

Copyright (c) 2006 Brother Industries, Ltd.

PT-9500PC

Linux Printer Driver Manual

Nov 2, 2006

Version 1.0

Brother Industries, Ltd., Printing & Solutions Company, ES Development Dept.

Table of Contents

1.	Overview 1	
1.1.	Introduction	1
1.2.	System requirements.....	1
1.3.	Verified operating environments.....	2
2.	Installation (RPM and Debian).....	3
2.1.	Installation procedure	3
2.2.	Precautions when specifying Linux distribution settings	8
2.3.	Uninstallation procedure.....	8
3.	Creating labels using an application	9
3.1.	Using an application (OpenOffice.org)	9
3.2.	Printing from an application (OpenOffice.org Writer and Calc).....	9
Appendix A	Printer properties.....	9
Appendix B	Adding media (label formats)	12
Appendix C	Templates for OpenOffice.org Writer and Calc.....	13
C.1.	Templates for OpenOffice.org Writer and Calc	13
C.2.	Media sizes.....	14
Appendix D	File configuration for Linux driver for PT-9500PC.....	17
D.1.	Installer file configuration (for example, for PT-9500PC)	17
D.2.	Driver file configuration.....	17
Appendix E	Network settings where Linux was used.....	19
Appendix F	Others	23
F.1.	Retrieving print error information.....	23
F.2.	MFC-compatible Linux drivers.....	23

1. Overview

1.1. Introduction

This manual provides information on the Linux driver for the PT-9500PC label printers.

The Linux driver for the PT-9500PC label printers consists of two types of drivers.

[1] LPR driver

The print features can be used with a Linux system that uses the LPD print service.

[2] CUPS wrapper driver

The CUPS wrapper driver operates the LPR driver as a CUPS driver.

The LPR driver must be installed before the CUPS wrapper driver is installed.

For compatibility with the different measurement units, a CUPS wrapper driver that displays values in millimeters and a CUPS wrapper driver that displays values in inches are available.

This software provides the installer package that automatically copies the appropriate driver file (from those mentioned above) to your Linux distribution.

Notes

- Only the English versions of the drivers are currently available.
- The content of this manual does not guarantee the operation of our product in your Linux operating environment.
- We guarantee no part of the contents of this manual. The installation and use is the sole responsibility of the user.

1.2. System requirements

Driver	PT-9500PC
Port	USB port (USB 1.1 or later) Serial port (RS-232C)
Computer	IBM-compatible PC (CPU architecture: x86)
Linux distribution	RPM or DEB (Refer to section 1.3 for details.)

1.3. Verified operating environments

The operation of PT-9500PC in the various Linux distributions has been verified as shown below.

Linux distribution	
RPM	Fedora Core 3
	Fedora Core 4
	Fedora Core 5
	Mandriva Linux 2006
	Red Hat Linux 9
	SuSE Linux 10.0
	MIRACLE Linux V4.0
	Turbolinux 10 FUJI
	Vine Linux 3.2
Debian	Debian GNU/Linux 3.1r1(sarge)

Notes

- However, the information provided here does not imply a guarantee that the same results will be achieved in your operating environment. In addition, we do not guarantee the information provided here.

2. Installation (RPM and Debian)

2.1. Installation procedure

As an example, the installation procedure for the PT-9500PC driver is described below.

[1] Prepare the LPR driver or CUPS wrapper driver in the appropriate directory.

[2] Log on as the root user. Otherwise, use the “su” command to obtain Root permissions.



```
user@localhost:/home/user
File Edit View Terminal Tabs Help
[user@localhost ~]$ su
Password:
[root@localhost user]#
```

[3] Install the LPR driver.

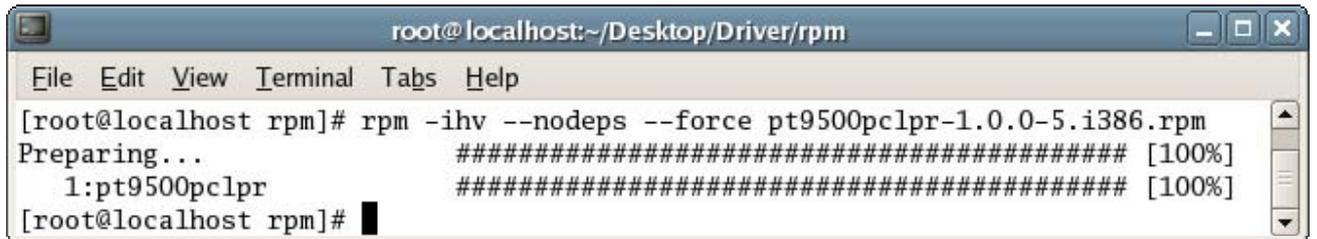
- For Debian users:

```
dpkg -i --force-all pt9500pclpr-1.0.0-5.i386.deb
```

- For Fedora Core (RPM) users:

```
rpm -ihv --nodeps pt9500pclpr-1.0.0-5.i386.rpm
```

(If a Brother LPR driver is already installed, an error will occur. To overwrite it, specify the “--force” option.)



```
root@localhost:~/Desktop/Driver/rpm
File Edit View Terminal Tabs Help
[root@localhost rpm]# rpm -ihv --nodeps --force pt9500pclpr-1.0.0-5.i386.rpm
Preparing... ##### [100%]
 1:pt9500pclpr ##### [100%]
[root@localhost rpm]#
```

[4] Install the CUPS wrapper driver.

- For Debian users:

When values are displayed in millimeters

```
dpkg -i --force-all pt9500pccupswrapper-1.0.0-5.debian.i386.deb
```

When values are displayed in inches

```
dpkg -i --force-all pt9500pccupswrapperinch-1.0.0-5.debian.i386.deb
```

- For Fedora Core (RPM) users:

When values are displayed in millimeters

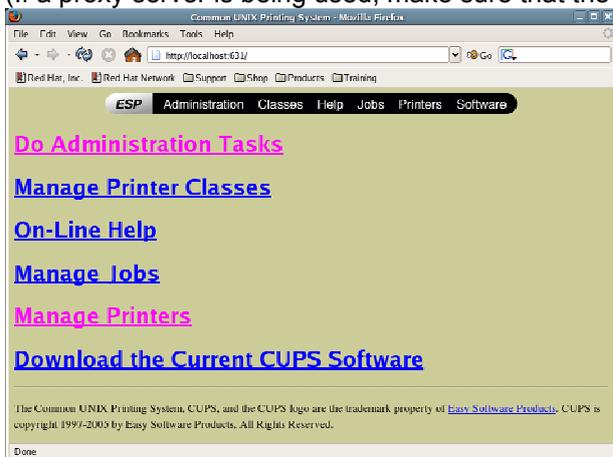
```
rpm -ihv --nodeps pt9500pccupswrapper-1.0.0-5.redhat.i386.rpm
```

