

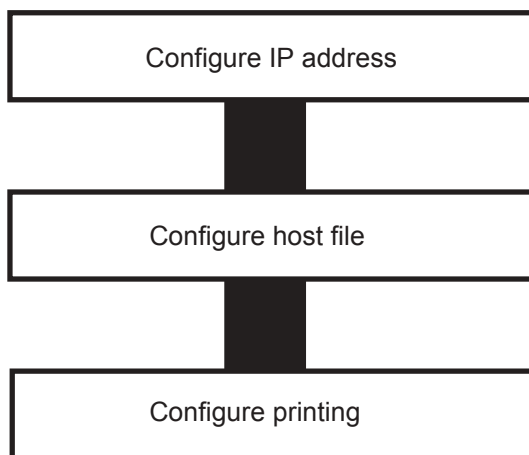
## 3-3. Using PRICOM 7000 in UNIX/Linux Environment

This chapter explains how to configure PRICOM 7000 in UNIX/Linux environment and how to print using LPD and FTP.

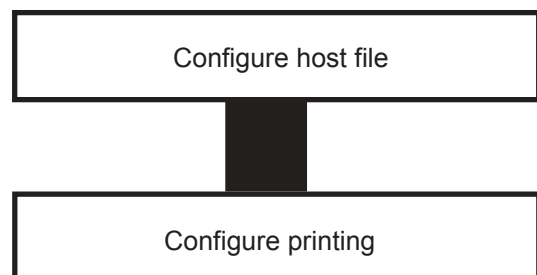
For further information not covered in this manual, refer to the manual of workstation you use.

<Procedure to execute printing in UNIX/Linux environment.>

In case of initial installation and printing  
(Administrator)



In case of printing  
(Client)



## Configuring IP Address



NOTE

-After configuring IP address, configure PRICOM by TELNET.  
For information about TELNET, refer to Chapter 8 Functions for Configuration.

### Configuring IP Address by BOOTP

Register the combination of IP address and Ethernet address that are to be registered on PRICOM to BOOTP server. IP address will be configured to PRICOM by turning the power on.



TIP

-To configure IP address by BOOTP, you need a workstation that is running BOOTP within the network.

The below shows an example of IP address configuration by UNIX BOOTP server.

Example: Ethernet address is "00809200100f", IP address is "192.168.10.100" and host name is "pbox".

1. Add following configuration to /etc/bootptab.

```
pbox:\
ht=ether:\           # Target hardware type is ETHERNET
ha=00809200100f:\    # Target hardware address
ip=192.168.10.100:\   # Target IP address
gw=192.168.10.254:\  # Default gateway address (If required)
sm=255.255.255.0:    # Target subnet mask (If required)
```

2. Add following configuration to /etc/inetd.conf.

```
bootps dgram udp wait root /etc/bootpd bootpd
```

3. Reboot inetd.

```
kill -1 1
```

4. Reset PRICOM and printer.

## Configuring IP Address by RARP

Add the combination of IP address and Ethernet address that are to be registered on PRICOM to UNIX /etc/ethers and activate RARPD. IP address will be configured to PRICOM by turning the power on.



TIP

-To configure IP address by RARP, you need a workstation that is running within the network.

The below shows an example of IP address configuration by UNIX RARP server.

Example: Ethernet address is "00809200110f", IP address is "192.168.10.100" and host name is "pbox".

1. Add following configuration to /etc/ethers.

```
00:80:92:00:11:0f  192.168.10.100  #pbox
```

2. Reboot RARPD.

```
rarpd -a
```

3. Reset PRICOM and printer.

The following explains how to setup a PRICOM 7000 in a UNIX environment

The IP address for the PRICOM 7000 can be set by using the ARP command.



TIP

- IP address configured in this method is temporary and will not be registered to PRICOM.  
Be sure to register IP address by TELNET or utility.
- Once this product has been configured the ARP command cannot be used to change the IP address

1. Insert the CD-ROM in the CD-ROM drive. Change the directory to //Utility/Arps.

2. Copy arps.tar to any directory, and the de-compress the arps.tar by using the tar command.

```
>tar xvf arps.tar
```

A command is offered by the following binary files.

```
./HP-UX/arps
./Linux/arps
./Solaris_x86/arps
./Solaris_sparc/arps
```

- Verify the usage.

```
./arps
```

```
Usage: arps [-t target address] [-i ip address] [-d device name]
```

Option :

- t - Ethernet Address of Product
- i - IP Address
- d - A host interface name (Optional)

When two or more LAN cards are mounted, an interface name is checked and specified by the netstat command.

