QL-1050

Linux Printer Driver Manual

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Version 1.1

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1. Overview

1.1. Introduction

This manual provides information on the Linux driver for the QL-1050 label printers.

The Linux driver for the QL-1050 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	QL-1050
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 QL-1050 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
	Fedora Core 6
	openSUSE 10.2
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 QL-1050 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]#
```
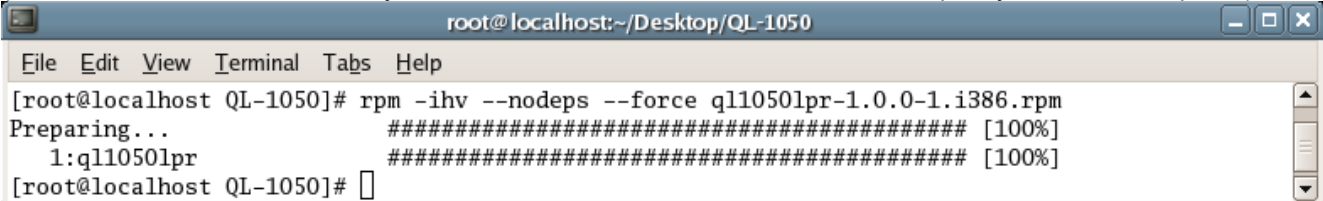
[3]   Install the LPR driver.

・   For Debian users:

```
dpkg -i --force-all ql1050lpr-1.0.0-1.i386.deb
```

・   For Fedora Core (RPM) users:

```
rpm -ihv --nodeps ql1050lpr-1.0.0-1.i386.rpm
```

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

```
root@localhost:~/Desktop/QL-1050

File  Edit  View  Terminal  Tabs  Help

[root@localhost QL-1050]# rpm -ihv --nodeps --force ql1050lpr-1.0.0-1.i386.rpm
Preparing...                ####################################### [100%]
   1:ql1050lpr              ####################################### [100%]
[root@localhost QL-1050]# []
```

[4]   Install the CUPS wrapper driver.

・   For Debian users:

When values are displayed in millimeters

```
dpkg -i --force-all ql1050cupswrapper-1.0.0-1.debian.i386.deb
```

When values are displayed in inches

```
dpkg -i --force-all ql1050cupswrapperinch-1.0.0-1.debian.i386.deb
```

・   For Fedora Core (RPM) users:

When values are displayed in millimeters

```
rpm -ihv --nodeps ql1050cupswrapper-1.0.0-1.redhat.i386.rpm
```
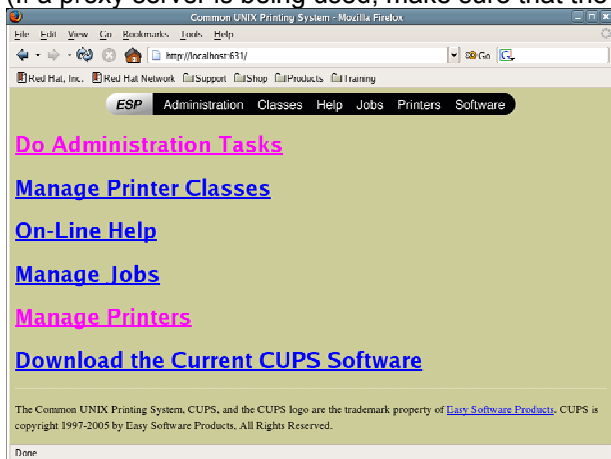
When values are displayed in inches

