the ROMs, check the machine, in accordance with the attached check sheet, and return the sheets to Ricoh Tokyo (Attn. Mr Motojima) by air mail once a month.

#### 4. Serial No.

December (1991) production only A06112XXXXX

Subject:

Document non-feed

Model(s):

Classification

FAX T.S. Section T.S. Department Assistant General Manager <u>H. Motojima</u>

Control No. for Each Area

R.C.	001	Asia	
SAVIN	001	LAM	001
Europe	001	AT&T	
HCS	001		

### [Problem]

The document may not feed at all if the customer places 50 sheets in the ADF.

#### [Cause]

- 1. Static electricity. (In low humidity environment)
- 2. Some types of paper, such as rough or thick types.

### [Action]

Normally documents should be set with the edges even, because the CSO has a shutter. However, if the customer faces this problem, instruct the customer to do the following.

- 1. Shuffle the stack
- 2. Place the document in the feeder as follows



RIGOH	Technic	al Bulletin CSO-003	lssued	d on February 1	5, 1992
Subject: AFO/A	F2/CSO Softwa	re problem			
Model(s): AFO/AF2/C	SO				
Classification		FAX T.S. Se Assistant Ge <u>H. Motojima</u> Control No.	ction T.S. D neral Mana for Each Ar	epartment ger ea	
		R.C.		Asia	002
Betrofit Information		SAVIN		LAM	002
Revision of Service N	Manual	Europe	002	AT&T	
☐ Information Only	handa	HCS	002		
Others					

## [Problem]

- 1. When a telephone call is incoming, the contact of the NCU OH relay may melt after quite a few repetition of incoming calls. then no fax reception becomes available. (AFO/AF2/CSO)
- 2. The first printing page for a reception, a substitute file output, a report or a pattern output may be blank. (AFO/AF2)

### [Cause]

1. By a software fault, the DC loop over the OH relay is closed during an incoming call to result in putting the ringing voltage (energy) through the DC loop.

The current faulty program allows the ringing off signal be enabled during a ringing sequence, so the OH relay is to be switched on.

Possible occurrence rate is ;

 $1/1800 \sim 1/8300$  at incoming calls. (For more details, refer to page 3.)

2. By a software fault, the command for 24V power supplying to the thermal head may be turned off instantly.

However, the printing sequence continues to result in a blank page outputted. This is caused by the faulty priority assignment of the signals of 24V power on, of status check and of RXSTART trigger.

It may occur at random as  $36 \,\mu\text{s}/160 \,\text{ms} \cong 1/4400$ .

Subject:

## AFO/AF2/CSO Software problem

#### [Countermeasure]

(け())

- 1. The program is corrected. So, exchange the ROM on the MBU to the new one.
- 2. The program is corrected.

So, exchange the ROM on the MBU to the new one.

#### Part numbers

	Version	Old	New ROM
	Ricoh Europe/NRG	H0847140C	H0847140D
AFO	HCS	H0847143C	H0847143D
74 0	Language kit	H0847150A	H0847150B
	Asia	H0847141C	H0847141D
	Ricoh Europe/NRG	H0867140C	H0867140D
AF2	HCS	H0867143C	H0867143D
	Language kit	H0867150B	H0867150C
	Asia	H0867141C	H0867141D
	Ricoh Europe/NRG	H0817130G	H0817130H
CSO	HCS	H0817131G	H0817131H
	Language kit	H0817159D	H0817159E
	Asia	H0817132G	H0817132H

#### [Affected machines]

The machines produced in Nov and Dec '91 and in Jan '92.

Note: Some of the above machines have been modified in Japan before shipment.



AFO/AF2/CSO Software problem

### 1. Faulty program



### 2. Corrected program



RIC		Technical Bulletin No. CSO-004	lssued	on February 19t	h, 1992
Subject:	NCU paran	neter setting for Holland			
Model(s): AFO CSC	/AF2	FAX T.S. Se Assistant Ge <u>H. Motojima</u>	ction T.S. D neral Mana	epartment ger	
Classification Control No. for Each Area					
		R.C.		Asia	
		SAVIN		LAM	
		Europe	003	AT&T	
		HCS	003		

When installing the above models in Holland/Italy/Belgium, change the NCU parpameter to meet the PTT requirement as follows.

1. Change the country codes for NCU parameter and bitswitch.

2. Change the following parameters and RAM addresses as follows.

[Holland]		[Italy]		[Belgiu	m]
NCU Parameter	002=020	Address	4157=06H	Address	413F=05H
NCU Parameter	003=080	Address	4158=00H	Address	4140=20H
NCU Parameter	004=020	Address	4159=01H	Address	4141=03H
NCU Parameter	005=080	Address	415A=00H	Address	4142=00H
NCU Parameter	006=002	Address	4158=15H	Address	414D=05H
NCU Parameter	010=058	Address	415C=15H	Address	414E=20H
NCU Parameter	011=058	Address	4164=40H	Address	414F=03H
NCU Parameter	012=042			Address	4150=00H
NCU Parameter	013=042			Address	4151=1EH
Address	4144=5EH			Address	4152=13H
Address	4152=5EH			Address	4153=1EH
Address	416A=5EH			Address	4154=04H
Address	417F=02H				

The above correction will be applied into the software from the 1st productions of March '92.



Subject:

Optional paper feed unit adjustment

Model(s): CSO

Classification

FAX T.S. Section T.S. Department Assistant General Manager H. Motojima

Control No. for Each Area

R.C.		Asia	
SAVIN		LAM	
Europe	004	AT&T	
HCS	004		

If the customer require A5 size paper in the paper feed unit, adjust the spring pressure as follows in order to prevent double feeding.

- 1. Remove the right cover.
- 2. Adjust the spring pressure by the adjustment bracket as shown below. (by loosening 2 screws)
- 3. Put the cover back.





Subject:

### Duct cover for the development unit

#### Model(s): CSO

Classification

Others

Action Required
 Troubleshooting
 Retrofit Information

Information Only

Revision of Service Manual

FAX T.S. Section T.S. Department
Assistant General Manager
H. Motojima

**Remaining Toner** 

Control No. for Each Area

R.C.	002	Asia	003
SAVIN	002	LAM	003
Europe	005	AT&T	
HCS	005		

Once the machine is installed (with the Toner Cassette installed in the machine), the toner will be transferred to the developing unit. As a result, when the Toner Cassette is removed from the machine, some residual toner may spill out from the developing unit when the machine is moved.

If it is necessary to transport the machine after installation, please do the following:

- 1. Switch off the power, and remove the toner cassette.
- 2. Remove the remaining toner at the duct entrance by tapping the duct.
- 3. Close the front cover without putting back the toner cassette.
- 4. Using the test mode, rotate the toner supplier as follows.
  - (1) Enter test mode: Function 5 1 9 9 1
  - (2) 9 7 Yes
  - (3) 8

Duct

- (4) After the noise from the toner supply mechanism stops, press Stop
- 5. Push the duct cover (H0812487) into the development unit with a screwdriver.





- 6. Switch off the power.
- 7. Move the machine.

RIGOH_	Technical Bulletin No. CSO-007	Issued	on March 16 , 1	992
Subject: Lower par	per feed unit			
Model(s): CSO				
Classification	FAX T.S. Se Assistant Ge <u>H. Motojima</u> Control No. f	ection, T.S. E eneral Mana for Each Are	Department ger	
	R.C.	003	Europe	006
	SAVIN	003	HCS	006
	NRG-		NRG	
	USA			
			Asia/LAM	004

When the power is kept on, the PCB-PFU will be broken after connecting/disconnecting the connectors during instalation/checking the lower paper feed unit.

Therefore, before connecting/disconnecting the paper feed unit, please make sure that the power is switched off.



**Dedicated Tx parameter programming problem** 

Model(s):	AFO/AF2/CSO
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FAX	T.S. Section, T.S. Department
Assis	tant General Manager
H. Mo	otojima

Classification

Control No. for Each Area

R.C.	004	Europe	007
SAVIN	004	HCS	007
NRG-	001	NRG	001
		Asia/LAM	005

#### -Problem-

If the T1 timer is set with a value of over 100 for a speed dial code by dedicated Tx parameter programming, the other parameter for the speed dial codes will not be programmed.

#### -Cause-

Software bug.

#### -Countermeasure-

Temporary- Set the T1 timer with a value less than 100 for speed dial codes.

Permanent - We will correct the software from the May mass production.

	NC1370EG			
	<b>Technical Bulletin</b>	Issued	on March 19th,	1992
Subject: NCU param	neter setting for Sweden			
Model(s): AFO/AF2 CSO	FAX T.S. Se Assistant G <u>H. Motejima</u> Control No.	ction T.S. De General Mar	epartment jager 7, <u>2011-ma</u> ea	<u>z</u>
<ul> <li>Action Required</li> <li>Troubleshooting</li> <li>Retrofit Information</li> <li>Revision of Service Manua</li> <li>Information Only</li> <li>Others</li> </ul>	R.C. SAVIN NRG-USA		Europe HCS NRG Asia/LAM	008 008 002 

Deissued

Page 1

When installing the above models in Sweden, change the NCU parameter in accordance with the PTT/sales requirements as follows.

