Model: H1	Date: 25-Jan-01	No.: RH538001a

Subject: Service Manual Correction (H1)		Prepared by: A. Ishiyama
From: Technical Services Dept., GTS Division		
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Other ( )	☐ Part information ☐ Electrical ☐ Transmit/receive	☐ Action required ☒ Service manual revision ☐ Retrofit information

This RTB is to inform of mistakes in the service manual.

1. "1.1 SPECIFICATIONS" (Page 1-1 ~ 1-2)

2. "4.2.18 SOFTWARE DOWNLOAD (FUNCTION 12)" (Page 4-11)

3. "4.2.19 SOFTWARE UPLOAD (FUNCTION 12)" (Page 4-12)

4. "5-2 PM PARTS" (Page 5-1)"

5. "5-3 MAINTENANCE ITEMS AND METHODS" (Page 5-1)

Refer to the attached pages for details.

1. OVERALL MACHINE INFORMATION

1.1 SPECIFICATIONS

Type	Desktop Transceiver
Circuit	PSTN, PABX
Connection	Direct Couple
Document Size	**Length:** 148 - 356 mm [5.8 - 14.0 ins] Up to 600 mm [23.6 ins], manually assisted **Width:** 148 - 217 mm [5.8 - 8.5 ins] To determine whether an A4/letter width original is detected as A4 width or Letter width, change System Switch 0C bit 3. **Thickness:** 0.05 mm to 0.2 mm (Equivalent to 60 g/m² [16lb] - 90 g/m² [24lb]) Lighter than 70 g/m² [18lb], manually assisted
Document Feed	Automatic feed, face down
ADF Capacity	**Recommended Environment:** 30 sheets using A4 recommended paper 20 sheets using A4 paper **Operating environment:** 15 sheets using A4 paper
Scanning Method	Contact Image Sensor with LED lamp (CIS unit)
Maximum Scan Width	208 mm (A4 setting) 212 mm (Letter setting)
Scan Resolution	**Main scan:** 8 dots/mm **Sub-scan:** Standard - 3.85 lines/mm Detail - 7.7 lines/mm Fine - 15.4 lines/mm
Memory Capacity	**ECM:** 64 Kbytes **SAF:** Standard 1.2MB (96 pages/ITU-T #1) With 2MB option = 3.2MB (200 pages/ITU-T #1)
Protocol	Group 3 with ECM
Compression	MH, MR, MMR
Modulation	V17 (TCM), V29 (QAM), V27ter (PHM), V21 (FM)
Data Rate	14400/12000/9600/7200/4800/2400 bps Automatic fall-back
I/O Rate	**With ECM:** 0 ms/line **Without ECM:** 2.5, 5, 10, 20 or 40 ms/line

Transmission Time	6 seconds Condition: 14400 bps; G3 ECM, MMR and MTF off using memory for an ITU-T #1 test document (Slerexe letter) at standard resolution
Printing System	Laser printing, plain paper, dry toner
Printing Speed	6 ppm for A4 or letter size paper
Paper Size	**Europe:** A4 **Asia:** A4, F4 (Adjustable to Letter and Legal)

Paper Capacity	**Recommended environment:**
	  100 sheets (A4 recommended paper)
	Operating environment:
	  80 sheets (A4 paper)

Paper Weight	70 g/m² [18lb] - 90 g/m² [24lb]
Maximum Printing Width	204 mm [8.0 ins]: A4 210 mm [8.3 ins]: Letter and Legal
Print Resolution	**Main Scan:** 16 dots/mm **Sub Scan:** 15.4 lines/mm
Power Supply	AC 220 V-10% - 240 V+10% 50/60 ±3 Hz
Power Consumption	**Stand-by:** Average 10 W **Transmission:** Average 30 W **Reception:** Average 220 W **Copying:** Average 250 W **Maximum Power Consumption:** 600 W
Operating Environment	**Temperature:** 10°C - 35°C [50°F - 95°F] **Humidity:** 15% - 80%
Recommended Environment	**Temperature:** 15°C - 25°C [59°F - 77°F] **Humidity:** 30% - 70%
Dimensions (W x D x H)	341 x 766 x 472 mm [13.2 x 29.9 x 18.4 ins] Including trays (Maximum dimensions)
Weight	9.1kg [20.1 lbs.] Including toner cartridge and trays

4.2.18 Software Download (Function 12)

This function copies software from an external flash memory card to the flash ROM on the FCU inside the machine.
The software copy tool (P/N: H5479352) must be used for this procedure.