```
rpm -ihv --nodeps ql1050cupswrapperinch-1.0.0-1.redhat.i386.rpm
```

[5] Start the Web browser, and then display the CUPS Web administrator page (http://localhost:631).

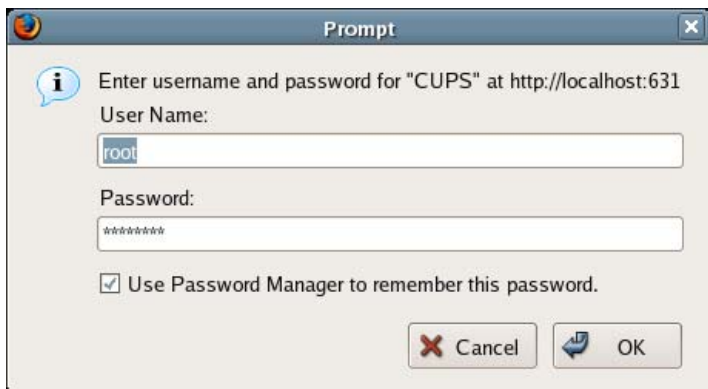(If a proxy server is being used, make sure that the proxy server is not used as the local server.)


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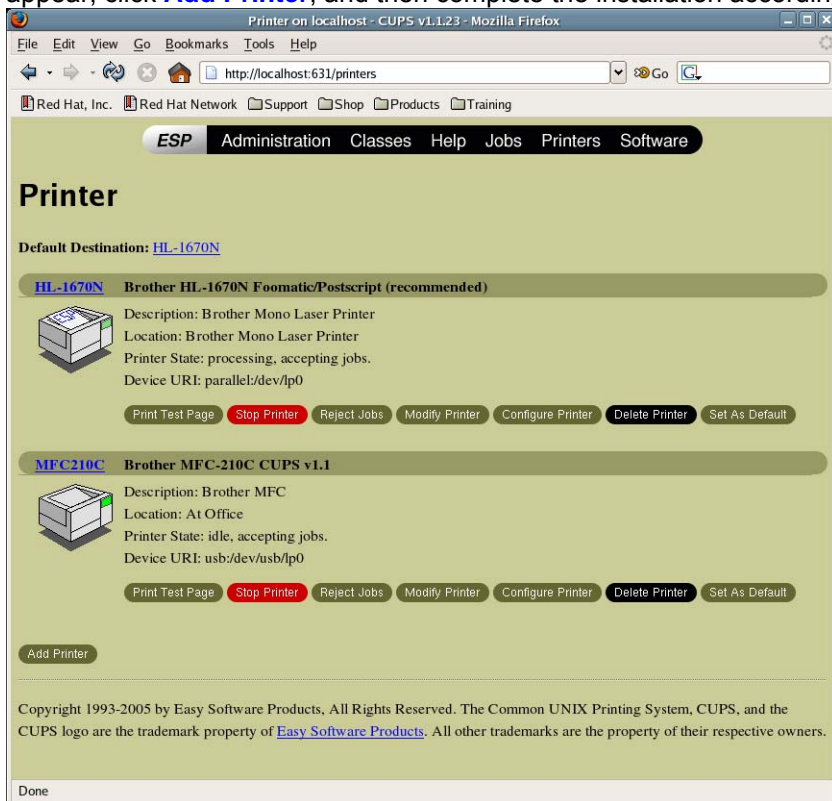
[7] Type in the user name and password, and then click the [OK] button.

[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.
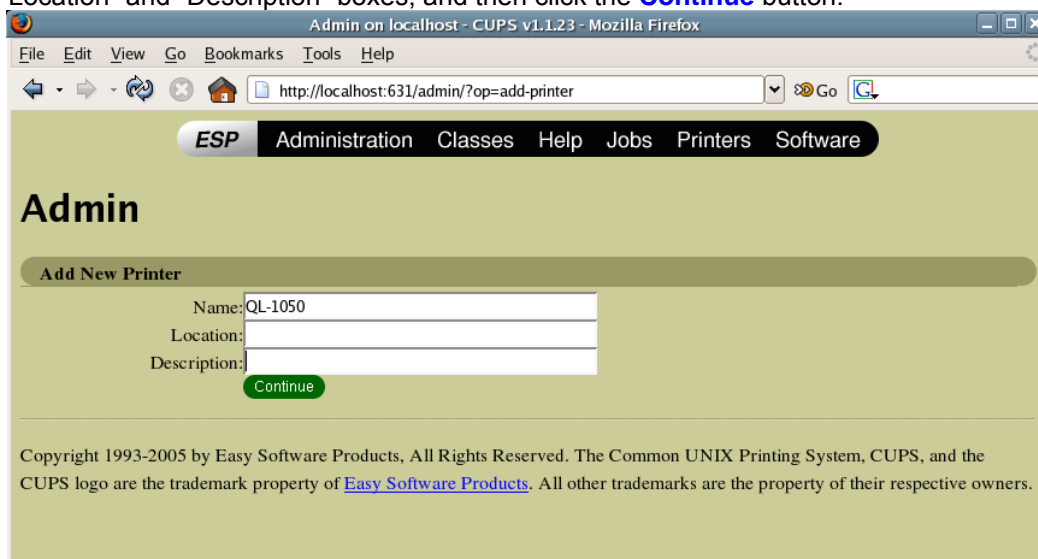
[9]   From the following two options, select the device being used, and then click the **Continue** button.

Brother USB Printer(Ptouch QL-1050): Select this option when a USB interface is used.

Brother Serial Port: Select this option when a serial interface is used.
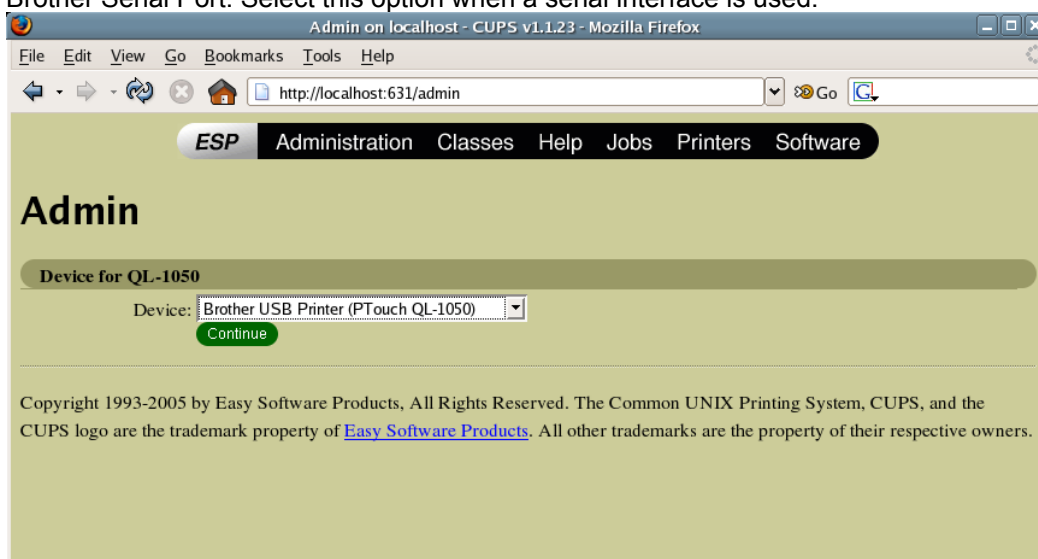
[10] Select "Brother", and then click the **Continue** button.
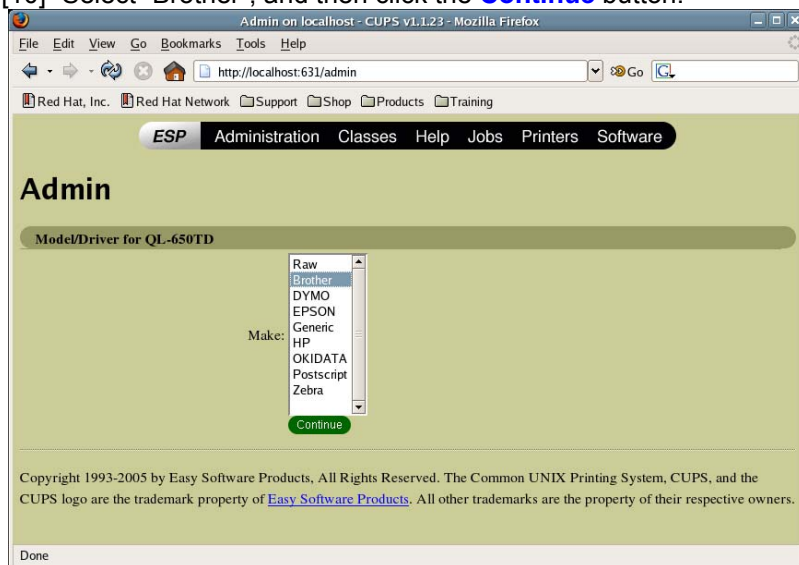
[11] Select the name of the model being used (Brother QL-1050 CUPS v1.1(en)), and then click the **Continue** button.

[12] This completes the installation.

Click **Printers**, and then check that the printer was added.
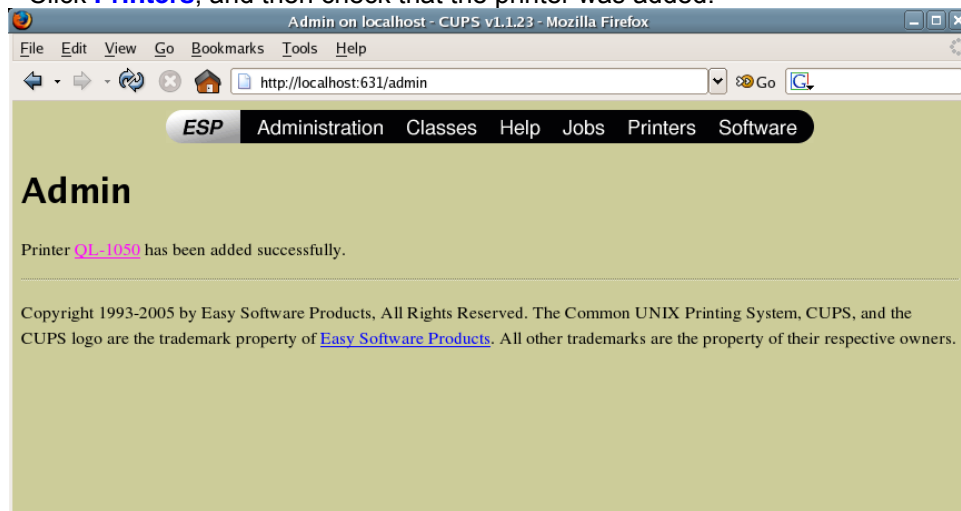
[13] Click **Configure Printer** to specify the various other settings.
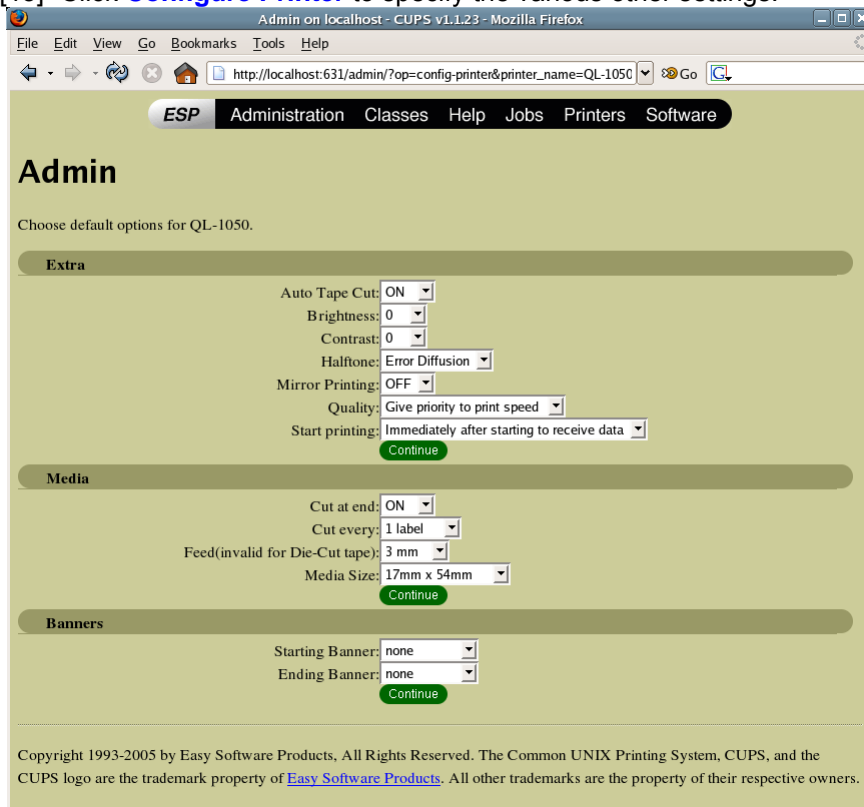
[14] Click **Print Test Page** to confirm the successful installation if a test page is printed.

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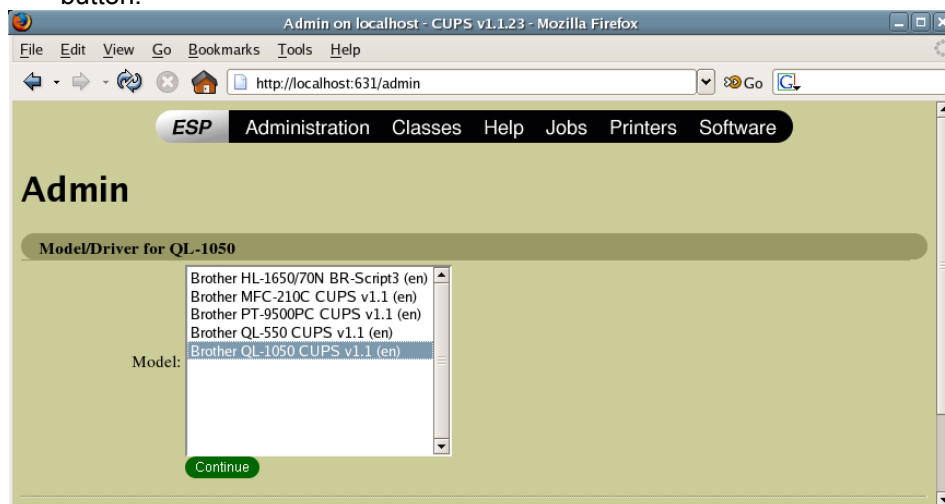－ For detailed information concerning CUPS, click "Help" in the CUPS Web administrator page.

－ 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".
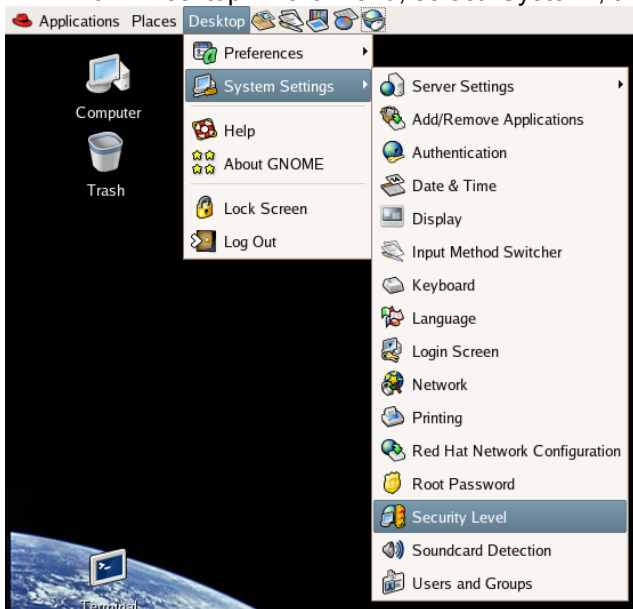
[2]　　　Select the SELinux tab, clear the "Enabled" check box, and then click the [OK] button.
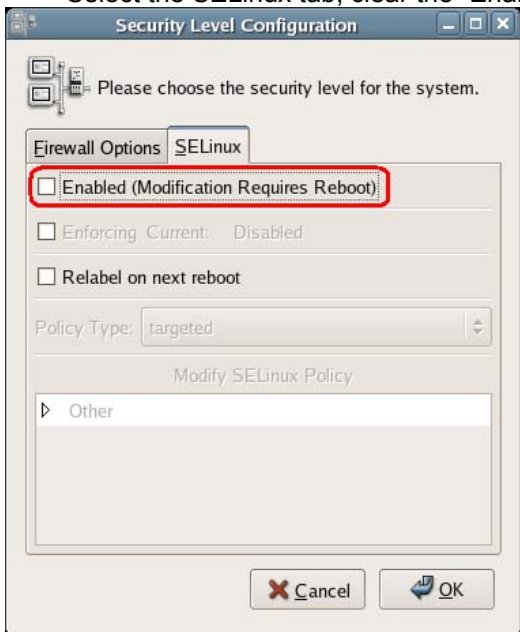
[3]　　　Restart the system.

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 QL-1050 printer from OpenOffice.org, an application that is widely used in Linux distributions.

When printing to the QL-1050 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 62 mm × 100 mm landscape template for Writer is described below.

[1]   Copy the file "62mm×100mm.doc", and then open it from OpenOffice.org Writer.

[2]   Change the data in the file as necessary.
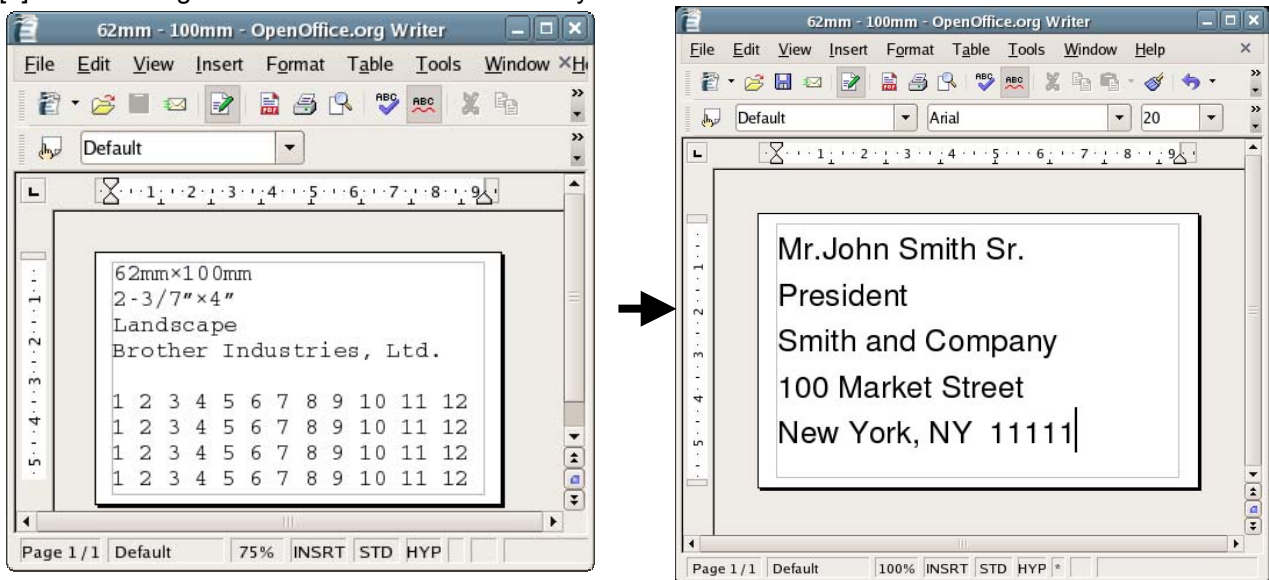
[3]   Open the Print dialog box. For this example, select the printer name (QL-1050).

Click the [Properties] button, and then select "62mm×100mm" 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.
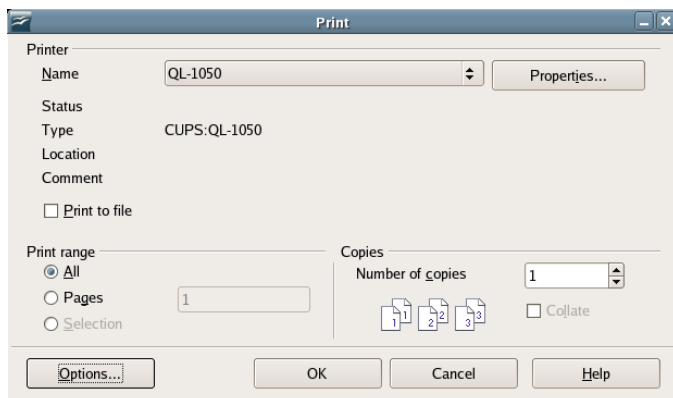
Figure 1: Print dialog box   Figure 2: Properties dialog box for the printer
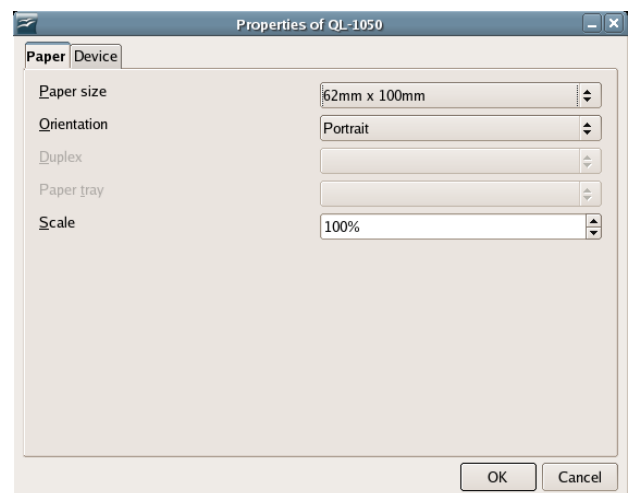
Appendix A   Printer properties

The printer properties available in the CUPS Web administrator page (http://localhost:631) are described below.
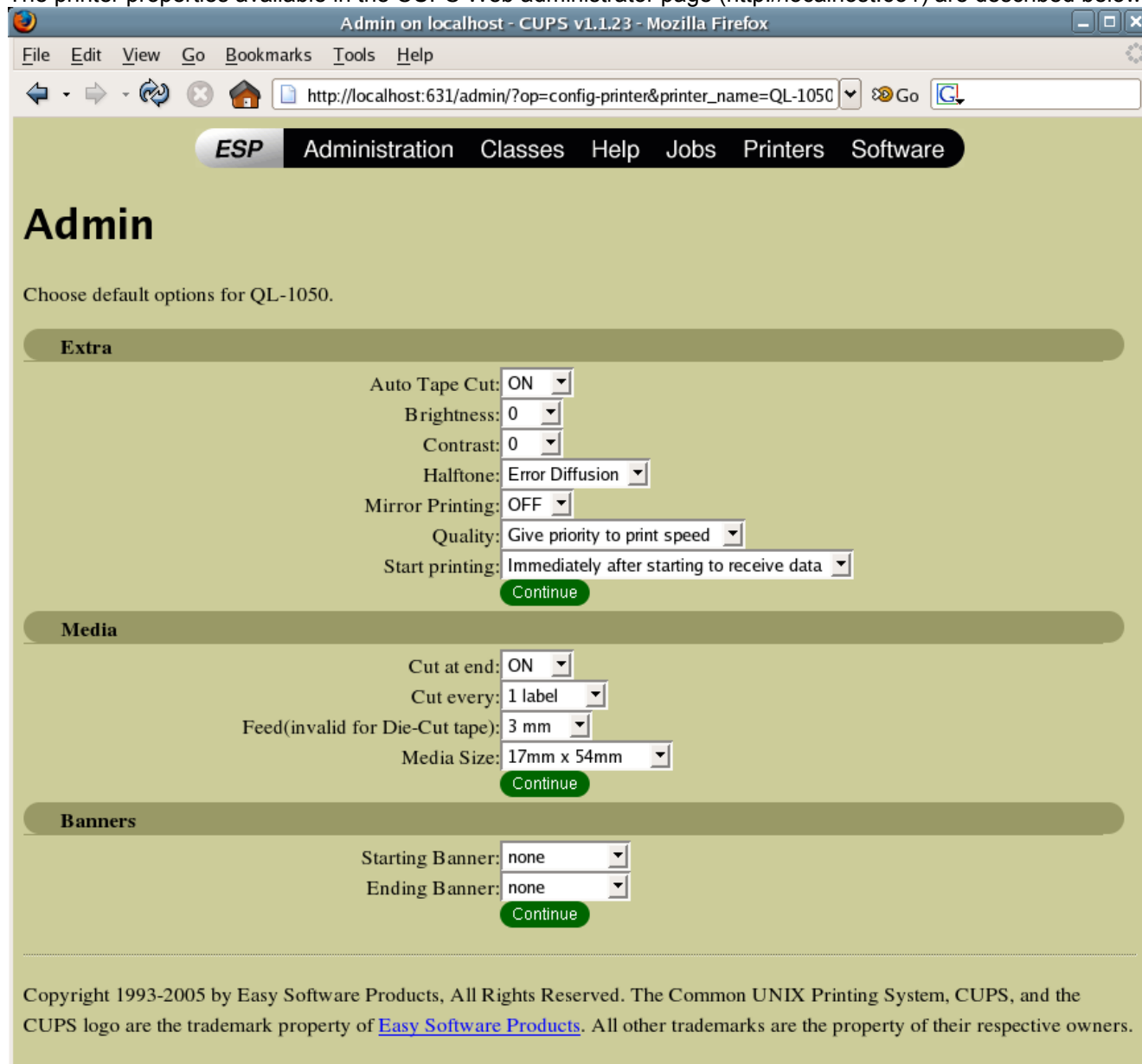
・ Auto Tape Cut

Automatically cuts each label that is printed.

The default is "ON".

・ 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".

・ 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".

・ Quality

Select "Give priority to print speed" or "Give priority to print quality".

The default is "Give priority to print speed".

・ Cut at end

Specify that whether cut at end or not when plural pages printing.

ON: Cut at end (default)

OFF: Not cut at end

・ Cut every … labels

When "auto cut" is specified, you can specify page number (1 - 30) in "cut every * labels".

The default is "1" (cut each label).

・ Media Size

The available tape widths (12 to 102 mm roll or die-cut tape) are listed.

The default is "29mm×90mm".

Specifying split printing

17mm x 54mm	2/3" x 2-1/8"
17mm x 87mm	2/3" x 3-7/16"
29mm x 90mm	1-1/7" x 3-7/16"
38mm x 90mm	1-1/2" x 3-1/2"
62mm x 29mm	2-3/7" x 1-1/7"
62mm x 100mm	2-3/7" x 4"
12mm Dia	1/2" Dia
24mm Dia	1" Dia
58mm Dia	2-1/3" Dia
102mm x 51mm	4" x 2"
102mm x 152mm	4" x 6"
23mm x 23mm	10/11" x 10/11"
12mm	1/2"
29mm	1-1/7"
62mm	2-3/7"
102mm	4"

Units: mm   Units: inch

Appendix B   Adding media (label formats)

To specify a length before printing on continuous length (12 mm, 29 mm, 62 mm, 102mm) labels, use added media (label format).

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

Use the tool "brpapertoollpr_ql1050" to add media (label formats). This tool is installed in the following folder with the driver.

Folder: [usr]-[bin]

To add:

brpapertoollpr_ql1050 [-P <*printer_name*>] [-n <*label_format_name*>] [-w <*media_width_(mm)*>] [-h <*media_height_(mm)*>]

To delete:

brpapertoollpr_ql1050 [-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.
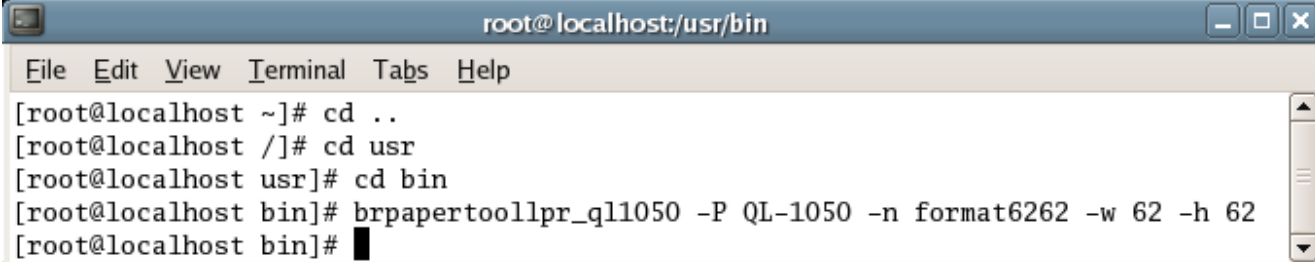

Example:

[1]   A new label format for 62-mm continuous length tape for the QL-1050 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 "format6262", the media width as "62 (mm)", and the media length as "62 (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_ql1050 -P QL-1050 -n format6262 -w 62 -h 62
[root@localhost bin]#
```