## Error message:

The following errors are displayed when specification of an option is not appropriate.

"Error! Wrong the target address."

FThe target was not specified or the format is wrong.

"Error! Wrong the IP address."

FThe IP address was not specified or the format is wrong.

"Error! Wrong the Device.[Device Name]"

FThe specified device cannot be used.

## 3. Setup an IP address.

### 3-1. Switch on PRICOM.

### 3-2. The ARP command can be used to assign an IP address by using the combination of IP address and Ethernet address.

Example: Ethernet address is "00809200110f", IP address is "192.168.10.100",  
`arps -t00:80:92:00:11:0f temp -i192.168.10.100`

- When the two or more LAN cards are being used, the LAN card must be specified.  
`./arp -t00:80:92:00:00:01 -i192.168.0.1 -deth1`

### 3-3. Command PING.

`ping 192.168.10.100`

### 3-4. If you get reply from PRICOM, configuration is complete.

192.168.10.100 is alive.

### 3-5 Telnet TCP/IP configuration

## Configuring Host File

Register host name and IP address to UNIX or Linux hosts file.



NOTE

- Make sure to contact network administrator when editing hosts file.
- Editing hosts file may not be required if using IP administration system like DNS.

1. Log in to UNIX/Linux machine by “root”.

# login root

2. Register PRICOM host name and IP address to /etc/hosts file.

To edit host file, use an editor, e.g. “vi”.

Example: The IP address is “192.168.10.100”, host name is “pbox”

192.168.10.98	venus	# UNIX-A
192.168.10.99	mars	# UNIX-B
192.168.10.100	pbox	# Print-Server

3. Switch on printer. Verify the network connection by using ping command.

# ping pbox



TIP

- If there is no response or error is indicated, there may be problems with IP address configuration, host file editing or network status. Contact network administrator.

## Printing by LPD

This section explains how to print using LPD protocol of TCP/IP.

For further information on “lpr” and “lp” commands, refer to your workstation manual.



NOTE

- LPD protocol:

LPD (Line Printer Daemon) is a protocol that enables you to execute printing to a printer on the network.

- Remote-Printer Queue

PRICOM has three remote printer queues.

To print files using a printer driver, use “lp”. For printing text files using shift-JIS KANJI code, use “sjis”. For printing text files using EUC KANJI code, use “euc”.

Connection port	Remote Printer	Function
Parallel port	lp_lp	Direct output port
	lp_sjis	Shift- JIS KANJI code
	lp_euc	EUC KANJI code
USB1 port	lp_u1_lp	Direct output port
	lp_u1_sjis	Shift- JIS KANJI code
	lp_u1_euc	EUC KANJI code
USB2 port	lp_u2_lp	Direct output port
	lp_u2_sjis	Shift- JIS KANJI code
	lp_u2_euc	EUC KANJI code
USB3 port	lp_u3_lp	Direct output port
	lp_u3_sjis	Shift- JIS KANJI code
	lp_u3_euc	EUC KANJI code
USB4 port	lp_u4_lp	Direct output port
	lp_u4_sjis	Shift- JIS KANJI code
	lp_u4_euc	EUC KANJI code

## Using PRICOM in Solaris Environment

### Solaris 2.6/7/8

This section explains how to print from Solaris2.6/7/8.

The below command and path instruction may vary depending on OS version. Refer to your workstation manual.



TIP

-Remote printer can not be configured with PRICOM.

#### 1. Create Printer Queue

1-1 Log in to UNIX machine by "root".

```
# login root
```

1-2 Register print server name.

Example: Register the print queue name by "pboxlp":

```
# lpadmin -p pboxlp -m netstandard -o protocol=bsd
```

(Print queue name)

```
-o dest=pbox:lp_u1_lp -v /dev/null
```

(Host name) (Remote printer name)



NOTE

- "lp\_u1\_lp" after the ":" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

-EUC kanji text data can be directly printed as configuring the below example.

"lp\_u1\_euc" after the ":" is the logical printer name when connecting to the USB1 port of this product and printing a text file using EUC KANJI code.

```
# lpadmin -p pboxeuc -m netstandard -o protocol=bsd
```

```
-o dest=pbox:lp_u1_euc -v /dev/null
```

(Specify euc port)

1-3 Enable print queue.

```
#/usr/sbin/accept pboxlp
```

```
#/usr/bin/enable pboxlp
```



## 2. Printing

2-1 This section explains how to print using [lp] command. For more details, refer to Solaris manual.

```
# lp -d pboxlp <Name of print file>
```

This causes the banner page to be automatically printed.

