Chapter 6. Additional Functions

This chapter explains the functions provided by the LAN board.

6.1 Logical Printers

The LAN board supports a function for changing the print data.

This function provides the following features:

♦ Add character strings before and after print data.

♦ Replace character strings in print data.

♦ Convert data from ASCII to PostScript.

♦ Hexadecimal dump mode (this mode can be set by PR3_DUMP.:YES. This mode is not normally used.)

The LAN board has eight logical printers for which the filtering of such print data can be set. The eight logical printers can be individually set by editing the parameters in the config file, or the LAN board setting file.

In the default status, logical printers 1 to 4 do not change the print data.

Logical printers 5 to 8 add CR control characters to LF control characters.

Logical printer		Data change
Logical printer 1	pr1	No conversion
Logical printer 2	pr2	No conversion
Logical printer 3	pr3	No conversion
Logical printer 4	pr4	No conversion
Logical printer 5	pr5	Addition of CR to LF
Logical printer 6	pr6	Addition of CR to LF
Logical printer 7	pr7	Addition of CR to LF
Logical printer 8	pr8	Addition of CR to LF

- Logical printer:

    A logical printer functions as a filter between the network and printer. For example, some PostScript drivers have no code (0x04) indicating the end of the job. This problem can be solved when this function specifies that this code is to be added.

Items to be considered

- Some protocols cannot clearly recognize the end of a job. This function may not operate normally for such protocols.
  For example, this function may not operate normally in the remote printer mode of NetWare.

- If character string replacement is frequently used, the LAN board throughput falls considerably. Keep this point in mind when using this function.

- Some printers may incur problems, such as corrupted printing, with this setting. Carefully confirm the printer functions before using each printer.

(1) Adding character strings

This character string function can send the printer control command before and after each print job. This function can be set separately for each logical printer.

Enter all character strings as hexadecimal numeric values.

Example: Some PostScript drivers do not suffix the code (0x04), indicating the end of a job, to the print job. In this case, edit the following entry:

> PRI_AFT.:04

(2) Replacing character strings

The character string replacement function executes the retrieval and replacement of print data. This function is used mainly for printer control command replacement. Replacement of up to 20 sets of character strings can be specified for each logical printer.

All character strings must be entered as hexadecimal numeric characters. The count byte must be placed before a retrieval character string and before a replacement character string.

Example: Edit the following parameter in the config file to replace a UNIX line feed (0x0A) with a DOS line feed (0x0D 0x0A) for logical printer 1:

> PR1_STR. : 01 0A 02 0D 0A

01: Count byte of the retrieval character string (length of the retrieval character string)

0A: Retrieval character string

02: Count byte of the replacement character string (length of the replacement character string)

0D0A: Replacement character string

This example is the default setting for logical printers 5 to 8.

(3) Conversion from ASCII to Postscript

A logical printer of the LAN board can convert ASCII format print data to PostScript format print data. (However, this function does not support kanji or Chinese characters.)

Conversion is selected by validating the filter for converting ASCII data to PostScript. This filter can be validated for each logical printer.

Example: Setting parameters in the config file

Logical printer 1: Does not change the print data.

Logical printer 2: Converts the print data from ASCII to PostScript.

Logical printer 3: Converts ASCII data to PostScript. Does not convert PostScript data.

```
PR1_FILT. : NONE
PR2_FILT. : POSTSCR
PR3_FILT. : AUTO_PS
```

To set PostScript conversion for a logical printer, the following must be set: the page size, page direction, page format, and the font to be used.

The default page size is A4. The default page direction is portrait orientation. The page format parameters are listed below.

Page format	Default value	Remarks
Number of lines per page (LPP)	66	
Number of characters per line (CPL)	0	0 = Turn of a line invalid
Number of characters per inch (CPI)	100	100 = 10.0 characters per inch
Number of lines per inch (LPI)	60	60 = 6.0 lines per inch
Left margin	30	30 = 3.0 mm
Upper margin	50	50 = 5.0 mm

Any PostScript font resident in the printer can be used.

If no font is specified, Courier is used.

