Model: Russian-C2		Date: 26-Oct-01	No.: RB022002

Subject: Major differences between Russian-C1 and Russian-C2		Prepared by: S. Tomoe
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 RTB outlines the major differences between the Russian-C1 and Russian-C2.

Overview:

The R-C2 is intended as the successor model to the R-C1. The mechanical components and design of these two models are nearly identical. In addition, the electrical system of the R-C2 employs GW architecture.

Machine Configuration:
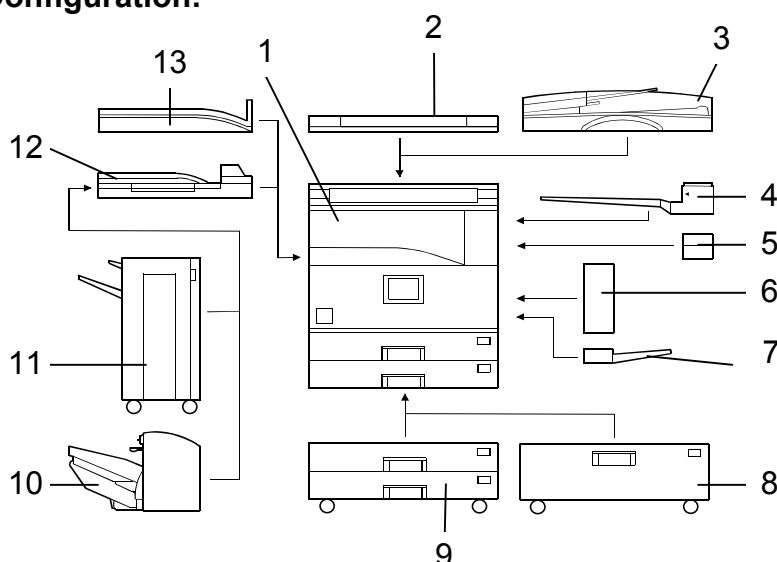
Version	Item	Machine Code	No.	Comments
Copier	Copier(R-C2a)	B022	1	
	Copier(R-C2b)	B027	1	
	ARDF	B386	3	New option
	Platen Cover	B406	2	Common with Kir-C
	Paper Tray Unit-2 tray	B390	9	*See Note 2*
	LCT	B391	8	*See Note 2*
	1-bin Tray	B413	4	Color change
	Shift Tray	B459	13	Color change
	Duplex Unit	B414	6	*See Note 2*
	By-pass Tray	B415	7	Color change
	Interchange Unit	B416	5	Color change
	Bridge Unit	B417	12	*See Note 2*
	1000-sheet finisher	B408	11	New option

RICOH

| Model: Russian-C2 | Date: 26-Oct-01 | No.: RB022002 |

Version	Item	Machine Code	No.	Comments
	500-sheet finisher	B442	10	Common with R-P2, Color change
	Key Counter Bracket	B452		Color change
Fax	Fax Unit	B418		
	JBIG	A892		Common with Stinger-C
	G3 interface unit	B448		
	G4 kit	B449		
	Hand set	B433		Color change
Printer/ Scanner	Printer unit	B461		
	Printer & Scanner unit	B453		
	HDD	B420		
	PS3	B462		
	User Account Enhance	B443		Common with A-C2
	NIB	G335		
	IEEE 1394	G590		Common with A-C2
	Memory – 32MB	G578		Common with A-C2
	Memory – 64MB	G579		Common with A-C2

Note:

1) The R-C2 has a new exterior color (same as A-C2).

2) The Drive Motor and Control Board for these peripherals have been changed so that the peripherals can be installed on the high cpm machine (R-C2c).

