RICOH **Technical Bulletin** No.Barbara-001

Issued on 13th July, 1992

Subject:

Parts List Corrections

Model(s):

FAX RF01/02, FAX240

FAX T.S. Section
Service Planning Department
Assistant General Manager

H. Motojima

Classification

- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ■ Revision of Service Manual
- ☐ Information Only
- ☐ Others

The following parts have been registered or corrected.

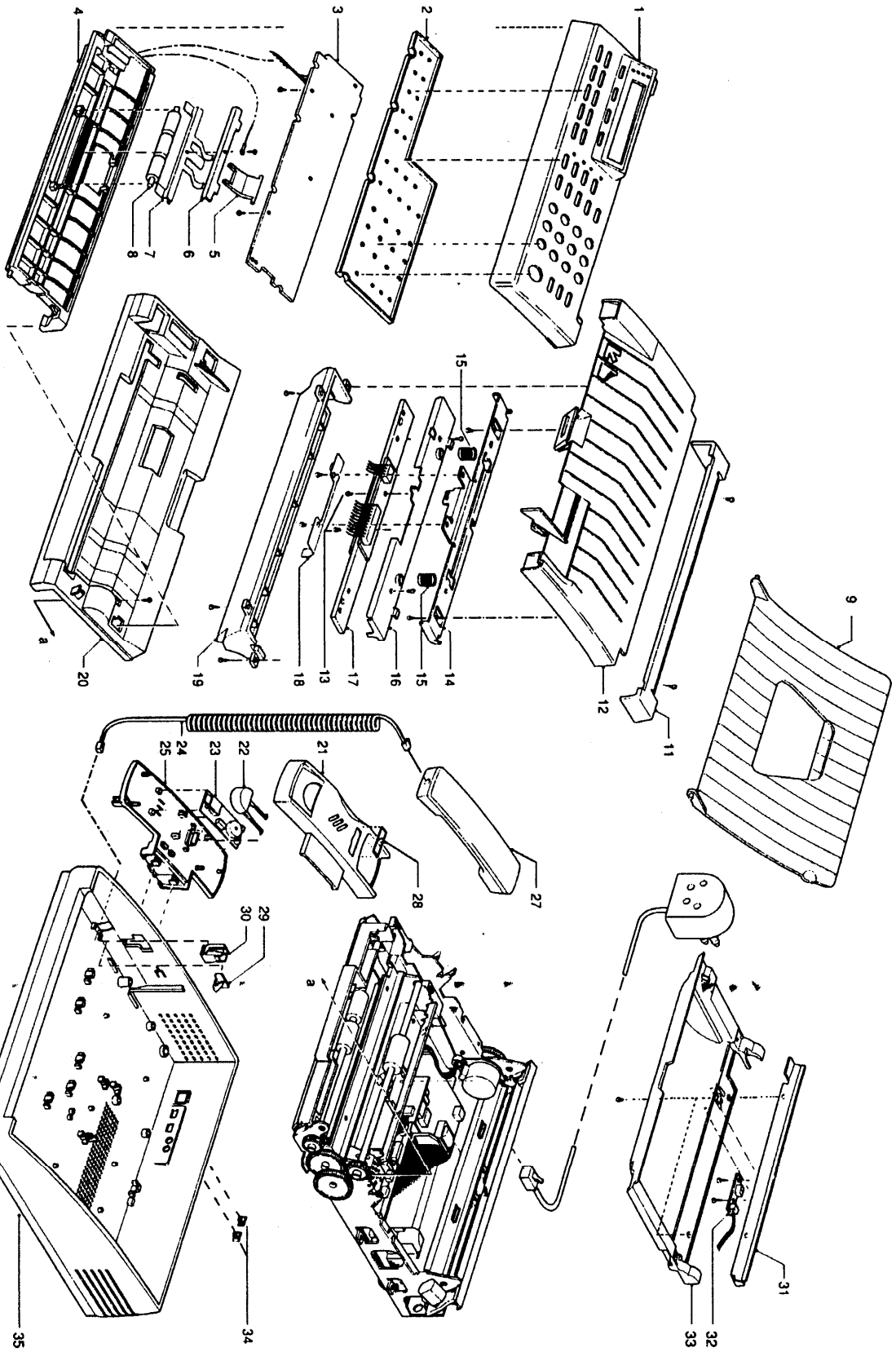
Index	Part No.	Description		RF01	RF02	FAX240
2	H0948508	OPU Rubber Mat - FAX240	New			o
140	H0535023	Monitor Speaker - P/# corrected		o	0	0
*	H0937711	Spring Washer - Thermal Head	New	o	0	0
*	H0937712	Washer - Thermal Head	New	o	0	0
*	H0937713	Screw - M3 x 5	New	o	0	0
	H0938107	Quick Dial Label	New		o	0

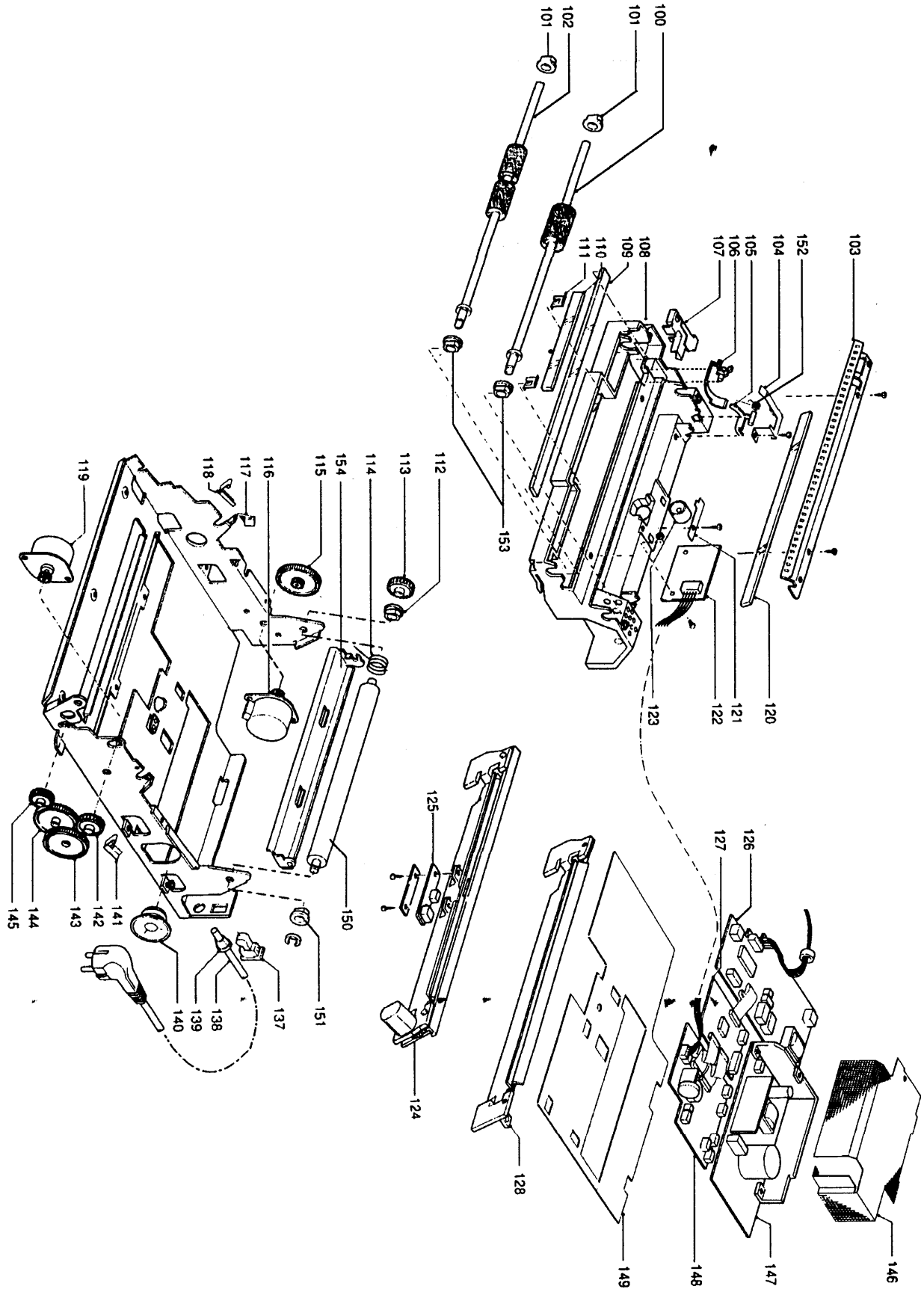
Note that the part number of the monitor speaker listed in the service manual was wrong. Use "H0535023" for further ordering.

A full set of latest parts list with exploded view is enclosed.

8. PARTS CATALOG

8-1. PARTS LAYOUT

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8-2. PARTS LIST

In the following table, O in RF01 (H092), RF02(H093) or FAX240(H094) column indicates that a part is used in that machine.