When values are displayed in inches

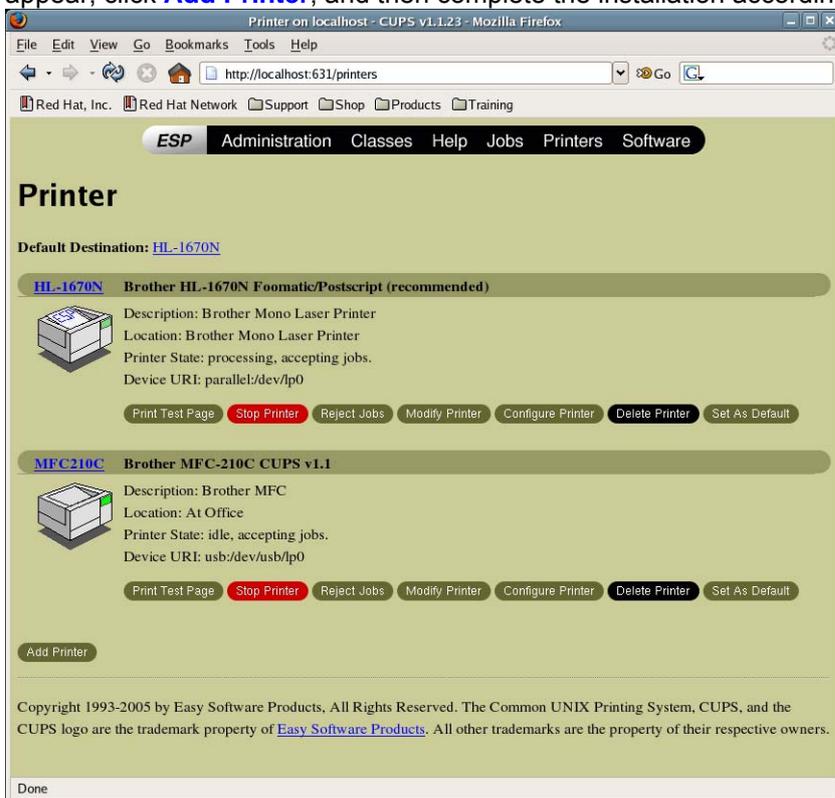
```
rpm -ihv --nodeps pt9500pccupswrapperinch-1.0.0-5.redhat.i386.rpm
```

```
root@localhost:~/Desktop/Driver/rpm
File Edit View Terminal Tabs Help
[root@localhost rpm]# rpm -ihv --nodeps --force pt9500pclpr-1.0.0-5.i386.rpm
Preparing... ##### [100%]
 1:pt9500pclpr ##### [100%]
[root@localhost rpm]# rpm -ihv --nodeps --force pt9500pccupswrapper-1.0.0-5.redhat.i386.rpm
Preparing... ##### [100%]
 1:pt9500pccupswrapper ##### [100%]
Stopping cups: [ OK ]
Starting cups: [ OK ]
[root@localhost rpm]#
```

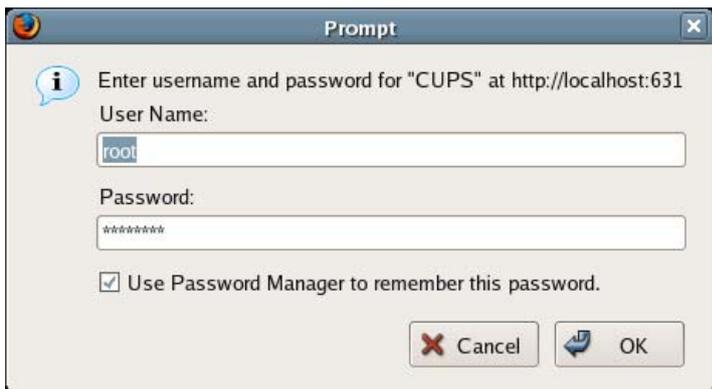
[5] Start the Web browser, and then display the CUPS Web administrator page (<http://localhost:631>).
(If a proxy server is being used, make sure that the proxy server is not used as the local server.)



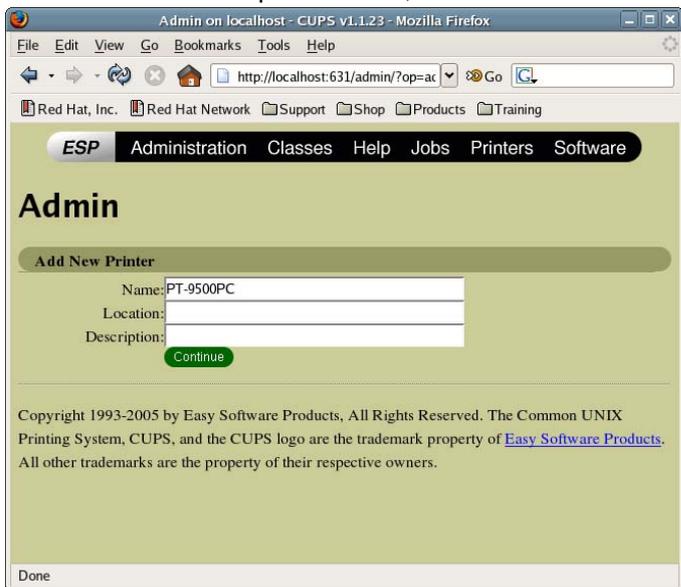
[6] Click **Manage Printers**, and then check that the name of the installed printer appears. If it does not appear, click **Add Printer**, and then complete the installation according to the instructions that appear.



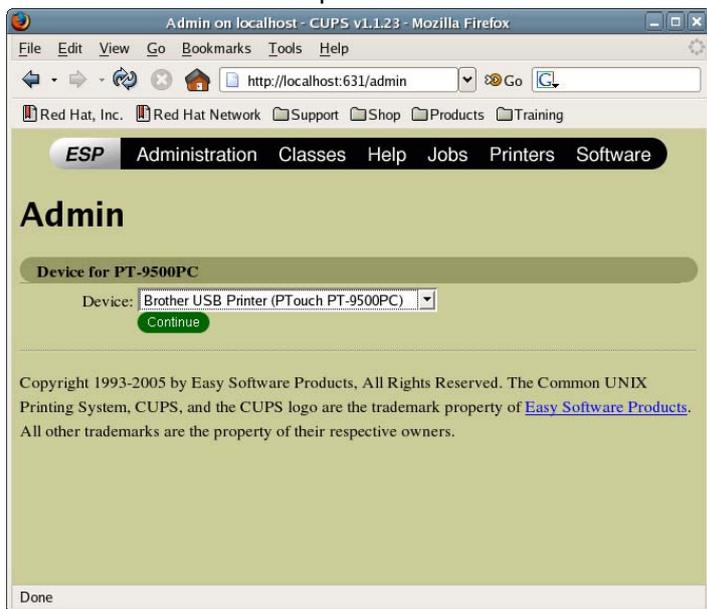
[7] Type in the user name and password, and then click the [OK] button.



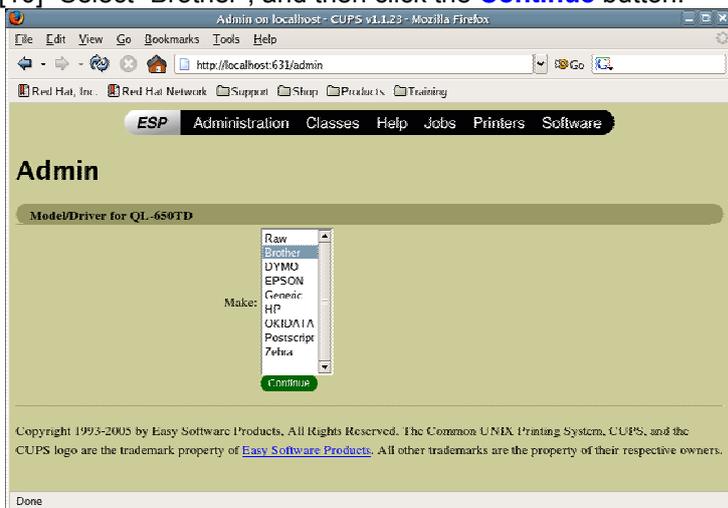
[8] In the Name box, type in the name of the model being used, type in the appropriate information in the "Location" and "Description" boxes, and then click the **Continue** button.