[2]   To delete a label format:
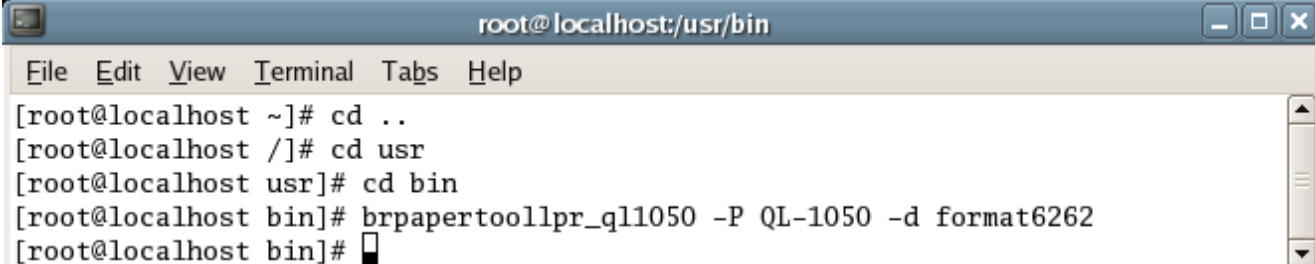
Specify the label format name as "format6262".

```
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_ql1050 -P QL-1050 -d format6262
[root@localhost bin]#
```