Index	Part No.	Description	RF01 (H092)	RF02 (H093)	FAX240(H094)
	H0927910	Op-port Cover - English : RF01	O		
	H0927911	Op-port Cover - German : RF01	O		
	H0927912	Op-port Cover - Italian: RF01	O		
	H0927913	Op-port Cover - French : RF01	O		
	H0927914	Op-port Cover - Spanish : RF01	O		
	H0927915	Op-port Cover - Swedish : RF01	O		
	H0937950	Op-port Cover - English : RF02		O	
1	H0937951	Op-port Cover - German : RF02		O	
	H0937952	Op-port Cover - Italian: RF02		O	
	H0937953	Op-port Cover - French: RF02		O	
	H0937954	Op-port Cover - Spanish : RF02		O	
	H0937955	Op-port Cover - Swedish: RF02		O	
	H0947950	Op-port Cover - English : FAX240	O		
	H0947951	Op-port Cover - German : FAX240			O
	H0947952	Op-port Cover - Italian : FAX240			O
	H0947953	Op-port Cover - French : FAX240			O
	H0947954	Op-port Cover - Spanish : FAX240			O
	H0947955	Op-port Cover - Swedish : FAX240			O
	H0928505	OPU Rubber Mat - RF01	o		
2	H0938508	OPU Rubber Mat - RF02		o	
	H0948508*	OPU Rubber Mat - FAX240			O
3	H0928504	PCB - OPU : RF01	O		
	H0938504	PCB - OPU : RF02/FAX240		O	O
4	H0801501	White Pressure Plate	o	0	0
5	H0801031	Separation Rubber Plate Ass'y	o	0	0
6	H0801523	Reinforce Plate	o	0	0
7	H0801514	Spring Plate - ADF	o	0	0
8	H0801503	Upper R2 Roller	o	0	0
9	H0938102	Copy Tray - RF01 /02	O	O	
	H0948102	Copy Tray - FAX240			O
11	H0937903	Rear Cover - RF01/02	O	o	
	H0947903	Rear Cover - FAX240			o
12	H0937904	Printer Cover - RF01/02	o	0	
	H0947904	Printer Cover - FAX240			o
13	H0937710	Trust Screw - Thermal Head	o	0	0
*	H0937711*	Spring Washer - Thermal Head			
*	H0937712*	Washer - Thermal Head			
*	H0937713*	Screw - M3 x 5			
14	H0937705	Bracket - Printer Cover	o	0	0
15	H0937702	Coil Spring - Thermal Head	O	O	O
16	H0937706	Bracket - Thermal Head	O	O	O
17	H0945203	Thermal Head	O	O	O
18	H0937701	Spring Plate - Thermal Head	O	O	O

Index	Part No.	Description	RF01 (H092)	RF02 (H093)	FAX240(H094)
19	H093791O	Decurler Cover	o	0	0
20	H0937901	Scanner Cover - RF01/02	o	0	
	H0947901	Scanner Cover - FAX240			o
21	.H0938140	Upper Cradle Cover - RF01/02	o	o	
	H0948140	Upper Cradle Cover - FAX240			o
22	H0938142	Hook Switch - RFO1 /02	o	0	
	H0948142	Hook Switch - FAX240			o
23	H0938507	PCB - HSB	o	0	0
24	H0938105	Curled Cord - 4p-4p - RF01/02	o	0	
	H0948105	Curled Cord - 4p-4p - FAX240			o
25	H0938141	Lower Cradle Cover - RF01/02	o	0	
	H0948141	**Lower Cradle Cover - FAX240**			o
27	**,H0938103**	**Handset - RF01/02**	o	0	
	H0948103	**Handset - FAX240**			o
28	**H0938143**	**Clear Cover - Cradle**	o	0	0
29	**H0938352**	**Harness Clamper**	o	0	0
30	**H0938351**	Modular Jack - Handset: 4 p	o	0	0
31	H0937707	Bracket - Paper Holder	o	0	
32	**H0805007**	Paper End Sensor **(SB-4)**	o	0	0
33	**H0937908**	Paper Holder - **RF01/02**	o	0	0
	H0947907	**Paper Holder - FAX240**			
34	**H0937906**	Slide Switch - **LIU : RF01 /02**	o	0	
	H0947906	**Slide Switch - LIU : FAX240**			o
35	H0937902	**Bottom Cover - RF01/02**	o	0	
	H0947902	**Bottom Cover - FAX240**			o
100	**H0801510**	**ADF Feed Roller**	O	0	0
101	**H0801508**	**Bushing - R2/Feed Roller**	o	0	0
102	**H0801511**	**Lower R2 Roller**	o	0	0
103	H0938302	LED Array Ass'y	o	0	0
104	H0801109	Spring Plate - Feed Roller	o	0	0
105	H0801102	**Actuator-SB1**	o	0	0
106	H0801103	**Actuator-SB2**	o	0	0
107	H0801104	White Reflector - SB-1 /2	o	0	0
108	**H0801101**	**Scanner Base**	o	0	0
109	**H0801105**	1st **Mirror**	O	0	O
110	HO8O11O7	**3rd Mirror**	**o**	o	0
111	H0801110	Spring Plate - **3rd Mirror**	o	0	0
112	H0937704	Left Bushing - Platen Roller	o	0	0
113	**H0802107**	**Gear - Platen Roller**	o	0	0
114	**H0947701**	**Spring Clutch - Decurler**			o
115	**H0801504**	**Idler Gear - ADF/Printer**	o	0	0
116	**H0945101**	**Rx Motor**	o	0	0
117	**H0938301**	**Cover Switch (SB-1O)**	o	0	0
118	**H0801517**	**Spring Hook - Left**	o	0	0
119	**HO945100**	**Tx Motor**	o	0	0
120	**H0801106**	**2nd Mirror**	o	0	0
121	**H0801111**	Spring Plate - Lens	o	0	0

Index	Part No.	Description	RF01 (H092)	RF02 (H093)	FAX240(H094)
122	H0938506	PCB - SBU	o	0	0
123	H0801108	Lens	o	0	0
124	H0942200	Cutter Unit			o
125	H0805007	Jam Sensor (SB-5)			o
126	H0928530	PCB - LIU - RFO1 : D	o		
	H0928531	PCB - LIU - RF01 : NL	o		
	H0928532	PCB - LIU - RFO1 : I	o		
	H0928533	PCB - LIU - RFO1 : GB	o		
	H0928534	PCB - LIU - RF01 : E	o		
	H0928535	PCB - LIU - RFO1 : S	o		
	H0928536	PCB - LIU - RFO1 : A	o		
	H0928537	PCB-LIU-RF01 :CH ‘	o		
	H0928538	PCB - LIU - RF01 : B	o		
	H0928539	PCB-LIU-RF01: DK	o		
	H0928541	PCB - LIU - RF01 : N	o		
	H0928543	PCB-LIU-RF01: P	o		
	H0938530	PCB - LIU - RF02/FAX240 : D		o	0
	H0938531	PCB - LIU - RF02/FAX240 :NL		o	0
	H0938532	PCB-LIU-RF02/FAX240 :I		0	0
	H0938533	PCB-LIU-RF02/FAX240 :GB		o	0
	H0938534	PCB - LIU - RF02/FAX240 :E		o	0
	H0938535	PCB-LIU-RF02/FAX240 : S		o	0
	H0938536	PCB - LIU - RF02/FAX240 :A		o	0
	H0938537	PCB - LIU - RF02/FAX240 :CH		o	0
	H0938538	PCB - LIU - RF02/FAX240 : B		o	0
	H0938539	PCB-LIU-RF02/FAX240 :DK		o	0
	H0938541	PCB - LIU - RF02/FAX240 :N		o	0
	H0938543	PCB-LIU-RF02/FAX240 :P		o	0
127	H0928501	PCB-FCE-RF01 w/o ROM	o		
	H0938501	PCB-FCE-RF02/FAX240 w/o ROM		o	0
128	H0937708	Paper Guide Bracket	o	0	
137	H0938350	Power Switch	o	0	0
138	H0938401	PowerCord-C type	o	0	0
	H0938402	PowerCord-BF type	o	0	0
	H0938403	PowerCord-CH type	o	0	0
139	H0938353	Power Cord Clamper	o	o	o
140	H0535023*	Monitor Speaker	o	0	0
141	H0801518	Spring Hook-Right	o	0	0
142	H0801506	Gear-ADF Feed Roller	o	0	0
143	H0801504	Idler Gear - ADF/Printer	o	0	0
144	H0801505	Idler Gear - ADF	o	0	0
145	H0801507	Gear - R2 Roller	o	0	0
146	H0938354	Shield Plate - PSU	o	0	0
147	H0938505	PCB - PSU	o	0	0

Index	Part No.	Description	RF01 (H092)	RF02 (H093)	FAX240(H 094)
148*	H0928521	PCB - FDU - RFO1 : Type A (UK, D, NL, A, CH, B, F, IRL)	o		
	H0928522	PCB - FDU - RF01 : Type B (S, DK, N, SF)	o		
	H0928523	PCB - FDU - RF01 : Type C (I, E, P)	o		
	H0938521	PCB - FDU - RF02: Type A (UK, D, NL, A, CH, B, F, IRL)		o	
	H0938522	PCB - FDU - RF02: Type B (S, DK, N, SF)		o	
	H0938523	PCB - FDU - RF02: Type C (I, E, P)		o	
	H0948521	PCB - FDU - FAX240: Type A (UK, D, NL, A, CH, B, F, IRL)			o
	H0948522	PCB - FDU - FAX240: Type B (S, DK, N, SF)			o
	H0948523	PCB - FDU - FAX240: Type C (I, E, P)			o
149	H0938355	Insulating Sheet	o	0	0
150	H0942100	Platen Roller	o	0	0
151	H0937703	Right Bushing - Platen Roller	o	0	0
152	H0801115	Spring-SB1	o	0	0
153	50530447	Bushing - 6 m m	o	0	0
154	H0937709	Decurler Bracket			o
*	H0937907	Rubber Foot	o	0	0
*	H0937909	Slide Switch Cover - RF01/02	o	0	
	H0947909	Slide Switch Cover - FAX240			o
*	H0927106	ROM - RF01	o		
	H0947106	ROM - RF02/FAX240		o	0
*	H0938303	Flat Cable - FDU-FCE : 22p	o	0	0
*	H0938305	Flat Cable - LIU-FCE : 10p	o	0	0
*	H0928301	Harness - OPUI -FDU	o		
*	H0928302	Harness - OPU1-LIU : 10p	o		
*	H0938306	Harness - OPU2-FCE :6 p		o	0
*	H0938312	Harness - OPU2-LIU :		0	0
*	H0938307	Harness - PSU-FDU	o	0	0
*	H0938310	Harness - SB4-FDU	0	o	0
*	H0938311	Harness - SB5-FDU	o	0	0
*	H0938309	Harness - SBU-FDU	o	0	0
*	H0938304	Harness - T/H-FCE	O	0	0
*	H0938308	Harness - T/H-FDU	o	0	0
*	H0938314	Harness - LIU-HSB - White: 2 p	o	0	0
*	H0938315	Harness - LIU-HSB - Blue: 2 p	o	0	O
*	H0938316	Harness - LIU-HSB : 6 p	o	0	0
*	H0928110	Operation Manual - RF01 : English	o		
*	H0928111	Operation Manual - RF01 : German	o		
*	H0928112	Operation Manual - RF01 : Italian	o		
*	H0928113	Operation Manual - RF01 : French	o		