To disable the banner printing feature, add the following option, “-o nobanner”.

```
# lp -d pboxlp -o nobannert <Name of print file>
```

Alternatively, type,

```
# lpadmin -p pboxlp -o nobanner
```

directly edit the filter file generated under /etc/lp/interfaces.

Either of these options disables banner print function.

Example: Using an editor e.g. vi, open the file shown below. Change “nobanner=no” to “nobanner=yes”.

```
# vi /etc/lp/interfaces/pboxlp
nobanner=no ---> nobanner=yes
```

## 3. Cancel the print request.

3-1 Use “cancel” command to cancel the current print job request.



TIP

-Depending on the timing or Solaris specification, canceling attempt will fail.

## 4. Check the printer status

4-1 Use “lpstat” to verify the printer status.

```
# lpstat -p pboxlp
```



TIP

-Depending on the UNIX specification, the command will fail to correctly display the printer status.

## Solaris 2.3x-2.5x

This section explains how to print from Solaris 2.5 or below.

Command absolute path and configuration method may vary depending on OS version. Refer to your workstation manual for more details.



TIP

-Remote printer can not be used with PRICOM.

### 1. Prepare the print queue.

1-1 Log in to the UNIX machine by "root".

```
# login root
```

1-2 Cancel the print scheduler.

```
# /usr/sbin/lpshut
```

### 1-3 Register the print server.

Example: Register the host name "pbox":

```
# /usr/sbin/lpsystem -R0 -t bsd pbox
```

### 1-4 Configure the print queue.

Example: Register the print queue name "pboxlp":

```
#/usr/sbin/lpadmin -p pboxlp -s pbox!lp_u1_lp
```

(Name of print queue) (Name of the host) ( Name of logical printer)



NOTE

- When using csh, replace " /! " with " ! ".

"lp\_u1\_lp" after the "!" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

-EUC kanji text data can be directly printed as it is by the following setup.

"lp\_u1\_euc" after the ":" is the logical printer name when connecting to the USB1 port of this product and printing a text file using EUC KANJI code.

```
#/usr/sbin/lpadmin -p pboxeuc -s pbox!lp_u1_euc
```

(Specify euc port)

### 1-5 Activate the print scheduler.

```
#/usr/bin/sh /etc/init.d/lp start
```

### 1-6 Enable the print queue.

```
#/usr/sbin/accept pboxlp
```

```
#/usr/bin/enable pboxlp
```

## 2. Printing.

2-1 Print using "lp" command.

```
# lp -d pboxlp <Print file name>
```

## 3. Cancel the print request.

3-1 Use the "cancel" command to cancel the current print job request.

```
# cancel pboxlp- <Name of print file>
```

## 4. Check the printer status.

4-1 Use the "lpstat" to verify the printer status.

```
# lpstat -p pboxlp
```



TIP

-Depending on the UNIX specification, the command will fail to correctly display the printer status.



TIP

- [Limits]

When running PRICOM with Solaris 2.x, following limits occurs due to Solaris specifications.

- 1) If, after starting printing, the printer goes off line and cannot receive data for quite a while, timeout occurs on the Solaris side and then the printing continues (re-connection). This means that the data stream to the printer is discontinued, and the first page will be sent again.
- 2) When the printer status is displayed in the form "lpstat -p<printer name>", optional character string returned to show the status (e.g. PrinterReady) cannot be interpreted by the Solaris. As a result, "Faulted" is displayed followed by unintentional characters.
- 3) When a print-related command is sent to PRICOM while the Solaris is sending data from the same machine, the command cannot function as it should. This is because Solaris cannot output another packet until it finishes the transmission of the current data. Thus, "system not responding" will be displayed in response to "lpstat -p <printer name>".
- 4) Certain commands such as lpstat following cancel command will result in error. In such case, printer scheduler daemon may not be running, so verify using "lpstat -r". If "scheduler is not running" is displayed, reboot the printer scheduler daemon by typing in as below.  
/bin/sh /etc/init.d/lp start
- 5) Even if "cancel" is used to delete a job that does not exist, no error occurs with Solaris.

## Using PRICOM in HP-UX 9.x/10.x Environment

This section explains how to print from Hewlett-Packard HP-UX.

Command absolute path and configuration method may vary depending on OS version.

Refer to your workstation manual for more details.

### 1. Set the remote spooler.

When HP-UX machine is not configured to remote spooler, follow with the below configuration.