**NOTE:** When writing the software to the flash memory card, set the Start and End addresses as shown below.

<p align="center">START ADDRESS: 300000 (H), END ADDRESS: 3FFFFF (H)</p>

1. Turn off the machine.

2. Remove the IC card cover [A].
   Remove the optional memory card
   [B] if it is installed.
   Connect the flash memory card [C]
   with the software copy tool [D]. Then,
   insert the copy tool into the IC card
   slot as shown.
   NOTE: The switch on the copy tool
   [E] must be at the **ON**
   position.

3. Turn on the machine.
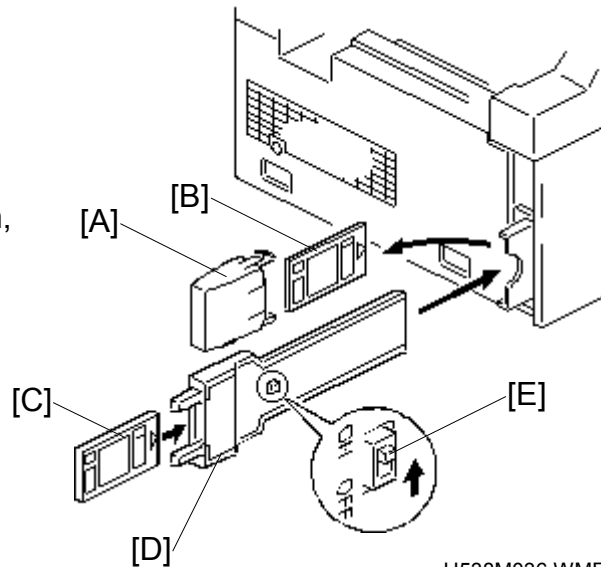
H538M036.WMF

4. [Function] (#) (1) (0) (7) (◇)

```
FUNCTION   KPAD/NEXT>
■■  SERVICE FUNCTIONS
```

5. (1) (2) [Yes]

```
0-SRAM    1-SAF
2-SAFCARD 3-M->R
```

6. (▶) to go to the next menu.

```
4-M<-R     5-M<-S
6-M->S
```

7. (4) (◇)

```
COPYING
COPY MACH <- FLROM
```

8. If the software downloads successfully, the
   display shows **"OK"**.
   If the software download fails, the display
   shows **"CANNOT PROGRAM"**.
   The download should take about 5 minutes.

```
OK!!
# NO. H5387200B 64F8
```

```
CANNOT PROGRAM
COPY MACH <- FLROM
```

9. To finish, [Function]

10. Turn off the machine and disconnect the copy tool. Then turn the machine back on.

11. Print out the system parameter list and check the ROM version on it.

Software Copy Tool

The following table shows the switch settings for each procedure using the software copy tool.

Program Items	Switch Settings
Software download	On
Software upload	Off
SRAM data upload	Off
SRAM data download	Off

4.2.19 Software Upload (Function 12)

This function copies software from the FCU inside the machine to an external memory card.

1. Turn off the machine.

2. Connect the Flash memory card and the software copy tool as shown in the previous section.
    The switch [D] on the tool must be at the **OFF** position.

3. Turn on the machine.

4. Function (#) (1) (0) (7) (◇)

```
FUNCTION  KPAD/NEXT>
■■ SERVICE FUNCTIONS
```

5. (1) (2) Yes

```
0-SRAM     1-SAF
2-SAFCARD 3-M->R
```

6. (3)

```
                 START
COPY  MACH -> FLROM
```

7. (◇)

```
COPYING
COPY  MACH -> FLROM
```

8. If the software uploads successfully, the display shows **"OK"**.
    If the software upload fails, the display shows **"CANNOT PROGRAM"**.

```
OK!!
COPY  MACH -> FLROM
```

```
  CANNOT PROGRAM
COPY  MACH -> FLROM
```

9. Finish: Function

10. Turn off the machine and disconnect the copy tool. Then turn the machine back on.

5. PREVENTIVE MAINTENANCE

5.1 SPECIAL TOOLS AND LUBRICANTS

- Flash/SRAM data copy tool (P/N: H5479352)
- Flash ROM Memory Card (P/N: A2309352)
- CIS Shading Chart (P/N: H0689300)

5.2 PM parts

Preventive maintenance is not required on this products.