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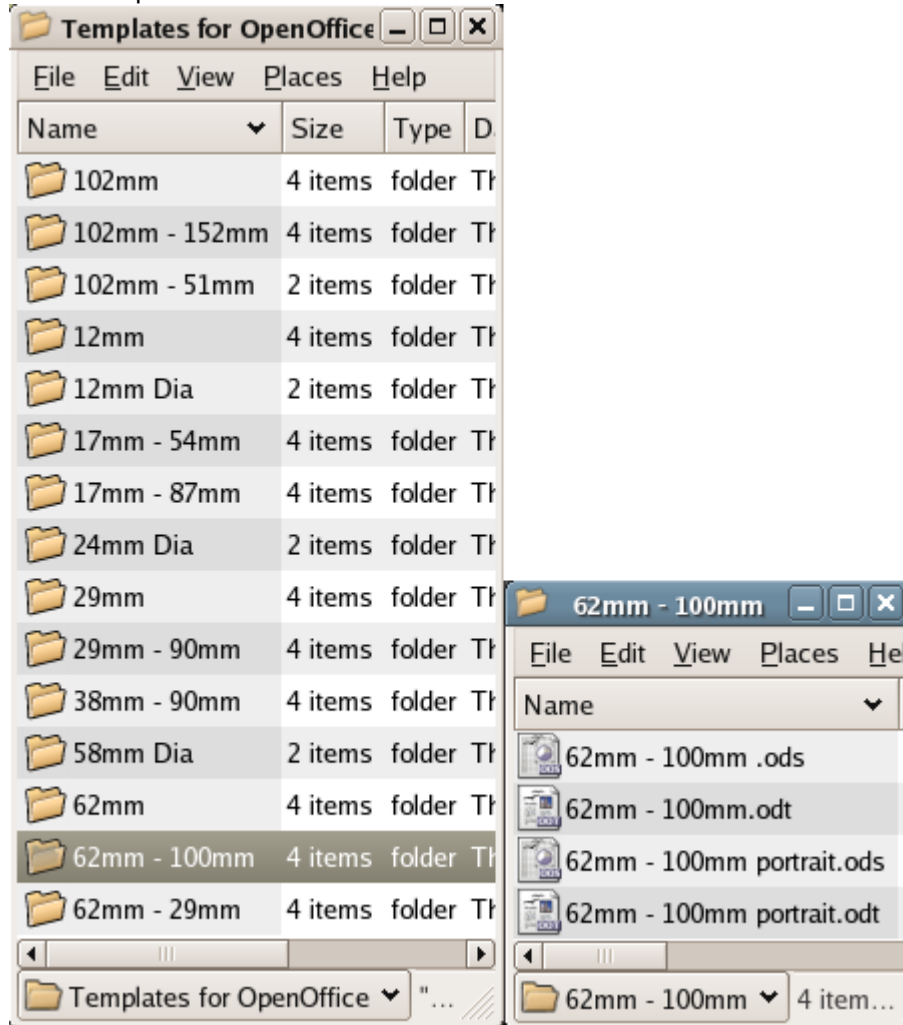
C.1.   Templates for OpenOffice.org Writer and Calc