Example: To set logical printer 2 for conversion from ASCII to Post-Script, the following parameters must be set in the config file:

PR2_FILT.:POSTSCR	(PostScript conversion ON)
PR2_SIZE.:LETTER	(Page size = letter)
PR2_ORNT.:LANDS	(Orientation = Landscape)
PR2_FORM.:48 0 120 60 30 50	(48 LPP, 0 CPL, 12 CPI, 6 LPI, left margin 3 mm, upper margin 5 mm)
PR2_FONT.:Helvetica	(Font = Helvetica)

6.2 Telnet

Telnet is a TCP/IP command that remotely operates a remote system. The LAN board has built-in commands that can be executed via Telnet.

Confirm these built-in commands by using the help command after login.

Log in to the system by using the command shown in the following example:

```
telnet host-name (IP-address)
```

```
> telnet 192.168.31.24
Trying 192.168.31.24...
Connected to 192.168.31.24.
Escape character is '^]'.
NPS 540+/542+ TELNET Print server V5.43.12 Oct 16 1998
NPS 540+/542+ network login: root
Password: pass          ←  (Invisible)
NPS 540+/542+ TELNET Print server V5.43.12 Oct 16 1998
Root> help
Commands may be abbreviated:
logout          logout from TELNET
version          print current software version
help            print this list
status           show current printing status
account        show current account file
softreset        protocol restart of NPS 540+/542+
hardreset      reboot of NPS 540+/542+
defaults        set default parameters in NPS 540+/542+
Root>logout
Goodbye!
Connection closed by foreign host.
>
```

The usable commands are listed below. Commands may be changed, without prior notice, as a result of control software upgrading.

Command	Function
logout	Log out from TELNET.
version	Displays the control software version.
help	Displays the command list.
status	Displays the printer status.
account	Displays the account file.
softreset	Restarts the protocol.
hardreset	Reboots the LAN board.
defaults	Returns the LAN board setting to the default setting.

(1)   Displaying the account file

The account file contains the following information about the latest 10 print jobs: internal job numbers (JOBs), user (USER) who sent jobs, used protocols (PROT), logical printers (LPRs), current status (C in the S field: completion, O in the S field: offline, and P in the S field: printing in progress), number of printed bytes (BYTES), elapsed time (ETIME), and offline time (OTIME). The account file can be viewed by using Telnet, FTP, or the Web browser.

```
> telnet 192.168.31.24
Trying 192.168.31.24...
Connected to 192.168.31.24.
Escape character is '^]'.
NPS 540+/542+ TELNET Print server V5.43.12 Oct 16 1998
NPS 540+/542+ network login: root
Password: pass          ←   (Invisible)
NPS 540+/542+ TELNET Print server V5.43.12 Oct 16 1998

Root> account

Current account file:
JOB USER          PROT          LPR     S       BYTES   ETIME   OTIME
1 anyone          FTP           pr2     C       1885    2       0
2 KOAMI.YUJI  LPD           pr1     C       23074   4       0
3 admin            PSERVER   pr2     C       43044   5       0
4 administrator   FTP           pr1     C       6717    2       0
5 LSLM_user     PSERVER   pr2     C       36995   3       0
6 patrick           LPD           pr5     P       83208   9       0
Root>
```

(2)   Displaying statuses

The status command displays the statuses of the logical printers.

The statuses can also be seen by using the Web browser.

```
Root> status
Current printer status:
Printer    Port     Status       Bytes printed    Comments
pr1        LPT1    Printing    20916            Ready
pr2        LPT1    Occupied                     Ready
pr3        LPT1    Occupied                     Ready
pr4        LPT1    Occupied                     Ready
pr5        LPT1    Occupied                     Ready
pr6        LPT1    Occupied                     Ready
pr7        LPT1    Occupied                     Ready
pr8        LPT1    Occupied                     Ready
Root>
```

6.3 SNMP

The Simple Network Management Protocol (SNMP) can be used for the remote monitoring of the LAN board.

(1) Overview

SNMP is the standard network management protocol including protocols, database structure specifications, and the data object group. SNMP operates in the TCP/IP environment.