Index	Part No.	Description	RF01 (H092)	RF02 (H093)	FAX240(H094)
*	H0928114	Operation Manual - RFO1 : Spanish	O		
*	H0928115	Operation Manual - RF01 : Swedish	O		
*	H0928116	Operation Manual - RF01 : Dutch	O		
	H0928117	Operation Manual - RF01 : Danish	Q		
*	H0928118	Operation Manual - RF01 : Norwegian	O		
*	H0928119	Operation Manual - RF01 : Portuguese	O		
	H0938160	Operation Manual - RF02/FAX240: English		O	0
*	H0938161	Operation Manual - RF02/FAX240 : German		O	0
*	H0938162	Operation Manual - RF02/FAX240 : Italian		O	0
	IH0938163	0peration Manual - RF02/FAX240 : French		O	0
*	H0938164	Operation Manual - RF02/FAX240 : Spanish		O	0
*	H0938165	Operation Manual - RF02/FAX240: Swedish		O	0
	IH0938166	0peration Manual - RF02/FAX240: Dutch		O	0
*	H0938167	Operation Manual - RF02/FAX240: Danish		O	0
*	H0938168	Operation Manual - RF02/FAX240 : Norwegian		O	0
*	H0938169	Operation Manual - RF02/FAX240 : Portuguese		O	0
	H0938107*	Quick Dial Label		O	0
		Service Tools			
	H0809600	Scanner Adjustment Kit	O	0	0
	H0809602	Scanner Adjustment Chart	O	0	0
	H0939600	Scanner Adjustment PCB	O	0	0
	5 4 7 7 9 0 7 8	Heat Resistant Grease MT -78	0	0	0

RICOH **Technical Bulletin No. Barbara-002**

Issued on 18th August, 1992

Subject:

How to exit back-to-back mode

Model(s):

FAX RF01/02, FAX240

FAX T.S. Section
Service Planning Department
Assistant General Manager

H. Motojima

Classification

- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ■ Revision of Service Manual
- ☐ Information Only
- ☐ Others

The procedure to exit back-to-back mode mentioned in the service manual (which are referred as "Important Notice for Back-to-Back Mode") was wrong. Use the following procedures to exit back-to-back mode.

1. **Make sure that the machine is not communicating.**
2. **Press the Halftone key to light the Halftone LED.**
3. **While holding down the Stop key. press Halftone key. Then the machine exits the back-to-back mode.**
4. **Enter the service mode.**
5. **After finishing with service mode,** re-enter **back-to-back mode if required.**

RICOH Technical Bulletin No. Barbara - 003

SUBJECT: Communication Problem	**DATE:** 25th, Sep., 1992
PREPARED BY: Yokoyama CHECKED BY:	FROM: FAX T.S. Section

CLASSIFICATION:

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

MODEL: FAX RF01

[Problem]

The RF01 may not transmit and receive, depending on how to program the CSI numeric.
The occurrence rate is approx. less than 1.6%.

[Cause]

A certain bit pattern of the CRC in the CSI frame causes the problem.
This is because the software of RF01 for zero insertion may not be working correctly.

[Temporary countermeasure]

Add "+ " or "(Space)" before the CSI characters.

[Modification]

H0927106 → H097106A

This modification has been made from October, 1992 production.

RICOH Technical Bulletin No. Barbara - 004

SUBJECT: Various	**DATE:** 26th, Sep., 1992
PREPARED BY: Yokoyama CHECKED BY:	FROM: FAX T.S. Section

CLASSIFICATION:

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

MODEL: FAX RF01/02
FAX 240

We will correct the Operator's Manual for the next printing run. The following notes will be added. Please advise your customers if you receive any complaints concerning the following points.

1. TAM Ring Count (Number of rings until the machine begins to receive the fax message).

Note:

Set the number of rings to one more than the number of rings before your telephone answering machine takes the call.

2. Silence Detection

Note:

Make sure that the time you programmed for silence detection is shorter than the time your telephone answering machine takes to detect silence and disconnect the line.

Otherwise, your telephone answering machine disconnects the line before your fax machine will be able to take the call.

3. TCR On/Off

Note:

When this function is turned off, only information about received messages will be printed.

4. Pulse/Tone

Note:

In the DP (Pulse Dial) mode, you can change to the PB (Tone Dial) mode by pressing the # key on the operation panel.

RICOH Technical Bulletin No. Barbara - 004

SUBJECT: Various

DATE: 26th, Sep., 1992

In addition, we will modify the machine as follows

A. Modification

The customer will be able to set a TAM Ring Count of 0 through 10.
(The current machine can only have a value for the above from 0 through 5.)

B. Execution Date

October, 1992

RICOH Technical Bulletin No. BARBARA- 005

SUBJECT: Modem Capture Range Problem	**DATE: Oct., 13th, 1992**
PREPARED BY: H. Someya CHECKED BY:	FROM: FAX T.S. Section
CLASSIFICATION: ☐ Action Required ☐ Revision of service manual ■ Troubleshooting ☐ Information only ☐ Retrofit Information ☐ Other	MODEL: Barbara 1, Barbara 2, Barbara 3

[Problem]

The Barbara may not receive at 9600bps/7200bps from certain machines, with the following symptoms.

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

[Cause]

In the CCITT recommendations, the signalling rate of the TX terminal is defined to be 9600bps ± 0.01%, and all makers design the facsimile models in accordance with the CCITT recommendation. However, in some of the models (Tx side), the signalling rate may be out of the range set in the CCITT recommendation, due to possible production variations in the modem, or other factors.

The capture range (Rx capability) of the Barbara is designed to be 9600bps ± 0.01% (there is no margin). Therefore, if the signalling rate of the Tx terminal is out of CCITT- recommended range, the Barbara can not receive V29 signals correctly. This means that, if the modem is produced precisely, this problem will not occur.

Tx side: Signalling rate in the CCITT recommendations - 9600bps ± 0.01%
Rx side: Capture range in the CCITT recommendations - none

[Countermeasure]

Permanent: We have re-designed the modem to have a certain margin for reception and this countermeasure will be applied after the new modem has been prepared.

[Action in the field]

(1) **Make sure the exact causes** of the communication problem. If a communication problem occured in the following conditions, your problem is caused by this modem capture range problem. Go to step 2.
   1. Rx error occurs only in a few cases and always from the same transmitting terminal.
   2. The communication problem is solved when you change the Rx speed 4800 bps.

(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 FCE with the new FCE which contains the new modem.

RICOH **Technical Bulletin No. BARBARA- 005**

SUBJECT: Modem Capture Range Problem | **DATE: Oct., 13th, 1992**

[Sample]

Until now, this problem has been reported at a low rate with the following models, and as a 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	- 0.0163 %
SANFAX 515	Unknown
Panafax UF1000	- 0.012 %
PC98 FAX (Star FAX)	+ 0.012 %
PC FAX Mac	+ 0.018%
IBM PC FAX	Unknown

Please note that the above table just shows examples 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.

RICOH Technical Bulletin No. Barbara - 006

SUBJECT: Useful RAM Address	**DATE: Oct .15th, 1992**
PREPARED BY: H.Someya CHECKED BY:	FROM: FAX T.S. Section
CLASSIFICATION: ☐ Action Required ■ Revision of service manual ☐ Troubleshooting ☐ Information only ☐ Retrofit Information ☐ Other	MODEL: Barbara 1, Barbara 2, Barbara 3.

This information includes a correction and an addition to the Barbara RAM addresses.

1. Barbara 1

(1) Address 032A [H]

This address contains the data indicated in the programming sheet for the continuous silent period detection time in TAM mode.

(2) Address 03B7 [H]

This address contains the actual data being used for the continuous silent period detection time in TAM mode.
[Time = N x 65 (ms)]

2. Barbara 2/3

(1) Address 6376 [H]

This address contains the data indicated in the programming sheet for the continuous silent period detection time in TAM mode.

(2) Address 03C7 [H]

This address contains the actual data being used for the continuous silent period detection time in TAM mode.
[Time = N x 65 (ms)]

If you program the continuous silent period detection time in TAM mode by service mode or RDS change both addresses.

RICOH Technical Bulletin No. Barbara-007

SUBJECT: Barbara ROM modification | **DATE: Nov. 16th, 1992**

PREPARED BY: H.Yokoyama
CHECKED BY:

FROM: FAX T.S. Section

CLASSIFICATION:
- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ■ Information only
- ☐ Other

MODEL: Barbara 1, 2 and 3.