- 1. Change the country codes for NCU parameter and bitswitches.
- 2. Change the and RAM addresses and bit switch as follows.

197

(PTT requirement)	(Sales requirement)
Address 4172 = 60H	Address 406C bit $5 = 0$ , bit $6 = 1$
Address 4173 = 20H	Address 4063 bit $7 = O$
Address 4174 = 60H	Bit sw SW06 = F0H
Address 4175 = 03H	
Address 4176 = 19H	

The above correction will be applied into the software from the 1st productions of May '92.

Also, we have changed the following Addresses, in accordance with additional request from PTT, from the 1st productions of July '92.

> 4143=28H 4145=28H 4151=28H 4153=28H 4153=28H 4172=28H 4174=28H 418E=12H

RIGOH_	Technical Bulletin No.CSO-010	lssued on April 15th, 1992
Subject: Service Ma	nual Correction	
Model(s): CSO (Europe and	d Asia)	
	FAX T.S. Secti Assistant Gene	ion, T.S. Department eral Manager
Classification Action Required Troubleshooting Retrofit Information Revision of Service Manua Information Only Others	<u>H. Motojima</u>	

We issue the correction for the service manual for CSO.

Please refer to the attached.



Issued on April 24th, 1992

**NCU Modification for Switzerland** 

#### Model(s): AFO AF2/CSO (Europe only)

FAX T.S. Section, T.S. Department Assistant General Manager

#### Classification Action Required

<u>H. Motojima</u>

Retrofit Information Revision of Service Manual

Information Only

Troubleshooting

Others

When installing the above models in Switzerland, you have to apply the modification as the following steps.

- 1. Prepare the following parts at your side.
  - (1) Resister 10Ω: 1/10W
  - (2) Capacitor  $0.047 \mu F$  /250V
  - (3) Coil TDK ELF 1010 SKI-332k (3.3mH)
- 2. Remove the NCU from the machine, then apply the modification.
  - (1) Replace the R17 with the above resister  $(10\Omega)$
  - (2) Add the capacitor and coil, and cut the pattern as shown on the next page.
- 3. Put the NCU back, and reassemble the machine.
- 4. Check the machine for the following items.
  - Dialling (PD/DTMF)
  - Transmission
  - Reception

R		
Subject	:	Tro

Troubleshooting

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

If you have any copy quality problems, make sure of the causes and solve the problem, in accordance with the following pages.







No. 2	
Problem	
Toner spillage.	
Image sample	
Characteristics of	the problem
A lot of toner is attach	ed on the copy.
Cause	
There is a defective c	leaning roller blade in the used toner tank, or the used toner tank is full.
Action	
Replace the CTM.	







Issued on April 30th, 1992





· · · -		
No. 5		
Problem		
Dirty Backgrand.		
Image sample		
	を読む	
	6 ー ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	
Characteristics of the prob	lem	
Many clean black dots.		
Cause		
Shortage of change, equiped by C	NPC stross	
Shortage of change, caused by C	or o siless.	
Action		
AGUUII		
Rreplace the OPC.		







No. 7			
Problem			
Black dots.			
Image sample			
Characteristics of the pro	oblem		
Difference of the first			
Dots appear at an interval of 1	4mm or 188mm.		
Cause			
(1) 14 mm interval $\longrightarrow$ Defective development roller			
(2) 88mm interval			
Action			
(1) Replace the development u	unit.		
(1) Replace the OPC.			







No. 9
Problem
White dots.
Image sample
Characteristics of the problem
The dots appear at intervals of 14mm or 188mm.
Cause
14mm $\longrightarrow$ Defective development unit.
188mm $\longrightarrow$ Defective OPC
Action
(1) Replace the development unit.
(2) Replace the OPC.











Issued on April 30th, 1992





Subject:

### **Communication Problem**

Model(s): AFO / AF2 / CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

### [Problem]

The above models may not transmit to the following models.

(Error code 0 - 21 / 0 - 23)

The document may stop during scanning, then the machine will reset after 1 ~ 2 min, and the power failure report will be printed.

During transmission, the stop key does not function.

Condition : I / O rate 40ms (standard), 20ms (Detail) Models : UF32H • UF23 (Matsushita)

## [Cause]

A software error

On the Tx side, the fill bit will be added if the 1 line data is less than the min Tx time for 1 line, however on the above AFO / AF2 / CSO, the counting may be incorrect.

#### [Countermeature]

Temporary : Using the dedicated Tx parameter, select 4800bps of the initial modem rate. Permanent : The 1st production of March '92 will contain the correct software.



**Communication Problem** 

Model(s): AFO / AF2 / CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

## [Problem]

The avove models can not receive using ECM from the machines which use 64 frames, such as Canofax 470.

#### [Cause]

A software error The frame size (256 / 64 frame) can not be changed in the software.

### [Countermeature]

#### Temporary

If you face this problem, switch off the ECM function. (Bit sw 07, bit 5  $0 \rightarrow 1$ ) In the field, most of facsimile machines use 256 frame, so, this problem may occur rarely.

#### Permanent

The 1st production of May '92 will contain the correct software.



Subject:

### Difficult to remove the upper cassette

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

# [Problem]

It is difficult to remove the upper cassette from the machine when adding the paper.

# [Cause]

Friction between the Cassette Retaining Shaft and Cassette Guide Rail.

# [Countermeasure]

Lubricate both sides of the Cassette Retaing Shaft. (Refer to the diagram below). Use P/N 52039501 Grease 501

This modification was completed from March, 1992.



[ Viewed from the bottom of the cassette]



Subject:

**Communication Trouble** 

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

## [Problem]

The CSO may not receive from the following models, with 9600 bps / 7200 bps.

- (1) SANFAX 1 / 515
- (2) PC FAX (Mac, PC98, IBM 400)
- (3) Pana FAX UF 1000

## [Cause]

The signalling rates in the above machines (1) (2) and (3) are out of CCITT recommendation, therefore, the CSO can not receive V29 signal correctly.

Capture Range of CSO : 9600 bps  $\pm$  0.01% (100ppm) CCITT recommendation : 9600 bps ± 0.01%

### [Countermeasure]

- Temporary At present, these is no way of solving this problem from the Ricoh side. Please ask the possibility of solving this problem (such as exchanging modem) from the Tx side.
- Permanent We are correcting the capture range of the CSO as follows. 9600 bps +230 ppm - 300 ppm (temporary range)

From the result of the test, finally we will fix it and apply to the machine.

חר	Technical Bulletin
Л	No. CSO - 017

Subject:

NCU parameter setting for Denmark, Switzerland and Austria

Model(s): AFO / AF2 / CSO (Europe)

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

<u>H. Motojima</u>

## [Problem]

When installing the above models in Denmark, Switzerland and Austria, change the following addresses in accordance with the PTT requierments it the machine Serial Number is prior to the following excution date.

1. Change the country codes for NCU parameter and bit switch.

2. Change the RAM addresses as follows.

## [Denmark]

4149 =04H, 414A =60H, 414B =03H, 414C =90H, 415B =OCH, 415C =OCH, 415D =08H, 415E =17H, 414D =05H, 414E =12H, 414F =03H, 4150 =40H, 4151 = 41H, 4152 = 3FH, 4153 = 41H, 4154 = 04H, 4155 = 19H, 4157 = 04H, 4158 =60H, 4159 =03H, 415A =90H, 4164 =42H

These corrections have been applied from the 1st production of March '92.

### [Switzerland]

4181 =05H, 4143 =28H, 4145 =28H, 4164 =51H, 415B =18, 415C =1EH, 415D =OFH, 415E =16H, 415F =OBH, 4160 =OBH, 4161 =08H, 4162 =1EH, 4064(bit 5) =1

These corrections have been applied from the 1st production of May '92.



NCU parameter setting for Denmark, Switzerland and Austria

### [Austria]

# AFO/AF2/CSO

#### Addr.

4058:	$\rightarrow$	0AH
4059:	$\rightarrow$	01H
4143:	$\rightarrow$	28H
4178:	$\rightarrow$	64H
417D:	$\rightarrow$	0EH
417E:	$\rightarrow$	0AH
417F:	$\rightarrow$	01H
4182:	$\rightarrow$	14H
4183:	$\rightarrow$	50H
4187:	$\rightarrow$	09H
4190:	$\rightarrow$	50H
4191:	$\rightarrow$	50H
4192:	$\rightarrow$	07H

# CSO

#### Bit SW

Bit SW 01:	$\rightarrow$	03H
Bit SW 02:	$\rightarrow$	40H
Bit SW 03:	$\rightarrow$	4AH
Bit SW 05:	$\rightarrow$	27H
Bit SW 07:	$\rightarrow$	46H
Bit SW 0B:	$\rightarrow$	06H

Depending on the sales requirement, change the followings.