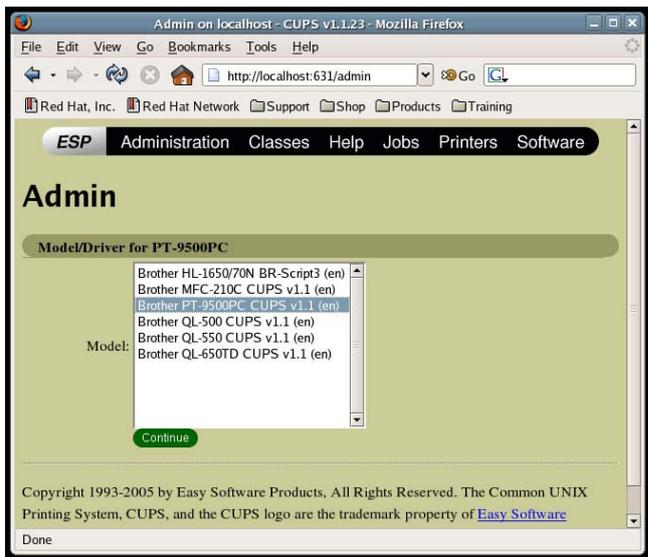
[9] From the following two options, select the device being used, and then click the **Continue** button.
Brother USB Printer(Ptouch PT-9500PC): Select this option when a USB interface is used.
Serial Port #1: Select this option when a serial interface is used.



[10] Select "Brother", and then click the **Continue** button.



[11] Select the name of the model being used (Brother PT-9500PC CUPS v1.1(en)), and then click the **Continue** button.

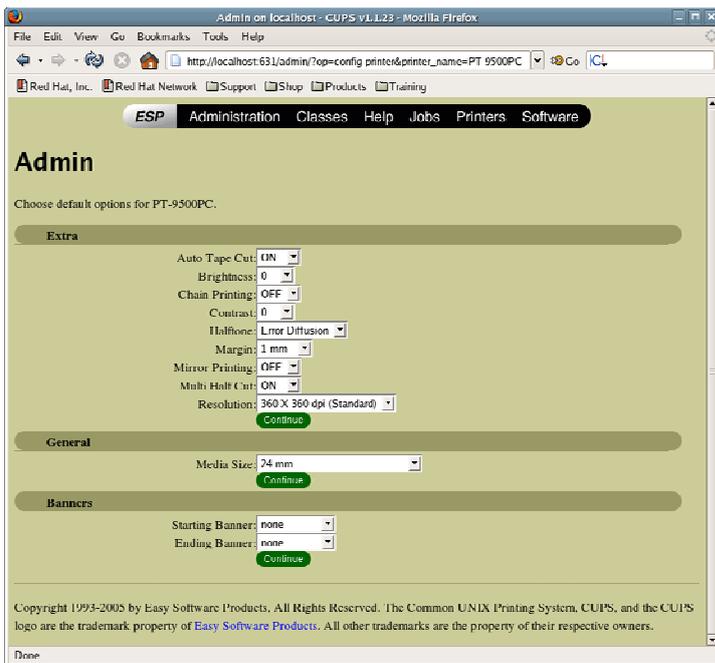


[12] This completes the installation.

Click **Printers**, and then check that the printer was added.



[13] Click **Configure Printer** to specify the various other settings.



[14] Click [Print Test Page](#) to confirm the successful installation if a test page is printed.



Notes

- For detailed information concerning CUPS, click “Help” in the CUPS Web administrator page.
- Common UNIX Printing System, CUPS and the CUPS logo are registered trademarks of Easy Software Products. If CUPS was provided by the Linux or Apple distribution, direct all questions concerning CUPS to the vendor. We do not provide CUPS support.

2.2. Precautions when specifying Linux distribution settings

2.2.1. Compatibility with distributions (Fedora Core 5/GNOME, etc.) that include SELinux

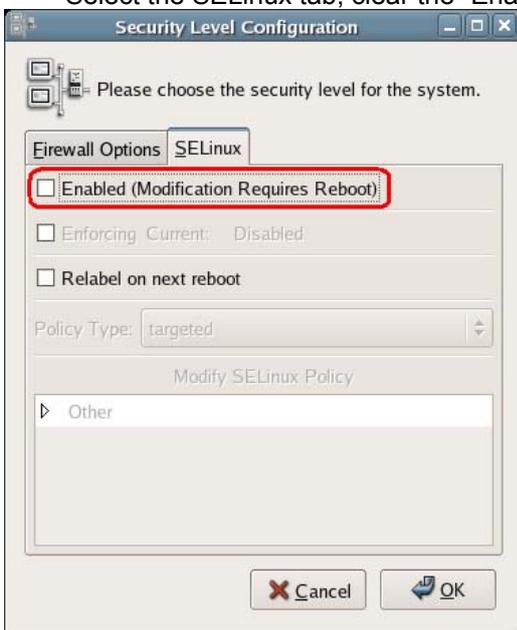
This printer driver is not compatible with SELinux. If an error occurs and printing is not possible, disable SELinux.

To disable SELinux

- [1] From “Desktop” in the menu, select “System”, then “Security Level”.



- [2] Select the SELinux tab, clear the “Enabled” check box, and then click the [OK] button.



- [3] Restart the system.

Notes

— For details on SELinux, contact the distribution supplier.

2.3. Uninstallation procedure

Manually delete each file in Appendix D.

3. Creating labels using an application

3.1. Using an application (OpenOffice.org)

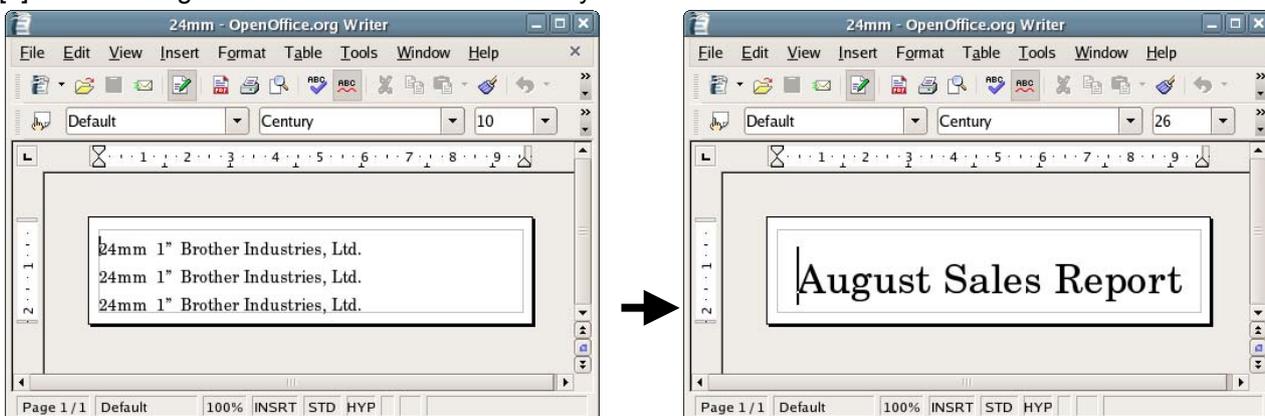
This manual provides a description of the procedure for printing to the PT-9500PC printer from OpenOffice.org, an application that is widely used in Linux distributions.

When printing to the PT-9500PC printer from OpenOffice.org, settings must be specified for the paper size and margins of the layout. Templates with paper size and margin settings specified for Writer and Calc have been provided with this software.