The modification history of the ROMs is as follows.

Barbara 1. (H0927106)

Suffix(New)	I.C.A	Reason for Modification	Effective S/N
--	--	--	K001 209 0001~
A	X / O	1. To solve the CSI problem (Babara 1 may not transmit or receive, depending on how the CSI numeric was programmed.)	--
B	X / O	1. To change the default language setting as follows. France: from Italian to French Italy: from Dutch to Italian Norway: from English to Norwegian Portugal: from English to Portuguese Netherlands: from English to Dutch 2. To correct the setting for number of ring detections in the Norway version (from 1 to 2). 3. To correct the setting for frequency range of ring detection in the Netherlands version (from 11~ 91HZ to 21~ 67HZ)	K001 209 0301~
C	X / O	1. To solve the following problems • In SSC receiving mode, the FIFO may overflow. • In receiving mode, the post message command may not be recognized. • To correct the setting for Tx leveL in the spain version. • To introduce the Spanish PTT requirements. • If a "^ " is in the RTI of the other terminal, it will be printed as "= " on reports made by Barbara 1.	--

RICOH **Technical Bulletin No. Barbara-007**

SUBJECT: Barbara ROM modification | **DATE: Nov. 16th, 1992**

		• The T1 timer setting of Barbara 1 after EOM is 9s shorter than the T.30 recommendation • If the user switches the machine off and on after a document jam, the machine tries to feed the document. • The range of allowable TAM ring count is not enough (1 through 5). • The default AVM language for Switzerland is not correct. (It should be 1 through 10.)	

Barbara 2/3 (H0947106)

--	--	--	K021 206 0001~

A	X / O	1. To solve the following problems.
		• The image may be divided into two pages.
		• The machine may not be able to receive in auto receive mode in the following conditions.
		  • If the country code is set to Germany or Switzerland
		  • If Bit switch 1. Bit no.1 is ON
		  • After a communication using the Handset.
		• The machine may not be able to detect CNG in TAM mode
			--
			K041 206 0001~

B	X / O	1. To solve the following problems.
		• The machine may not be able to receive up to 7 pages of the CCITT # 1 test chart.
		• The machine may erase all pages from the SAF memory if printer down occurs after storing 10 pages.
		• The printed image density may not be normal when printing the 2nd page in halftone multicopy mode.
		2. To introduce the following PTT requirements.
		  • Italy
		  • Dutch
		  • Sweden
			--
			K041 208 0001 ~

RICOH **Technical Bulletin No. Barbara-007**

SUBJECT: Barbara ROM modification | **DATE: Nov. 16th, 1992**

C	X / O	1. To solve the following problems. The machine may dial continuously when in forwarding mode. This problem occurs rarely, in the following conditions • If the Forwarding function is switched on. • If the Machine dials in auto dialling mode before forwarding • If a pause is inserted in the number when the machine dials as described in the above item. • If the number of the digits before the pause and after the pause are the same.	-- K041 209 0001~
D	X / O	1. To solve the following problems. • The machine may malfunction, if the user programs the Polling ID when the machine is out of paper. • The allowable TAM ring count range is not enough (1 through 5). • The NCU parameter table settings are not the same as for AFO/2	K021 209 0001 ~
E	X / O	1. To change the default language setting as follows Sweden: from Dutch to Swedish Norway: from Swedish to Norwegian Portugal: from Italian to Portuguese France: from Swedish to French 2. To solve the following problems. • In SSC receiving mode, the FIFO may oneflow. • In receiving mode, the post message command may not be recognized. • To correct the setting for Tx level in the Spain version. • To introduce the Spanish PTT requirements. • When the user programs "*" for the PSTN access number, dial tone detection is not performed. • Pages which were OK after page retransmission may be shown as error pages on the transmission error report.	

RICOH **Technical Bulletin No. Barbara-007**

SUBJECT: Barbara ROM modification | **DATE: Nov. 16th, 1992**

		• The Norway version may not be able to detect busy tone. • To correct the setting for Tx level in the Spain version. • To introduce the Spanish PTT requirements. • If the machine is switched off in the "ECM data in Buffer" condition ECM data may not be saved if this condition occurs again in the future. • The T1 time after EOM is 9s shorter than the T.30 recommendation. • If the customer switches the machine off and on after a document jam, the machine will try to feed the document. • Bit SW 2. bit no 4 of the Austrian model is always kept at 1, even if a technician changes the setting to 0. • In ECM reception, if the cover is open while a page is being printed the next page may be lost. • The machine may not be able to detect the dial tone, when dialling from behind a PABX.	

RICOH Technical Bulletin No. Barbara-008

SUBJECT: Barbara ROM modification

DATE: Dec., 25th, 1992

PREPARED BY: H. Yokoyama
CHECKED BY:

FROM: FAX T.S. Section

CLASSIFICATION:
- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ■ Information only
- ☐ Other

MODEL:
Barbara 1, 2, and 3

The modification history of the ROMs is as follows.

Barbara 1 (H092 7106)

Suffix(New)	I.C.A	Reason for Modification	Effective Date
D	X / O	1. To change the following NCU parameter settings. • Sweden ring dat 1: 11 →15 ring dat 2: 90 →49 (11~ 90HZ →20~ 67HZ) ring dat 4: 13 →11 (140ms →100ms) • Nether land ring dat 1: 15 →11 (21~ 67HZ →21~ 90HZ) ring dat 4: 20 →10 (280ms →80ms) ring dat 5: 9 →3 (360ms →120ms) 2. To be able to set the TAM ring count to 9 or 10	November, 1992
E	X / O	1. To change the following NCU parameter settings. • Denmark ring dat 4: 10 →12 (80ms →120ms) • Netherland ring dat 4: 10 →12 (80ms →120ms) 2. To correct the software so that the cadence data for CNG detection is not erased when the main switch is turned off.(It sill be cleared when RAM clear has been done.)	December, 1992

RICOH **Technical Bulletin No. Barbara-008**

SUBJECT: Barbara ROM modification

DATE: Dec., 25th, 1992

Suffix(New)	I.C.A	Reason for Modification	Effective Date
		3. To introduce the following Belgian PTT requirements. • 2.5s after the DC loop has been closed, the machine starts sending AVM or ringback tone when the machine has been set in auto select mode. • The cadence data for quasiringback tone has been charged as follows. 0.3s ON, 0.1s OFF, 0.3s ON, 4s OFF confinuously 4. To introduce the Italian PTT requirement.	
F	X / O	1. To solve the CNG detection problem. • CNG cadence data (ON period) has been changed (300 ~ 600ms →360 ~ 800ms) • CNG or silent detection period has been changed to within 40s from off hook. 2. To change the following NCU parameter and Bit Switch settings. • Switzerland ring dat 1: 11 →15 ring dat 2: 90 →51 (11 ~ 90HZ →20 ~ 67HZ) ring dat 4: 10 →9 (80ms →60ms) ring dat 5: 3 →11 (120ms →440ms) • Austria ring dat 1: 11 →12 ring dat 2: 90 →52 (11 ~ 90HZ →19~ 83HZ) Bit SW 0/3: 0 →1	December, 1992

RICOH **Technical Bulletin No. Barbara-008**

SUBJECT: Barbara ROM modification

DATE: Dec., 25th, 1992

Barbara 2/3 (H0947106)

Suffix(New)	I.C.A	Reason for Modification	Effective Date
F	X / O	1. To change the following NCU parameter settings. • Sweden Busy tone detection level : 4C(H) →32(H) (-28.5dBm →-18.75dBm) ring dat 1: 11 →15 ring dat 2: 90 →49 (11~ 90HZ →20~ 67HZ) ring dat 4: 13 →11 (140ms →100ms)	November, 1992
G	X / O	1. To introduce Italian PTT requirements. 2. To change the following NCU parameter settings. • Denmark ring dat 4: 10 →12 (80ms →120ms) dtmf 1: 2 →3 (70ms →75ms) • Netherlands ring dat 1: 15 →11 (21~ 67HZ →21~ 90HZ) ring dat 4: 10 →12 (80ms →120ms) ring dat 5: 9 →3 (360ms →120ms) • Sweden dial tone detection level: 4C(H) →32(H) (-28.5dBm →-18.75dBm) busy tone detection level: 32(H) →4C(H) (-18.75dBm →-28.5dBm) 3. To correct the software so that the cadence data for CNG detection is not erased (It will be cleared when RAM clear has been done.) 4. To introduce the Belgian PTT requirements.	December, 1992
H	X / O	1. To solve the polling transmission problem (Set the polling Tx enable bit in the DIS frame.) 2. To solve the CNG detection problem • CNG cadence data (ON period) has been changed (300~ 600ms →360~ 800ms)	December, 1992

RICOH **Technical Bulletin No. Barbara-008**

SUBJECT: Barbara ROM modification

DATE: Dec., 25th, 1992

Suffix(New)	I.C.A	Reason for Modification	Effective Date
		• CNG or silent detection period has been changed to within 40 from off hook 3. To change the following NCU parameter settings. • Switzerland ring dat 1: 11 →15 ring dat 2: 90 →51 (11~ 90HZ →20~ 67HZ) ring dat 4: 10 →9 (80ms →60ms) ring dat 5: 3 →11 (120ms →440ms) • Austria ring dat 1: 11 →12 ring dat 2: 90 →52 (11~ 90HZ →19~ 83HZ)	

RICOH Technical Bulletin No. Barbara-009

SUBJECT: TAM mode problem	**DATE:** Feb., 15th, 1993
PREPARED BY: H. Yokoyama CHECKED BY:	FROM: FAX T.S. Section

CLASSIFICATION:

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

MODEL: Barbara

— Problem —

- When using the machine in TAM mode with a External Telephone or a TAM the following problems may occur.