The SNMP manager software performs the actual management. This manager sends inquiries or instructions for a device, or receives notification that uses a specific event in the device as a trigger. The object is contained in the database called the Management Information Base (MIB). MIB-II is the standard database.

The LAN board supports those portions relating to MIB-II containing the private enterprise MIB. MIB is explained below.

(2) Insertion into the SNMP manager

To use the SNMP function of the LAN board, the SNMP manager software, to which private enterprise MIB can be inserted, is required.

The MIB file is distributed on the provided floppy disk and LAN board.

The MIB file is described in ASN.1 format. This file can be upgraded by using FTP.

Add MIB to the SNMP manager software, by referring to the following sample procedure:

1. Log in to the LAN board by using FTP.

2. Upload MIB file/snmp/white.mib to the SNMP manager.

3. Insert MIB as described in the SNMP manager software manual.

(3) MIB

MIB can be classified as an object, as follows:

- Menu object - The setting of the LAN board can be viewed or changed using the SNMP manager software.

- Printer status and management object - The print job of the LAN board can be monitored or parameters can be changed.

- Trap object - Various error statuses can be posted.

For details of MIB, refer to the MIB file (white.mib) by using any text editor.

6.4 Test Button

The test button is located at the rear of the LAN board. The following functions can be executed by pressing the test button:

- Printing of a test page. This function is used to test the connection with the printer.

- Printing of a parameter list to confirm the LAN board setting.

- Returning the LAN board parameter values to the factory-set default values.

The test button function is determined by the number of times the test button is pressed.

The following explains how to utilize these functions:

(1) Test page

The test page is output by pressing the test button once.

After mounting the LAN board in the printer, output a test page to confirm whether the interface is functioning normally.

Basic information about the LAN board is printed on the test page.

(2) Parameter list

The LAN board parameter settings can be output to the connected printer by pressing the test button twice.

All parameters and the current setting values are printed in this parameter list.

Items to be considered: The test page and parameter list are output as text to the printer. Therefore, some GDI format printers may not be able to output them. Before executing this function, read the related printer manual carefully.

(3) Setting the factory-set default values

The following shows how to return the LAN board settings to the factory-set default statuses by pressing the test button:

1. Turn the printer power off.

2. Turn the printer power on while holding down the test button. Keep the test button held down until the network LED starts blinking at an interval of one second.

3. Release the test button and wait until the network LED blinks at least five times.

4. Hold down the test button again.

5. This function is completed once the network LED lights steadily.

6. Turn the printer power off then back on to make the settings effective.

Supplementary explanation: Even though the default setting function is executed, only the IP address (INT_ADDR) parameter is not returned to the default value.

Test page sample

```
%!PS-Adobe
%%Creator: NPS 540+/542+ Print server
%%EndComments
%****************************************************************************
%**    This printout contains PostScript code.    Please disregard the extra      **
%**    text or garbage below if you do not have a PostScript printer.            **
       0 gt {showpage} if exit }if }loop restore }bind excel (END)eq{Lines2     **
%****************************************************************************


***************************************************************************
** NPS 540+/542+ V5.43.12   Oct 16 1998 S/N: 000087902E00                   **
**                                                                         **
** NPS 540+/542+ Print server Test Page                                     **
**                                                                         **
** Power - on time: 0 days,   1 hours,   23 minutes.                        **
** Node address: 00:00:87:90:2E:00                                          **
**                                                                         **
** TCP/IP:enabled                                                           **
** Internet address   Default router   Net mask                            **
** 192.168.31.24      <automatic router sensing>                           **
**                                                                         **
** NetWare: enabled                                                         **
**    PSERVER (Bindery) status                                              **
**    Print server name: NPS902E00                                          **
**    Connected to:            Status:                                     **
**    <none connected>                                                      **
**                                                                         **
**    PSERVER (NDS) status                                                  **
**    Preferred server: <not configured>                                    **
**    Print server name: <not configured>                                   **
**    Connected to:            Status:                                     **
**    <none connected>                                                      **
**                                                                         **
**    NPRINTER status                                                       **
**    Connected to:            Slot:         Status:                        **
**    <none connected>                                                      **
**                                                                         **
** Microsoft Networks and LAN Server/LAN Manager: enabled                   **
**    Printer name: PS902E00.LP1                                            **
**                                                                         **
** Apple EtherTalk: enabled                                                 **
**    Printer name                 Printer type          Mode              **
**    NPS902E00_LPT1               LaserWriter           Spooler           **
**    NPS902E00_2                                        Printer           **
**                                                                         **
** For more information, use the TEST button:                               **
** First press the TEST button until the Network LED starts flashing,       **
** release the button, then press once to print the PARAMETER LIST.         **
**                                                                         **
***************************************************************************
END OF TEST PAGE
```