5.3 Maintenance items and methods

If the machine is serviced, do the following items.

Action Symbol: L: Lubricate　I: Inspect　C: Clean　A: Adjust

Item	Action	Notes
Scanner/ADF		
ADF Separation Pad	C	Soft cloth dampened with water
Exposure Glass	C	Soft cloth dampened with water
Shading Plate	C	Soft cloth dampened with water
Document Pick-up Roller	C	Soft cloth dampened with water
Document Feed Roller	C	Soft cloth dampened with water
R1 Roller	C	Soft cloth dampened with water
R2 Roller	C	Soft cloth dampened with water
Ground contact point of the R1 roller shaft	L	Grease - KS660
Ground contact point of the R2 roller shaft	L	Grease - KS660
Printer		
Paper Feed Roller	C	Soft cloth dampened with water
Ground contact point of the paper feed roller shaft	L	Grease - KS660
Transfer Roller	C	Blower Brush (Remove the roller and then blow off adhered toner.)
Transfer Roller Shaft	L	Grease - KS660
Cleaning Pad	I	Replace when the toner cartridge is changed.
Hot Roller Bushing (Left)	L	Grease - KS660
Gears	L	Grease - CPL501

Preventive Maintenance

Model: H1		Date: 08-Mar-01	No.: RH538002a

Subject: Differences between Ricoh model and Sindo Ricoh model	Prepared by: A. Ishiyama
From: Technical Services Dept., GTS Division	

Classification:	☐ Troubleshooting	☐ Part information	☐Action required
	☐ Mechanical	☐ Electrical	☒Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

The following shows the differences between the Ricoh Asia model **(RA model)** and the Sindo Ricoh model **(SR model)**.

Differences in the Service Manual

4.2.24 ACCESSING THE INITIAL SETTING PROCEDURE   (Page 4-15)

When the machine is switched on for the first time after installation, an initial setting procedure appears. With this procedure, the user can program the initial setting items more easily. However, the initial setting procedure does not appear again.

If you need to use the initial setting procedure again but do not need to display the country code any more, do the following.

1. Set System Switch 15 bit 3 to 0, so that the user cannot change the country code.

2. Press the resolution key, ① key, and ⓪ key all at the same time.

> ```
> PROGRAMMED
> ```

3. After the display shows "Programmed", turn off the machine.
    Then the machine will show the initial setting procedure when the machine is turned on again.

If you need to use the initial setting procedure again and also need to display the country code, do the following.

CAUTION: THIS PROCEDURE WILL ERASE ALL RAM DATA.

1. Press the resolution key, ① key and ⑨ key all at the same time.

> ```
> FACTORY ADJUST.
> SET DOCUMENT
> ```

2. ⑨

> ```
> RAM CLEAR
>  0-2
> ```

3. ①

> ```
> START
> FIRST CLEAR
> ```

4. ◈
   The machine resets automatically.

   ```
   FACTORY ADJUST.
   SET DOCUMENT
   ```

5. ②

   ```
   PTT / COUNTRY-CODE
    0-1
   ```

6. ①

   ```
   0-6/Y/N
   COUNTRY = 1(UK)
   ```

7. Either;

   - ① [Yes] for Europe models
   - ② [Yes] for Asia models
   - ⑥ [Yes] for Korea models

   NOTE: Do not choose any other numbers.

8. ▽

   ```
   FACTORY ADJUST.
   SET DOCUMENT
   ```

9. ⑨

   ```
   RAM CLEAR
    0-2
   ```

10. ② ◈
    The machine resets automatically and prints a system parameter list. Then the start up initial setting procedure appears.