When printing to the QL-1050 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.   Page size

C.2.1.   Continuous length tape
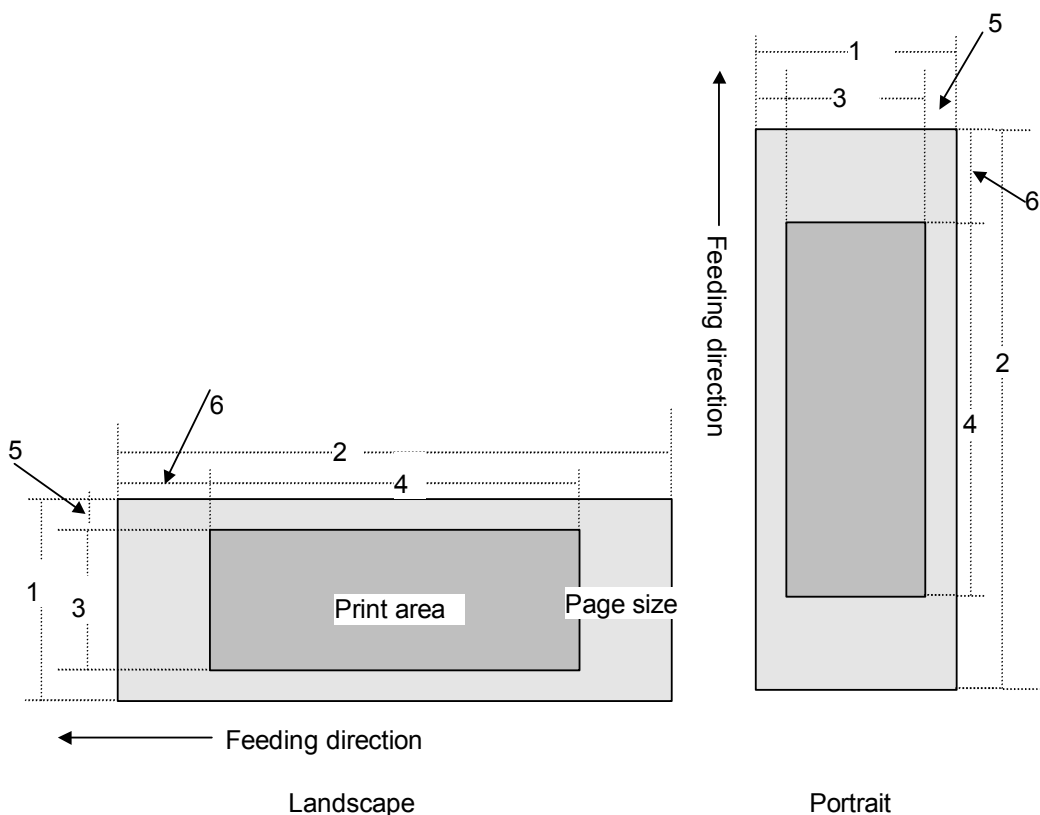
Landscape   Portrait

Number   1 Width   2 Length

3 Print area width (maximum printing width)   4 Print area length

5 Width offset   6 Length offset

Label Size	Designation	1	2	3	4	5	6
12mm	12mm 1/2"	12.02 mm 142 dots	→C.2.4	8.97 mm 106 dots	→C.2.4	1.5 mm 18 dots	→C.2.3
29mm	29mm 1-1/7"	28.96mm 342 dots	→C.2.4	25.91 mm 306 dots	→C.2.4	1.5 mm 18 dots	→C.2.3
62mm	62mm 2-3/7"	61.98mm 732 dots	→C.2.4	58.93mm 696 dots	→C.2.4	1.5 mm 18 dots	→C.2.3
102mm	102mm 4"	101.6mm 1200 dots	→C.2.4	98.59 mm 1164 dots	→C.2.4	1.5 mm 18 dots	→C.3.3