3.2. Printing from an application (OpenOffice.org Writer and Calc)

As an example, the procedure for using a 24 mm landscape template for Writer is described below.

- [1] Copy the file "24mm.doc", and then open it from OpenOffice.org Writer.
- [2] Change the data in the file as necessary.



- [3] Open the Print dialog box. For this example, select the printer name (PT-9500PC). Click the [Properties] button, and then select "24mm" as the paper size in the Properties dialog box for the printer. Start printing to confirm the successful operation if the data is printed with the specified layout.

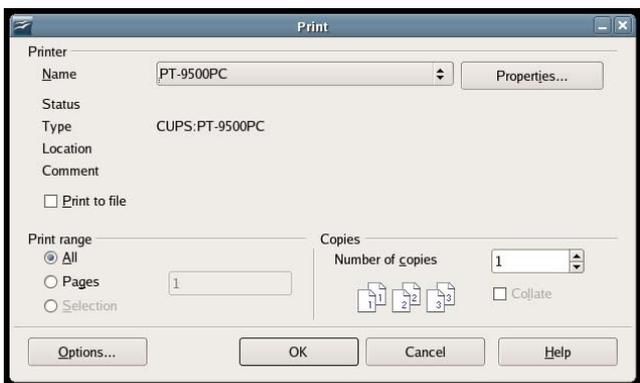


Figure 1: Print dialog box

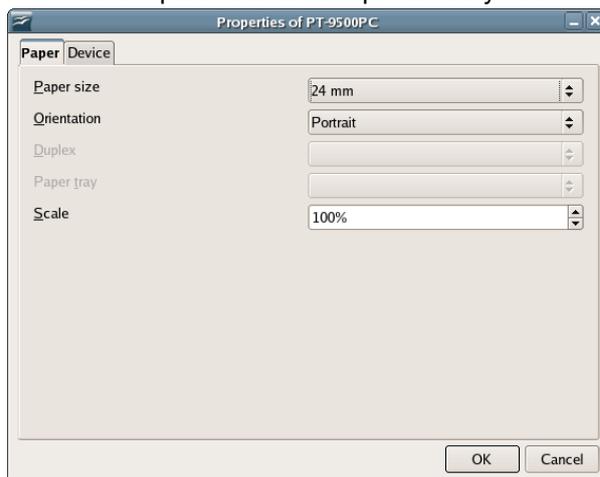
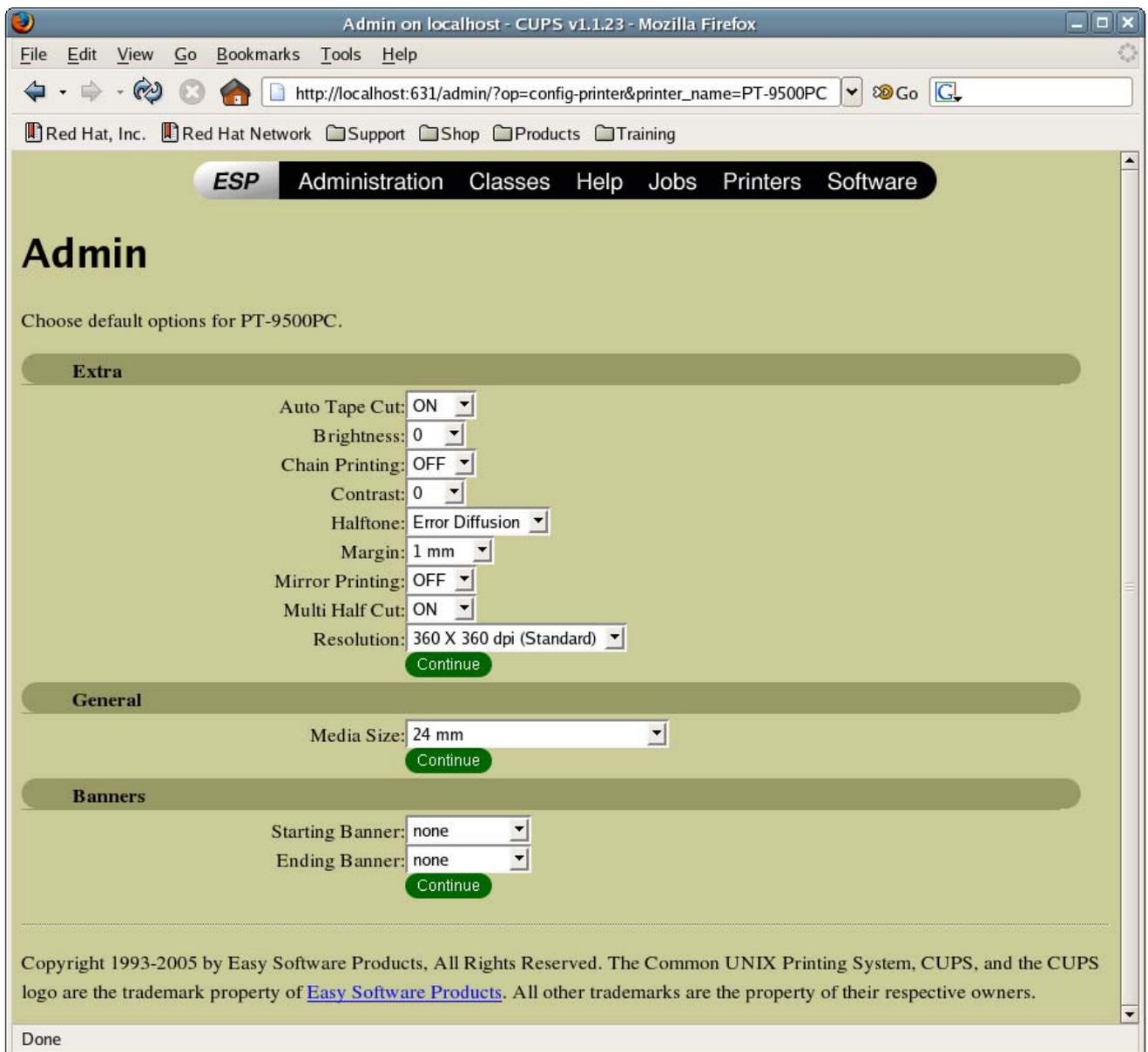


Figure 2: Properties dialog box for the printer

Appendix A Printer properties

The printer properties available in the CUPS Web administrator page (<http://localhost:631>) are described below.



- Auto Tape Cut
Automatically cuts each label that is printed. The default is "OFF".
- Brightness
A setting within a range of 20% of the current value can be selected. The effect is applied to the sample. The default is "0".
- Chain Printing
No feeding and cutting the last label. The default is "OFF".
- Contrast
A setting within a range of 20% of the current value can be selected. The effect is applied to the sample. The default is "0".
- Halftone
Select "Binary", "Dither" or "Error Diffusion". The default is "Error Diffusion".
- Margin

The available left and right margins (3 to 30 mm) are listed. For normal tape, the default is "3 mm".
No setting can be selected with die-cut tape.

- Mirror Printing

Specifies mirror printing. The default is "OFF".

- Multi Half Cut

Half cut is effective only with laminated tape. The default is "ON".

- Resolution

- Media Size

The available tapes are listed. (Tape length of 6 to 36 mm tape is 100mm)

The default is "36mm".