  (1) During a telephone conversation, the machine may change to fax mode.
  (2) While the TAM sending an OGM (Out Going Message), the machine may change to fax mode.

- When using the machine in TAM mode with a TAM, the machine may not recognize the CNG which was sent from Transmitter.

— Cause —

- The machine may recognize the voice as a CNG.
  This is because:
  (1) The machine does not check the CNG level.
  (2) Acceptable cadence range for CNG is too wide.
  (3) The period for CNG detection is not determined.

- The machine may not detect CNG.
  This is because:
  (1) The margin for the delay in the Modem filter is not enough.
  (2) The S/N ratio margin for detecting CNG is not enough.

— Countermeasure —

The software has been modified.
The part number for new ROMs are:

H0927106G
H0947106J

RICOH Technical Bulletin No. Barbara-009

SUBJECT: TAM mode problem

DATE: Feb., 15th, 1993

The additional RAM addresses are as follows.

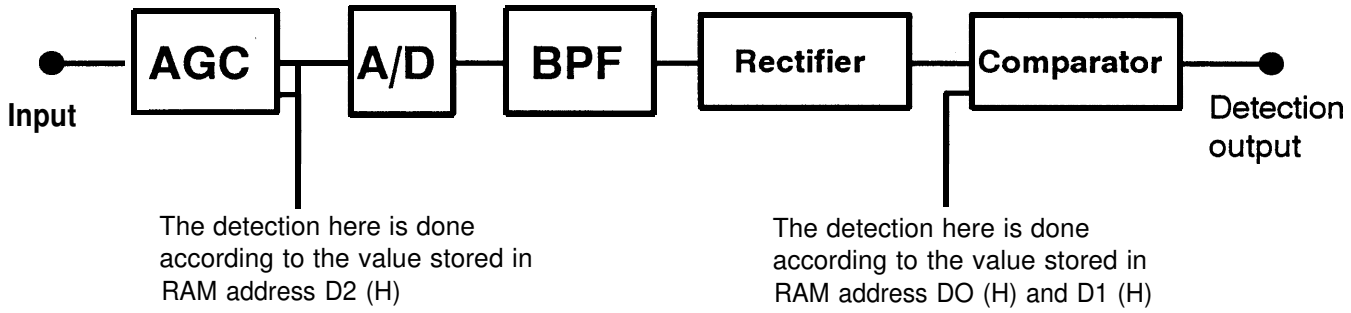
Description	Address (H)	Default (H)	Calculated Value
CNG hysteresis	Do	02	}-18dB *Note 1
CNG hysteresis	D1	00	
CNG detection level (Min.)	D2	5A	5A (H) x 0.375 = - 33.75dB *Note 2
CNG non detection period	D3	00	00 (H) x 0.16 (sec.) = 0 sec }*Note 3
CNG silence detection period	D4	. FA	FA (H) x 0.16 (sec.) = 40 sec

***Note 1**

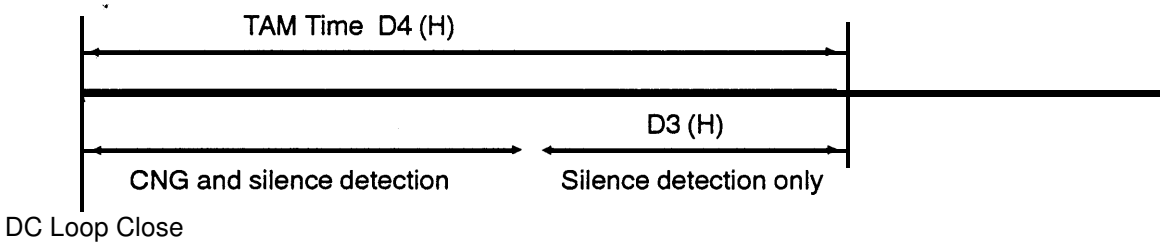
The addresses for D0 and D1 decide the level of CNG. The level is decided according to the following table.

D1	D0	Value
00	01	-24dB
00	02	-18dB
00	04	-12dB
00	08	-6dB
00	10	0dB
00	20	6dB

***Note 2**



***Note 3**



RICOH **Technical Bulletin No. Barbara-009**

SUBJECT: TAM mode problem

DATE: Feb., 15th, 1993

The corrected addresses are as follows.

Description	Address (H)	Default (H)	Calculated Value
CNG detection off time (High)	39D	AB	3420 msec
CNG detection off time (Low)	39E	78	2400 msec
CNG detection on time (High)	39F	2A	840 msec
CNG detection on time (Low)	3A0	12	360 msec

— Parts —

We will send 1set of ROMs as a master.

— Request —

We would like you not to recommend the customer to use the machine which may have this problem with an External telephone or a TAM.

— Effective Date —

End of January, 1993.

RICOH **Technical Bulletin No. Barbara-010**

SUBJECT: 1st Mirror is out of position	**DATE: Feb. 15th. 1993**
PREPARED BY: H. Yokoyama	**FROM: FAX T.S. Section**
CHECKED BY:	
CLASSIFICATION:	**MODEL: Barbara**

- ❑ Action Required
- ❑ Troubleshooting
- ■ Retrofit Information
- ❑ Revision of service manual
- ❑ Information only
- ❑ Other

Problem

Tx image or copy image is abnormal (e.g. all black) after transportation.

Cause

The 1st mirror was knocked out of position during transportation.

Countermeasure

We will add two stopper ribs for the first mirror.

Temporary Countermeasure

Attach the two rubber feet according to the attached procedure.
. Parts; we will send 100 feet (50 sets) to REBV.

Execution Date

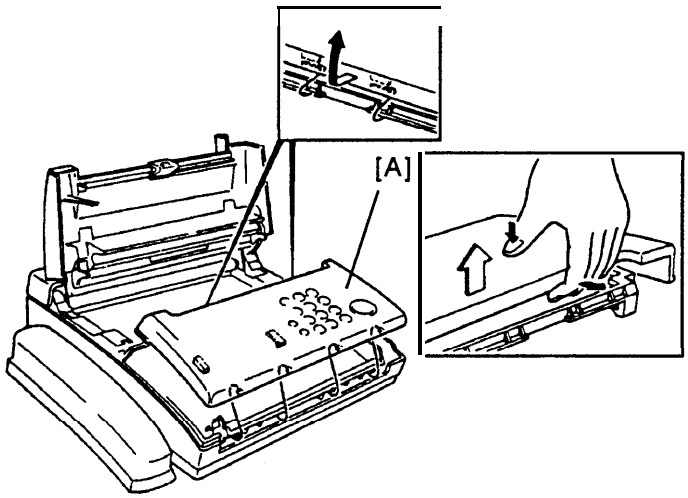
March, 1993.

RICOH **Technical Bulletin No. Barbara-010**

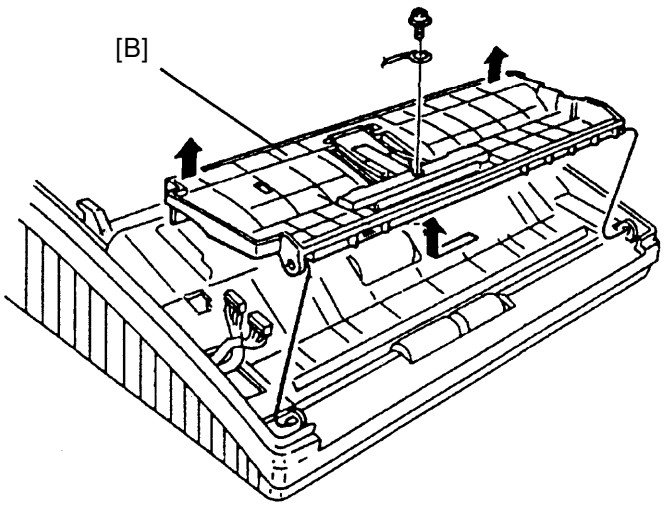
SUBJECT: 1st Mirror is out of position	DATE: Feb. 15th, 1993

Procedure for Temporary Countermeasure

1. Open the printer cover.
2. Open the ADF.
3. Remove the operation panel cover [A] as shown below.



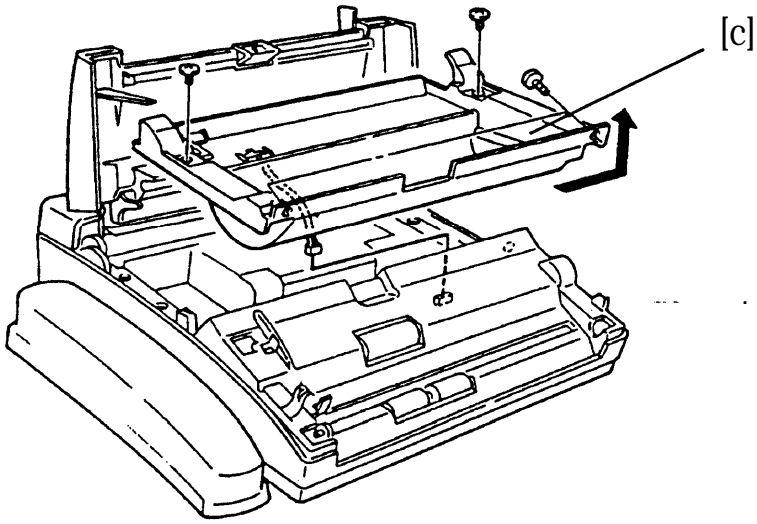
4. Disconnect both connectors,
5. Remove the lower [B] (1 ground wire),