Model: Russian-C2	Date: 26-Oct-01	No.: RB022002

Mainframe: R-C1 vs. R-C2

Unit	Item	Details
Exterior	The color has been changed	
Operation panel	LCD size has been expanded	Same size as the A-C2.
Drive section	Fusing drive solenoid has been added.	To reduce warm-up time, this solenoid disengages the drive to the fusing unit during warm-up.
Electrical component	The PCB layout has been changed	The R-C2 uses GW architecture.
Scanner	The CCD has been changed	The mechanical layout of the scanner unit has been modified to accommodate this change.
Image processing	SP mode adjustments	Some SP adjustments have been deleted, some added, and others combined.
Laser exposure	The LD driver board has been changed	This board is designed to be used in the high cpm machine (R-C2c).
Paper Feed	Special paper lever deleted	The control for this function has been changed over to a software switch (op. panel).
Fusing Unit	New design to meet ZESM standards	• Thin hot roller • 2 fusing lamps • 4 thermostats • 2 thermistors • The fusing temperature control and Energy Saver function are very similar to those of the A-C2.
PCU	New developer and new toner are used to meet ZESM standards	• The ID sensor pattern creation time has been changed so that it is performed at power-on and at a specified interval (# copies). • Toner density control is the same as for the R-C1. • The cleaning pad for the charge roller has been changed to a brush roller type.

Fax option: R-C2 vs. A-C2

The fax options are very similar. However, the following differences exist because of the GW architecture used in the R-C2:

- Installable units:
  R-C2: 1 SG3 and 1 SiG4 (simultaneously).
  A-C2: 2 SG3, **or** 1 SG3 and 1 SiG4 (simultaneously).
- Default unit for scanning resolution:
  R-C2: Inches
  A-C2: mm

Printer option: R-C2 vs. A-C2

As with the fax, the printer options are very similar. However, the following differences exist because of the GW architecture used in the R-C2:

- The RPCS driver for the R-C2 -
The Overlay feature will soon be added to the Edit tab (per field requests).
The HDD for the R-C2 is an option, but is required to use the following features with the printer. (Note that these features are always available with the A-C2, since the HDD comes standard).

1. Sample Print
2. Locked Print
3. Document Server
4. Macro/Font Download
5. Rotate Sort

Scanner option: . R-C2 vs. A-C2

1. HDD (A-C2: standard, R-C2: option):
   Net file applications can be used with the R-C2 even if the HDD is not installed. However, they cannot with the A-C2.

2. Scanning Memory:
   The total scanning memory on the R-C2 is less than on the A-C2, so there are greater limitations with respect to the maximum scannable size for each dpi setting.

Model: Russian-C2	Date: 20-Dec-01	No.: RB022010

Subject: Notice for Scanner Installation		Prepared by: S.Tomoe
From: Technical Services Dept., GTS Division		

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

Due to a scanner system limitation, sometimes the Scanner SP modes are not set to the defaults when the scanner option is installed or when the scanner firmware is updated. This results in blank scanned images.

So, please do a memory clear for the scanner application (Copier SP5-801-009) when installing the scanner option or updating the scanner firmware.

Model: General (GW Models)	Date: 20-Dec-01	No.: RGene010

Subject: Series Print Mode	Prepared by: K. Misugi
From: Technical Services Dept., GTS Division	

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

In response to complaints from customers that the intervals between jobs are too long when sent in series, a new service switch has been added to improve performance.

New service switch:
Controller SP mode bit switch 2, bit 1
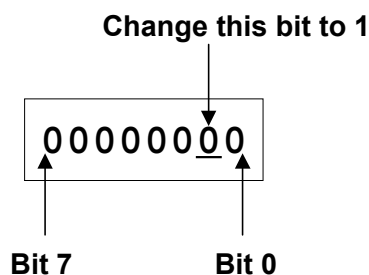Series print mode On/Off
0: Off (default setting)
1: On

This switch has been added to the following GW models:
K-P1 (Kir-P1), J-P1, A-P3 (Adonis-P3), and R-C2 (Russian-C2).

Enter the printer controller service mode, access the bit switch settings display, then change bit 1 of bit switch 2 to "1."

Change this bit to 1

00000000

Bit 7   **Bit 0**

Important: Do not change any other settings. (The default setting is "0.")

Descriptions:
Series print mode Off (default):
The machine starts to feed paper for the next job <u>after</u> the last sheet of the previous job has fed out from the machine.

Series print mode On:
The machine starts to feed paper for the next job <u>before</u> the last sheet of the previous job is fed out.

Model: General (GW Models)	Date: 20-Dec-01	No.: RGene010

Conditions for use:
For the Series Print mode to become effective, jobs must be sent from the same PC, using the same PDL and interface (Ethernet, IEEE1284, IEEE1394).

Limitations:
Series Print mode cannot be used when:
- The above conditions are not met
- Stapling or punching is used
- A user code is used
- Color and black-and-white jobs are mixed (only for color machines)

Remarks:
When enabled, the machine handles the jobs waiting to be printed as a single job.
When the Job Reset key on the operation panel is pressed, all jobs combined by this feature are cancelled.