1-1 Log in to the UNIX machine by "root".

```
# login root
```

1-2 Cancel the printer spooler.

```
#!/usr/lib/lpshut
```

1-3 Register remote spooler by adding the line shown below to /etc/inetd.conf file.

```
printer stream tcp nowait root /usr/lib/rpdaemon -i
```

1-4 Reboot inetd.

```
#!/etc/inetd -c
```

### 2. Prepare the print queue.

2-1 Log in to the UNIX machine through "root".

```
# login root
```

2-2 Configure print queue.

Example: Register the print queue name as "pboxlp":

```
#!/usr/lib/lpadmin -ppboxlp -mrmodel -ormpbox
```

(Print queue name)

(Host name)

```
-orlp_u1_lp -ocmrcmodel -osmrsmodel -ob3 -v/dev/null
```

(Remote printer name)



NOTE

- "lp\_u1\_lp" after the "orp" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver

-SJIS kanji text data can be directly printed by configuring as below. "lp\_u1\_sjis " after the ":" is the logical printer name when connecting to the USB1 port of this product and printing text files using shift-JIS KANJI code.

```
#!/usr/lib/lpadmin -ppboxsjis -mrmodel -ormpbox
```

```
-orlp_u1_sjis -ocmrcmodel -osmrsmodel -ob3 -v/dev/null
```

(Specify sjis port)

2-3 Enable the print queue.

```
#/usr/lib/accept pboxlp  
#/usr/bin/enable pboxlp
```

2-4 Boot the printer spooler.

```
#/usr/lib/lpsched
```

### 3. Prepare for printing.

3-1 Use the print command "lp".

```
# lp -d pboxlp <Name of print file>
```

### 4. Cancel the print request.

4-1 Use the "cancel" command to cancel the current print job request.

```
# cancel pboxlp- <job number>
```

### 5. Check the printer status

5-1 Use the "lpstat" to verify the printer status.

```
# lpstat -p pboxlp
```



TIP

-Depending on UNIX specification, the command may fail to display the printer status correctly.

## Using setnetlp Tool



TIP

-setnetlp utility is available for HP-UX, ver. 10.10 or below.

Example:

IP address: 192.168.10.100

Host name: pbox

These are already registered to /etc/hosts and to be registered by "pboxlp" as a queue name.

1. Log in by root and execute /usr/sbin/setnetlp. Below menu will be displayed.  
Select [1) Add Printer]

```
# /usr/sbin/setnetlp

#####
#                MAIN MENU                #
#  Network Printer Configuration          #
#####

1) Add Printer
2) Remove Printer

q) Quit

Please enter a selection: 1
```

2. The below menu will be displayed. Select [1) LP destination name:]

```
Please enter a selection: 1

Configurable Parameters:      Current Settings
-----
0) Done. Make Configuration now!
1) Lp destination name:      [(N/A)]
2) Remote System name:      [(N/A)]
3) Remote Printer name:      [(N/A)]
4) Local Model Script:      [(N/A)]

q) Quit

Select an item for change or select "0":1
```

3. Registered printer list will be displayed. Type in printer name to be configured following [Please enter a lp destination name:].

Currently used names:

-----

pbox1lp    pbox3lp

Please enter a lp destination name: pboxlp

4. Select [2) Remote System name]. Type in the IP address configured to PRICOM, or the host name registered to /etc/hosts after [Please enter a remote system name/ IP address:].

Host name is typed for this example.

Select an item for change or select "0":2

Please enter a remote system name/IP address: pbox

5. Select [Remote Printer name]. Type in [lp\_u1\_lp] following [Please enter a remote printer name:].

Select an item for change or select "0":3

Please enter a remote printer name: lp\_u1\_lp

6. Select [4) Local Model Script]. Model file list and prompt will be displayed. Type in model file name to be configured following [Please enter a model file:]. [PS.nlio] that is generally used by Japanese postscript is used for this example.

```

Select an item for change or select "0":4
Valid Models:
-----
ESCP          colorpro      hp2228a      hp2934a      laserjet4
HPGL1         deskjet        hp2235a      hp33440a     laserjet4Si
HPGL2         deskjet1200C   hp2276a      hp33447a     laserjet4v
HPGL2.cent    deskjet1600CM hp2300-1100L hp3630a      laserjet5Si
LIPS3         deskjet500     hp2300-840L  hp5000c30    laserjetIIISi
LIPS4         deskjet500C    hp2560       hp5000f100   paintjet
PCL1          deskjet550C    hp2563a      hp7440a      paintjetXL300
PCL2          deskjet850C    hp2564b      hp7475a      postscript
PCL3          deskjet855C    hp2565a      hp7550a      print_model.sh
PCL4          draftpro      hp2566b      hp7570a      quietjet
PCL4.nloo     dumb          hp2567b      hp7595a      rmodel
PCL5          dumbplot      hp256x.cent  hp7596a      rmodel.asx
PCL5.asian    fonts         hp2631g      hpC1208a     ruggedwriter
PCL5.nloo     hp2225a       hp2684a      hpc1200aj    sharedprint
PS.nlio       hp2225d       hp2686a      hpc1208a     thinkjet
colorlaserjet hp2227a       hp2932a      laserjet

Please enter a model file: PS.nlio
  