6.5 Parameter List

This section gives an overview of the LAN board parameters and explains how to edit them.

All parameters are stored in the config file for the LAN board.

(1) Editing the setting parameters

♦ NetPilot

The config file can be changed by the property page of the NetPilot software.

For details of the property page, see Chapter 3, "Utilities."

♦ Web browser

The parameter list for the LAN board can be edited by using the standard Web browser.

♦ FTP

The LAN board can be set by using the File Transfer Protocol (FTP).

The procedure for making this setting is explained below.

(a) Editing the config file under UNIX or Windows

Edit the config file under UNIX or Windows by using FTP according to the following procedure:

1. For Windows95 or WindowsNT, open the DOS window and execute cd for a directory other than ＼Windows.

2. Log in to the LAN board by using the ftp command, then perform get for the config file. Enter root as the user ID and pass as the password.

```
%ftp 192.168.31.24
Connect to 192.168.31.24
220 NPS 540+/542+ FTP Printer Server V5.43.12 Oct 16 1998 ready.
User (192.168.31.24:(none)): root
331 User name ok, need password
Password:          (Invisible)
230 User logged in
f tp> get config
200 PORT command successful.
150 Opening data connection for config (192,168,31,13,4,8), (mode ascii).
226 Transfer complete.
6499 bytes received in 0.11 seconds (59.08 Kbytes/sec)
ftp> quit
221 Goodbye.
```

3. Edit the config file by using the text editor.

4. Perform login by using the ftp command, then execute put for the config file.

```
%ftp 192.168.31.24
Connect to 192.168.31.24
220 NPS 540+/542+ FTP Printer Server V5.43.12 Oct 16 1998 ready.
User (192.168.31.24:(none)): root
331 User name ok, need password
Password:           (Invisible)
230 User logged in
ftp> put config CONFIG
200 PORT command successful.
150 Opening data connection for config (192,168,31,13,4,8), (mode ascii).
226 Transfer complete.
6499 bytes received in 0.11 seconds (59.08 Kbytes/sec)
ftp> quit
```

Notes on the setting:

When the config file is edited, some text editors may save the file in a format that differs from the original format. If a config file of other than the correct format is subjected to put for the LAN board, the LAN board may be reset during put execution.

When the config file is subjected to put (lower-case characters), and if the power is then turned off then back on, the original settings are restored. Execute put with the name CONFIG (uppercase). (Underlined section in the above figure)

   put config CONFIG   (Code the underlined section in uppercase.)

(b) Editing the config file from a Macintosh machine

To edit the config file from a Macintosh machine, the FTP functions such as MacTCP, Fetch, and Anarchic are required. The procedure for this editing is the same as that for UNIX and Windows, above.

(2)   config file

The parameter list for the LAN board is shown below. The config file parameter names and their default values are listed on the left side of the parameter list. Simplified explanations of the parameters are listed on the right side.

Some parameters may require LAN board reactivation. To validate the new parameters, the LAN board must be turned off then back on.

The sample parameter list contains character string NPS902E00. 902E00 are the six low-order digits of the ethernet address. These digits vary depending on the LAN board type.