Applied from the following software versions:

K-P1:	Controller Ver. 1.11
J-P1:	1st mass production of P1b
A-P3:	1st mass production
U-P1:	1st mass production
R-C2:	1st mass production

RICOH Technical Bulletin

Model: Russian-C2	Date: 3-Oct-02	No.: RB022020

Subject: Service Manual Correction	Prepared by: S. Tomoe
From: Technical Services sec. Service Planning Dept.	

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

Please apply the following corrections to your Service Manuals.

1. Model R-C2 Service Manual

Troubleshooting
7.1.2 SC Code Description (pg. 7-5)

Please add the following SC code.

Code No.		Symptom	Possible Causes
545	A	Fusing lamp remains on	Thermistor is out of position.
		After reaching the Ready temperature (stand-by temperature) during warm-up, the fusing lamp remains at full power for 10 seconds without the hot roller rotating.	

2. Model R-C2 Printer/Scanner Controllers Service Manual

Specifications
1.2 Scanner (pg. Spec-3)

Please revise the descriptions underlined below.

Image Storage Capacity:

Incorrect:
Number of originals per file: Maximum 160 pages

Correct:
Number of originals per file: Maximum 160 pages (without optional HDD)
                                                       Maximum 500 pages (with optional HDD)

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Subject: Euro symbol not printed with PS driver	Prepared by: T. Itoh
From: Technical Services sec. Service Planning Dept.	

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

SYMPTOM

When printing with the PS driver, the Euro currency symbol is not printed out with 112 of 136 fonts, which are stored in the font ROM in GW-based products.

The following are GW-based products:

Model-K3, Model-K P2, Russian-C2, Adonis- C2, Model-A P3, Model-J P1b, Model-J CF Model-U P1, Model-U C1, Martini-C1.

CAUSE

The Euro currency symbol was not included in the font ROM.

SOLUTION

Temporary Solution (1)

A workaround for each operating system has been previously released on the FAQ page, and is included on pp. 5-8 below.

Temporary Solution (2)

Although the font ROM will be modified as a permanent solution (details below), before this can be applied, the controller firmware has been modified on the following GW-based products:

Product	Firmware Version	Product	Firmware Version
Model-K3	1.01 (Controller)	Model-J P1b	2.18 (Controller)
Model-K P2	1.06.1 (Controller)	Model-J CF	1.11 (Printer Application)
Russian-C2	2.03 (Printer Application)	Model-U P1	2.20 (Printer Application)
Adonis-C2	3.09 (Printer Application)	Model-U C1	1.22 (Printer Application)
Model-A P3	1.08 (Controller)	Martini-C1	1.01 (Printer Application)

Specifically, the Euro currency symbol has been added along with the "PS fonts download" feature, which allows the symbol to be downloaded to machine RAM. Enable this feature by changing the setting of Bit SW#3-0 to "1 (ON)" in SP mode (default: OFF).

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Remarks for Temporary Solution 2:

1. Switching PDL to PS takes approximate 7 to 10 seconds.

   When PS fonts download is enabled, the Euro symbol is temporarily downloaded to the machine RAM at the first PS printing job, and whenever the PDL is switched from RPCS or PCL to PS. The total download time is approximately 7 to 10 seconds. This is because once the data is downloaded, it will remain in the RAM until the PDL is switched or the power turned off.

2. Printing high image area documents at 1200 dpi may cause a memory overflow error in machines equipped only with 32MB of memory (ex. Model-K P2).

   This is because the PS fonts download feature uses approximately 800kB, which can bring the amount of available memory close to capacity with the above printing conditions.

   Workaround:

   ● Printing at 600dpi may prevent an overflow, even with just the 32MB memory installed.

   ● Changing the memory usage setting from "Frame Priority" to "Font Priority" may prevent an overflow.

Permanent Solution

Modification of the font ROM on the ROM DIMM or the Controller Board, from October '02, production or later (details differ depending on the model). Specifically, the Euro currency symbol has been added to the 112 fonts mentioned above.

Note:

1. When the new ROM DIMM or Controller Board is installed, it is <u>not</u> necessary to disable the PS fonts download feature (temporary solution).