11. Turn off the machine. The initial setting procedure will appear when the machine is turned on again.

4.3 BIT SWITCHES   (Page 4-17)

4.3.1 System Switches   (Page 4-23)

System Switch 0F		
No.	**FUNCTION**	**COMMENTS**
0-7	Country code for functional settings (Hex) 00: France 10: Not used 01: Germany 11: Not used 02: UK 12: Asia 03: Italy 13: Not used 04: Austria 14: Hong Kong 05: Belgium 15: South Africa 06: Denmark 16: Australia 07: Finland 17: New Zealand 08: Ireland 18: Singapore 09: Norway 19: Malaysia 0A: Sweden 1C: Korea 0B: Swiss. 20: Turkey 0C: Portugal 21: Greece 0D: Holland 22: Hungary 0E: Spain 23: Czech 0F: Israel 24: Poland	This country code determines the factory settings of bit switches and RAM addresses. However, it has no effect on the NCU parameter settings and communication parameter RAM addresses. **Cross-reference** NCU country code: Function 08, parameter CC. The bit switch country code will automatically be changed to the same country code with the NCU country code when you change the NCU country code and exit the service mode. **Note:** If RAM reset level 1 is done, this bit switch resets to 02 (UK).

4.3.5 G3 Switches   (Page 4-39)

G3 Switch 0B		
No.	**FUNCTION**	**COMMENTS**
0	Protocol requirements: Europe **0:** Disabled **1:** Enabled	Program these bit switches manually to match local requirements.
1	Protocol requirements: Spain **0:** Disabled **1:** Enabled	
2-3	Not used	
4	PTT requirements: Germany **0:** Disabled **1:** Enabled	
5	Not used	
6	PTT requirements: Korea **0:** Disabled **1:** Enabled	**1:** The machine transmits commands using Sindo Ricoh NSF. In addition, if the machine receives a command in Sindo Ricoh NSF, it transmits the response using Sindo Ricoh NSS.
7	Not used	Do not change this setting.

4.4 NCU PARAMETERS (Page 4-40)

Address	Function	Unit	Remarks
807F00	Country code for NCU parameters		Use the Hex value to program the country code directly into this address, or use the decimal value to program it using Function 08 (parameter C.C.).

Country	Decimal	Hex
France	00	00
Germany	01	01
UK	02	02
Italy	03	03
Austria	04	04
Belgium	05	05
Denmark	06	06
Finland	07	07
Ireland	08	08
Norway	09	09
Sweden	10	0A
Switzerland	11	0B
Portugal	12	0C
Holland	13	0D
Spain	14	0E
Israel	15	0F
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
Korea	28	1C
Turkey	32	20
Greek	33	21
Hungary	34	22
Czech	35	23
Poland	36	24

Model: H1	Date: 08-Mar-01	No.: RH538002a

Differences in the Parts Catalog

Description	Part Number		Q'ty		Parts Catalog		Note
	RA Model	SR Model	RA	SR	Page	Index	
Front Cover Ass'y	H5384080		1	0	3	29	
Stopper Shaft - A	H5384111		1	0	3	19	
Spring – Lock Lever	H5384112		1	0	3	22	
Lock Lever - Cartridge	H5384114		1	0	3	21	
E Ring – JRE4	H5153543		4	0	3	27	
Memory Card Cover	H5383406		1	0	3	30	
Decal – Motor : SR	G0251316	H5384053	1	1	5 (19)	17 (4)	
LCD Sheet - SR	H5383610	H5383615	1	1	7 (19)	1 (11)	
Op Sheet – Right : SR	H5383812	H5383815	1	1	7 (19)	3 (7)	
Op Sheet – Left : SR	H5383813	H5383816	1	1	7 (19)	5 (8)	
Op Sheet – Start/Stop : SR	H5383814	H5383818	1	1	7 (19)	4 (9)	
Op Sheet – Center : SR	H5383817	H5383819	1	1	7 (19)	2 (10)	
Decal - Energystar	H5164095		1	0	19	5	
Operating Instructions – Basic H538-51	H5388609		1	0	19	12	
Operating Instructions – Advance H538-51	H5388702		1	0	19	12	

RICOH

Technical Bulletin

PAGE: 1/1

Model: H1	Date: 04-Apr-01	No.: RH538003

Subject: Firmware History		Prepared by: A. Ishiyama
From: Technical Services Dept., GTS Division		

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Other ( )		

This is to inform you of the firmware history for the H1.