C.2.2.   Die-cut labels
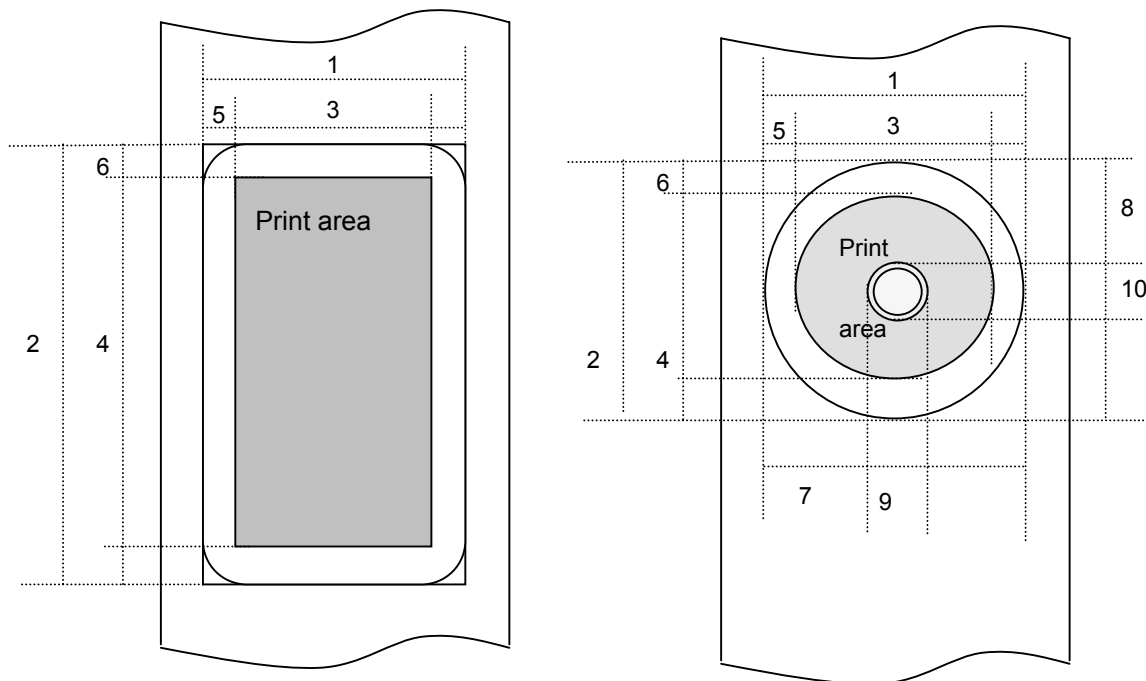

Number   1 Width   2 Length

3 Print area width (maximum printing width)   4 Print area length

5 Width offset   6 Length offset

7 Width offset of masked area   8 Length offset of masked area

9 Width of masked area   10 Length of masked area

ID	Designation	1	2	3	4	5	6
DC1	17mm x 54mm 2/3" x 2-1/8"	17.02mm 201	53.85mm 636	13.97mm 165	47.92mm 566	1.5 mm 18 dots	3.0 mm 35 dots
DC2	17mm x 87mm 2/3" x 3-7/16"	17.02mm 201	86.87mm 1026	13.97mm 165	80.94mm 956	1.5 mm 18 dots	3.0 mm 35 dots
DC3	29mm x 90mm 1-1/7" x 3-1/2"	28.96mm 342	89.83mm 1061	25.91mm 306	83.90mm 991	1.5 mm 18 dots	3.0 mm 35 dots
DC4	38mm x 90mm 1-1/2" x 3-1/2"	38.01mm 449	89.83mm 1061	34.97mm 413	83.90mm 991	1.5 mm 18 dots	3.0 mm 35 dots
DC5	58mm Dia 2-1/3" Dia	58.25mm 688	58. 25mm 688	52.24mm 618	52.24mm 618	3.0 mm 35 dots	3.0 mm 35 dots
DC6	62mm x 29mm 2-3/7" x 1-1/7"	61.98mm 732	28.87mm 341	58.93mm 696	22.94mm 271	1.5 mm 18 dots	3.0 mm 35 dots
DC7	62mm x 100mm 2-3/7" x 4"	61.98mm 732	99.82mm 1179	58.93mm 696	93.90mm 1109	1.5 mm 18 dots	3.0 mm 35 dots
DC12	12mm Dia 1/2" Dia	12.02mm 142	12.02mm 142	7.96mm 94	7.96mm 94	2.0 mm 24 dots	2.0 mm 24 dots
DC13	24mm Dia 1" Dia	24.04mm 284	24.04mm 284	19.98mm 236	19.98mm 236	2.0 mm 24 dots	2.0 mm 24 dots
DC15	102mm x 51mm 4" x 2"	101.6mm 1200 dots	50.5mm 596 dots	98.59mm 1164 dots	44.53mm 526 dots	1.5mm 18 dots	3.0 mm 35 dots
DC16	102mm x 152mm 4" x 6"	101.6mm 1200 dots	152.75mm 1804 dots	98.59mm 1164 dots	140.60mm 1660 dots	1.5mm 18 dots	6.1mm 72 dots

ID	Designation	1	2	3	4	5	6
DC20	23mm x 23mm 10/11" x 10/11"	23.03mm 272 dots	23.03mm 272 dots	19.99mm 236 dots	17.10mm 202 dots	1.5 mm 18 dots	3.0 mm 35 dots

ID	7	8	9 *	1 0 *
DC5	21.17mm 232	21.08mm 232	19.0mm 224	19.0mm 224

*Margins of 3 mm (1.5 mm × 2) horizontally and 3 mm (1.5 mm × 2) vertically are added to a diameter of 16 mm.

C.2.3.   Feed amount

The feed amount (left and right margins) is defined below.

Tape Type	Minimum Margin Setting	Maximum Margin Setting
Continuous length tape	mm setting: 3 mm Inch setting: 0.1" 35 dots	mm setting: 127 mm Inch setting: 5" 1500 dots
Die-cut labels	Set the command for specifying the margin to "0".	

C.2.4.   Maximum and minimum lengths

The maximum and minimum lengths are defined below.

Tape Type	Minimum Length	Maximum Length
Continuous length tape	25 mm 295 dots	1000mm 11811 dots
Die-cut labels	Fixed	Fixed

Appendix D   File configuration for Linux driver for QL-1050

D.1.   Installer file configuration

For Fedora Core (RPM):

Name	Units	File Name
LPR driver	-	ql1050lpr-1.0.0-1.i386.rpm
CUPS wrapper driver	mm	ql1050cupswrapper-1.0.0-1.redhat.i386.rpm
	inch	ql1050cupswrapperinch-1.0.0-1.redhat.i386.rpm

For Debian:

| Name	Units	File Name
LPR driver	-	ql1050lpr-1.0.0-1.i386.deb
CUPS wrapper driver	mm	ql1050cupswrapper-1.0.0-1.debian.i386.deb
	inch	ql1050cupswrapperinch-1.0.0-1.debian.i386.deb

D.2.   Driver file configuration

For RPM

Name	Function	File Name
LPR driver	Driver	(1) /usr/bin/brpapertoollpr_ql1050 (2) /usr/bin/brprintconfpt1_ql1050 (3) /usr/bin/brps2ps_ql1050 (4) /usr/local/Brother/PTouch/ql1050/inf/brPrintListpt1 (5) /usr/local/Brother/PTouch/ql1050/inf/brql1050func (6) /usr/local/Brother/PTouch/ql1050/inf/brql1050init (7) /usr/local/Brother/PTouch/ql1050/inf/brql1050rc (8) /usr/local/Brother/PTouch/ql1050/inf/paperinfql1050pt1 (9) /usr/local/Brother/PTouch/ql1050/inf/setupPrintcappt1 (10) /usr/local/Brother/PTouch/ql1050/lpd/brpapertoolcups (11) /usr/local/Brother/PTouch/ql1050/lpd/brusb_ql_lpr brserial_ql1050 (12) /usr/local/Brother/PTouch/ql1050/lpd/filterql1050 (13) /usr/local/Brother/PTouch/ql1050/lpd/psconvertpt1 (14) /usr/local/Brother/PTouch/ql1050/lpd/rastertobrpt1
CUPS Wrapper	CUPS Wrapper	(1) /usr/local/Brother/PTouch/ql1050/cupswrapper/brcupsconfpt1 (2) /usr/local/Brother/PTouch/ql1050/cupswrapper/cupswrapperql1050pt1
Related files		(1) /usr/lib/cups/backend/brusb_ql1050 brserial_ql1050 (2) /usr/lib/cups/filter/brlpdwrapperql1050 (3) /usr/share/cups/model/brql1050.ppd (4) /etc/cups/ppd/<*printer_name*>.ppd