```



NOTE

- Select "LIPS4 (LIPS3)" when using Canon LBP series.
- Select "ESCP" when using Epson LP series.

7. When everything is complete, the below to be displayed. Select [ 0) Done.  
Make configuration now!:] if there is nothing you want to change.

```

Configurable Parameters:      Current Settings
-----
0) Done. Make Configuration now!
1) Lp destination name:      [pboxlp]
2) Remote System name:      [pbox]
3) Remote Printer name:     [lp_u1_lp]
4) Local Model Script:      [ps.nlio]

q) Quit

Select an item for change or select "0": 0
  
```



8. Make sure that the machine is not performing printing sequence, and then type in "y".

```
Select an item for change or select "0":0
```

```
WARNING: This operation requires lp spooler be shut down.
The spooler will be running again after this operation is done.
If there are jobs currently being printed, those are reprinted in
their entirety after spooler is started again.
```

```
OK to continue? (y/n, default-n): y
```

9. This completes the printer addition procedure. Press [Return] key.

```
Printer, pboxlp, has been added.
Press the return-key to return to configuration menu...
```

10. The display returns to registration confirmation screen.

Enter "q" twice to quit the setnetlp tool.

Configurable Parameters:	Current Settings
-----	-----
0) Done. Make Configuration now!	
1) Lp destination name:	[pboxlp]
2) Remote System name:	[pbox]
3) Remote Printer name:	[lp_u1_lp]
4) Local Model Script:	[PS.nlio]
q) Quit	

```
Select an item for change or select "0": q
```

## 11. Execute test print to verify the proper printing operation.

Example: Printing Japanese text file

To print Japanese text file, the following options are required. (For further information, refer to HP-UX manual.)

Character code	lp option
Shift JIS	japanese
Japanese EUC	japanese.euc

### 11-1 Shift JIS text test print

Command examples for test print is shown below.

#lp -d pbboxlp -ojapanese "en quad" location of the text

### 11-2 Japanese text test print

Command example for test print is shown below.

#lp -d pbboxlp -ojapanese.euc "en quad" location of the text



- To delete printer registered, the below command should be typed.

#/usr/sbin/setnetlp -x <destination>

<destination> is a registered printer name.

## Using PRICOM in AIX 4.x.x Environment

This section explains how to print from IBM AIX.

Command absolute path and setting method may vary depending on OS version. Refer to your workstation manual for more details.

### 1. Prepare the print queue.

1-1 Log in to the UNIX machine through "root".

```
# login root
```

1-2 Add a print server.

Example: To add a host named "pbox".

```
# ruser -a -p pbox
```

1-3 Start the remote printer daemon.

```
# startsrc -s lpd
```

```
# mkitab 'lpd:2:once:startsrc -s lpd'
```

1-4 Add a print queue by using smit command:

1-4-1 Once the command starts, shift to the option "Add printing queue".

```
# smit mkrque
```

1-4-2 Among "Connection types", select "remote"(a printer connected to a remote host).

1-4-3 Select "Standard processing" among "remote printing type".

1-4-4 Under "Add a standard remote queue", configure the following items.

In addition, modify other options to match the conditions of the operating environment.

Example: To register the print queue under the name "pboxlp".

Queue to be registered [pboxlp]

Host name of the remote server [pbox]

Name of the queue on the remote server [lp\_u1\_lp]

Type of print spooler on the remote server [BSD]

Printer name description on the remote server [any comment]



- "lp\_u1\_lp" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

- SJIS kanji text data can be directly printed by typing "lp\_u1\_sjis" into "Queue name on the remote server". "lp\_u1\_sjis " after the ":" is the logical printer name when connecting to the USB1 port of this product and printing text files using shift-JIS KANJI code.

## 2. Printing

2-1 Print using command "lp".