A. File Information

H5387200	File Name	Version	C.SUM	Production	
				EU/Asia	Korea
C	H5387200C.bin	34	538F	1st Mass Production.	--
D	*H5387200D.bin*	*35*	*6D41*	*March '01 Production*	1st Mass Production.

B. Symptoms Corrected

Symptoms Corrected	Suffix
For product release in Korea, the appropriate setting values for the following have been added: • Protocol • Bit switches • NCU parameters • Operation flow • Country code table • Default settings *Note: The above additions will not affect versions for Europe or Asia, as they are only effective when Korea has been selected in the country code table.	*D*
The use of the cable equalizer in Rx mode has been minimized (optimized).	*D*
Software bug: The printer does not work if the paper is loaded at a certain time following paper end.	*D*
The default value for the PM default counter has been changed from 30000 to 00000.	*D*
Wording correction: German and Swedish translations for the transmission result report have been corrected.	*D*
Functional change with User Parameter Sw13: The selection of Ground Start and Flash Start has been disabled in versions for Asia and Korea.	*D*

Model: H1	Date: 23-Jul-01	No.: RH538004

Subject: Differences between SINDOFAX LF1200 and LF1250	Prepared by: A. Ishiyama
From: Technical Services Dept., GTS Division	

Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

The following shows the differences between the SINDOFAX LF1200 and LF1250.
Please refer to RTB H538002a about the differences between the Ricoh Asian model and the SINDOFAX LF1200.

Differences in the Service Manual

1.1 SPECIFICATIONS   (Page 1-1)

Item	LF1200	LF1250
Data Rate	14400/12000/9600/7200/4800/2400 bps Automatic fall-back	**9600/7200/4800/2400 bps** **Automatic fall-back**

Differences in the Parts Catalog

Description	Part Number		Q'ty		Parts Catalog		Note
	LF1200	LF1250	1200	1250	Page	Index	
LCD Sheet	H5383615	**H5383616**	1	1	7 (19)	1 (11)	

Model: H1	Date: 22-Aug-01	No.: RH538005

Subject: Paper Exit Tray Decals	Prepared by: A. Ishiyama
From: Technical Services Dept., GTS Division	

Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Other ( )		

Symptom

Paper jam at paper exit.

Cause

The pressure roller(s) at the paper exit are inadvertently pushed inside the machine when the user sets the paper exit tray, blocking the paper path.