6 mm
9 mm
12 mm
18 mm
24 mm
36 mm
AV1789 FILE FOLDER
AV1957 RETURN ADDRESS
AV2067 ADDRESS

Units:mm

1/4"
3/8"
1/2"
3/4"
1"
1 1/2"
AV1789 FILE FOLDER
AV1957 RETURN ADDRESS
AV2067 ADDRESS

Units:inch

Appendix B Adding media (label formats)

To specify a length before printing on continuous length (6 mm, 9 mm, 12 mm, 18 mm, 24 mm, 36 mm) labels, use added media (label format).

Media (label formats) are added from the command line.

Use the tool “brpapertoollpr_pt9500pc” (for PT-9500PC) to add media (label formats). This tool is installed in the following folder with the driver.

Folder: [usr]-[bin]

To add:

```
brpapertoollpr_pt9500pc [-P <printer_name>] [-n <label_format_name>] [-w <media_width_(mm)>] [-h <media_height_(mm)>]
```

To delete:

```
brpapertoollpr_pt9500pc [-P <printer_name>] [-d <label_format_name>]
```

- [*-P <printer_name>*]: Printer name defined by the user
- [*-n <label_format_name>*]: The width and height for the added label format name is added to the PPD file. (If the label format name already exists, the old parameters will be updated with the new parameters.)
- [*-w <paper_width_(mm)>*]: Specify the media width of the label format. (units: mm)
- [*-h <paper_height_(mm)>*]: Specify the media height of the label format. (units: mm)
- [*-d <label_format_name>*]: The label format is deleted from the PPD file.

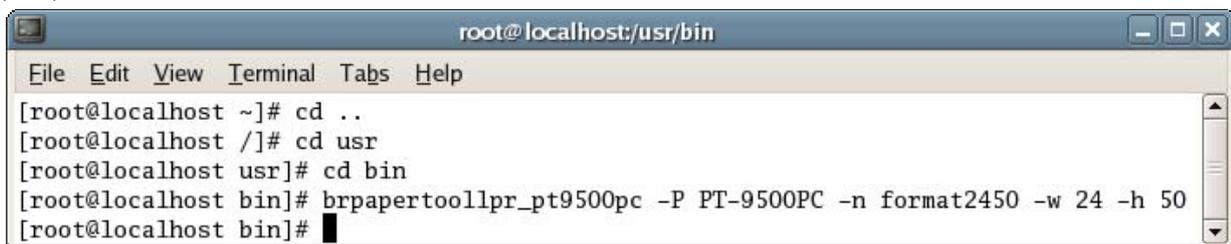
Example:

[1] A new label format for 24-mm continuous length tape for the PT-9500PC printer will be added.

The operation must be performed by using Root permissions.

[2] To add a label format:

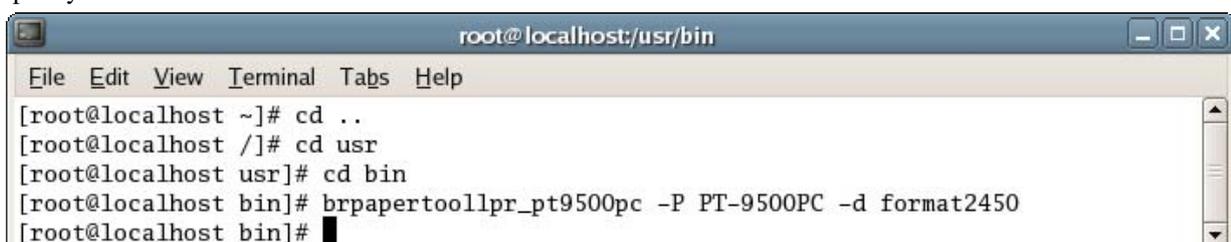
Specify the label format name as “format2450”, the media width as “24 (mm)”, and the media length as “50 (mm)”.



```
root@localhost:usr/bin
File Edit View Terminal Tabs Help
[root@localhost ~]# cd ..
[root@localhost /]# cd usr
[root@localhost usr]# cd bin
[root@localhost bin]# brpapertoollpr_pt9500pc -P PT-9500PC -n format2450 -w 24 -h 50
[root@localhost bin]#
```

[2] To delete a label format:

Specify the label format name as “format2450”.



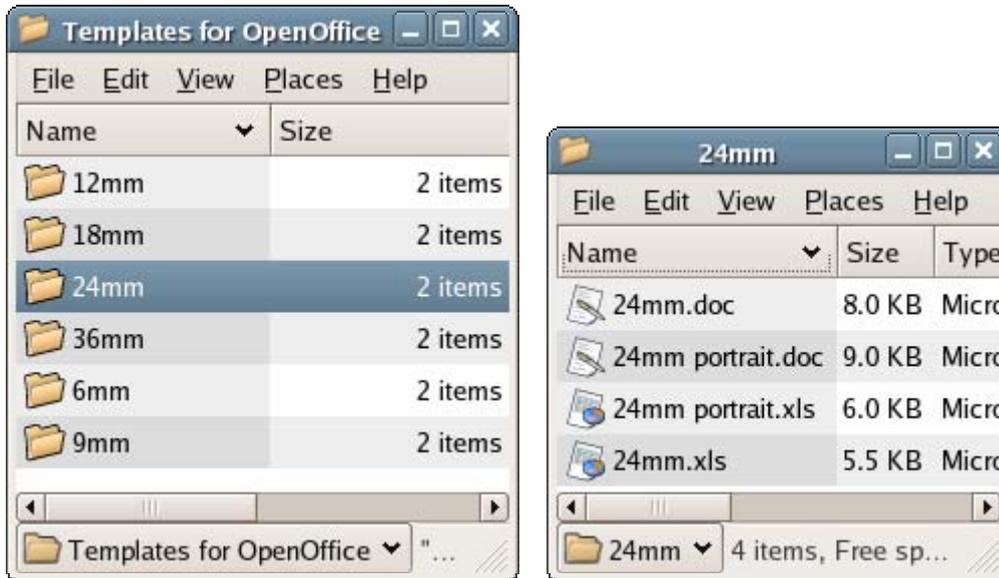
```
root@localhost:usr/bin
File Edit View Terminal Tabs Help
[root@localhost ~]# cd ..
[root@localhost /]# cd usr
[root@localhost usr]# cd bin
[root@localhost bin]# brpapertoollpr_pt9500pc -P PT-9500PC -d format2450
[root@localhost bin]#
```