For Debian

Name	Function	File Name
LPR driver	Driver	(1) /usr/bin/brpapertoollpr_ql1050 (2) /usr/bin/brprintconfpt1_ql1050 (3) /usr/bin/brps2ps_ql1050 (4) /usr/local/Brother/PTouch/ql1050/inf/brPrintListpt1 (5) /usr/local/Brother/PTouch/ql1050/inf/brql1050func (6) /usr/local/Brother/PTouch/ql1050/inf/brql1050init (7) /usr/local/Brother/PTouch/ql1050/inf/brql1050rc (8) /usr/local/Brother/PTouch/ql1050/inf/paperinfql1050pt1 (9) /usr/local/Brother/PTouch/ql1050/inf/setupPrintcappt1 (10) /usr/local/Brother/PTouch/ql1050/lpd/brpapertoolcups (11) /usr/local/Brother/PTouch/ql1050/lpd/brusb_ql_lpr brserial_ql1050 (12) /usr/local/Brother/PTouch/ql1050/lpd/filterql1050 (13) /usr/local/Brother/PTouch/ql1050/lpd/psconvertpt1 (14) /usr/local/Brother/PTouch/ql1050/lpd/rastertobrpt1
CUPS Wrapper	CUPS Wrapper	(1) /usr/local/Brother/PTouch/ql1050/cupswrapper/brcupsconfpt1 (2) /usr/local/Brother/PTouch/ql1050/cupswrapper/cupswrapperql1050pt1
Related files		(1) /usr/lib/cups/backend/brusb_ql1050 brserial_ql1050 (2) /usr/lib/cups/filter/brlpdwrapperql1050 (3) /usr/share/cups/model/brql1050.ppd (4) /etc/cups/ppd/<*printer_name*>.ppd (5) /var/lib/dpkg/info/ql1050*

Appendix E   Network settings where Linux was used
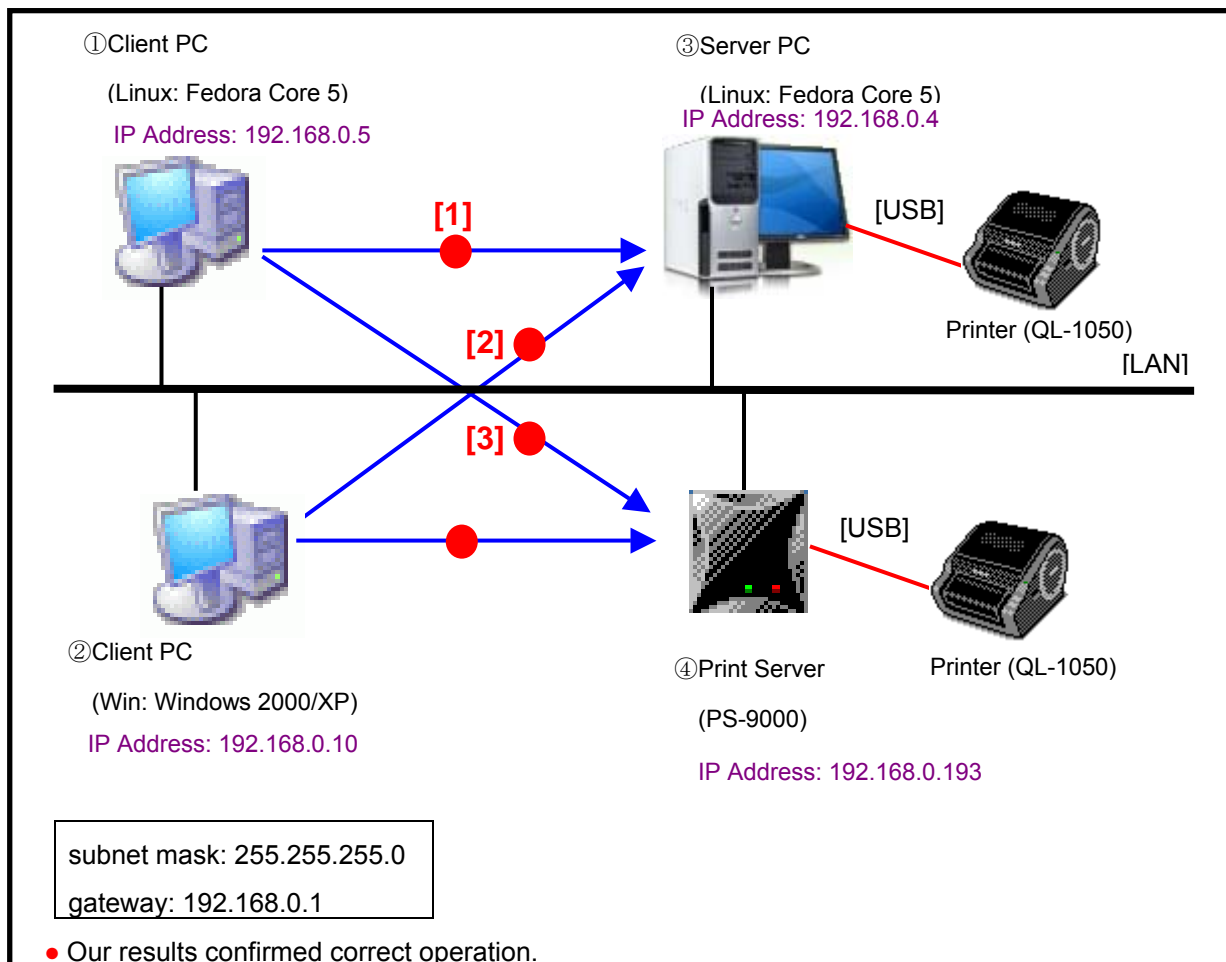
Linux network configuration (example)

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

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>

Settings specified in advance for CUPS 1.2 users

Start the Web browser, and then display the CUPS Web administrator page (http://localhost:631/admin).

Make sure of "Basic Server Settings".

[1] － : Server [Linux]-Client [Linux]

	At Server [Linux]	At Client [Linux]	Result
Setting procedure 1	When adding a printer (QL-1050) from the CUPS window, select: Device: Brother USB Printer (PTouch QL-1050) = USB Make: Brother Model: Brother QL-1050 CUPS v1.1 (en)	When adding a printer (QL-1050) from the CUPS window, select: Device: Internet Printing Protocol(http) Device URI: http://192.168.0.4:631/printers/QL-1050 Make: Raw Model: Raw Queue(en)	○
Setting procedure 2	When adding a printer (QL-1050) from the CUPS window, select: Device: Brother USB Printer (PTouch QL-1050) = USB Make: Raw Model: Raw Queue(en)	When adding a printer (QL-1050) from the CUPS window, select: Device: Internet Printing Protocol(http) Device URI: http://192.168.0.4:631/printers/QL-1050 Make: Brother Model: Brother QL-1050 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　　-

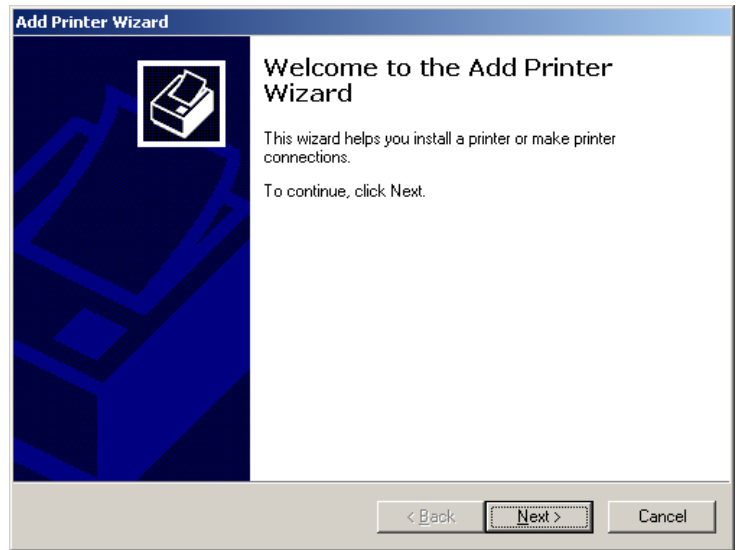Delete "#" at the beginning of this line.