#### **User SW**

$\rightarrow$	41H
$\rightarrow$	0BH
$\rightarrow$	F5H
$\rightarrow$	0BH
	$\begin{array}{c} \rightarrow \\ \rightarrow \\ \rightarrow \\ \rightarrow \\ \rightarrow \end{array}$

# AFO/AF2

Bit SW		
Bit SW 01:	$\rightarrow$	07H
Bit SW 02:	$\rightarrow$	58H
Bit SW 03:	$\rightarrow$	4AH
Bit SW 05:	$\rightarrow$	27H
Bit SW 07:	$\rightarrow$	06H
Bit SW 0B:	$\rightarrow$	06H

Depending on the sales requirement, change the followings.

# User SW

User SW 03:  $\rightarrow$  F5H

After correcting the software, we will apply to the machine(except user SW).



Subject:

Toner Guide Gear (H0812437) breakage

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

## [Problem]

The toner guide gear may break because of stress caused by too much toner in the development unit, into which toner is being supplied continuously. As a result white lines will appear on the copy.

## [Cause]

- The toner end detection lever bends easily when it suffers from some external shock, because the material is not thick enough.
- The position of the toner end sensor or the toner detection lever mylar is incorrect.
- If the lever is bent, or the position of the sensor or the mylar is incorrect, toner is supplied continuously and fills up over the maximum level, because the toner end detector does not work properly.
- · Ultimately, the toner trough is not returned to its initial position, and the toner guide gear breaks, because it experiences too much stress during toner supply.

# [Action]

 We have modified the following parts from April production. Regarding the serial no., refer to the attached list.

Lever : Toner End Detector  $\rightarrow$  H0812422D Spring : Lever  $\rightarrow$  H0812462D Shutter : Toner End Detector  $\rightarrow$  Deleted

 If you face the above problem in the field, please throw some toner away, and replace the toner guide gear (H0812473) with the above parts (H0812422 and H0812462). Also, please make sure that the other parts of the development unit such as the agitator or gears, are not damaged.



# Toner Guide Gear (H0812437) breakage

### [Probability]

Around 0.2% ..... according to the Japanese domestic market data

**Note:** Probability does not mean the F/R per month.

### [Serial Nos]

<h081-20></h081-20>	R6720401099~
<h081-23></h081-23>	R7320401001~
<h081-60></h081-60>	6012241354~
<others></others>	From 1st production of May, '92



**Toner Leakage** 

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

### [Problem]

Toner leakage inside unit or on the copy during normal operation.

#### [Cause]

The adhesion of the brush onto the toner retainer blade in the cleaning part of the toner cassette became poor, opening a small gap(s).

Then, the cleaned off toner leaked out through the above poor adhesion gap.

#### Cause of the poor adhesion

a. Application of stress to mount the brush with double sided adhesive tape was not even.

b. The area where the adhesive tape was applied was not well cleaned.

### [Action]

We conclude that this problem would occur rarely, this means that only few toner cassettes may have the possibility of this problem at very low rate.

So, if you face this problem in the field, you can solve by replacing the toner cassette with other cassette.

Also, we have improved the production procedure of one toner cassette in our factory, in order to increase the reliability.



oubjeet.

Caution when installing the OPC(Master Unit)

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

Classification

H. Motojima

# [Problem]

Black dots or lines on the printed image at 88mm intervals.

# [Cause]

Defective OPC. (The OPC might fall down during installation, resetting or replacement of the OPC.)

# [Reason]

The OPC may drop if the technician removes the two white tapes on the OPC holder before installation.

# [Action]

Remove the two white tapes on the OPC holder after installing the OPC in the machine.


Subject:

Noise when printing

Model(s): CSO

FAX T.S. Section, T.S. Department Assistant General Manager

#### <u>Classification</u>

<u>H. Motojima</u>

Troubleshooting

Revision of Service Manual

Information Only

Action Required

Others

### [Problem]

When printing, you may hear noise from around the bushing for the paper feed roller.

Some customers may complain about this noise if the machine is used in a quiet place. However, this noise level is within our specifications.

#### [Countermeasure]

We have already added the spring plate (H0813410) to the machine in order to decrease the noise.

So, if you receive a complaint about a machine which has not received the modification, concerning the above noise, please add the spring plate, as shown on the next page.

Regarding the serial nos, please refer to the next page.

### Noise when printing

- 1. Remove the left cover.
- 2. Remove gears and belt (1, 2, 3, 4).



- 3. Attach the spring plate (H0813410).
- 4. Reassemble the machine.

H081 - 20	R6720400001
H081 - 21	6102270063
H081 - 22	6112240110
H081 - 23	R7320400001
H081 - 24	R7420600001
H081 - 26	S2320400001
H081 - 27	S1920400001
H081 - 28	L4020401601
H081 - 29	L4120401401
H081 - 51	A0620400001
H081 - 59	6022240136
H081 - 30	4580520001
H081 - 40	U1720500001
H081 - 60	6012251504

RICOH	Technical B	ulletin	No	CSO-022
SUBJECT: Modem Capture	Range Problem			<b>DATE: August 21st, 1992</b> Reissued: Sept 29, 1992
PREPARED BY: N.Mihara CHECKED BY:		FROM: FAX	X T.S. 9	Section
CLASSIFICATION: Action Required Troubleshooting Betrofit Information	Revision of server     Information only     Other	<i>v</i> ice manual y	MOD	EL: CSO, AFO, AF2

### [Problem]

The CSO/AFO/AF2 may not receive at 9600bps/7200bps from the certain machines, with the following phenomenon.

- Error code: 0-21, 23
- Only the 1st few inches (cm) of the image data would be received and then the line would be disconnected, or the error would occur as the usual Line fail.

### [Cause]

On the CCITT recommendation, the signalling rate of the TX terminal is defined to be 9600bps  $\pm$  0.01% (100ppm), and all makers design the facsimile models in accordance with the CCITT recommendation. However, on the some of the models (Tx side), the signalling rate may be out of CCITT recommendation, due to the possible production variation of modem, or other factors.

The capture range (Rx capability) of the CSO/AFO/AF2 is designed as 9600bps  $\pm$  100ppm(there is no margin). Therefore, if the signalling rate of Tx terminal is out of CCITT recommendation, the CSO/AFO/AF2 can not receive the V29 signal correctly. It means that, if a modem is produced precisely, there will not be the problem.

Tx side: Signalling rate of CCITT recommendation - 9600bps  $\pm$  100ppm Rx side: Capture range of CCITT recommendation - none

### [Countermeasure]

Permanent: We have re-designed the modem, to have certain margin for reception and the new modem will be applied from Oct. productions of '92 except the following.

CSO (Productions at RIF factory)  $\rightarrow$  From November, 1992 AFO/AF2 (Productions at RIF factory)  $\rightarrow$  From December, 1992.

The P/Ns of the FCUs will be changed as follows.

Old		New	
H08160xx	$\rightarrow$	H08161xx	(The last two digits will not be changed)
H08460xx	$\rightarrow$	H084603x	(The last digit will not be changed)
H08660xx	$\rightarrow$	H086603x	(The last digit will not be changed)

### No. CSO-022

SUBJECT: Modem Capture Range Problem

DATE: August 21st, 1992 Reissued: Sept 29, 1992

### [Action in the field]

- (1) **Make sure the exact causes** of the communication problem. By referring to the attached troubleshooting flow, because there are other communication problems which are caused by other reasons. If the problem is caused by this modem capture range problem, go to the next steps.
- (2) Drop the starting modem rate of the terminal for Rx or Tx.
- (3) Ask the Tx terminal to replace the modem.
- (4) If (3) is not possible, replace the FCU with the new FCU which contains the new modem.

### [Sample]

Until now, we have been reported on this problem with the following models at few rate, and as the result of our investigation, the signalling rates of the machines are as follows.

Models	Signalling rate
SANFAX 2100	Unknown (The modem has been replaced on the tx side)
SANFAX 1	-163ppm
SANFAX 515	Unknown
Panafax UF1000	-120ppm
PC98 FAX (Star FAX)	+ 120ppm
PC FAX Mac	-180ppm
IBM PC FAX	Unknown

Please note that the above table is just the samples of the problem, and the problem should not always occur with the above models in your field.

The estimated occurrence rate is as low as 0.05%/mo. However, we like to keep watching the field performance. We like you to log this case monthly.





with a another FCU

#### R Technical Bulletin No. CSO-023 DATE: SUBJECT: CSO Swiss Version December 11th, 1992 PREPARED BY: H.Yokoyama FROM: FAX T.S. Section CHECKED BY: MODEL

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

We inform you that we will make a version of CSO for Switzerland, in which it is not necessary to change any jumpers at installation.

The details are as follows.

### -Mass Production-

September, 1992

#### -Difference-

MBU (P/N: H0816025) NCU (P/N: H0846020) Other parts are the same as CSO European version.