Appendix C Templates for OpenOffice.org Writer and Calc

C.1. Templates for OpenOffice.org Writer and Calc

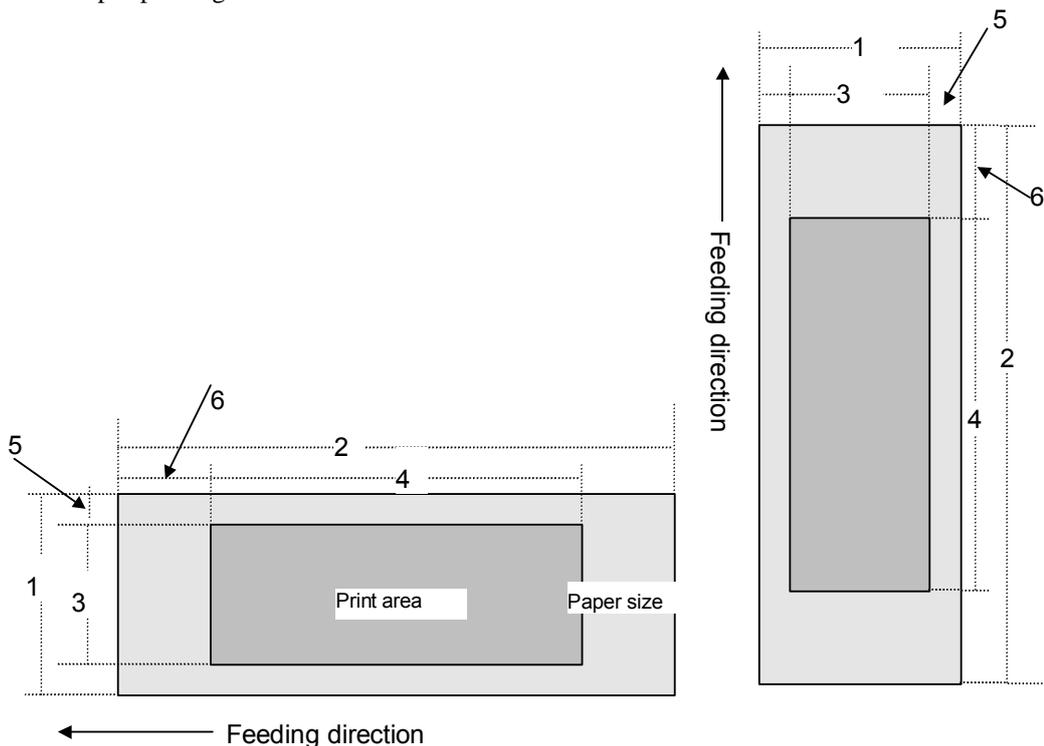
When printing to the PT-9500PC printer from OpenOffice.org, settings must be specified for the paper size and margins of the layout. Templates with the landscape and portrait orientations have been provided. The templates are shown below.

These templates were created based on the media sizes listed in “C.2. Media sizes”.



C.2. Paper size

A. No split printing



Landscape

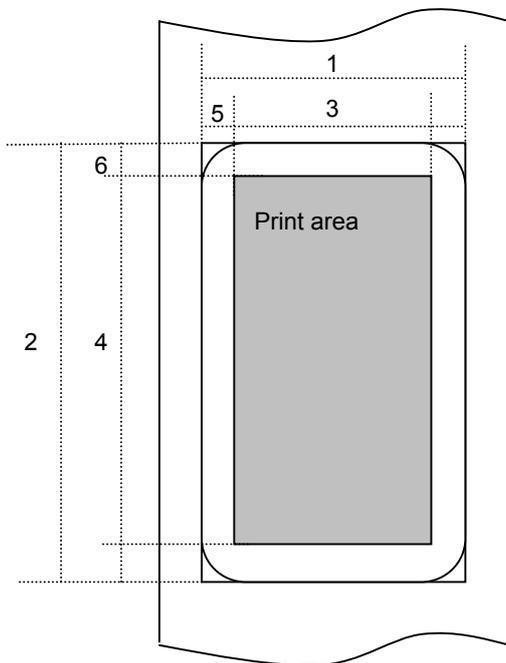
Portrait

- Number 1 Width 2 Length
- 3 Print area width (maximum printing width) 4 Print area length
- 5 Width offset 6 Length offset

Tape Type	Designation	1	2	3	4	5	6
6 mm	6 mm 1/4 "	6.0 mm 84 dots	→2.3.4	4.52 mm 64 dots	→2.3.4	0.74 mm 10 dots	→2.3.3.
9 mm	9 mm 3/8 "	9.0 mm 128 dots	→2.3.4	7.48 mm 106 dots	→2.3.4	0.76 mm 11 dots	→2.3.3.
12 mm	12 mm 1/2 "	12.0 mm 170 dots	→2.3.4	10.58 mm 150 dots	→2.3.4	0.71 mm 10 dots	→2.3.3.
18 mm	18 mm 3/4 "	18.01 mm 256 dots	→2.3.4	16.51 mm 234 dots	→2.3.4	0.75 mm 11 dots	→2.3.3.
24 mm	24 mm 1 "	24.0 mm 340 dots	→2.3.4	22.58 mm 320 dots	→2.3.4	0.71 mm 10 dots	→2.3.3.
36 mm	36 mm 1 1/2 "	36.09 mm 512 dots	→2.3.4	27.09 mm 384 dots	→2.3.4	4.5 mm 64 dots	→2.3.3.

B. AV tape

AV tape is only available in certain areas.



- Number 1 Width 2 Length
 3 Print area width (maximum printing width) 4 Print area length
 5 Width offset 6 Length offset
 9 Background length offset

24-mm-wide tape

ID (Designation)	Dimensions	1	2	3	4	5	6
AV1789 FILE FOLDER	17 mm x 89 mm 5/8" x 3-1/2"	16.9 mm 240	89.1 mm 1263	13.5 mm 192	78.9 mm 1119	1.69 mm 24 dots	5.1 mm 72 dots
AV1957 RETURN ADDRESS	19 mm x 57 mm 3/4" x 2-1/4"	19.2 mm 272	57.3 mm 812	15.8 mm 224	47.1 mm 668	1.69 mm 24 dots	5.1 mm 72 dots
AV2067 ADDRESS	20 mm x 67 mm 3/4" x 2-5/8"	20.3 mm 288	66.9 mm 948	16.9 mm 240	56.7mm 804	1.69 mm 24 dots	5.1 mm 72 dots

3.2.4 Maximum and minimum lengths

The maximum and minimum lengths can be specified.

Tape Type	Minimum Length	Maximum Length
Normal	4 mm	1000 mm
	360dpi: 57 dots	360dpi: 14173 dots
	720dpi: 114 dots	720dpi: 28346 dots
AV	Not available	Not available

Do not print labels less than 4 mm long, otherwise problems, such as tape misfeeds, may occur.

Appendix D File configuration for Linux driver for PT-9500PC

D.1. Installer file configuration (for example, for PT-9500PC)

For Fedora Core (RPM):

Name	Units	File Name
LPR driver	-	pt9500pclpr-1.0.0-5.i386.rpm
CUPS wrapper driver	mm	pt9500pccupswrapper-1.0.0-5.redhat.i386.rpm
	inch	pt9500pccupswrapperinch-1.0.0-5.redhat.i386.rpm

For Debian:

Name	Units	File Name
LPR driver	-	pt9500pclpr-1.0.0-5.i386.deb
CUPS wrapper driver	mm	pt9500pccupswrapper-1.0.0-5.debian.i386.deb
	inch	pt9500pccupswrapperinch-1.0.0-5.debian.i386.deb