2. An MB will be issued separately announcing the P/N change for the ROMM DIMM and Controller Boards, and cut-in serial number.

ROM DIMM and Controller Board P/N:

Model	Where the font ROM is soldered	Current P/N	Model	Where the font ROM is soldered	Current P/N
Model-K P2	Controller	G0735712	Model-J CF	ROM DIMM	G5706687
		G0745712	Model-U P1	ROM DIMM	G0705851
Adonis-C2	ROM DIMM	B3615117	Model-U C1	ROM DIMM	B5295117
		B3625118			B4635117
Model-A P3	Controller	G0656022	Martini-C1	ROM DIMM	G3395117
		G0656023			G3385117
Russian-C2	ROM DIMM	B4615117	Model-K3	Controller	B5165750
		B4535117			
Model-J P1b	ROM DIMM	G0776120			

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Font Table

	Euro symbol is printed correctly.
	This is a symbol font, so no countermeasure is applied.
	Both temporary and permanent solutions work to print out the Euro currency symbol correctly.

AlbertusMT	Helvetica	Univers
AlbertusMT-Italic	Helvetica-Bold	Univers-Bold
AlbertusMT-Light	Helvetica-BoldOblique	Univers-BoldExt
AntiqueOlive-Bold	Helvetica-Condensed	Univers-BoldExtObl
AntiqueOlive-Compact	Helvetica-Condensed-Bold	Univers-BoldOblique
AntiqueOlive-Italic	Helvetica-Condensed-BoldObl	Univers-Condensed
AntiqueOlive-Roman	Helvetica-Condensed-Oblique	Univers-CondensedBold
Apple-Chancery	Helvetica-Narrow	Univers-CondensedBoldOblique
Arial-BoldItalicMT	Helvetica-Narrow-Bold	Univers-CondensedBoldOblique
Arial-BoldMT	Helvetica-Narrow-BoldOblique	Univers-CondensedOblique
Arial-ItalicMT	Helvetica-Narrow-Oblique	Univers-Extended
ArialMT	Helvetica-Oblique	Univers-ExtendedObl
AvantGarde-Book	HoeflerText-Black	Univers-Light
AvantGarde-BookOblique	HoeflerText-BlackItalic	Univers-LightOblique
AvantGarde-Demi	HoeflerText-Italic	Univers-Oblique
AvantGarde-DemiOblique	HoeflerText-Ornaments	Wingdings-Regular
Bodoni	HoeflerText-Regular	ZapfChancery-MediumItalic
Bodoni-Bold	JoannaMT	ZapfDingbats
Bodoni-BoldItalic	JoannaMT-Bold	
Bodoni-Italic	JoannaMT-BoldItalic	
Bodoni-Poster	JoannaMT-Italic	
Bodoni-PosterCompressed	LetterGothic	
Bookman-Demi	LetterGothic-Bold	
Bookman-DemiItalic	LetterGothic-BoldSlanted	
Bookman-Light	LetterGothic-Slanted	
Bookman-LightItalic	LubalinGraph-Book	
Carta	LubalinGraph-BookOblique	
Chicago	LubalinGraph-Demi	
Clarendon	LubalinGraph-DemiOblique	
Clarendon-Bold	Marigold	
Clarendon-Light	MonaLisa-Recut	
CooperBlack	Monaco	
CooperBlack-Italic	NewCenturySchlbk-Bold	
Copperplate-ThirtyThreeBC	NewCenturySchlbk-BoldItalic	
Copperplate-ThirtyTwoBC	NewCenturySchlbk-Italic	
Coronet-Regular	NewCenturySchlbk-Roman	
Courier	NewYork	
Courier-Bold	Optima	
Courier-BoldOblique	Optima-Bold	
Courier-Oblique	Optima-BoldItalic	
Eurostile	Optima-Italic	
Eurostile-Bold	Oxford	
Eurostile-BoldExtendedTwo	Palatino-Bold	
Eurostile-ExtendedTwo	Palatino-BoldItalic	