Parameter list

--- General Menu

NODE_ADDR.	: 00 00 87 90 2E 00	Node address
ROOT_PWD.	: Pass	root password
USERS.	:	User authority and printer access
BASE URL.	:	Default base URL address
HP_JETADMIN.	: AUTO_SENSE (AUTO_SENSE, YES, NO)	HP emulation setting
DEF_OUT.	: PR1 (PR1, PR2, PR3, PR4, PR5, PR6,PR7, PR8, LPT1)	Internal print output destination

--- TCP/IP Menu

TCP_ENB.	: YES	Whether the TCP/IP protocol is valid
INT_ADDR.	: 0 0 0 0	IP address
DEF_ROUT.	: 0 0 0 0	Default router address (0.0.0.0 when no router is supported)
NET_MASK.	: 0 0 0 0	Subnet mask (0.0.0.0 for automatic detection)
PROS_PWD.	: netprinter	Must not be changed
PROS_PRT.	: 35	Must not be changed
LPD_BANN.	: OFF (OFF, AUTO, LAST)	Whether the LPD banner page is valid
DHCP_ENB.	: NO	Whether the DHCP protocol is valid
BOOTP_ENB.	: YES	Whether the BOOTP protocol is valid
RARP_ENB.	: YES	Whether the RARP protocol is valid
RTN_OPT.	: YES	Must not be changed
RTEL_PR1.	: 0	Must not be changed
RTEL_PR2.	: 0	Must not be changed
RTEL_PR3.	: 0	Must not be changed
RTEL_PR4.	: 0	Must not be changed
RTEL_PR5.	: 0	Must not be changed
RTEL_PR6.	: 0	Must not be changed
RTEL_PR7.	: 0	Must not be changed
RTEL_PR8.	: 0	Must not be changed

--- SNMP Menu

READ_COM.	: public	Read-only community name
WRT_COM.	: pass	Readable and writeable community name
TRAPADDR.	: 0 0 0 0	SNMP trap IP address
TRAP_COM.	: Public	SNMP trap community name
SYS_CONT.	:	System contact destination
SYS_NAME.	:	System name
SYS_LOC.	:	System location
SNMP_AUT.	: DISABLE (DISABLE, ENABLE)	Whether the certification failure trap is valid
TRAP_PRT.	: DISABLE (DISABLE, ENABLE)	Whether the printer trap is valid

--- NetWare Menu

NETW_ENB.	: YES	Whether the NetWare protocol is valid
PS_NAME.	: HI902E00	Print server name
JOB_CHECK_DELAY.	: 5	Queue polling interval of the print server
CONF_CHECK_DELAY.	: 300	Automatic setting check interval
FR_802_3.	: YES	Whether the IEEE 802.3 frame type is valid
FR_ETH_2.	: YES	Whether the Ethernet II frame type is valid
FR_802_2.	: YES	Whether the IEEE 802.2 frame type is valid
FR_SNAP.	: YES	Whether the SNAP frame type is valid
NCP_BURST_MODE.	YES	Whether the NetWare burst mode is valid (Reactivation required)
PSERVER_NDS.	:	File server name, or login NDS tree name and print server context name
PSERVER_BINDERY1.	:	Bindery file server name
PSERVER_BINDERY2.	:	Bindery file server name
PSERVER_BINDERY3.	:	Bindery file server name
PSERVER_BINDERY4.	:	Bindery file server name
PSERVER_BINDERY5.	:	Bindery file server name
PSERVER_BINDERY6.	:	Bindery file server name
PSERVER_BINDERY7.	:	Bindery file server name
PSERVER_BINDERY8.	:	Bindery file server name
PSERVER_BINDERY9.	:	Bindery file server name
PSERVER_BINDERY10.	:	Bindery file server name
PSERVER_BINDERY11.	:	Bindery file server name
PSERVER_BINDERY12.	:	Bindery file server name
PSERVER_BINDERY13.	:	Bindery file server name
PSERVER_BINDERY14.	:	Bindery file server name
PSERVER_BINDERY15.	:	Bindery file server name
PSERVER_BINDERY16.	:	Bindery file server name
NPRINTER1.	:	Print server name and slot number
NPRINTER2.	:	Print server name and slot number
NPRINTER3.	:	Print server name and slot number
NPRINTER4.	:	Print server name and slot number
NPRINTER5.	:	Print server name and slot number
NPRINTER6.	:	Print server name and slot number
NPRINTER7.	:	Print server name and slot number
NPRINTER8.	:	Print server name and slot number