Action

The following changes have been made to clearly indicate to the customer where the exit tray should be attached:
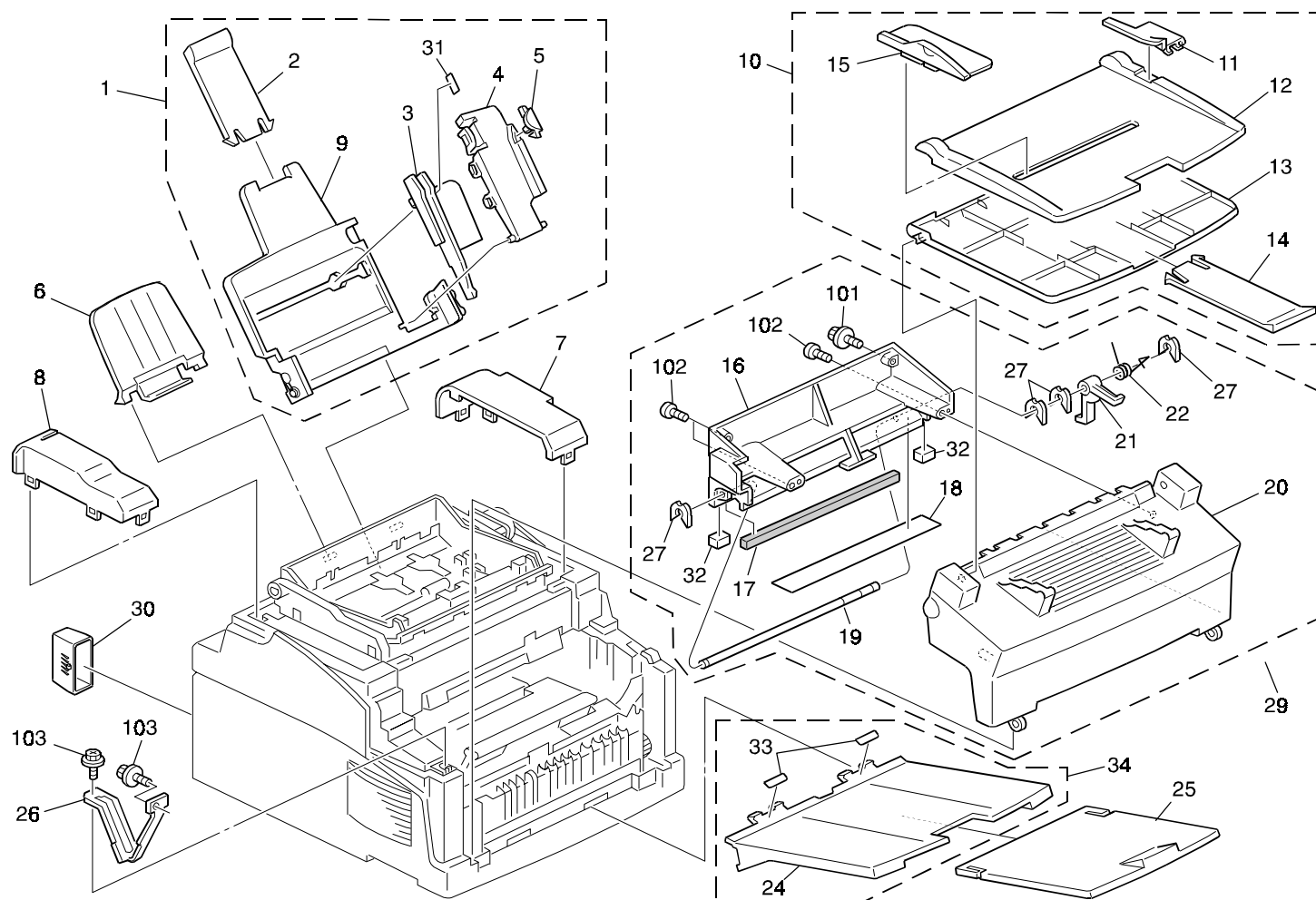1. Two types of directional arrow decals have been added (2 small decals for the tray, 2 large ones for the mainframe). Please refer to MB No.010 (MH538010) for details on service parts, P/N changes.
2. The Installation Procedure in the Installation Manual has been revised, using illustrations that clearly indicate the attachment positions.