# lp -d pboxlp <print file name>

## 3. Cancel the print request.

3-1 Use the "cancel" command to cancel the current print job request.

# cancel pboxlp- <job number>

## 4. Check the printer status.

4-1 Use the "lpstat" to verify the printer status.



TIP

-Depending on UNIX specification, the command may fail to display the printer status correctly.

## Using PRICOM in BSD UNIX Environment

This section explains how to print from BSD UNIX.

Command absolute path and setting method may vary depending on OS version. Refer to your workstation manual for more details.

### 1. Prepare the print queue.

1-1 Log in to the UNIX machine by "root".

```
# login root
```

1-2 Register the PRICOM to /etc/printcap file.

Example: To register a print queue by the name "pboxlp".

```
pboxlp:\                ----(1)
:lp=:rm=pbox:rp=lp_u1_lp:\    ---(2)
:sd=/usr/spool/pboxlp:\      ---(3)
:lf=/usr/spool/pboxlp/pboxlp_errs:  ---(4)
```



NOTE

- "lp\_u1\_lp" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

#### <Description of parameters>

- (1) Describes the printer name.
- (2) lp: Device file name to connect printer.  
No name designation required on the network.  
rm: remote printer host name.  
Type the host name registered to /etc/hosts file.  
rp: Remote printer name.  
PRICOM remote printer name; select logical printer name.
- (3) sd: Spool directory name. Must be the absolute path.
- (4) lf: Error log file name. Must be the absolute path.

1-3 Create the spool directory and error log file registered to /etc/printcap file.

Example: To create the spool directory "pboxlp" and error log file "pboxlp\_errs".

# mkdir /usr/spool/pboxlp	Create the spool directory
# touch /usr/spool/pboxlp/pboxlp_errs	Create the error log file
# chown -R daemon /usr/spool/pboxlp	Change the owner to daemon
# chgrp -R daemon /usr/spool/pboxlp	Change the group to daemon

1-4 Check whether the lpd (printer daemon) is activated.

```
# ps aux \ grap lpd
```

If lpd is not working, run the following command using a super user account.

```
# /usr/lib/lpd&
```

1-5 Enable the print queue configured.

```
# lpc restart pboxlp
```

## 2. Start printing.

2-1 Use the “lpr” command.

```
# lpr -P pboxlp <print file name>
```

## 3. Cancel the print request.

3-1 The print job request can be cancelled by using “lprm” command.

```
# lprm -Ppboxlp <job number>
```

## 4. Check the printer status.

4-1 The printer status can be checked by using “lpq” command.



TIP

-Certain UNIX specifications fail to display the status correctly.

-lpq short format is UNIX compatible but the long format is specific to PRICOM to display the printer status.

Example: In case of short format

```
# lpq -P pboxlp
```

Example: In case of long format

```
# lpq -l -P pboxlp
```

## Using PRICOM in Linux Environment

This section explains how to print from Linux.

Command absolute path and setting method may vary depending on OS version. Refer to your workstation manual for more details.



NOTE

-For print queue creating tool of Red Hat Linux and Turbo Linux, refer to "Using Red Hat Linux print queue creating tool" and "Using Turbo Linux print queue creating tool", respectively.

### 1. Prepare the print queue.

1-1 Log in to the Linux machine through "root".

```
# login root
```

1-2 Register the PRICOM to /etc/printcap file.

Example: To register a print queue by the name "pboxlp".

```
pboxlp:\                                ---(1)
      :lp=:rm=pbox:rp=lp_u1_lp:\        ---(2)
      :sd=/usr/spool/pboxlp:\           ---(3)
      :lf=/usr/spool/pboxlp/pboxlp_errs: ---(4)
```



NOTE

- "lp\_u1\_lp" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

#### <Description of parameters>

(1) Describes the printer name.

(2) lp: Device file name to connect printer.

No name designation required on the network.

rm: Host name for the remote printer

Type the host name registered to /etc/hosts file.

rp: Remote printer name.

PRICOM remote printer name; select logical printer name.

(3) sd: Spool directory name. Must be the absolute path.

(4) lf: Error log file name. Must be the absolute path.

1-3 Create the spool directory and error log file registered to /etc/printcap file.