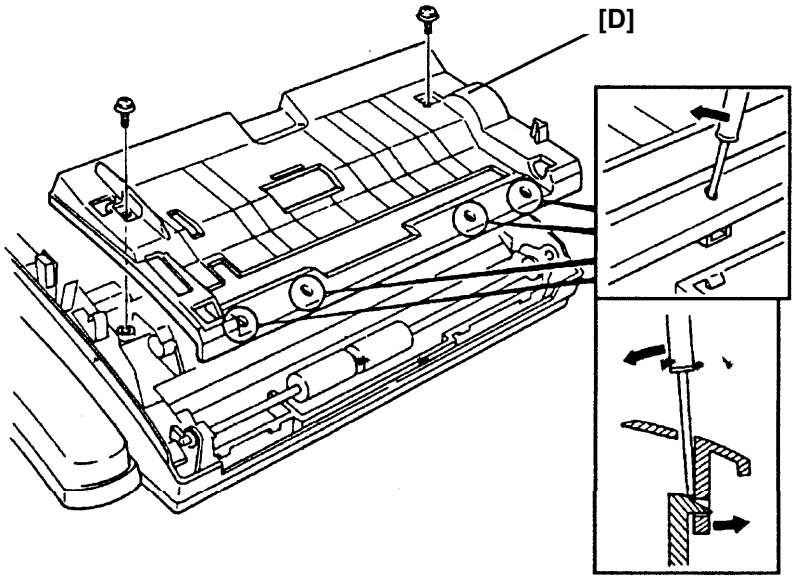
RICOH **Technical Bulletin No. Barbara-010**

SUBJECT: 1st Mirror is out of position	DATE: Feb. 15th, 1993

6. Remove the paper holder [C] (4 screws, 1 connector).



7. Remove the scanner cover [D] with a small watchmaker's screwdriver as shown below.
   Note: Use a screwdriver which is less than 2 mm thick, otherwise the scanner cover will warp and cause a document jam later.

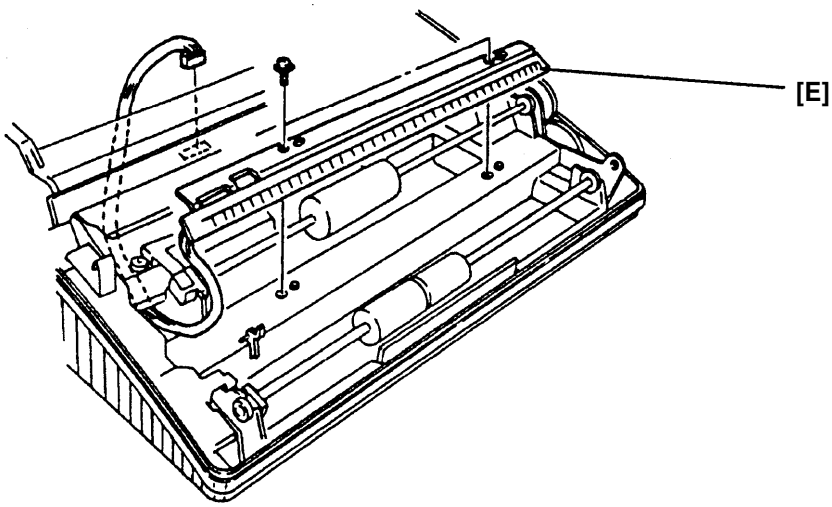


RICOH **Technical Bulletin No. Barbara-010**

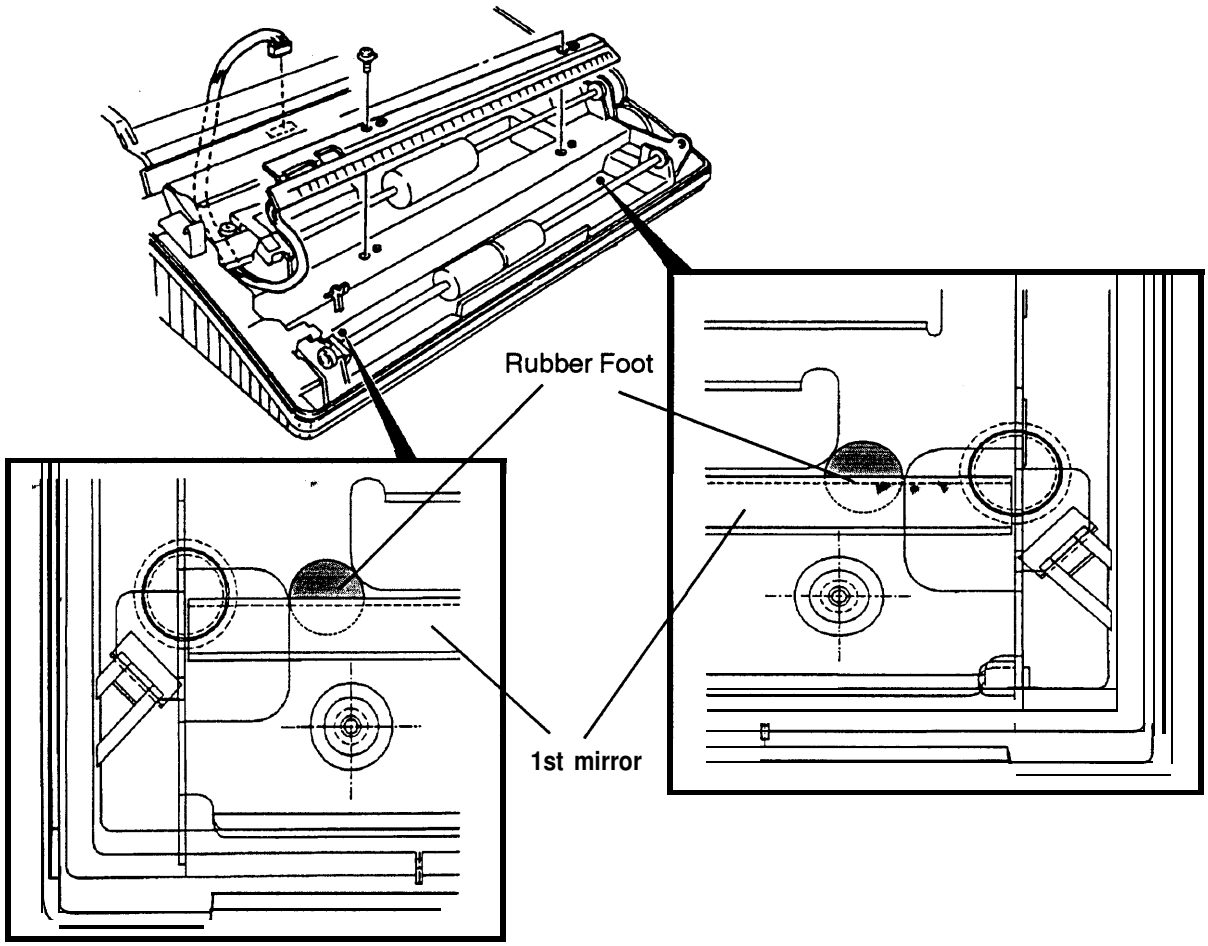
SUBJECT: 1st Mirror is out of position

DATE: Feb. 15th, 1993

8. Remove the LED array [E] (2 screws, 1 connector).



9. Attach the two rubber feet.



RICOH **Technical Bulletin No. Barbara-011**

SUBJECT: TAM Auto Answer Ring Count	**DATE:** 1993, Feb., 15th
PREPARED BY: H.Yokoyama CHECKED BY:	FROM: FAX T.S. Section

CLASSIFICATION:

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

MODEL: Barbara 1 only

Problem

The machine may act like the TAM Auto Answer Ring Count is set at 4 times, even if it is set at 9 times or 10 times.
This problem happens in the machines for which the ROM suffix is "C" (version number 1.03)

Cause

Software problem

Modification

The ROM has been modified.
The New ROM number is H0927106D (version number 1.04)

Execution Date

December, 1992.

RICOH Technical Bulletin No. Barbara-012

SUBJECT: Additional Spare Parts

DATE: 16th April, 1993

PREPARED BY: Y. Furuya
CHECKED BY: H. Motojima

FROM: FAX T.S. Section

CLASSIFICATION:
- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ■ Revision of service manual
- ☐ Information only
- ☐ Other

MODEL:
Ricoh RF01/02, FAX240
NRG9600/9610
infotec 3003/3103/3203

Spare parts in the following table have newly been registered at the S.P.C.

Index	Part Number	Name	PHILIPS P/#
1	H0923336	Op-port cover - RF01 - Norwegian	5103 507 56980
1	H0923612	Op-port cover - infotec 3003 - Italian	5103 507 57250
1	H0933336	Op-port cover - RF02 - Norwegian	5103 509 40580
1	H0943336	Op-port cover - FAX240 - Norwegian	5103 509 40570
12	H0943606	Printer cover - infotec	5103 509 40640
12	H0943706	Printer cover - NRG	5103 509 40650
33	H0943607	Paper holder - infotec	5103 509 40620
33	H0943707	Paper holder - NRG	5103 509 40630
*	H0944242	Warning label	5103 506 05450
*	H0924412	Operation manual - infotec 3003 - Italian	5103 506 07020
*	H0944240	Decal - Cutter / Paper Exit Bracket	5103 506 05300
*	H0934241	Decal - Paper Set - Non-cutter model	5103 506 05290
*	H0944241	Decal - Paper Set - Cutter model	5103 506 05280

Plus, use the following PCBs for infotec 3003 Italy model.