### -Production Code-

H081-46

# RIGOH

### Technical Bulletin

No. CSO-024

SUBJECT: Software Problem

DATE:

December, 3rd, 1992

PREPARED BY: A. Ishiyama CHECKED BY:	FROM: FAX	X T.S. Section
CLASSIFICATION:         Action Required         Troubleshooting         Retrofit Information	ice manual	MODEL: CSO for Ricoh and NRG

### [ Problem]

When receiving, the machine always sends out a CFR (Confirmation to Receive) as a response to modem training.

As a result, communication fails (reception error) if the telephone line is poor, because the transmission modem rate never falls back.

(This will not happen with ECM communication)

### [Cause]

When some of the software modifications were executed, a bug was introduced.

### [Countermeasure]

The program has been corrected. So, change the ROM or the MBU.

### **ROM Part Numbers**

Version	Old P/No.	New P/No.
Ricoh FAX3000L	H081 7140J	H081 7140K
Eurpe	H081 7130M	H081 7130N
Swiss	H081 7131M	H081 7131N
Asia	H081 7132M	H081 7132N

### [Affected Machines]

The machines produced in November 1992.

Notes: 1. Most of the above machines have been modified in Japan before shipment.

2. Only for Ricoh brand CSO 115 Volt version, Please note that the serial numbers earlier than xx21100602 are out of the applicable machines, because those are equipped with the older ROM(H081 7140H) which does not contain the problem.

SUBJECT: Scratch on the OPU

DATE: April 15th, 1993

 PREPARED BY: N. Mihara
 FROM: FAX T.S. Section

 CHECKED BY:
 MODEL: CSO

 CLASSIFICATION:
 Revision of service manual

 Action Required
 Information only

 Troubleshooting
 Information only

 Retrofit Information
 Other

### Problem

The OPU may be damaged when using the machine, as shown below. However, there is no problem on the printed image.

### Cause

1. Both sides of the development roller may touch the metal blade on the development roller. By this, the shaved corpuscles may get in the space between the OPU belt and the development roller, the both sides of the OPU belt may be damaged.

2. The position of the OPU guide may be changed for some reason, then the OPU belt may touch the plastic pins on the development unit.

### Action

- 1. If the above problem occurs, do not replace the OPU, because, there will be no problem on the printed image, in the lifetime of the OPU.
- 2. Do not adjust and change the position of the OPU guide.

### Note

Do not touch the sorface of the OPU belt and not clean with alcohol.







No.	<b>CSO-027</b>
-----	----------------

**SUBJECT:** Tx cable Equalizer

K

DATE:

April 14th, 1993

PREPARED BY: N. Mihara

FROM: FAX T.S. Section

CHECKED BY:		
CLASSIFICATION:		MODEL: CSO
Action Required	Revision of service manual	
Troubleshooting	Information only	
Betrofit Information	Other	

We have added the tx equalizer feature and charged the setting for the rx equalizer by changing the software and the hardware as shown below. (MB CSO-027)

With these charge, more proper setting will be available for the communication quality.

### 1. New setting

Bit SW 0A (Rx cable equalizer) Bit SW 08 (Tx cable equalizer)		ualizer) Jalizer)	Equalizer information on the TCR (Journal) (When Bit SW 00, bit 1 = 1)
bit 7	bit 6		
0	0	(OFF)	→ 00
0	1	(Middle)	<u> </u>
1	0	(High)	<u> </u>
1	1	(Not used)	Do not change

Regarding the Tx equalizer, it will be available only with the following combination.

### 2. Combination of the parts

	FCU (MB CSO-035)	MBU (MB CSO-027)	ROM (MB CSO-027)
USA	H0816153: USα H0816152: USβ	H0816026 N	H0817140K
	H0816155: Telα H0816154: Telβ	H0816039 E	H0817139D
EUR	H0816151	H0816025 R H0816024 R H0816029 F 	H0817131N HCS H0817130N RICOH/ NRG H0817133E France H0817159K Language kit
Asia	H0816156	H0816027 R	H0817132 N

Regarding the affected date, please refer to the above MBS.

**SUBJECT:** Dirty Mirrors

DATE: June 30, 1993.

PREPARED BY: N. Mihara CHECKED BY:	FROM: FA	X T.S. Section
CLASSIFICATION: Action Required Rev Troubleshooting Info Retrofit Information Oth	ision of service manual rmation only er	MODEL: CSO

#### - Problem -

In the field, the scanner mirrors may become dusty (poor scanning quality). In this case, we recommend that you do procedures 1 and 2.

### — Procedure —

#### Procedure 1.

Clean the mirrors with the mirror cleaning kit. It is easy to clean the mirrors (there is no need to remove the ADF base).

P/N: H0819300 (for CSO) Mirror Cleaning Kit

- Mirror Cleaning Tool × 1pc
- Cleaning Felt × 30pcs
- Vinyl Bag × 1pc

### [Preparation]

Attach the cleaning felts [1] to the mirror cleaning tool [2]. (Fig. 1) (With one set of felts, you can clean the mirror up to 10 times)

### [Cleaning Method]

- (1) Remove the exposure glass.
- (2) Insert the cleaning tool into the scanner. (Fig. 2)
- (3) Clean the mirrors by sliding the tool. (3~ 4 times for each mirror)



Fig. 1

[1]

H081

[2]

[1]

# RIGOR

### Technical Bulletin

### No. CSO-028

### SUBJECT: Dirty Mirrors

DATE: June 30, 1993.

### Procedure 2.

Install the mirror protection sheet kit. The sheets in the kit will prevent the mirrors from becomeing dirty.

### P/N: H0819900 Dust Protection Sheet Kit

- FCU Sheet × 1pc
- Dust Protection Sheet 1  $\times$  1pc
- Dust Protection Sheet  $2 \times 1pc$
- CTM Sheet × 1pc

### [CTM Sheet Installation]

- (1) Open the front cover, then cover the OPC belt with a piece of paper (do not touch the belt surface by hand).
- (2) Attach the CTM sheet. (Fig. 3)



### [FCU Sheet Installation]

- (1) Remove the rear/ left/ right/ lens covers.
- (2) Insert the FCU sheet under the mirrors, then attach the sheet to the right side and interior of the ADF base. (Fig. 4)

[Dust Protection Sheet 1 and 2 Installation]

- Attach the dust protection sheet 1 to the left side of the scanner and the upper side of the shading plate. (Fig. 4)
- (2) Attach the dust protection sheet 2 to the right side of the scanner and the upper side of the shading plate. (Fig. 4)



### — Countermeasure —

We have applied the modification (attaching the protection sheets to the productions) from the June. productions.



No. CSO-029

SUBJECT: ADF Non Feed Problem

DATE: July 27, 1993

PREPARED BY: N. Mihara CHECKED BY:		FROM: FAX	X T.S. Section
CLASSIFICATION: Action Required Troubleshooting Retrofit Information	<ul> <li>Revision of servi</li> <li>Information only</li> <li>Other</li> </ul>	ce manual	MODEL: CSO

### [Problem]

I

Non feed at the ADF may occur if copier paper which has silicone oil on the sorface is used as a original.

### [Reason]

Some copier machines may leave too much silicone oil on copies.

### [Countermeasure]

Please replace the pick-up roller with the following countermeasure part.

### Part No. H0819504: Pick up roller (Carborundum)

**Note:** Please note that the ADF capacity will be decreased. if the Carborundum roller is installed.

ADF capacity: 50 sheets (Normal rubber roller) 20 sheets (Carborundum)

	Bulletin	No.	CSO-030
SUBJECT: Treatment for the Rx image when error	or occur		<b>DATE:</b> Dec. 15, 1994
PREPARED BY: H.Yokoyama CHECKED BY: S.Hamano	FROM: 2nd	d T.S. Se	ection
CLASSIFICATION:	ice manual	MODE CSO (I	L: Europe and French)

The following function has been added.

Troubleshooting

Retrofit Information

- Address 24061 (H) bit 3. (Default setting is 1)

- 0 : Even if an Rx error occurs during memory Rx, the machine keeps the image in the memory.
- 1 : The data is erased.

Information only

Other

- ROM suffix no.s which contain the above function.

- H0817130P~ (Europe version)
   H0817131P~ (HCS version)
- H0817133F~ (French version)

The following table shows the maximum incoming page lengths that can be reduced for each copy paper size. All lengths are in millimetres. The factory setting of the reduction ratio is 4/3.

сору	Copy Paper	Maxim	Maximum reducable incoming page lengths			
Paper Type	Length	Ratio = 3/2	Ratio = 4/3	Ratio = 8/7	Ratio = 12/11	
A5	148	214.5	190.7	163.4	156	
B5	182	265.5	236	202.3	193.1	
Letter	279.4	341/385 *	341/365.9 *	313.6	299.3	2
A4	297	341/385 *	341/385 *	333.7	318.5	
F4, F	330.2	341/385 *	341/385 *	341/371 .7 *	341/354.8 *	
Legal	355.6	341/385 *	341/385 *	341/385 *	341/382.5 *	
B4	364	341/385 *	341/385 *	341/385 *	341/385 *	

\* The page memory cannot reduce incoming pages longer than 341 mm (Europe) or 385 mm (other areas).

The values are calculated as follows.

