CUPS Driver

Software Manual

for Linux

Supported Models

- ❑ ***Thermal Printers***
- ❑ ***Dot Matrix Printers***
- ❑ ***Kiosk Printers***

Rev. 7.7

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Table of Contents

Introduction

This manual explains how to operate the CUPS printer driver using ubunts 18.04LTS as an example. Images provided are different for other versions of ubunts or other distributions, but the same procedures can be used.

The printer's IP address must be set in advance to use a printer that supports LAN using this driver. If your LAN environment does not allow acquisition of an IP address from a DHCP server, set the IP address to the printer in advance. See 3. Guidelines for Using an Ethernet Environment for details on how to set the IP address for the printer.

This software dose not support ESC/POS emulation.

Test Environment

Distribution	Version
Red Hat Enterprise Linux	9.2 (64bit)
CentOS	7.9 (64bit)
openSUSE Leap	15.5 (64bit)
Fedora	38 (64bit)
ubuntu	16.04LTS (32bit) / 22.04 LTS (64bit)

When using a Bluetooth® Interface :

Depending on the distribution used and its version, the defaults may be configured so that SELinux restricts Bluetooth communication and the Bluetooth printer may not operate. Change the SELinux settings according to the environment of use.

◆ Target Model and Firmware Versions

Limitations for Bluetooth models

- The communication of Bluetooth interface is "SPP".

Thermal Printers

Target Model	Interface	Printer Firmware Version
TSP100IIU, TSP100IIIU series	USB	Ver 1.0 or later
TSP100IIILAN, TSP100IIIW series	Ethernet	Ver 1.0 or later
TSP100IIIBI series	Bluetooth	Ver 1.0 or later
TSP100IV series	USB / Ethernet	Ver 1.0 or later
TSP650II series	USB / Ethernet / Bluetooth / Parallel	Ver 1.0 or later
TSP700II series	USB / Ethernet / Bluetooth / Parallel	Ver 5.0 or later
TSP800II series	USB / Ethernet / Bluetooth / Parallel	Ver 2.0 or later
mPOP series	USB/ Bluetooth	Ver 1.0.1 or later (POP10) Ver 4.0.0 or later (POP10CI) Ver 5.0.0 or later (POP10CBI)
mC-Print3 series	USB / Ethernet / Bluetooth	Ver 1.0 or later (MCP31LB and MCP31L) Ver 2.0 or later (MCP30) Ver 3.0 or later (MCP31CB and MCP31C) Ver 5.0 or later (MCP31CBI and MCP31CI)
mC-Print2 series	USB / Ethernet / Bluetooth	Ver 1.0 or later
mC-Label3 series	USB / Bluetooth	Ver 1.0 or later

Dot Matrix Printers

Target Model	Interface	Printer Firmware Version
SP700 Series	USB / Ethernet / Bluetooth / Parallel	Ver 4.0 or later

Kiosk Printers

Target Model	Interface	Printer Firmware Version
SK1-211/221 series	USB	Ver 1.1 or later
SK1-211/221 Presenter series	USB	Ver 1.1 or later
SK1-311/321 series	USB	Ver 1.1 or later
SK1-311 Presenter series	USB	Ver 1.1 or later
SK1-41 series	USB	Ver 1.0 or later
SK1-41 Presenter series	USB	Ver 1.0 or later
SK5-31 Presenter series	USB / Ethernet	Ver 1.0 or later

1. Installation/Uninstallation Procedures

1.1 Installing Printer Driver

To install the driver, proceed as follows.

> ***Caution*** : Before installing the driver, connect the interface cable to the printer and turn on the power. See the hardware manual for details on how to connect the interface cable.
> The new version sometimes cannot be installed if an older version remains installed on your system. In such cases, see section 1.3 to uninstall the old version before installing a new version.

1. Startup the terminal.
2. Use the "su" command to enable root account privileges.
   $ su
3. Expand the starcupsdrv-x.xx.x_linux_yyyymmdd.tar.gz file downloaded via the website.
4. Navigate to the directory containing the following rpm files.

   starcupsdrv-x.x.x-x.x86_64.rpm

5. Run the rpm command using the 'i' and 'v' switches and the name of the RPM file.

   rpm -iv starcupsdrv-x.x.x-x.x86_64.rpm

The RPM has been installed.

When using a Bluetooth Interface proceed as follows to install.