--- NetBIOS/NetBEUI Menu

LSLM_ENB.	: YES	Whether the NetBIOS/NetBEUI protocol is valid
NB_FR_TYPE.	: FR_AUTO (FR_AUTO, FR_802_2, FR_DIX)	Frame type (reactivation required)
LPRINT_1.	: HI90D6A1.LP1	Name of printer 1
LLOGIC_1.	: LPT1 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 1
LPRINT_2.	:	Name of printer 2
LLOGIC_2.	: PR2 (PR1, PR2, PR3, PR4, PR5, PR6,PR7, PR8, LPT1)	Logical printer of printer 2
LPRINT_3.	:	Name of printer 3
LLOGIC_3.	: PR3 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 3
LPRINT_4.	:	Logical printer of printer 4
LLOGIC_4.	: PR4 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 4
LPRINT_5.	:	Name of printer 5
LLOGIC_5.	: PR5 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 5
LPRINT_6.	:	Name of printer 6
LLOGIC_6.	: PR6 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 6
LPRINT_7.	:	Name of printer 7
LLOGIC_7.	: PR7 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 7
LPRINT_8.	:	Name of printer 8
LLOGIC_8.	: PR8 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 8

--- AppleTalk Menu

ATLK_ENB.	: YES	Whether the AppleTalk protocol is valid
ATK_ZONE.	:	AppleTalk zone
ZONER_EN.	: YES	Whether the HP zoner is valid
ATK_FONT.	: DEFAULT (DEFAULT, 35N, ALL)	PostScript font set
BINARY.	: YES	Whether binary transfer is valid
BINARY_TYPE.	: TBCP (TBCP, BCP)	Binary used when binary transfer is valid Communication protocol
APRINT_1.	: NPS902E00_LPT1	Name of printer 1
ATYPE_1.	: LaserWriter	Type of printer 1
ALOGIC_1.	: LPT1 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 1
APRINT_2.	:	Name of printer 2
ATYPE_2.	:	Type of printer 2
ALOGIC_2.	: PR2 (PR1, PR2, PR3, PR4, PR5, PR6, PR7, PR8, LPT1)	Logical printer of printer 2

--- Printer1 Menu

PR1_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 1
PR1_BEF.	:	Character string before the print job of logical printer 1
PR1_STR.	:	Replacement of character strings of logical printer 1
PR1_CSET.	: NONE	Must not be changed (character set conversion)
PR1_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 1
PR1_AFT.	:	Character string after the print job of logical printer 1
PR1_DUMP.	: NO	Hexadecimal dump mode of logical printer 1
PR1_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 1
PR1_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 1
PR1_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 1 (LPP, CPL, CPI, LPI, LM, TM)
PR1_FONT.	:	PostScript font of logical printer 1 (Courier when omitted)

--- Printer2 Menu

PR2_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 2
PR2_BEF.	:	Character string before the print job of logical printer 2
PR2_STR.	:	Replacement of character strings of logical printer 2
PR2_CSET.	: NONE	Must not be changed (character set conversion)
PR2_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 2
PR2_AFT.	:	Character string after the print job of logical printer 2
PR2_DUMP.	: NO	Hexadecimal dump mode of logical printer 2
PR2_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 2
PR2_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 2
PR2_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 2
		(LPP, CPL, CPI, LPI, LM, TM)
PR2_FONT.	:	PostScript font of logical printer 2 (Courier when omitted)

--- Printer3 Menu

PR3_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 3
PR3_BEF.	:	Character string before the print job of logical printer 3
PR3_STR.	:	Replacement of character strings of logical printer 3
PR3_CSET.	: NONE	Must not be changed (character set conversion)
PR3_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 3
PR3_AFT.	:	Character string after the print job of logical printer 3
PR3_DUMP.	: NO	Hexadecimal dump mode of logical printer 3
PR3_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 3
PR3_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 3
PR3_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 3
		(LPP, CPL, CPI, LPI, LM, TM)
PR3_FONT.	:	PostScript font of logical printer 3 (Courier when omitted)