Index	Part Number	Name
126	H0928532	PCB - LIU1 - Italy
127	H0928509	PCB - FCE1 w/o ROM
148	H0928523	PCB - FDU - Type 3

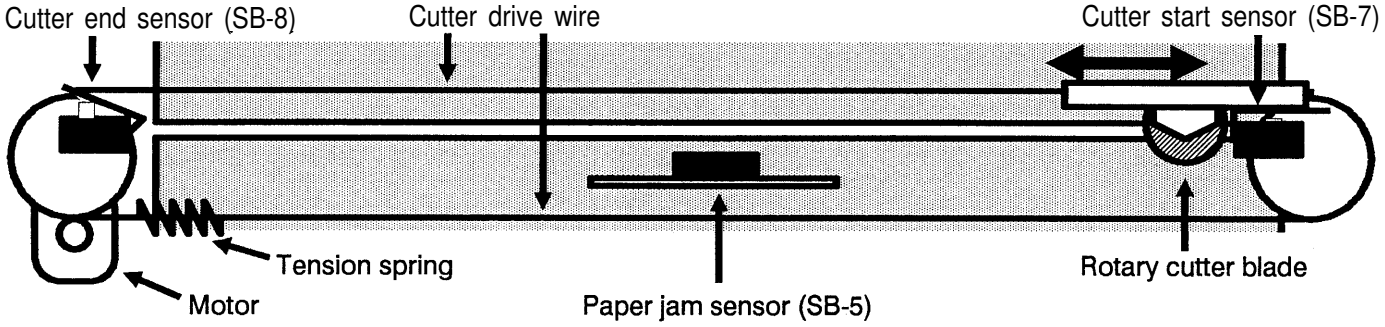
Note: The numbers in the “Index” column shows the index numbers appear in the parts layout diagram in the service manual.

RICOH Technical Bulletin No. Barbara-013

SUBJECT: Cutter Start/End Positions Sensors	DATE: 12th July, 1993
PREPARED BY: Y. Furuya CHECKED BY: H. Motojima	FROM: FAX T.S. Section
CLASSIFICATION: ❑ Action Required ■ Troubleshooting ❑ Retrofit Information ❑ Revision of service manual ❑ Information only ❑ Other	MODEL: Ricoh FAX240 infotec 3203 NRG 9610

[Problem]
The machines with automatic paper cutter may indicate “REMOVE PRINTOUT / ADJUST FAX PAPER” on the LCD display frequently, and the cutter may not work correctly.

[Cause]
The cutter start position sensor (SB-7) and/or the cutter end position sensor (SB-8) is/are defective.



[Countermeasure]
Replace whole cutter unit or defective sensor(s). The part number of the microswitch which is used as these sensors is;

H5022210

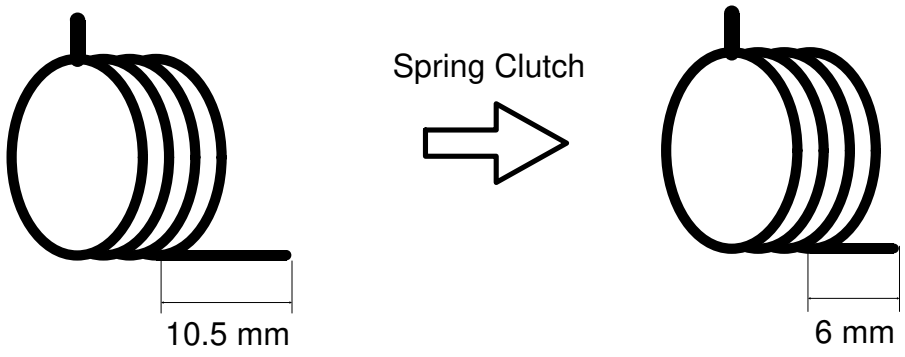
[N o t e]
When replacing the cutter unit, remove the jam sensor (SB-5) from the old cutter, and install it on a new cutter unit.

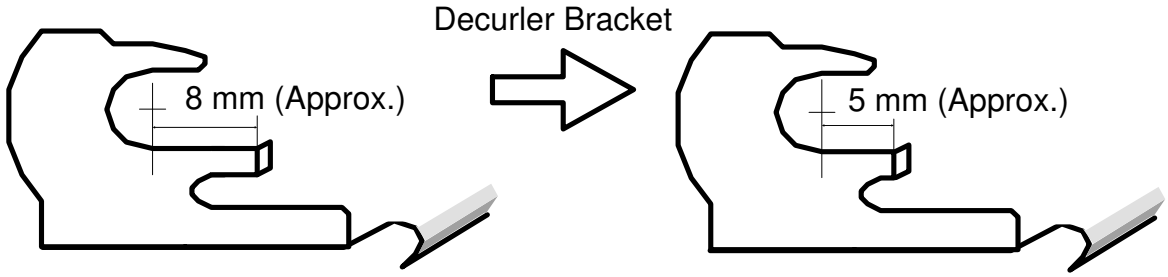
RICOH Technical Bulletin No. Barbara-014

SUBJECT: Decurler Bracket and Spring	**DATE:** July 22nd, 1993
PREPARED BY: Y. Furuya CHECKED BY: H. Motojima	FROM: FAX T.S. Section

CLASSIFICATION:		MODEL:
■ Action Required	☐ Revision of service manual	Ricoh FAX240
☐ Troubleshooting	☐ Information only	Infotec 3203
☐ Retrofit Information	☐ Other	NRG 9610

[Problem]
The thermal head surface might be scratched by the spring that is used as spring clutch for decurler.





[Countermeasure]
The decurler bracket and the spring clutch have been modified as follows. Use the new parts as a set for future replacement.

Index	Old P/#	New P/#	Description	ICA
154	H0947709	H0942121	Decurler Bracket	X/O
114	H0937701	H0942120	Spring Clutch	

RICOH Technical Bulletin No. Barbara-015

SUBJECT: Failures on LIU and FCE caused by Lightning	DATE: 28 July, 1993
PREPARED BY: Y. Furuya CHECKED BY: H. Motojima	FROM: FAX T.S. Section

CLASSIFICATION:		MODEL:
☐ Action Required	☐ Revision of service manual	RF01/02, FAX240
■ Troubleshooting	☐ Information only	infotec 3003/3103/3203
☐ Retrofit Information	☐ Other	NRG 9600/9610

[Symptom]
One or some of the following symptoms can be found on a defect caused by lightning.

Symptom	Defect(s) on	
	LIU	FCE
No dialling	✔ (IC880, TS830)	✔
No dial-tone can be heard from handset	✔ (IC830)	
"External Tel" is displayed		✔
"Dialling" is displayed	✔ (OC882)	✔
Ten-key is not functioning	✔ (IC880, 0C882 IC881, IC882)	
No display		✔
Tx and/or Rx impossible	✔	✔
Ground Start Impossible	✔ (IC880, TS838)	✔

[Cause]
A surge voltage from the line causes ICs on LIU and/or FCE to be defective.

[Countermeasure]
Replace the LIU board or defective components. The available components are listed in the following table:

Location	Ricoh P/#	PHILIPS P/#	Description
IC830	H0947108	933992840112	IC - TEA1062
TS830	H0947109	933981790126	Transistor - BSP254A
OC882	H0947110	933790830127	Photocoupler - CNX38U
IC881	H0947111	933670660652	IC - 74HC541P
IC882	H0947112	933670570650	IC - 74HC299P
TS838	H0947113	934003960112	Transistor - BSN254A
IC880	H0947117	820332048771	IC - PCD3349/082 w. PAUK PCB

Continued on the next page.

RICOH **Technical Bulletin No. Barbara-015**

SUBJECT: Failures on LIU and FCE caused by Lightning	DATE: 28 July, 1993

The function of each component is listed in in the following table.

Component	Function
IC830	Speech IC; Handset microphone and earpiece cannot work if this IC is defective. (No dial tone can be heard from the handset.)
TS830	Dialling Relay; controlled by dialler IC (IC880)
OC882	Photocoupler to forward dialler IC (IC880) status and ten-key status to host FCE.
IC881	Receives signals from ten-keys on the OPU and forward them to the dialler IC (IC880) and to the IC882.
IC882	Convert parallel signals from ten-keys and from dialler IC (IC880) into serial signal, and send it to FCE through OC882.
TS838	Ground Start Relay; controlled by dialler IC (IC880)
IC880	Dialler IC; machine cannot dial if this IC is defective.

Additionally, the following components have to be added on the LIU board as shown in the enclosed diagrams (fig.1, 2 and 3), to protect lightning damage.