1. EXTERIOR 1 (H538)

6. TRANSPORT SECTION 2 (H538)

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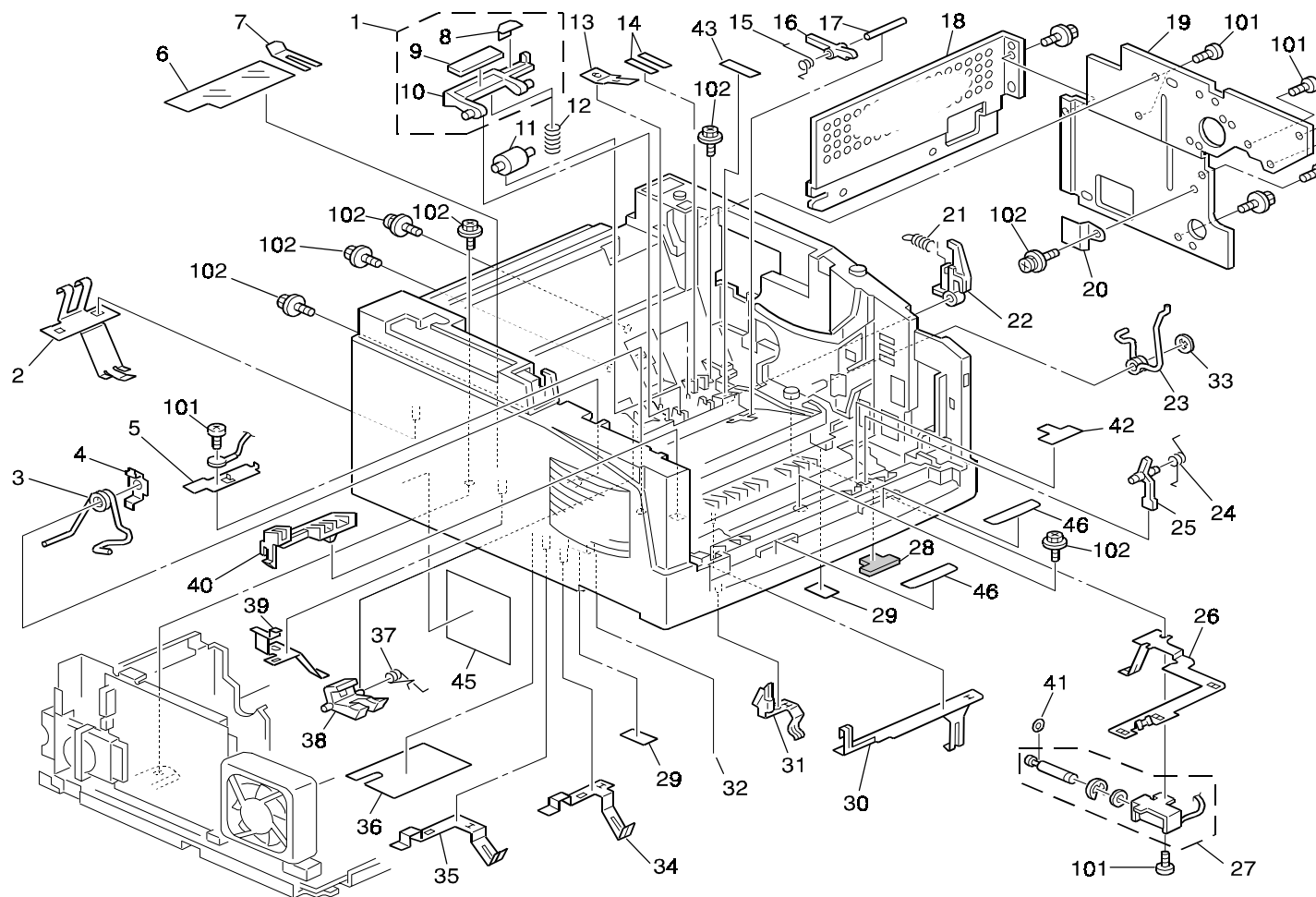
Reissued: 7-Nov-02

Model: Model H1	Date: 4-Apr-01	No.: RH538003a

RTB Update

The items in bold italics have been added.

Subject: Firmware History		Prepared by: A. Ishiyama
From: Technical Services Sec, Service Planning Dept.		
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Other ( )	☐ Part information ☐ Electrical ☐ Transmit/receive	☒ Action required ☐ Service manual revision ☐ Retrofit information

Firmware history for the H1.

A. File Information

H5387200	File Name	Version	C.SUM	Production	
				EU/Asia	**Korea**
E	*H5387200E.bin*	*36*	*8912*	*November '02 Production*	
D	H5387200D.bin	35	6D41	March '01 Production	1st Mass Production.
C	H5387200C.bin	34	538F	1st Mass Production.	--

B. Symptoms Corrected

Symptoms Corrected	Suffix
International dialing does not work properly with the France country code (GFPR #RE02080005)	*E*

Czech wording error:
  Incorrect: CISLO
  Correct: JMENO	

For product release in Korea, the appropriate setting values for the following have been added: • Protocol • Bit switches • NCU parameters • Operation flow • Country code table • Default settings *Note: The above additions will not affect versions for Europe or Asia, as they are only effective when Korea has been selected in the country code table.	D
The use of the cable equalizer in Rx mode has been minimized (optimized).	
Software bug: The plotter does not work if the paper is loaded at a certain time following paper end.	
The default value for the PM default counter has been changed from 30000 to 00000.	
Wording correction: German and Swedish translations for the transmission result report have been corrected.	
Functional change with User Parameter Sw13: The selection of Ground Start and Flash Start has been disabled in versions for Asia and Korea.	