Model: General RTB		Date: 8-Nov-02	No.: RGene011

Geneva	Palatino-Italic
GillSans	Palatino-Roman
GillSans-Bold	StempelGaramond-Bold
GillSans-BoldCondensed	StempelGaramond-BoldItalic
GillSans-BoldItalic	StempelGaramond-Italic
GillSans-Condensed	StempelGaramond-Roman
GillSans-ExtraBold	Symbol
GillSans-Italic	Tekton
GillSans-Light	Times-Bold
GillSans-LightItalic	Times-BoldItalic
Goudy	Times-Italic
Goudy-Bold	Times-Roman
Goudy-BoldItalic	TimesNewRomanPS-BoldItalicMT
Goudy-ExtraBold	TimesNewRomanPS-BoldMT
Goudy-Italic	TimesNewRomanPS-ItalicMT
	TimesNewRomanPSMT

Model: General RTB	Date: 8-Nov-02	No.: RGene011

Workaround Announced on the FAQ Page

Question:
Euro Fonts printing problem

Answer:
If Euro Fonts can't be printed by the PS driver, the following solutions may be effective.

Solution
MacOS 9.x / 8.x
Use the AdobePS 8.8 printer driver.
Get the printer driver from the Adobe site on the web.
http://www.adobe.com/support/downloads/product.jsp?product=44&platform=Macintosh

Then select "ALL" for the "Font Inclusion" setting in the "PostScript Settings" window as follows.
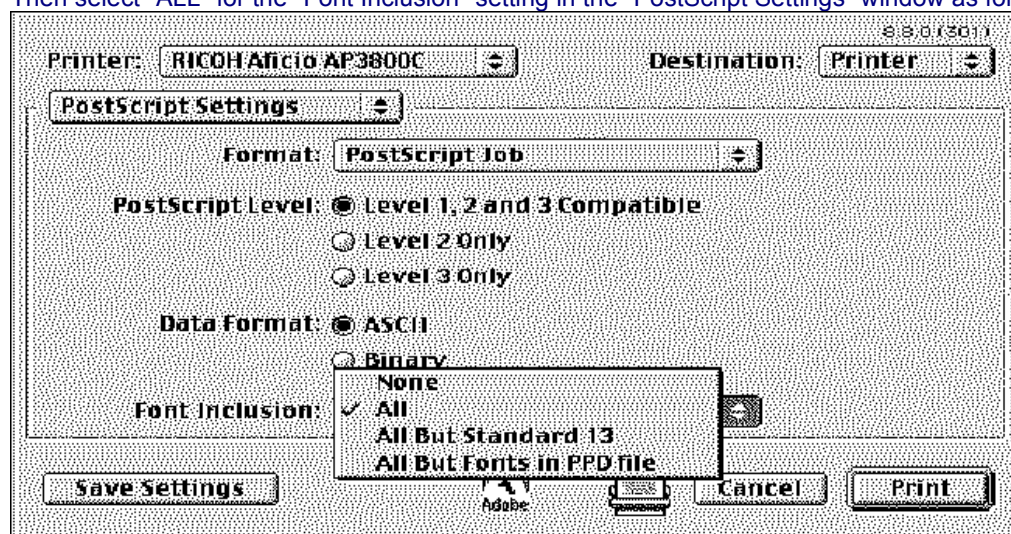
Windows 95
Update Windows95 to "Euro Currency Support for Windows95".
You can get it from the following URL.

http://www.microsoft.com/windows95/downloads/contents/WURecommended/S_WUFeatured/
W95EuroPatch/Default.asp
Then the "Add Euro Currency Symbol to PostScript Fonts" check box is available.
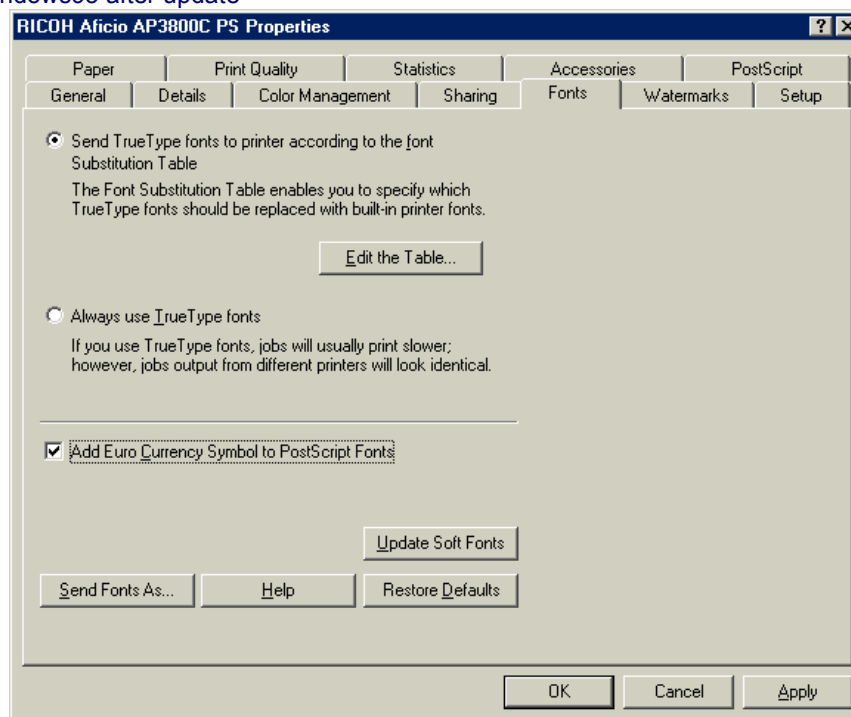Check "Add Euro Currency Symbol to PostScript Fonts". (Before update, the check box
doesn't work.)