Necessary package:

- "bluez-cups"

Install command:
(use the terminal command with administrative privileges.)
yum install bluez-cups

◆ ubuntu installation procedures

It is necessary to install from the source code.
Necessary package

- "gcc"
- "libcups2-dev"
- "libcupsimage2-dev"
- "bluez-cups" (When using a Bluetooth interface)

After making sure that your PC is connected to the internet, perform the following operation to install the three packages above.

```
# sudo apt-get update
# sudo apt-get install gcc
# sudo apt-get install libcups2-dev
# sudo apt-get install libcupsimage2-dev
```

When using a Bluetooth Interface

```
# apt-get install bluez-cups
```

After downloading the starcupsdrv-x.xx.x_linux_yyyymmdd.tar.gz file via the website, copy the file to your PC and perform the following operation.

```
# tar xzvf starcupsdrv-x.xx.x_linux_yyyymmdd.tar.gz
# cd starcupsdrv-x.xx.x_linux
# cd SourceCode
# tar xzvf starcupsdrv-src-x.xx.x.tar.gz
# cd starcupsdrv
# make
# make install
```

Note: The x.x.x-x is module version.
The yyyymmdd is the 8 digit date on which the package was release.

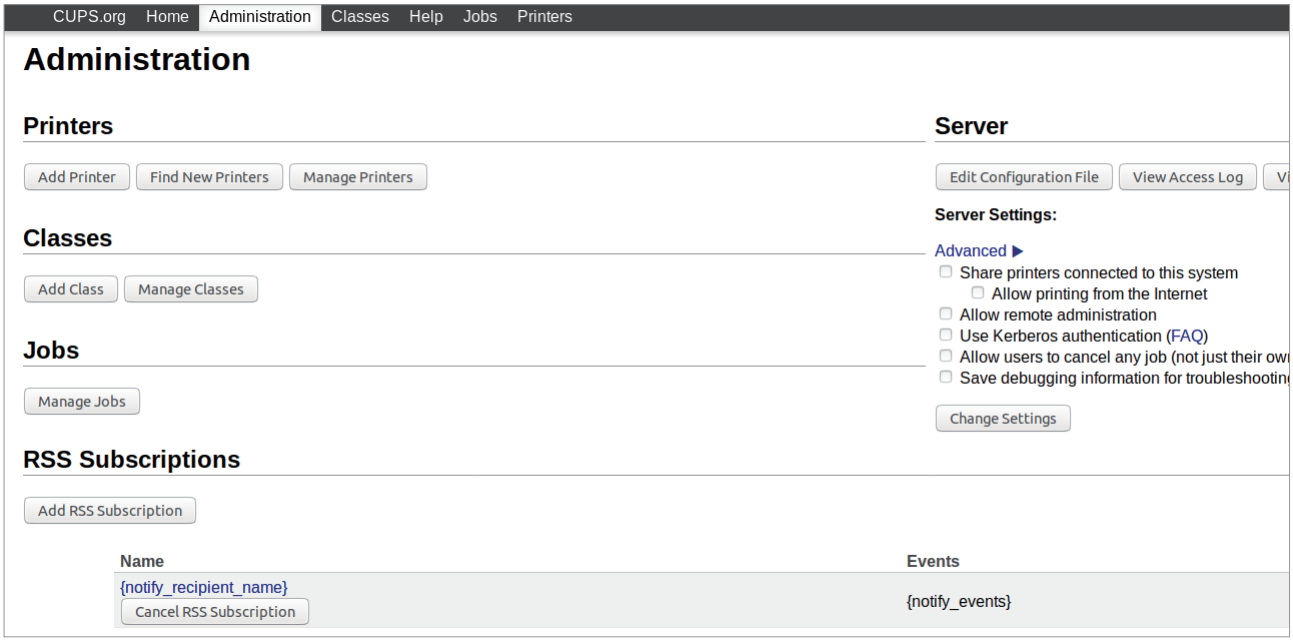
Next, enter the CUPS management screen (http://localhost:631/admin).
(Refer to section 1.2. Registering the Printer for details.)

1.2 Registering the Printer

Procedures for registering the printer differ according to the type of interface you use. See the page relating to your environment.