Example: To create the spool directory "pboxlp" and error log file "pboxlp\_errs".

```
# mkdir /usr/spool/pboxlp              Create the spool directory
# touch /usr/spool/pboxlp/pboxlp_errs  Create the error log file
# chown -R daemon /usr/spool/pboxlp    Change the owner to daemon
# chgrp -R daemon /usr/spool/pboxlp    Change the group to daemon
```

1-4 Check whether the lpd (printer daemon) is activated.

```
# ps aux / grep lpd
```

If lpd is not working, run the following command using a super user account.

```
# /usr/lib/lpd&
```

1-5 Enable the print queue configured.

```
# lpc restart pboxlp
```

## 2. Start printing.

2-1 Use the "lpr" command.

```
# lpr -P pboxlp <print file name>
```

## 3. Cancel the print request.

3-1 The print job request can be cancelled by using "lprm" command.

```
# lprm -Ppboxlp <job number>
```

## 4. Check the printer status.

4-1 The printer status can be checked by using "lpq" command.

Certain Linux specifications fail to display the status correctly.

Short format of lpq is UNIX compatible but the long format to show the printer state is specific to the PRICOM.

Example: In short format

```
# lpq -P pboxlp
```

Example: In long format

```
# lpq -l -P pboxlp
```



## Using Print Queue Creation Tool of Red Hat Linux



-This section explains how to print using print queue creation utility of Red Hat Linux 7.1.  
Note that some steps may vary depending on Red Hat Linux version.

Example: IP address "192.168.10.100" and Host name "pbox" are registered to etc/hosts file and print queue is to be registered by the name "pboxlp".

"lp\_u1\_lp" is the logical printer name when connecting to the USB1 port of this product and printing the file using the printer driver.

1. Select **Main menu**, then **Programs**, then **System**, then **Setting printer**.
2. Click **New** in the [printconf.gui] screen.
3. Click **Name and alias**, then type **pboxlp** in **Printer name**, then click **Add**.
4. Type **pboxlp** in **Alias**, then click **OK**.
5. Click **Printer type**, then select **LPD**. Type **pbox** in the server and **lp\_u1\_lp** in the printer.
6. Select **Printer driver** and **Printer option** that correspond with your operating environment.
7. After configuration is complete, click **OK** in [Printer edit].
8. Verify that the printer created is displayed and selected in the [printconf.gui].  
Click **Apply**.
9. Verify the dialog message, "lpd has been successfully rebooted", then Click **OK**.
10. Click **Test** in [printconf.gui] screen. When you get test page, the configuration is complete.

## Using the Print Queue Creation Tool of Turbo Linux



-This section explains how to print using print queue creation utility of Turbo Linux6.0.  
Note that some steps may vary depending on Turbo Linux version.

Example: IP address "192.168.10.100" and Host name "pbox" are registered to etc/hosts file and print queue is to be registered by the name "pboxlp".

"lp\_u1\_lp" is the logical queue name when connecting to the USB1 port of this product and printing the file using the printer driver.

1. Select **Main menu**, then **Turbo Linux tool**, then **Turbo Centro**.

2. Click **Turboprintcfg** in the **Turbo Centro-GT**.

3. Click **Add** in **Setting printer screen**.

3-1 Select **Remote LPD queue** in **Add printer**.

3-2 Type **pboxlp** in **New queue name**.

3-3 Click **Change** in **LPD configuration** of **Change printer configuration**.

3-3-1 Type "pbox" in Host name.

3-3-2 Type "lp\_u1\_lp" in Queue name.

3-4 Click **Change** in Printer type, then select the printer driver that corresponds with your operating environment.

3-5 Select **Paper size** and **Color depth** that correspond with your operating environment.

4. Click **OK** in the [Printer configuration].

5. Click **Save and Finish** to complete the configuration.

## Printing Using FTP

This section explains how to print using FTP of TCP/IP.

For further information on “ftp” command, refer to your workstation manual.