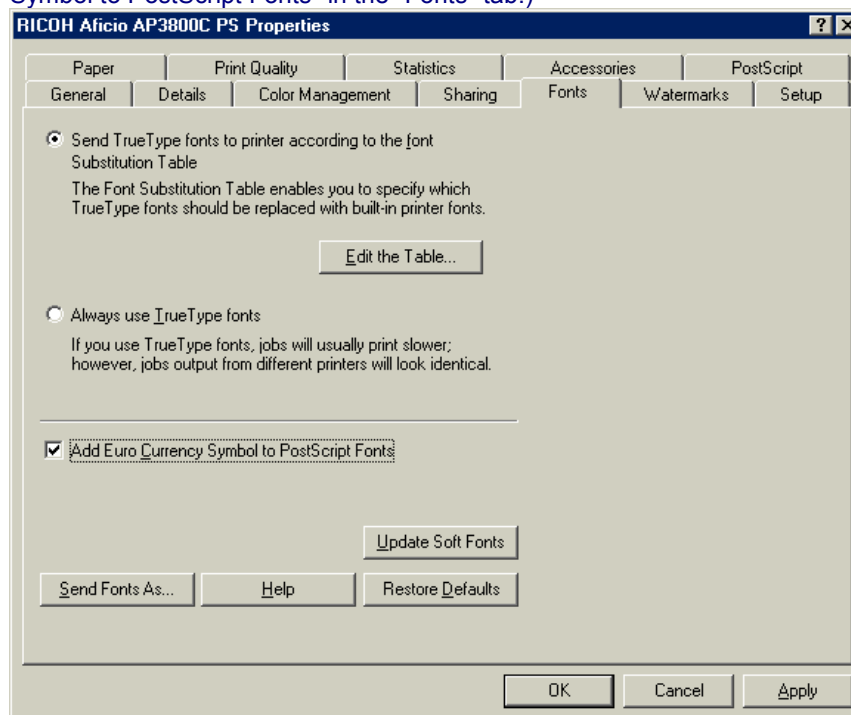| Model: General RTB	Date: 8-Nov-02	No.: RGene011

Windows95 after update

Windows 98 / ME / NT4.0 / XP
  Check "Add Euro Currency Symbol to PostScript Fonts" .