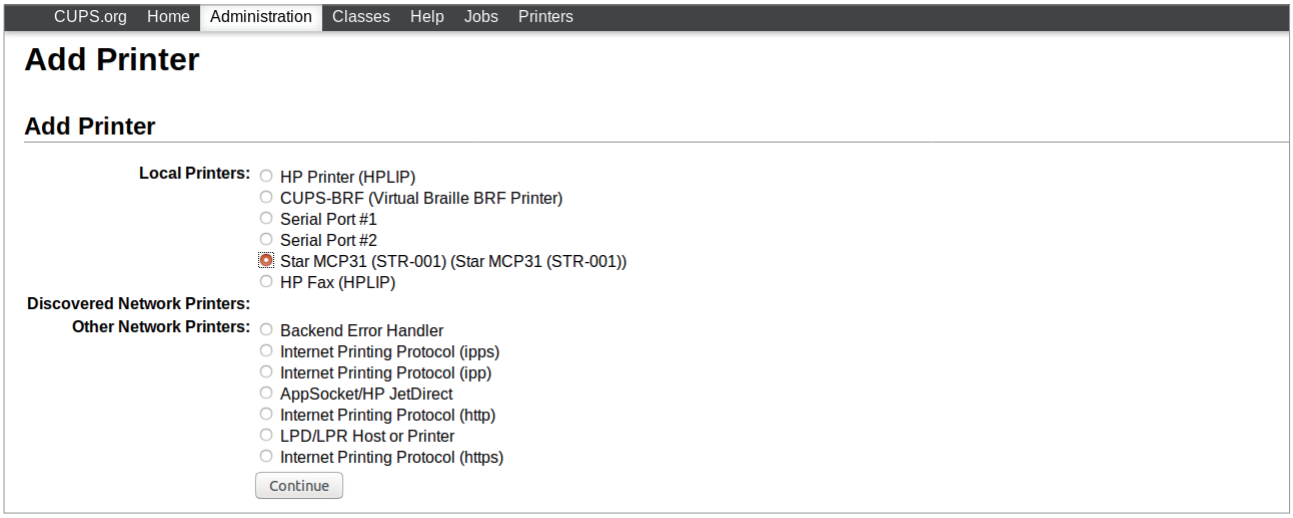
1.2.1 When Using a USB Interface

1. Connect the printer to PC, and then turn on the printer's power switch.
2. Open your favorite web browser and navigate to "http://localhost:631/admin".

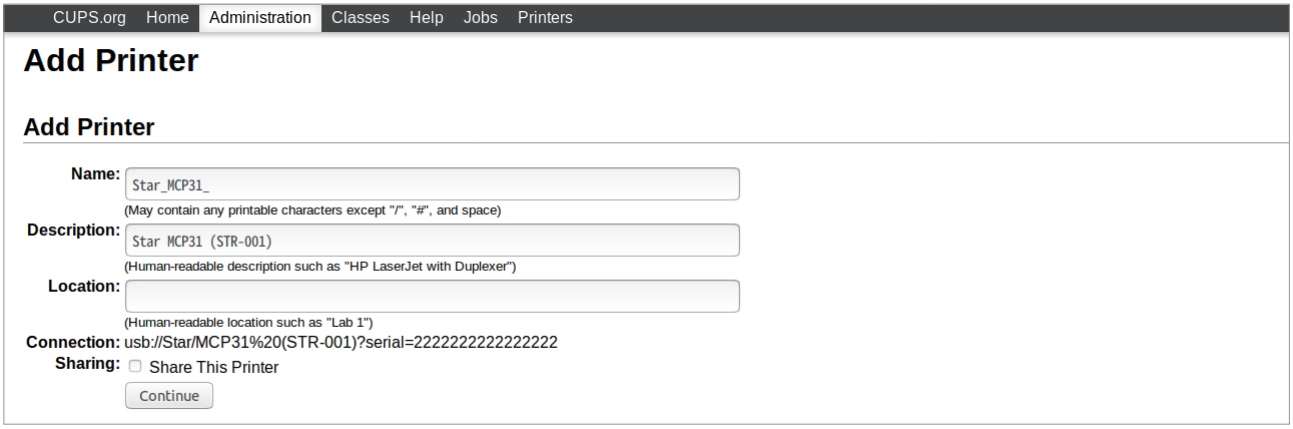


3. Click "Add Printer".
   Note: When a dialog box is displayed requesting certification, enter the root password and press [Yes].