D.2. Driver file configuration

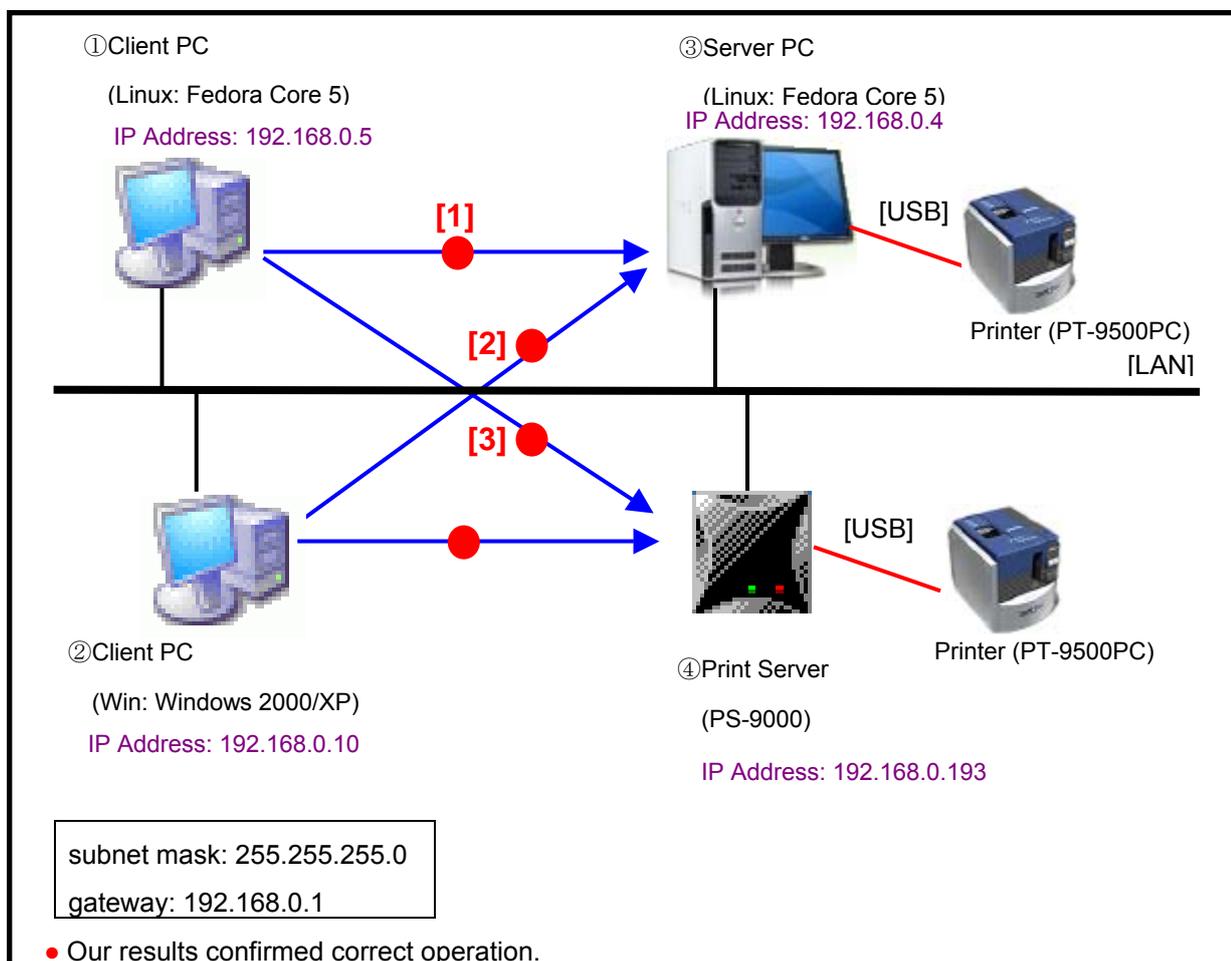
For RPM ("xxxx" represents the model name.)

Name	Function	File Name
LPR driver	Driver	(1) /usr/bin/brpapertoolpr_pt9500pc
		(2) /usr/bin/brprintconfpt9500pc
		(3) /usr/bin/brps2ps_pt9500pc
		(4) /usr/local/Brother/PTouch/pt9500pc/inf/brPrintListpt1
		(5) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcfunc
		(6) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcinit
		(7) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcrc
		(8) /usr/local/Brother/PTouch/pt9500pc/inf/paperinfpt9500pc
		(9) /usr/local/Brother/PTouch/pt9500pc/inf/setupPrintcappt1
		(10) /usr/local/Brother/PTouch/pt9500pc/lpd/brpapertoolcups_pt9500pc
		(11) /usr/local/Brother/PTouch/pt9500pc/lpd/brusb_pt9500pc
		(12) /usr/local/Brother/PTouch/pt9500pc/lpd/filterpt9500pc
		(13) /usr/local/Brother/PTouch/pt9500pc/lpd/psconvertpt1
		(14) /usr/local/Brother/PTouch/pt9500pc/lpd/brpt9500pcfilter
CUPS Wrapper	CUPS Wrapper	(1) /usr/local/Brother/PTouch/pt9500pc/cupswrapper/brcupsconfpt1
		(2) /usr/local/Brother/PTouch/pt9500pc/cupswrapper/cupswrapperpt9500pc
Related files		(1) /usr/lib/cups/backend/brusb_pt9500pc
		(2) /usr/lib/cups/filter/brlpdwrapperpt9500pc
		(3) /usr/share/cups/model/brpt9500pc.ppd
		(4) /etc/cups/ppd/<printer_name>.ppd

For Debian ("xxxx" represents the model name.)

Name	Function	File Name
LPR driver	Driver	(1) /usr/bin/brpapertoolpr_pt9500pc (2) /usr/bin/brprintconfpt9500pc (3) /usr/bin/brps2ps_pt9500pc (4) /usr/local/Brother/PTouch/pt9500pc/inf/brPrintListpt1 (5) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcfunc (6) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcinit (7) /usr/local/Brother/PTouch/pt9500pc/inf/brpt9500pcrc (8) /usr/local/Brother/PTouch/pt9500pc/inf/paperinfpt9500pc (9) /usr/local/Brother/PTouch/pt9500pc/inf/setupPrintcappt1 (10) /usr/local/Brother/PTouch/pt9500pc/lpd/brpapertoolcups_pt9500pc (11) /usr/local/Brother/PTouch/pt9500pc/lpd/brusb_pt9500pc (12) /usr/local/Brother/PTouch/pt9500pc/lpd/filterpt9500pc (13) /usr/local/Brother/PTouch/pt9500pc/lpd/psconvertpt1 (14) /usr/local/Brother/PTouch/pt9500pc/lpd/brpt9500pcfilter
CUPS Wrapper	CUPS Wrapper	(1) /usr/local/Brother/PTouch/pt9500pc/cupswrapper/brcupsconfpt1 (2) /usr/local/Brother/PTouch/pt9500pc/cupswrapper/cupswrapperpt9500pc
Related files		(1) /usr/lib/cups/backend/brusb_pt9500pc (2) /usr/lib/cups/filter/brlpdwrapperpt9500pc (3) /usr/share/cups/model/brpt9500pc.ppd (4) /etc/cups/ppd/<printer_name>.ppd (5) /var/lib/dpkg/info/pt9500pc*

Appendix E Network settings where Linux was used



Linux network configuration (example)

Combinations in the Linux network configuration

The configuration combinations are listed below.

- [1] - : Server [Linux]-Client [Linux]
- [2] - : Server [Linux]-Client [Windows]
- [3] - : Print Server [PS-9000]-Client [Linux]

Settings specified in advance

For [1] and [2], specify the following settings for Server [Linux] in advance.

(in order to access CUPS for Server [Linux] from the client computer)

/etc/cups/cupsd.conf

<location />

Order Deny,Allow

Deny From All

Allow From 127.0.0.1

```

Allow From 192.168.0.5/255.255.255.0
Allow From 192.168.0.10/255.255.255.0
</Location>

```

```

<location /admin>
## Restrict access to local domain
Order Deny,Allow
Deny From All
Allow From 127.0.0.1
Allow From 192.168.0.5/255.255.255.0
Allow From 192.168.0.10/255.255.255.0
#Encryption Required
</Location>

```

[1] - : Server [Linux]-Client [Linux]

	At Server [Linux]	At Client [Linux]	Result
Setting procedure 1	When adding a printer (PT-9500PC) from the CUPS window, select: Device: Brother USB Printer (PTouch PT-9500PC) = USB Make: Brother Model: Brother PT-9500PC CUPS v1.1 (en)	When adding a printer (PT-9500PC) from the CUPS window, select: Device: Internet Printing Protocol(http) Device URI: http://192.168.0.4:631/printers/PT-9500PC Make: Raw Model: Raw Queue(en)	○
Setting procedure 2	When adding a printer (PT-9500PC) from the CUPS window, select: Device: Brother USB Printer (PTouch PT-9500PC) = USB Make: Raw Model: Raw Queue(en)	When adding a printer (PT-9500PC) from the CUPS window, select: Device: Internet Printing Protocol(http) Device URI: http://192.168.0.4:631/printers/PT-9500PC Make: Brother Model: Brother PT-9500PC CUPS v1.1 (en)	○

[2] - : Server [Linux]-Client [Windows]

Specify the following settings for Server [Linux] in advance.