  Windows 98 / ME (Note: The AdobePS driver version 4.3.1 or later has "Add Euro Currency Symbol to PostScript Fonts" in the "Fonts" tab.)
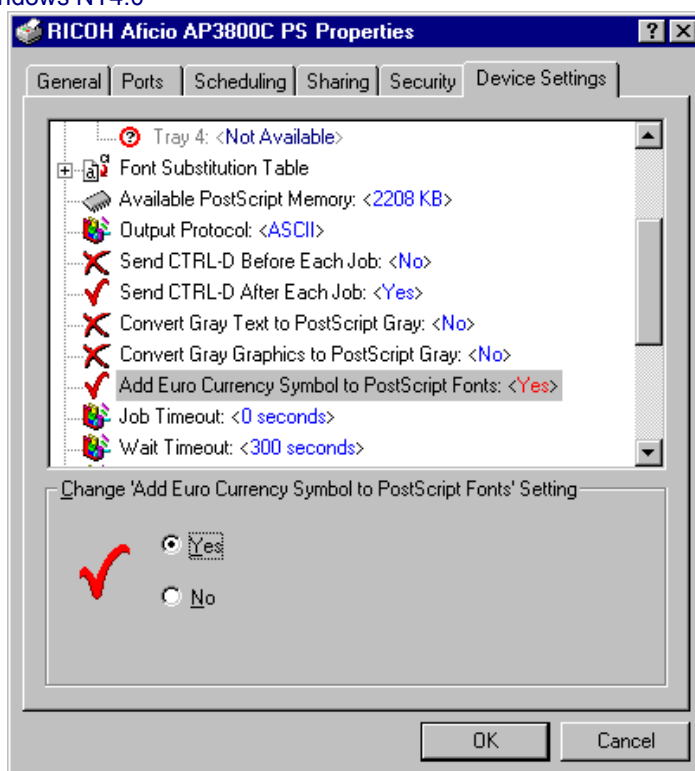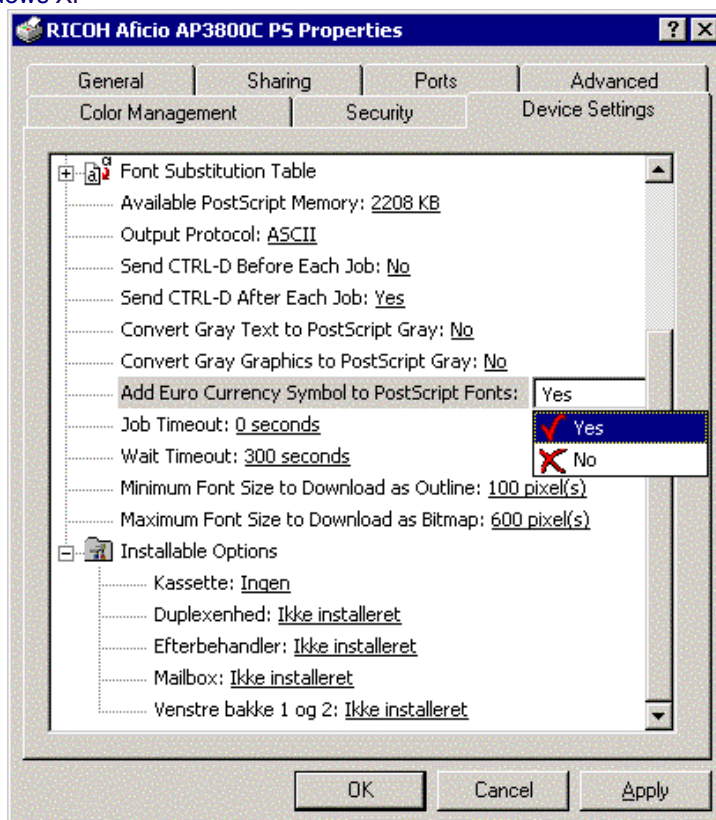
Model: General RTB	Date: 8-Nov-02	No.: RGene011

Windows NT4.0

RICOH Aficio AP3800C PS Properties

General	Ports	Scheduling	Sharing	Security	Device Settings

- Tray 4: <Not Available>
- Font Substitution Table
- Available PostScript Memory: <2208 KB>
- Output Protocol: <ASCII>
- Send CTRL-D Before Each Job: <No>
- Send CTRL-D After Each Job: <Yes>
- Convert Gray Text to PostScript Gray: <No>
- Convert Gray Graphics to PostScript Gray: <No>
- Add Euro Currency Symbol to PostScript Fonts: <Yes>
- Job Timeout: <0 seconds>
- Wait Timeout: <300 seconds>

Change 'Add Euro Currency Symbol to PostScript Fonts' Setting

- ⦿ Yes
- ◯ No

OK   Cancel

Windows XP

RICOH Aficio AP3800C PS Properties

General	Sharing	Ports	Advanced
Color Management		Security	Device Settings

- Font Substitution Table
- Available PostScript Memory: 2208 KB
- Output Protocol: ASCII
- Send CTRL-D Before Each Job: No
- Send CTRL-D After Each Job: Yes
- Convert Gray Text to PostScript Gray: No
- Convert Gray Graphics to PostScript Gray: No
- Add Euro Currency Symbol to PostScript Fonts: Yes
  - ✓ Yes
  - ✗ No
- Job Timeout: 0 seconds
- Wait Timeout: 300 seconds
- Minimum Font Size to Download as Outline: 100 pixel(s)
- Maximum Font Size to Download as Bitmap: 600 pixel(s)
- Installable Options
  - Kassette: Ingen
  - Duplexenhed: Ikke installeret
  - Efterbehandler: Ikke installeret
  - Mailbox: Ikke installeret
  - Venstre bakke 1 og 2: Ikke installeret