Maximum incoming page length that can be reduced = (Copy Paper Length - 5) x Reduction Ratio

For example, for A5 with a reduction ratio of 4/3Max incoming data length = (148 -5) x 4/3 = 190.7

Incoming pages that are longer than the maximum length will not be reduced, but will be printed on two pages and treated in accordance with the setting of bit 1 of bit switch 02. If this bit is 1, the bottom few lines of the page will be repeated at the top of the next page. If this bit is 0, the next page will continue from where the first page left off.

#### **Reduction Disabled**

If bit 2 of bit switch 02 is at 1, the data will not be reduced. However, if the incoming page is up to x mm longer than the copy paper, the excess portion will not be printed. The value of x can be from O to 15 mm. It is determined by the setting of RAM address 24051 (copy mode: bits 3 to O, receive mode: bits 7 to 4; bits 3 and 7 are the most significant bits).

Hex value	Value of x			
0	0			
1	1			
and so on until .				
15	15			

Messages more than x mm longer than the copy paper are printed on two pages and treated in accordance with the setting of bit 1 of bit switch 02.

- 1. CPU (AFSP)
  - . 65C02 compatible microprocessor
  - . Interrupt control
  - . DMA control
  - . Data compression and reconstruction (high speed MH coding for 4.5second scanning)
  - . Modem (digital operations)
  - . Real time clock (battery backed-up)
  - . Memory control
  - . Control of all mechanisms (directly or through other chips)
  - . NCU control (through the I/0 Port)
- 2.110 Port (LIOP)
  - . Clock control
  - . Sensor monitoring (including A/D conversion where necessary)
  - . Tone detection
  - . Motor drive
  - . Operation panel control
  - . Laser Interface control
- 3. Laser Interface (LIF)
  - . Page memory control
  - . Laser diode control
  - . Smoothing
- 4. Modem Analog Front End (Modem AFE)
  - . Modem (analog operations)
  - . Attenuation
- 5. Video Processor (VPP)
  - . Analog/digital video signal processing
- 6. Hybrid IC (HIC)
  - . Filters

#### 7. RAM

- . 128k for ECM (no back-up)
- 256k SAF memory (with battery back-up)
- . 768k page memory (USA, Asia) 576k page memory (Europe)

On the following pages, there are tables of factory settings for each country. To enable the factory settings for a particular nation, program the Country Code (RAM address 413B [use hex codes] or use Function 96 [input the decimal value]) to the appropriate setting. The country code also affects the NCU signal status (see section 2-3-7).

- . For each RAM address, there are two columns. The left hand column shows the actual value of the parameter. The right hand column shows the value of the factory setting that is stored in the RAM. The factory settings are quoted either in hexadecimal code (the actual contents of the RAM address) if there is a H after the value in the table, or in decimal (converted from the actual hex contents of the RAM address) if there is no H after the value.
- . Some RAMs must be stored using BCD; see the NCU Parameter definition table for details.
- . If the table entry is blank, this means that the value is not used,

#### Country Code for NCU Parameters [or RAM Address 413B, in hex code]:

France: 00, Germany: 01, UK: 02, Italy: 03, Austria: 04, Belgium: 05, Denmark: 06, Finland: 07, Ireland: 08, Norway: 09, Sweden: 10 [OA], Switzerland: 11 [OB], Portugal: 12 [OC], Holland: 13 [0D], Spain: 14 [0E], Israel: 15 [OF], USA: 17 [11], Asia: 18 [12], Japan: 19 [13], Hong kong:20[14], South Africa: 21[15], Australia: 22 [16], New Zealand:23 [17], Singapore: 24 [18], Malaysia:25 [19]

Tx Level (RAM Address 4181): Ail countries 6 (- 6dB), except the UK (10 [-10dB]), USA (9[-9dB]), and Australia(12[-12dB]).

Country	41:	3C	41	3D	413	3E	4	13F/414	-0
France							474 Hz	04(H)	74(H)
Germany	1.1s	55	4.1 s	205	1.06 s	53	<b>498</b> Hz	04(H)	98(H)
UK/Univ									
Italy							<b>471</b> Hz	04(H)	71 (H)
Austria							512 Hz	05(H)	12(H)
Belgium							471 Hz	04(H)	71 (H)
Denmark							512 Hz	05(H)	12(H)
Finland							536 Hz	05(H)	36(H)
Ireland	1.1s	55	4.1 s	205	1.06 s	53	<b>450</b> Hz	04(H)	50(H)
Norway							512 Hz	05(H)	12(H)
Sweden							512 Hz	05(H)	12(H)
Switz.	1.1s	55	4.1 s	205			608 Hz	06(H)	08(H)
Portugal							450 Hz	04(H)	50(H)
Holland							563 Hz	05(H)	63(H)
Spain							480 Hz	04(H)	80(H)
Israel	1.1s	55	4.1 s	205	1,06 s	53	498 Hz	04(H)	98(H)
USA									
Asia									
Australia							450 Hz	04(H)	50(H)

12.17.91	DRAWN		
		PCB ASS' Y:	(4/4)
H 0 8 <sup>-</sup>	1 6040	NCU-EUROF	PE/ASIA





А

SUBJECT: Black bands/lines on the received co	DATE: November 11th, 1993		
PREPARED BY: H.Yokoyama CHECKED BY:	FROM: 2nd	d T.S. Se	ection
CLASSIFICATION:	ice manual	MODE	L: 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  $\rightarrow$  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  $\rightarrow$  5mm)
- The distance between the gride plate and charge wire will be changed (6mm  $\rightarrow$  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.

		1		
4				

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]

R||(C)

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.

SUBJECT: Black bands/lines on the received co	<b>DATE:</b> Feb. 3rd, 1994		
PREPARED BY: H.Yokoyama CHECKED BY:	FROM: 2nd	d T.S. Se	ection
CLASSIFICATION:	ice manual	MODE	L: 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  $\rightarrow$  H081 2854 Eraser Ass'y
- H081 5030  $\rightarrow$  H081 5020 Power pack (CSO/CFO)
- H510 5050  $\rightarrow$  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  $\rightarrow$  5mm)
- The distance between the gride plate and charge wire will be changed (6mm  $\rightarrow$  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.

ì			
	1		
4			

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.

SUBJECT: CTM modification	on			<b>DATE:</b> April, 11th, 1994
PREPARED BY: H.Yokoya CHECKED BY:	ama	FROM: 2nd	1 T.S. S	ection
CLASSIFICATION:	Revision of serv	ice manual	MODE CSO, (	EL: CFO, CS1
Troubleshooting Retrofit Information	Information only Other			

To avoid toner from being spilt inside the machine, the toner collection roller of the CTM will be modified.

### <Figure>

Provious	After modification			
Flevious	Туре А	Туре В		
Brush	4 Magnets	Magnet surface		
J.	Magnet	Magnet		
Black lot no. is printed on the carton box.	Red lot no. will be printed on the carton box.	Blank lot no. will be printed on the carton box.		

### <Expected arrival period>



SUBJECT: Replacing the to	<b>DATE:</b> April, 11th, 1994		
PREPARED BY:H. Yokoya CHECKED BY:	ma	FROM: 2nd	d T.S. Section
CLASSIFICATION:			MODEL:
Action Required	Revision of serv	ice manual	CSO, CFO, CRO, CS1
Troubleshooting	Information only		
Retrofit Information	Other		

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.

SUBJECT: Vertical Black Lin	es			<b>DATE:</b> Jury. 30, 1994
PREPARED BY: H.Yokoyar CHECKED BY: S.Hamano	na	FROM: 2nd	d T.S. S	ection
CLASSIFICATION: Action Required Troubleshooting Retrofit Information	<ul> <li>Revision of servi</li> <li>Information only</li> <li>Other</li> </ul>	ice manual	MODE CSO, (	EL: 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

 $\text{H0812100D} \rightarrow \text{E}$ 

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.

## Technical Bulletin No. Multi-001

 

 SUBJECT: Memory Back-up Battery
 DATE: Jan. 19, 1995

 PREPARED BY: Y.Okunishi CHECKED BY: S.Hamano
 FROM: 2nd T.S. Section

 CLASSIFICATION:
 MODEL:

 Action Required
 Revision of service manual

 Troubleshooting
 Information only

 Retrofit Information
 Other

### [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.

- 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.



### [Modification]

See MB C Series-048A.

## R[[(C)(0

### Technical Bulletin No. Multi-001

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.

## Technical Bulletin No. Multi-002

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	<ul> <li>Revision of servi</li> <li>Information only</li> <li>Preventive Actio</li> </ul>	ice manual n	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 - 004A

#### **SUBJECT: Fusing Unit**

DATE: Oct. 15, 1996

PREPARED BY: Y.Okunish CHECKED BY: S.Fujii	i	FROM: Qu	ality Assurance Center
CLASSIFICATION: Action Required Troubleshooting Retrofit Information	<ul> <li>Revision of servi</li> <li>Information only</li> <li>Other</li> </ul>	ice manual	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 overherat 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	$2 \rightarrow 2$	X/O
2	H0812120	H5132119	Stripper (Separation Pawl)	$2 \rightarrow 2$	X / O
3	H0812137	H0815035 H0812141 03130080B	Thermistor Assembly Thermistor Bracket Screw - M3x8	$ \begin{array}{c} 1 \rightarrow 0 \\ 1 \rightarrow 1 \\ 1 \rightarrow 1 \\ 0 \rightarrow 1 \\ \end{array} $	X / O as an assembly
4	H0812100	H0819600	Hot Roller Kit	$1 \rightarrow 1$	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



Note: \*1 Place the thermostat harness under the part of the bracket.