- Specifying the data type (Specify the type of data sent from Windows.)

```

/etc/cups/mime.types
application/octet-stream

```

Data processed by the Windows printer driver will be sent to CUPS as binary data.

Delete “#” at the beginning of this line.

- Specify filters (Specify how to process data to be printed.)

/etc/cups/mime.convs

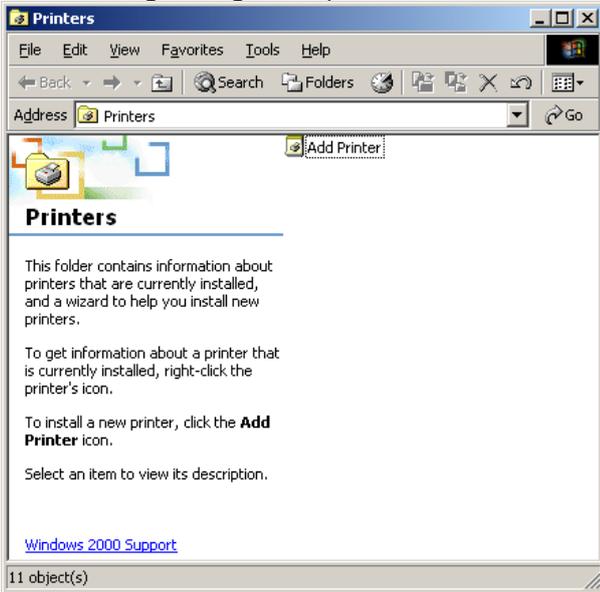
application/octet-stream application/vnd.cups-raw 0 -

Delete “#” at the beginning of this line.

When converting to the printer data format with Windows, no process is performed with Linux.

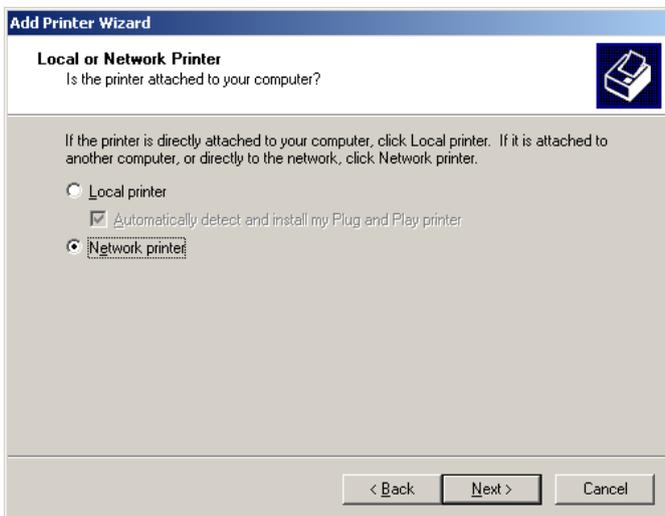
	At Server [Linux]	At Client[Windows]	Results
Setting procedure 1	When adding a printer (PT-9500PC) from the CUPS window, select: Device: Brother USB Printer (PTouch PT-9500PC) = USB Make: Raw Model: Raw Queue(en)		○

The following settings are specified from the client [Windows].

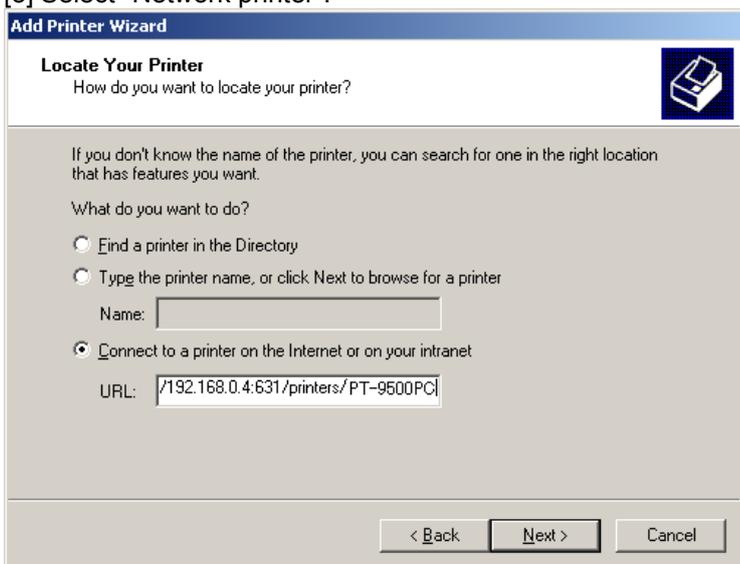


[1] Start printer installation.

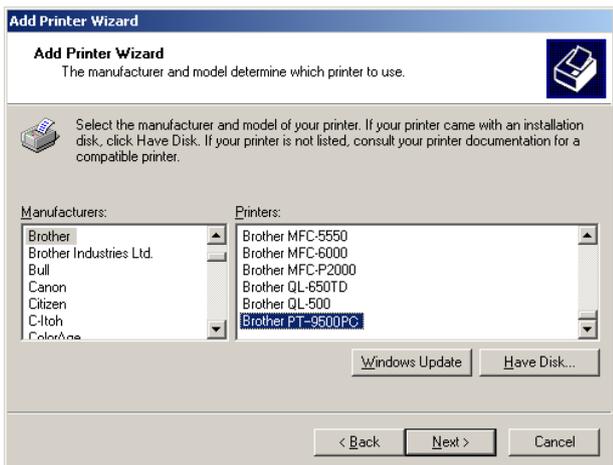
[2] Start the Add Printer Wizard.



[3] Select "Network printer".



[4] Specify the connection location for the printer.



[5] Select the printer model.



[6] The installation of the printer is finished.

[3] - : Print Server [PS-9000]-Client [Linux]

	At Print Server [PS-9000]	At Client [Linux]	Results
Setting procedure 1	<p>In Windows, specify network settings, such as:</p> <ul style="list-style-type: none"> •IP address (ex. 192.168.0.193) •Subnet mask (ex. 255.255.255.0) •Gateway (ex. 192.168.0.1) 	<p>When adding a printer (PT-9500PC) from the CUPS window, select:</p> <p>Device: LPD/LPR Host or Printer</p> <p>Device URI: lpd://192.168.0.193/queue</p> <p>Make: Brother</p> <p>Model: Brother PT-9500PC CUPS v1.1 (en)</p>	<p>○</p>

Appendix F Others

F.1. Retrieving print error information

Print error information can be retrieved from the following log file.

`/var/log/cups/error_log`

F.2. MFC-compatible Linux drivers

We provide MFC-compatible Linux drivers. The PT-9500PC driver described in this manual uses the same configuration as the MFC-compatible Linux driver, which is based on a configuration combining the LPR driver and the CUPS wrapper driver. For details, refer to the pages at the following links.

Links:

<http://solutions.brother.co.jp/linux/index.html>

http://solutions.brother.com/linux/en_us/index.html