OK   Cancel   Apply

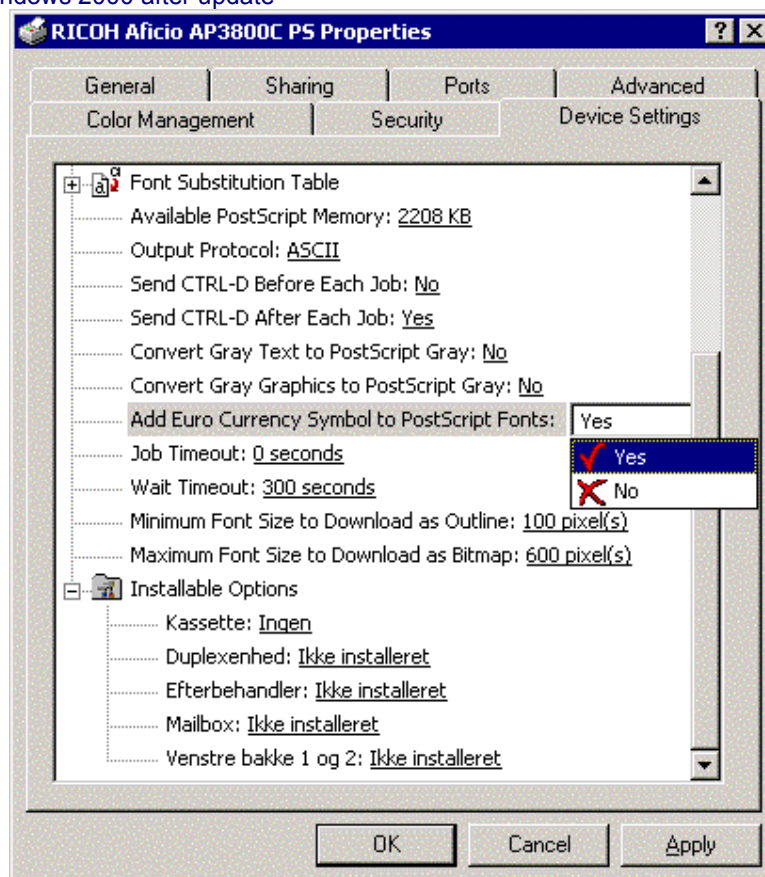| Model: General RTB	Date: 8-Nov-02	No.: RGene011

Windows 2000

Update the printer driver to v5.5.2 or later.

You can get it from the printer driver v1.0.6 on the Adobe web site that includes the W2000 driver v 5.5.2.

http://www.adobe.com/support/downloads/product.jsp?product=44&platform=Windows

Then the "Add Euro Currency Symbol to PostScript Fonts" check box is displayed.

Check "Add Euro Currency Symbol to PostScript Fonts".

Windows 2000 after update

RICOH

Technical Bulletin

PAGE: 1/1

Model: Russian-C2	Date: 20-Nov-03	No.: RB022026

Subject: NIB Installation	Prepared by: S. Tomoe
From: 1st Tech. Support Sec. Service Support Dept.	

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

SYMPTOM

Some Printer and/or Scanner settings in the User Tools are not displayed after the NIB is installed, e.g. the Scanner main screen cannot be accessed, only the Printer (parallel) can be accessed, pinging is possible but Network browsing is not, a Telnet session cannot be established, the Scanner cannot be accessed in SP mode.

CAUSE

Excessive force is applied to the NIB connector when connecting the NIB to the controller board, causing a crack in the soldered connection of the connector pin. The excessive force may be applied in cases where:

1. The NIB connection point is not visible.

2. The NIB connector cannot be inserted directly, such as in cases where the Ethernet connector must be led through the opening in the bracket before the NIB connector can be attached.

Action required

At NIB installation, be sure to remove the controller board first, then install the NIB.