- $\pm$  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.
- $\pm$  4 Do not bend the thermistor neck (spring plate) when installing or cleaning it . If the thermistor is bent, replace it.

## RIGOH

### Technical Bulletin

#### PAGE: 1/3

Model: General Date				e: 31-Oct-97	No: 011
Subject: Year 2000 Problem			Prepared by: Y.Okunishi		
From: QAC 2nd Field Information Dept.					
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul>	<ul> <li>Part info</li> <li>Electric</li> <li>Transm</li> </ul>	ormat al it/rec	tion Action Servio Servio eive Retro	n required ce manual revision fit 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.

- 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.
- 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.
- 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

RIGOH

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.)
- KV series (FAX2800L, 1200L, etc.) 15)
- C series (FAX3000L, 4500L, 5600L, etc.) 16)
- 17) L80 (MV715)
- I series (FAX800, 880, 680, etc.) 18)
- 19) F\L series (FAX2700L, 4700L, MV310, etc.)
- FX7, LX7 (FAX1700L, MV106, FAX1750MP, etc.) 20)
- 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.

- Clock adjustment is available only for years 91 through 99. The other years b) cannot be set. (Month, day, and time can be adjusted.)
- 2) K200 (FAX7000L)
  - Clock adjustment is available only for years 88 through 99. The other years a) cannot be set. (Month, day, and time can be adjusted.)
  - The send later mode does not function (no dialling occurs) if it passes the time b) 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.
  - Automatic re-transmission is not done if the year 2000 starts after the C) 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.

RIGOH
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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

RIGORI

Reissue date: 15-Nov-97

The items in bold italic have been corrected or added.

Model: General Date		e: 31-Oct-97	No: 011 <b>A</b>		
Subject: Year 2000 Problem		Prepared by: Y.Okunishi			
From: QAC 2nd Field Information Dept.					
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other <i>(Info only)</i></li> </ul>	Part informat		tion Action Servio	n required ce manual revision fit 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 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.
- 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 energry 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.)

<b>T</b> echnical I	Bulletin
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Model: General

KIGOH

Date: 31-Oct-97

No: 011**A** 

- 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) F\L 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.

- 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.)

RIGOH	Technical Bulletin	PAGE: 3/3
Model: General	Date: 31-Oct-97	No: 011 <b>A</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.
  - 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

RIGOH

Reissue date: 15-Jan-98

The items in bold italic have been corrected or added.

Model: General Date		e: 15-Jan-98	No: 011 <i>B</i>		
Subject: Year 2000 Problem			Prepared by: Y.Okunishi		
From: QAC 2nd Field Information Dept.					
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other (Info only)</li> </ul>	Part informat Electrical Transmit/rece		tion Action Service eive Retro	n required ce manual revision fit 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 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 energry 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

RIGOH

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) F\L 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.

 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.
  - 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	
*	*	*	

### Technical Bulletin

Model: General Da		Date: 15-Apr-98		No: 014	
Subject: Action Plan for the Year 2000 Issues			Prepared by: Y.C	)kunishi	
From: QAC Field Information Dept.					
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other (Info only)</li> </ul>	Part inf Electric	orma al iit/rec	tion Action Servio eive Retro	n required ce manual revision fit information

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 reated 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.

 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)
 CD2 (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

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

<sup>(2)</sup>The 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.

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.

RIGOH	Technical Bulletin	<b>PAGE: 2/3</b>	_
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.

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.

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.



Date: 13-Api-36	Model: General	Date: 15-Apr-98	No: 014
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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	
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# Technical Bulletin

Model: LSO, CRO, CS1, AFO, AF2, K200 Dat		Dat	e: 31-May-98	No: Multi - 008	
Subject: ROMs for the year 2000 problem		Prepared by: Y.Okunishi			
From: QAC Field Information Dept.					
Classification:	Troubleshooting	Part informat		tion Actior	ı required
1	Mechanical	Electrical		Servic	ce manual revision
1	Paper path	Transmit/rec		eive 🗌 Retro	fit information
4	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	
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# Technical Bulletin

**PAGE:** 2/8

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	New ROM	Test	File name	Check	ROM Code	Model code	Model	Brand	Area	Sold from	Sold by	No. of sold	Note
Code	No.	I		sum					l			units	
CSO	H0817138	yes	CSO7138	8552	c30usa	H081-20	3000L	RICOH	US	91/12	93/4	16,747	2M ROM (1ROM/unit)
		I	İ İ			23	3200L		l	91/12	95/11	18,242	
		l			[	24	3100L		l	93/2	95/2	21,863	
		I	İ I		[	21	9660	NRG	l	92/3	92/7	71	
		l			[	22	9661		l	92/3	94/2	1,651	
		l				26	3660	SAVIN	l	92/2	93/4	1,372	
		l				27	3620			92/1	93/4	1,917	
		<u> </u>									TOTAL	61,863	
	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	
		l	!			29	L41		L	92/1	93/5	8,008	
		ļ									TOTAL	13,189	
	H0817124A	yes	CSO7124A	0772	c30eur	40	3000L 3000L	RICOH	Europe	92/3	95/11	37,716	
		l				46	3000L	RICOH	Switzerland	92/10	95/6	4,179	
		l				60	9660	NRG	Europe	93/3	95/8	15,659	
		J			<u> </u>						TOTAL	57,554	
	H0817123A	no	CSO7123A	0078	c30fra	70	3000LF	RICOH	France	93/4	95/9	393	
		I				80			l	92/4	95/9	6,206	4
		l				90	9660⊦	NRG	L	92/4	95/9	2,164	
	1100171014		00071014					lafata a		00/10	TOTAL	8,763	4
	H081/121A	yes	CSU/121A	FA5/	c30ncs	30	3660	Infotec	Europe	92/10	94/8	15,528	
	H0817122A	yes	CS07122A	D225	c30asi	51	3000L	RICOH	Asia	92/3	96/10	18,523	
		l				59	9000	NHG	Karaa	94/3	90/4	2,031	
		1			-	55		Ricon	Korea		TOTAL	? 26 999	
	11001714014		CC07140M	9500	a 20tai	00	20001	DICOLI	Toiwon	00/2	IUTAL 05/11	30,888	
	HU017140W	yes	CS07140101	6090	c30lai	23	3000L	RICOH	China	92/3	95/11	1,201	
	H0017120D		CSO7120B	C2CE	c30cm		3000L	Ontion	Europo	93/7	95/11	901	Languaga Kit
	1100171591	yes	03071391	COOL	CSOOPI	73(•·BE) H151.	33•,F151- 83(•:GES)	Option	Luiope				Language Kit
CS1	H5117150B	ves	CS17150B	6A91	c31usa	H511-20	3500	BICOH	US	93/6	96/3	31,766	
001	1101111000	,	00111002	0,101	oorada	21	9669	NRG	00	93/6	95/9	700	
		1				22	L46	Omnifax	l	93/6	95/12	11.472	
		1				27	3670	SAVIN	l	93/7	95/9	3.106	
		1	İ İ			I				0/0	TOTAL	47,044	
CR0	H5107121B	yes	CR07121B	23AB	c60usa	H510-20	2500L	RICOH	US	3/8 93/5	95/4	26,535	
		-				21	9650	NRG	l	93/7	95/7	832	
													4

<b>R</b> [](	GOH			Tec	hnica	al <b>B</b> ulletir	I		PAGE:	-			
1	1	1	1			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	5
											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	-
			0000000		0.01		05001	DIAGU			TOTAL	7,062	
150	H5107131B	yes	CR07131B	23A3	c60tai	53	2500L	RICOH	Taiwan	94/10	97/6	777	_
AFO	H084/130K	yes	AFO/130K	D8D3	a20usa	H084-20	500	RICOH	Taiwan	92/4	93/4	365	-
	H084/140L	yes	AF0/140L	686A	a20eur	44	500	RICOH	Europe	91/8	94/10	6,817	
	H0847142H	no	AF0/142H	94D0	a20fra	83	500	RICOH	France	92/4	94/3	1,231	
	H0847143L	yes	AF07143L	350F	a20ncs	34	3301	Infotec	Europe	91/8	95/4	2,892	
	H0847141L	yes	AFO/141L	3F13	a20asi	51	500	RICOH	Asia	91/10	96/11	13,696	
						00	500	RICOH	vietnam	92/11	94/5	1,650	KD
	H0847150K	yes	AFO7150K	2A40	a20opt	H15146(•:RICOH),H 151-54(SW:HCS)	-	Option	Europe		TOTAL	?	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	i
											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),H 151- 55(SW:HCS),H151- 93(•:NASHUA)	-	Option	Europe			?	Language Kit