--- Printer4 Menu

PR4_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 4
PR4_BEF.	:	Character string before the print job of logical printer 4
PR4_STR.	:	Replacement of character strings of logical printer 4
PR4_CSET.	: NONE	Must not be changed (character set conversion)
PR4_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 4
PR4_AFT.	:	Character string after the print job of logical printer 4
PR4_DUMP.	: NO	Hexadecimal dump mode of logical printer 4
PR4_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 4
PR4_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 4
PR4_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 4
		(LPP, CPL, CPI, LPI, LM, TM)
PR4_FONT.	:	PostScript font of logical printer 4 (Courier when omitted)

--- Printer5 Menu

PR5_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 5
PR5_BEF.	:	Character string before the print job of logical printer 5
PR5_STR.	: 01 0A 02 0D 0A	Replacement of character strings of logical printer 5
PR5_CSET.	: NONE	Replacement of character strings of logical printer 5
PR5_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 5
PR5_AFT.	:	Character string after the print job of logical printer 5
PR5_DUMP.	: NO	Hexadecimal dump mode of logical printer 5
PR5_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 5
PR5_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 5
PR5_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 5
		(LPP, CPL, CPI, LPI, LM, TM)
PR5_FONT.	:	PostScript font of logical printer 5 (Courier when omitted)

--- Printer6 Menu

PR6_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 6
PR6_BEF.	:	Character string before the print job of logical printer 6
PR6_STR.	: 01 0A 02 0D 0A	Replacement of character strings of logical printer 6
PR6_CSET.	: NONE	Must not be changed (character set conversion)
PR6_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 6
PR6_AFT.	:	Character string after the print job of logical printer 6
PR6_DUMP.	: NO	Hexadecimal dump mode of logical printer 6
PR6_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 6
PR6_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 6
PR6_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 6
		(LPP, CPL, CPI, LPI, LM, TM)
PR6_FONT.	:	PostScript font of logical printer 6 (Courier when omitted)

--- Printer7 Menu

PR7_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 7
PR7_BEF.	:	Character string before the print job of logical printer 7
PR7_STR.	: 01 0A 02 0D 0A	Replacement of character strings of logical printer 7
PR7_CSET.	: NONE	Must not be changed (character set conversion)
PR7_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 7
PR7_AFT.	:	Character string after the print job of logical printer 7
PR7_DUMP.	: NO	Hexadecimal dump mode of logical printer 7
PR7_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 7
PR7_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 7
PR7_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 7
		(LPP, CPL, CPI, LPI, LM, TM)
PR7_FONT.	:	PostScript font of logical printer 7 (Courier when omitted)

--- Printer8 Menu

PR8_IN.	: AUTO (AUTO, NONE, COM1)	Read-back port of logical printer 8
PR8_BEF.	:	Character string before the print job of logical printer 8
PR8_STR.	: 01 0A 02 0D 0A	Replacement of character strings of logical printer 8
PR8_CSET.	: NONE	Must not be changed (character set conversion)
PR8_FILT.	: NONE (NONE, POSTSCR, AUTO_PS)	Conversion of printer language of logical printer 8
PR8_AFT.	:	Character string after the print job of logical printer 8
PR8_DUMP.	: NO	Hexadecimal dump mode of logical printer 8
PR8_SIZE.	: A4 (A4, LETTER, LEGAL, EXECUT)	PostScript page size of logical printer 8
PR8_ORNT.	: PORTR (PORTR, LANDS, R_PORTR, R_LANDS)	Orientation of the PostScript page of logical printer 8
PR8_FORM.	: 66 0 100 60 30 50	PostScript page format of logical printer 8
		(LPP, CPL, CPI, LPI, LM, TM)
PR8_FONT.	:	PostScript font of logical printer 8 (Courier when omitted)

--- Output Menu

L1_CENTR.	: HISPEED (IBM_PC, STNDRD, FAST, HISPEED)	Busy status time-out
L1_BSYTM.	: 60	Interface timing
		(For 0, all status reports are invalid.)
L1_MGM_INFO.	: AUTO (DISABLE, AUTO)	Whether the printer management information is valid

6.6 Updating Software

The following software can be updated:

- NetPilot software

- Print Monitor

- LAN board built-in control software

(1) Updating the software

The methods for updating the LAN board control software are listed below.

A file of new control software is required for updating.