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

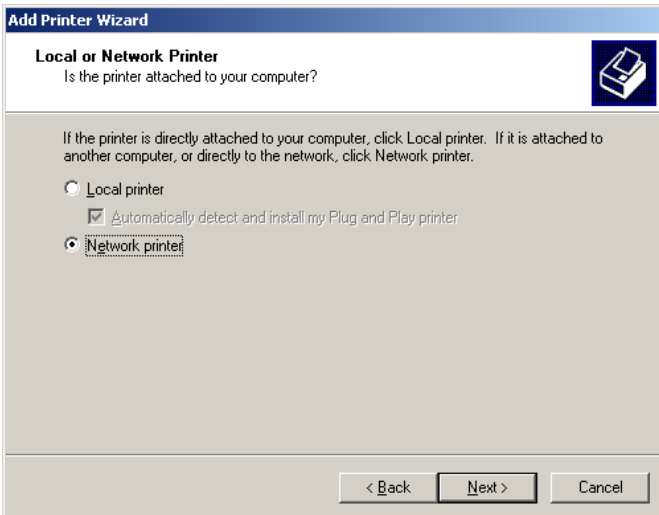|	At Server [Linux]	At Client[Windows]	Results
Setting procedure 1	When adding a printer (QL-1050) from the CUPS window, select: Device: Brother USB Printer (PTouch QL-1050) = USB Make: Raw Model: Raw Queue(en)		○

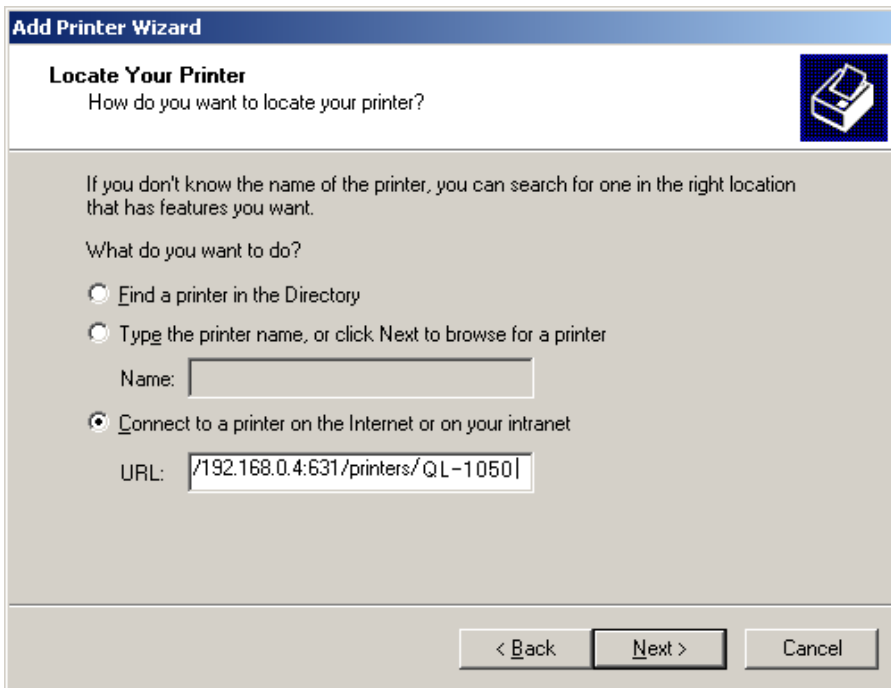The following settings are specified from the client [Windows].
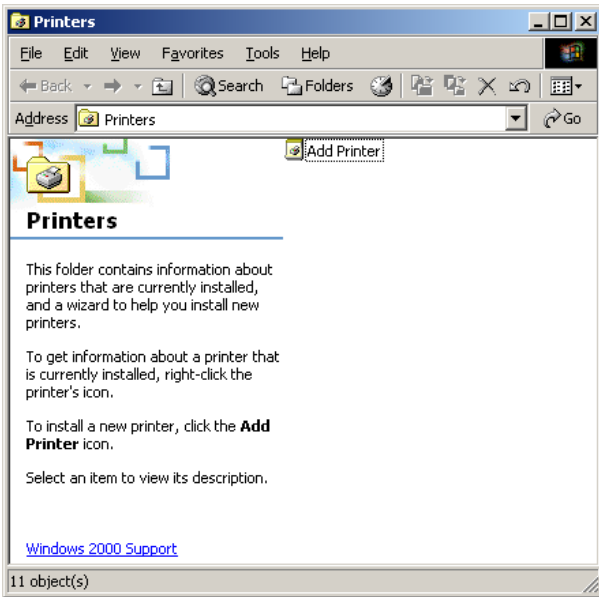
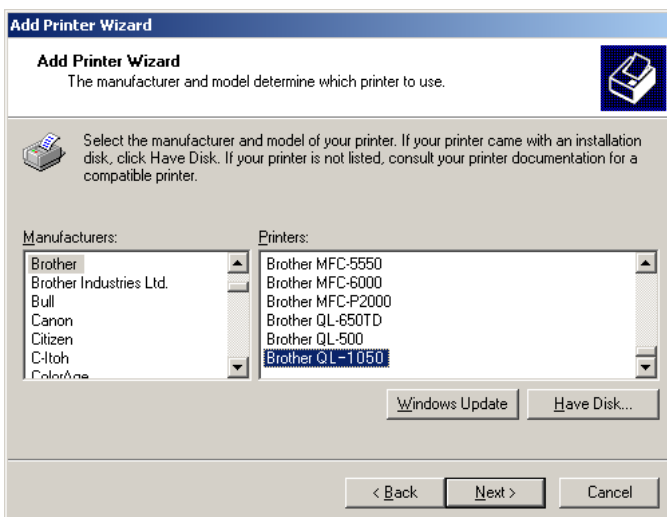[1] Start printer installation.   [2] Start the Add Printer Wizard.
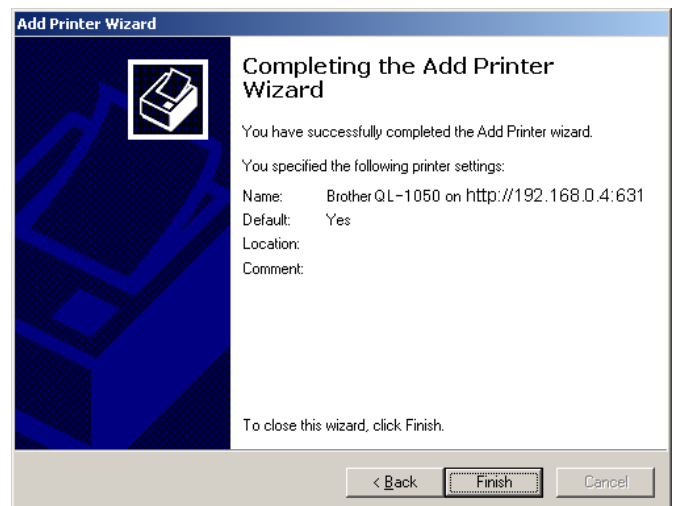

[3] Select "Network printer".

[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	In Windows, specify network settings, such as: •IP address (ex. 192.168.0.193) •Subnet mask (ex. 255.255.255.0) •Gateway (ex. 192.168.0.1)	When adding a printer (QL-1050) from the CUPS window, select: Device: LPD/LPR Host or Printer Device URI: lpd://192.168.0.193/queue Make: Brother Model: Brother QL-1050 CUPS v1.1 (en)	○

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 Ql-1050 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