**PAGE:** 4/8

K200	H0087260J H0087261J H0087262J H0087263J H0087264J H0087265J H0087266J H0087266J H0087267J	yes	H0087260	FC1E EBE0 B88F 08B2 7AA0 C2F0 28D7 CE5E	USA	20	7000L	RICOH	US	89/9	95/6	790	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	119	
	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	180	
	H0087280H H0087281H H0087282H H0087283H H0087283H H0087285H H0087285H H0087286H H0087287H	yes	H0087280	1956 CB16 4E46 C3F4 799D 33A8 3EE5 6478	ENG	41	7000L	RICOH	UK	89/10	94/8	85	
	H0087330H H0087331H H0087332H H0087333H H0087333H H0087335H H0087336H H0087337H	yes	H0087330	1D20 64B7 4FAF D4A1 7830 1EBB C591 854A	ENG	31	6765	Infotec	UK	89/10	92/12	125	
	H0087290C H0087291C H0087292C H0087293C H0087293C H0087294C H0087295C H0087297C	yes	H0087290	4A5D 5B24 416A C54D 8882 683D D331 E525	ITY	42	7000L	RICOH	Italy	89/10	91/10	29	

RIGOH	Tec	hnica	l <b>B</b> ulletir	1

**PAGE:** 5/8

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

END



### ROM writing procedure for K200 ROMs

1.	ROM Writing This will vary depending on the ROM This is an example with a buffer RA During the first load, 512KB is sent. During he first load, 0H~7FFFFH ca During the second, 800000H~FFFF Since the K200 is 1MB, the sending twice.	M writer buffer capacity. M capacity of 512KB. In be loaded. FH can be loaded. I is completed after 512KB worth has been sent
	First Time 1-1) Transfer to the ROM writer. Motorola-S Format Receiving location address Send/Receive buffer RAM start Sending buffer RAM end 1-2) Program on the ROM Set program Device Count Device Start Buffer RAM Start Data Type	0000000 0000000 Device capacity 16-bit series 4 00000000 0000000 BIGENDIAN
	Second Time 2-1) Transfer to the ROM writer. Motorola-S Format Receiving location address Send/Receive buffer RAM start Sending buffer RAM end 2-2) Program on the ROM Set program Device Count Device Start Buffer RAM Start Data Type	00080000 0000000 Device capacity 16-bit series 4 00000000 0000000 BIGENDIAN

When the buffer RAM capacity is 1MB, the RAM writing is as follows. 1MB can be sent during the first load. OH~FFFFH can be loaded. Since the K200 is 1MB, it can be transferred all at once.



**PAGE:**7/8

First Time 1-1) Transfer to the ROM writer. Motorola-S Format Receiving location address Send/Receive buffer RAM start Sending buffer RAM end

00000000 00000000 Device capacity

1-2) Program on the ROM

Set program	16-bit series
Device Count	4
Device Start	0000000
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 Device Count Device Start Buffer RAM Start Data Type

16-bit series 4 00000000 00080000 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:H0087260, 3-0:H0087267)



#### Check Sum Chart

ROM location	0-8	0-0	1-8	1-0	2-8	2-0	3-8	3-0
Model								
K200USA	FC1E	EBE0	B88F	08B2	7AA0	C2F0	28D7	EC5E
K200GMN-R	451C	78BA	3FA2	C44F	7B14	4DA3	7C16	380B
K200G <m-k< td=""><td>4527</td><td>7967</td><td>3FA2</td><td>C44F</td><td>7B14</td><td>4DA3</td><td>7C16</td><td>380B</td></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	85 <mark>4</mark> A
	· II · /I · f							

R: Ricoh, K : Kalle (Infotec)

## Technical Bulletin

#### **RTB Correction**

Reissue date: 30-Jun-98

The items in bold italic have been corrected or added.

Model: General		Date	e: 15-Jan-98	No: 011 <i>C</i>	
Subject: Year 20	00 Problem	Prepared by: Y.Okunishi			
From: QAC 2nd F	Field Information Dept.				
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other (Info only)</li> </ul>	eshooting Part infor nical Electrical path Transmit/		tion Action Servic Servic eive Retro	n required be manual revision fit 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 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.)

### Technical Bulletin

**PAGE: 2/3** 

Model: General

Date: 15-Jan-98

No: 011*C* 

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

#### Problem found

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

AFO (FAX 500/550/580, NRG 9620, Infotec 3301/3305, Nashua F492) 1) 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)

The day of week, that appears on the display only in the clock adjustment a) 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.

Clock adjustment is available only for the year 91 through 99. The other years b) cannot be set. (Month, day and time can be adjusted.)

Model: General

Date: 15-Jan-98

- 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.
  - 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.
- 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	
*	*	*	

## Technical Bulletin

#### **RTB Correction**

Reissue date: 30-Jun-98

The items in bold italic have been correction or added.

Model: CSO, CR	lodel: CSO, CRO, CS1, AFO, AF2, K200 Da			e: 31-May-98	No: Multi-008 <b>A</b>
Subject: ROMs for the year 2000 problem			Prepared by: Y. Okunishi		
From: QAC Field	Information Dept.				
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul>	⊠ Part informa □ Electrical □ Transmit/rec		tion Action Servio eive Retro	n required ce manual revision fit 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	
*	*	*	

### Technical Bulletin

**PAGE: 2/5** 

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

Date: 31-May-98

No: Multi-008

### ROMs for the year 2000

Product	New ROM	Check	Model code	Model	Brand	Area	Note
Code	No.	sum					
CSO	H0817138	8552	H081-20	3000L	RICOH	US	2M ROM
			23	3200L			(1ROM/unit)
			24	3100L			· ,
			21	9660	NRG		
			22	9661			
			26	3660	SAVIN		
			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:H	CS•	Option	Europe	Language Kit
			H151-73(FRN:R	icoh)			
			H151-83(FRN:G	ES)			-
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		-
<u> </u>	H5107131B	23A3	53	2500L	RICOH	Taiwan	

#### 25-Jun-98

### Technical Bulletin

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

Date: 31-May-98

No: Multi-008

AFO	H0847130K	D8D3	H084-20	500	RICOH	Taiwan	
	H0847140L	6B6A	44	500	RICOH	Europe	]
	H0847142H	94D0	83	500	RICOH	France	]
	H0847143L	350F	34	3301	Infotec	Europe	]
	H0847141L	3F13	51	500	RICOH	Asia	]
l		<u> </u>	56	500	RICOH	Vietnam	KD
1	H0847150K	2A40	H151-46(FRN:R	ICOH)	Option	Europe	Language Kit
		I	H151-54(SW:HC	CS)			
AF1	H0857135B	FCDF	H085-54	580	RICOH	China	]
AF2	H0867130K	9BDF	20	550	RICOH	US	]
	H0867140L	3C35	44	550	RICOH	Europe	
		1	90	9620	NRG		
	H0867142H	583D	73	3305	Infotec	France	
		I	83	550	RICOH	]	
		<u> </u>	93	9620	NRG		
	H0867143L	0CE0	34	3305	Infotec	Europe	]
	H0867141L	DAD8	51	550	RICOH	Asia	]
		1	59	9620	NRG	Asia	]
	H0867131A	9BC3	53	550	RICOH	Taiwan	]
	H0867150L	E725	H151-47(FRN:R	ICOH)	Option	Europe	Language Kit
		1	H151-55(SW:HC	CS)			
		1	H151-93(FRN:N	ASHUA)			

-		r	F		F		-
K200	H0087260J	FC1E	H008-20	7000L	RICOH	US	1M ROM
	H0087261J	EBE0					(8 ROMs/unit)
	H0087262J	B88F					
	H0087263J	08B2					
	H0087264J	7AA0					
	H0087265J	C2F0					
	H0087266J	28D7					
	H0087267J	CE5E					
	H0087270F	451C	30	7000L	RICOH	Germany	]
	H0087271F	78BA				l	
	H0087272F	3FA2				l	
	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				l	
	H0087327F	380B					

### Technical Bulletin

**PAGE: 4/5** 

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

Date: 31-May-98

No: Multi-008

H0087280H	1956	41	7000L	RICOH	UK
H0087281H	CB16				
H0087282H	4E46				
H0087283H	C3F4				
H0087284H	799D				
H0087285H	33A8				
H0087286H	3FF5				
H0087287H	6478				
H0087330H	1020	31	6765	Infotec	ЦК
H0087331H	64B7	01	0,00	iniotoo	UN
H0087332H	4F4F				
H0087333H	D4A1				
H0087334H	7830				
H0087335H	1EBB				
H0087336H	C591				
H0087337H	8544				
H0087290C		12	70001	BICOH	ltalv
H0087291C	5R24	74	7000L	TIOON	nary
H00872910	JD24 /16/				
H00872920	C54D				
H0087293C	0040				
H00872940	6820				
H0087295C	0030				
H0087290C	E525				
H0087297C	4469	20	6765	Infotoo	Italy
H0087340C	4A00 5RD1	52	0705	iniolec	italy
H0087341C	4164				
H00073420	410A				
H0087343C	004D				
H0067344C	0002 602D				
H0087345C	0030				
	D331 E525				
H0067347C	E020	10	70001	PICOL	Franco
H0007300E	4AZA 2600	43	7000L	RICOR	France
	3000				
H0087302E	403B				
HU007303E	9670				
	0900				
	1004A				
	1091	20	6765	Infotoo	France
	4430	33	6010	motec	France
	3/20				
HUU8/352E	403B				
	9600				
	0900				
HUU8/35/E	1005	4.4	70001	DICOLL	<b></b>
HUU8/310H	196E	44	7000L	RICOH	⊏urope/Asia
HUU8/311H	CB4C				
HUU8/312H	46				
HUU8/313H					
H0087314H	799A				
H008/315H	3385				
H0087316H	3EE5				
H0087317H	6478				

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

END

## Technical Bulletin

#### **RTB Correction**

Reissue date: 31-Jul-98

The items in bold italic have been correction or added.