- Use NetPilot on the IPX network

- Use FTP on the TCP/IP network

(a) Updating with NetPilot

This method is the most convenient one for updating the control software of the LAN board. The upgrade wizard that guides you through the necessary procedure can be used. Click the update icon on the NetPilot tool bar to call the upgrade wizard. See Chapter 3, "Utilities."

(b) Updating with FTP

To use FTP for updating, the TCP/IP setting of the LAN board is required.

Update the LAN board according to the following procedure:

1. Log in to the print server by using the ftp Host Name command. The host name here is the name of the printer server assigned by the host table of the system being used.

2. The prompt for the user ID and password is displayed. Use root (user ID having the highest priority) as the user ID and pass as the default password.

3. Issue the binary command to set binary transfer mode.

4. Issue the put Software name flash command. The software name here is the name of new control software.

5. Wait until flash load has been completed. It takes about one to four minutes to complete the flash load. Upon completion of the flash load, the LAN board is automatically reactivated by the new control software.

   Precautions: Do not stop file transfer halfway.

   If the file transfer is suspended, re-initialization of the LAN board may be required.

6. Perform logout by using the quit, bye, or exit command according to the FTP version being used.

第 6 章附加功能本章介绍 LAN 板提供的功能。

6.1 逻辑打印机

LAN 板支持更改打印数据的功能。

此功能提供以下特性：

在打印数据之前和之后添加字符串。

替换打印数据中的字符串。

将数据从 ASCII 转换为 PostScript。

十六进制转储模式（此模式可通过 PR3_DUMP.:YES 设置。此模式通常不使用。）

LAN 板有八个逻辑打印机，可以设置此类打印数据的过滤。可以通过编辑配置文件或 LAN 板设置文件中的参数单独设置八个逻辑打印机。

在默认状态下，逻辑打印机 1 至 4 不更改打印数据。

逻辑打印机 5 至 8 将 CR 控制字符添加到 LF 控制字符。

逻辑打印机数据更改逻辑打印机 1 pr1 无转换逻辑打印机 2 pr2 无转换逻辑打印机 3 pr3 无转换逻辑打印机 4 pr4 无转换逻辑打印机 5 pr5 将 CR 添加到 LF 逻辑打印机 6 pr6 将 CR 添加到 LF 逻辑打印机 7 pr7 将 CR 添加到 LF 逻辑打印机 8 pr8 将 CR 添加到 LF 逻辑打印机：

逻辑打印机充当网络和打印机之间的过滤器。例如，某些 PostScript 驱动程序没有表示作业结束的代码 (0x04)。当此功能指定要添加此代码时，可以解决此问题。需要考虑的事项某些协议无法清楚地识别作业的结束。此功能可能无法在此类协议中正常运行。例如，此功能可能无法在 NetWare 的远程打印机模式下正常运行。

如果频繁使用字符串替换，LAN 板吞吐量会大幅下降。使用此功能时请牢记这一点。

某些打印机使用此设置可能会出现问题，例如打印损坏。使用每台打印机前请仔细确认打印机功能。

1)添加字符串此字符串功能可以在每次打印作业之前和之后发送打印机控制命令。可以为每个逻辑打印机单独设置此功能。

将所有字符串输入为十六进制数值。

例如：

某些 PostScript 驱动程序不会在打印作业后添加表示作业结束的代码 (0x04)。在这种情况下，请编辑以下条目：PRI_AFT.:04

2)替换字符串字符串替换功能执行打印数据的检索和替换。此功能主要用于打印机控制命令替换。每个逻辑打印机最多可以指定 20 组字符串的替换。

所有字符串都必须以十六进制数字字符的形式输入。

计数字节必须放在检索字符串和替换字符串之前。

示例：

编辑配置文件中的以下参数，将逻辑打印机 1:PR1_STR 的 UNIX 换行符 (0x0A)替换为 DOS 换行符 (0x0D 0x0A)。：01 0A 02 0D 0A 01：

检索字符串的计数字节（检索字符串的长度）0A：检索字符串 02：

替换字符串的计数字节（替换字符串的长度）

0D0A：替换字符串此示例是逻辑打印机 5 至 8 的默认设置。