NOTE

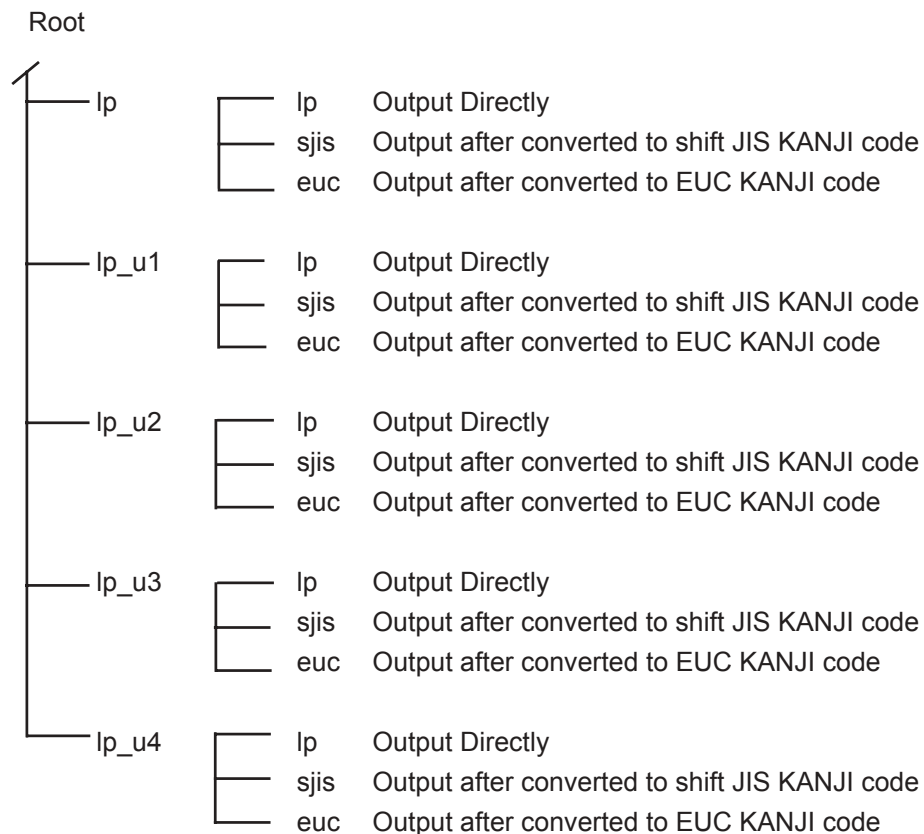
### - About FTP

FTP (File Transfer Protocol) is a protocol used to transfer a file by TCP/IP. By transferring data to PRICOM logical directory, printing can be executed.

### - Logical directory

PRICOM has three remote printer queues. To print files using a printer driver, use “lp”. For printing text files using shift-JIS KANJI code, use “sjis”. For printing text files using EUC KANJI code, use “euc”.

<PRICOM logical directory structure>



## Printing

1. Log in to PRICOM.



TIP

-When printing using “ftp” command, any input to “User” and “Password” will not disturb printing job unless “root” is used in “User”. When the “User” name is “root”, type the password configured in environment settings.

Example: To log in to a printer whose host name is “pbox”  
(or to log in to a printer having IP address “192.168.10.100”).

```
#ftp pbox (or ftp 192.168.10.100 )
Connected to pbox
220 PRICOM xxxxx Ver 1.0.0 FTP Server.
User(silex:root): root
331 Password required.
Password:
230 User Logged in.
ftp>
```

2. Using “cd” command to move to destination directory.



TIP

-PRICOM has hierarchical structure for destination directory. Print data to the root directory is processed as output to “lp”.

Example: To move to lp directory and verify the current directory.

```
ftp>cd /lp_lp
250 Command Ok.
ftp>pwd
257 "/lp_lp" is current directory.
ftp>cd /lp
250 Command Ok.
ftp>pwd
257 "/lp_u1/lp" is current directory.
ftp>
```

### 3. Changing transfer mode.



-There are two kinds of transfer modes. The “ASCII” mode converts LF code to CR+LF code, and the “BINARY” mode transfers file contents. To transfer binary-converted file from the printer driver, configure the transfer mode to “BINARY” (otherwise, ASCII mode is used).

Example: To change transfer mode to BINARY and verify the current mode.

```
ftp>type binary
200 Type set to I.
ftp>type
Using binary mode to transfer files.
ftp>
```

### 4. Transfer the print data to PRICOM using “put” command in file form.

There are two formats for transferring a file using “put” command.

Example: To transfer print data “test.prn”.

```
ftp>put test.prn
```

To transfer print data to the directory specified by “/users/test/test.prn”.

```
ftp>put /users/test/test.prn /lp
```



-When printing data by specifying the directory, specify the destination logical directory. Not necessary to move directory using the cd command.

### 5. Use “quit” command to log out from PRICOM.

```
ftp>quit
```

## Checking the status



-By using "stat" of "quote" command, IP address, use name for log in and transfer mode can be verified.

-By specifying the directory (lp, sjis, euc) following "stat", the printer status can be checked.

Example: To display the Ethernet board status.

```
ftp>quote stat
211-FTP server status:
Connected to: 192,168,10,100
User logged in: guest
Transfer type: BINARY
Data connection:Closed.
211 End of status.
ftp>
```

To display the printer status (directory name: lp).

```
ftp>quote stat /lp_u1/lp
211-FTP directory status:
Ready
211 End of status.
ftp>
```