Model: CSO, CRO, CS1, AFO, AF2, K200 Da				e: 31-May-98	No: Multi-008 <b>B</b>	
Subject: ROM's for the year 2000				Prepared by: Y.Okunishi		
From: QAC Field Information Dept.						
Classification:	<ul> <li>Troubleshooting</li> <li>Mechanical</li> <li>Paper path</li> <li>Other ()</li> </ul>	autor Dept.       oubleshooting     Image: Part infor       echanical     Image: Dept.       aper path     Image: Transmit       ther (     )		tion Action Service	n required ce manual revision fit 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.

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### Technical Bulletin

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

Date: 31-May-98

No: Multi-008B

<b>ROMs</b> 1	for the ye	ar 2000					25-Jun-98
Product	New ROM	Check	Model cord	Model	Brand	Area	Note
Code	No.	sum					
CSO	H0817138	8552	H081-20	3000L	RICOH	US	2M ROM
			23	3200L			(1ROM/unit)
			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	1
			29	L41			
							]
	H0817124A	0772	40	3000L	RICOH	Europe	
				3000L			
			46	3000L	RICOH	Sv	vitzerland
			60	9660	NRG	Europe	
	1100171004	0070	70		DIOOU	<b>-</b>	г
	HU817123A	0078	70	3000LF	RICOH	France	
			80	06605	NDC		
			90	9000F	INRG		-
	H0817121A	EA57	30	3660	Infotoc	Europe	-
	H0817121A	D225	51	3000	BICOH		-
	110017122A	D225	50	3000L		Asia	
			55	3000	Bicoh	Korea	-
					Theon	Notea	-
	H0817140M	859C	23	3000L	RICOH	Taiwan	_
	H0817128B	E8C5	54	3000L	RICOH	China	-
	H0817159N	C3CE	H151-65 (	SW:HCS),	Option	Europe	Language Kit
			H151-73	FRN:Ricoh)		I	5 5
			H151-83	(FRN:GES)			
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		
	U5107120P	EEDE	20	2661	Infotoo	Europo	-
	H3107120B	FUDE	30	25001	BICOLI	Europe	
			40	2500L			
			60	9650	INNG		_
	H5107123B	0F88	33	3661F	Infotec	France	1
		0100	43	25001 F	RICOH		
			67 63	9650F	NRG		
				00001			1
	H5107132G	37F5	51	2500L	RICOH	Asia	1
		- • •	59	9650	NRG		
							1
	H5107131B	23A3	53	25001	RICOH	Taiwan	1

### Technical Bulletin

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

Date: 31-May-98

No: Multi-008

AFO	H0847130K	D8D3	H084-20	500	RICOH	Taiwan	
	H0847140L	6B6A	44	500	RICOH	Europe	1
	H0847142H	94D0	83	500	RICOH	France	
	H0847143L	350F	34	3301	Infotec	Europe	
	H0847141L	3F13	51	500	RICOH	Asia	
			56	500	RICOH	Vietnam	KD
	H0847150K	2A40	H151-46(FRN:RICOH)	-	Option	Europe	Language Kit
4 5 4		FODE	H151-54(SW:HCS)	500	DIOOU	Obies	
AFI	H0857135B	FCDF	H085-54	580	RICOH	China	
AF2	H0867130K	9BDF	20	550	RICOH	0S	
	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	
	H0867150I	E725	H151-47(FBN·BICOH)		Option	Furope	Language Kit
	100071002	2720	H151-55(SW:HCS), H151- 93(EBN:NASHUA)		opion		
K200	H0087260 I	FC1E	20	70001	BICOH	211	1M BOM (8
IN200	H0087261.I	F886	20	/000L	Thoon	00	ROMs/unit)
	H0087262.1	B88E					
	H0087263J	084C					
	H0087264.I	7ABF					
	H0087265.	C07F					
	H0087266.I	29B0					
	H0087267.I	E658					
	H0087270F	451C	30	70001	BICOH	Germany	•
	H0087271F	7566	66	/000L	Thoon	definally	
	H0087272E	3542					
	H0087272F						
	H0087273F	7462					
	H0087274F	1005					
	L0007275	7005					
		7000					
	H0007277F	2000	10	6765	Infataa	Gormony	1
	H0007320F	4027	40	0700	Infotec	Germany	
		7013					
	HUU07323F						
	H0087324F	7 A62					
	H0087325F	1005					
	HUU8/326F	7008					
	HUU8/32/F	2830		7000	DIACU	1.117	{
	HUU8/280H	1956	41	7000L	RICOH	UK	
	H008/281H	C/BC					
	HUU8/282H	4645					
	H0087283H	C394					
	H0087284H	7A16					
	H0087285H	2A4E					
	H0087286H	3F82					
	H0087287H	56B3					]

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

Date: 31-May-98

No: Multi-008

LIU002230U	1020	01	6765	Infotoo		1
		31	C0/0	motec	UK	
H008/331H	615D					
H0087332H	4FAE					
H0087333H	D441					
H0087334H	78A7					
H0087335H	1761					
H0087336H	C62A					
	70027					
1000733711	7 000	40		DIOOLI		
H008/290C	4A5D	42	7000L	RICOH	Italy	
H0087291C	57CA					
H0087292C	4169					
H0087293C	C4EB					
H0087294C	889D					
H0087295C	69BC					
H0087206C	D427					
1100072300	D427					
H0067297C						
H008/340C	4A68	32	6765	Infotec	Italy	
H0087341C	5877					
H0087342C	4169					
H0087343C	CE4B					
H0087344C	889D					
H0087345C	69BC					
H0087346C	D427					
L00073400						
H0067347C		40		DIGGU	-	
H008/300E	4A2A	43	7000L	RICOH	France	
H0087301E	3326					
H0087302E	403B					
H0087303E	9E1A					
H0087304E	8968					
H0087305E	CC0C					
H0087306E	6DE3					
H0087307E	1807					
10007307	1007	20	6765	Infataa	France	
H0067350E	4A35	33	6765	motec	France	
H008/351E	33D3					
H0087352E	403B					
H0087353E	9E1A					
H0087354E	8968					
H0087355E	CC0C					
H0087356F	6DF3					
H0087357E	1807					
H0087310H	196E	11	70001	BICOH	Eur	one/Asia
	0750	44	7000L		Lui	ope/Asia
	0762					
H0087312H	4E45					
H0087313H	C394					
H0087314H	7A13					
H0087315H	2A2B					
H0087316H	3F82					
H0087317H	56B3					
H0087360H	1D38	34	6765	Infotec	Furone	
H0087361H	6193	04	0,00		_a.opo	
	153					
	D441					
H008/364H	/8A4					
H0087365H	173E					
H0087366H	C62A					
H0087367H	7B85					

### Technical Bulletin

Reissued: 30-Apr-99

Model: General

Date: 15-Jan-99 No

No.: RGene011d

#### **RTB** Correction

The items in bold italics have been corrected or added.

Subject: Year 20	00 Problem	Prepared by: Y. Okunishi		
From: Technical	Service Dept., GTS Division			
Classification:		<ul> <li>Part information</li> <li>Electrical</li> <li>Transmit/rec</li> </ul>	tion eive	<ul> <li>Action required</li> <li>Service manual revision</li> <li>Retrofit information</li> </ul>

#### 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.
- 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.

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Reiss	Reissued: 30-Apr-99						
Mod	el: General	Date: 15-Jan-99	No.: RGene011d				
<u>Mode</u>	ls 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	c.)					
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, 5	600L, etc.)					
17)	L80 (MV715)						
18)	I series (FAX800, 880, 680, MV74, etc.)						
19)	F\L 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						

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Reissued: 30-Apr-99

Date: 15-Jan-99

No.: RGene011d

Model: General

#### Problems found

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

 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.
  - 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.

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Reissued: 30-Apr-99Model: GeneralDate: 15-Jan-99No.: 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	
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