Location	Ricoh P/#	PHILIPS P/#	Description
R801	H0947114	933882070113	Trisil Diode - BR211 -240V
R963	H0947115	933882020113	Trisil Diode - BR211 -140V
R802	H0947116	211255000077	Varistor - SIOVK275
R811	H0947116	211255000077	Varistor - SIOVK275

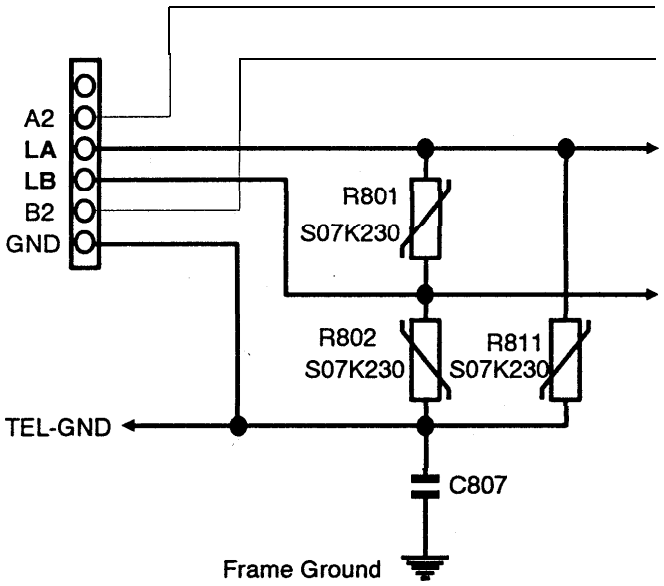
RICOH Technical Bulletin No. Barbara-015

SUBJECT: Failures on LIU and FCE caused by Lightning

DATE: 28 July, 1993

Fig.-1 (Circuit Diagram - R801, R802, R811)

Before Modification



After Modification

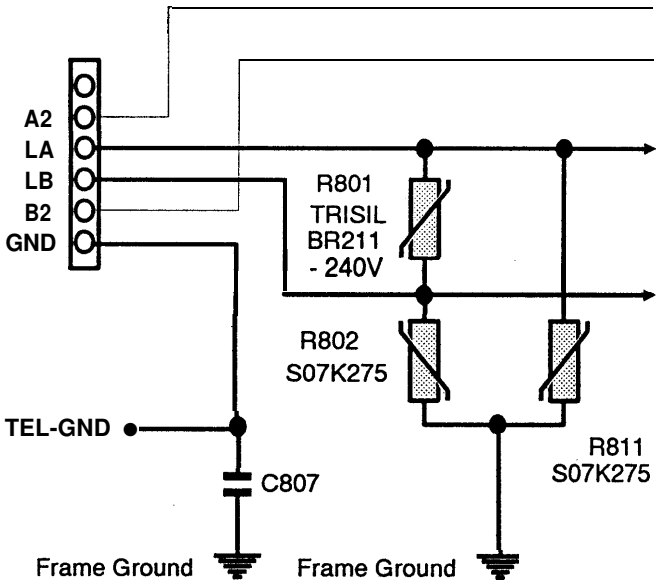
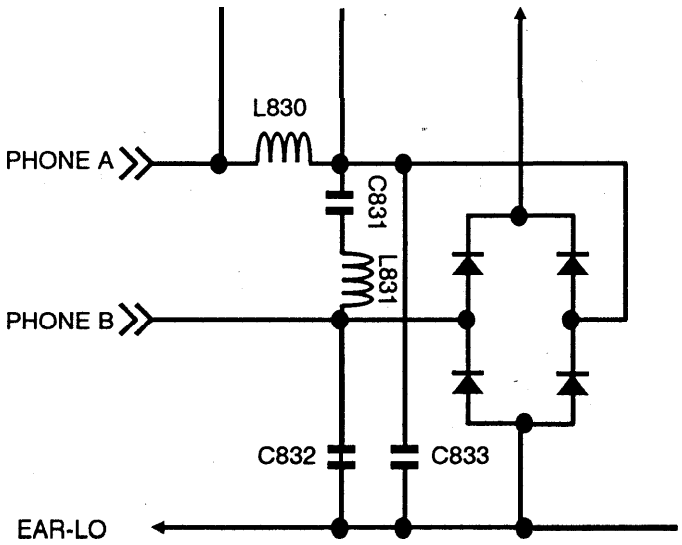
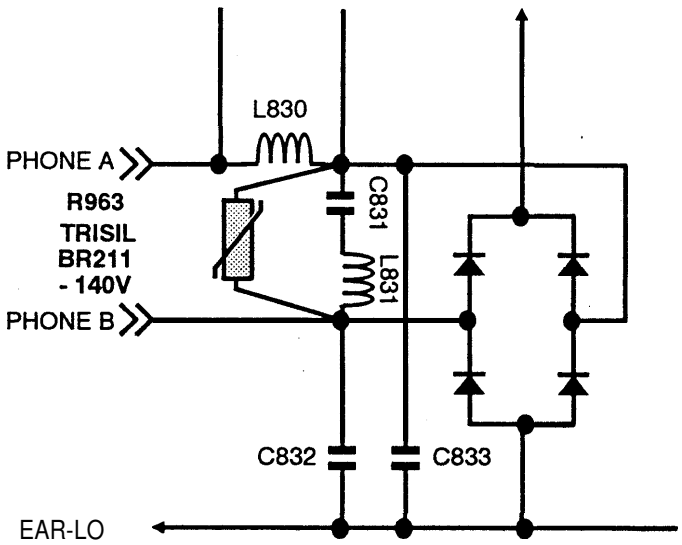


Fig.-2 (Circuit Diagram - R963)

Before Modification



After Modification

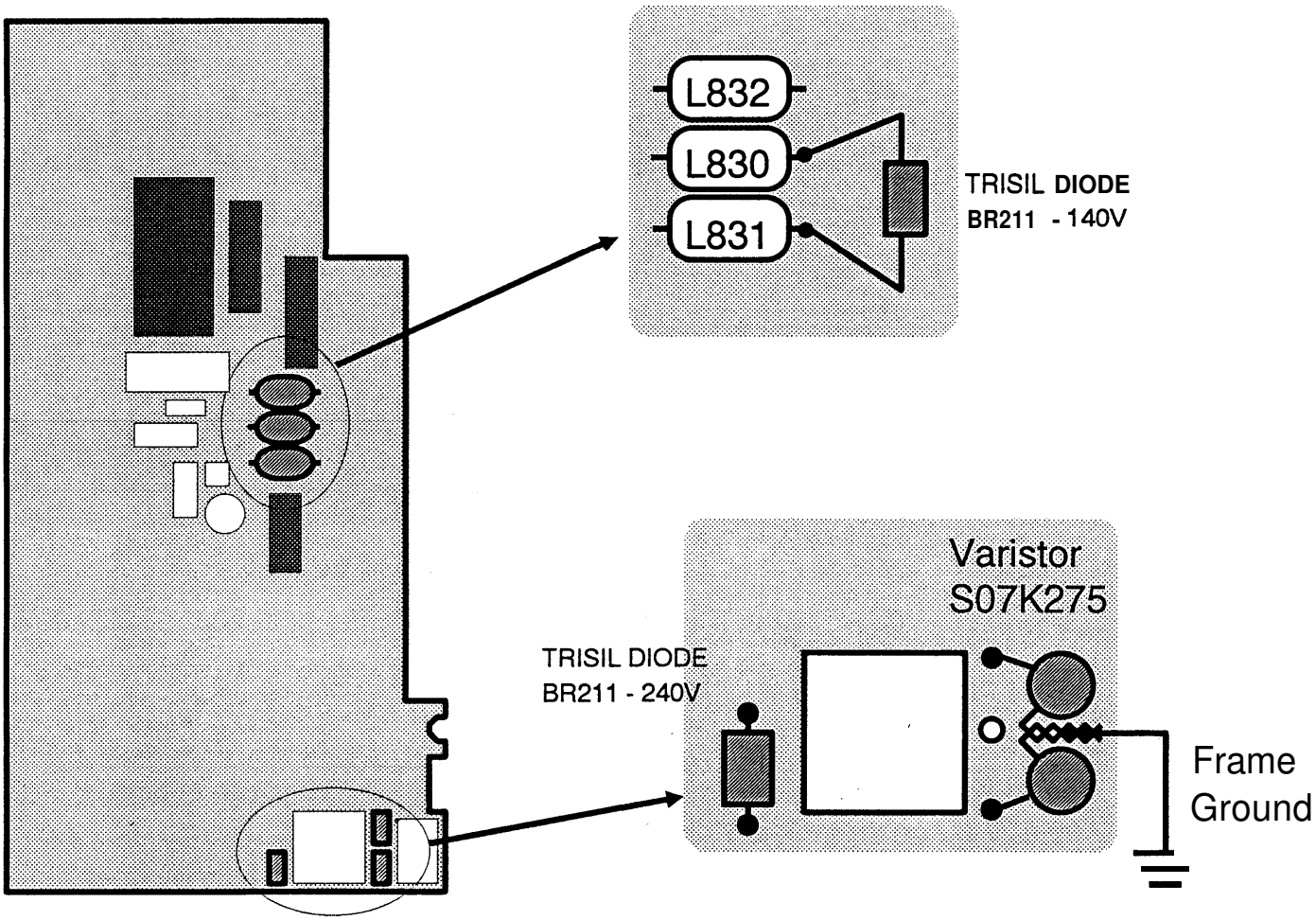


RICOH **Technical Bulletin No. Barbara-015**

SUBJECT: Failures on LIU and FCE caused by Lightning

DATE: 28 July, 1993

Fig.-3 (Layout)



RICOH Technical Bulletin No. Barbara-016

SUBJECT: PCB - SBU

DATE: June 30,1994

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

FROM: 2nd T.S. Section

CLASSIFICATION:
- ☐ Action Required
- ☐ Troubleshooting
- ☐ Retrofit Information
- ☐ Revision of service manual
- ■ Information only
- ☐ Other

MODEL:
Barbara

The harness which connects the SBU and the FDU has been fixed to the SBU from March '93 production.

Index	Old P/N	New P/N	Description
122	H0938506	H0938512	PCB - SBU
*	H0938309		Harness FDU - SBU

Therefore, connect the test PCB as follows when adjusting the scanner.

Procedure

Connect the harness from the FDU (P302) to CNI on the test PCB, then connect the harness from the test PCB (CN2) to the harness from the SBU through a 7 pin connector (P/N: 11024206).

Note: Make sure that the test PCB is connected as shown in the diagram below.
The SBU may be damaged if the test PCB is connected the other way around.