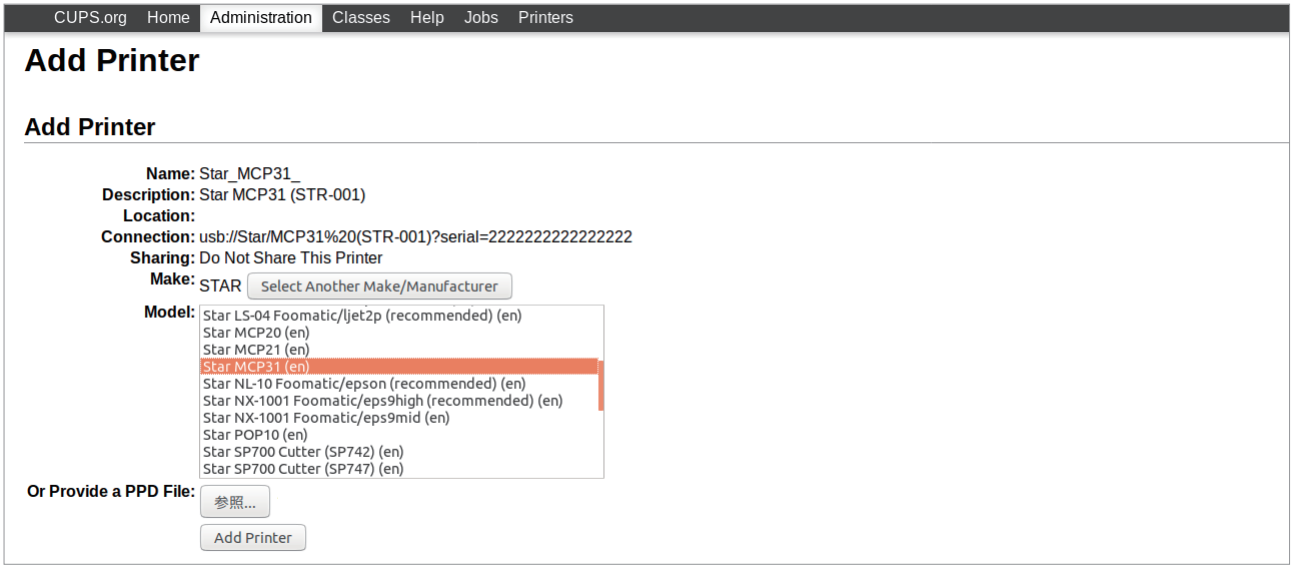
4. Select the device to which the printer is connected. Then click "Continue".



5. In the Add Printer screen, enter "Name:", "Description:" and "Location". Then click "Continue". Location and Description can be left blank.



6. Select the printer model/driver. Then click "Add Printer".



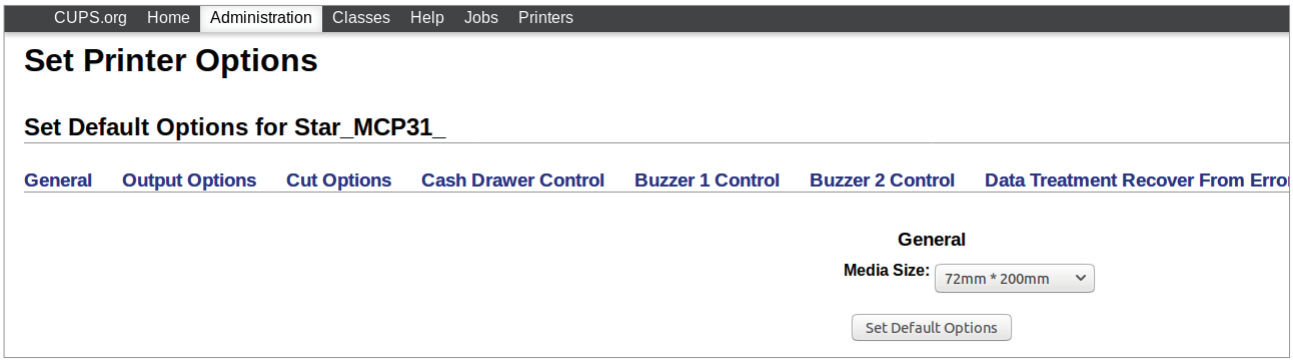
Note : In some versions of CUPS, Star model name is not displayed in the model/driver pull-down menu. In such cases, after performing the following, return to the previous page and reregister the printer.

```
$ su
# cp -fr /usr/share/cups/model/star /usr/share/ppd/star
```

Point! The correspondence table for printer models and drivers is shown below.

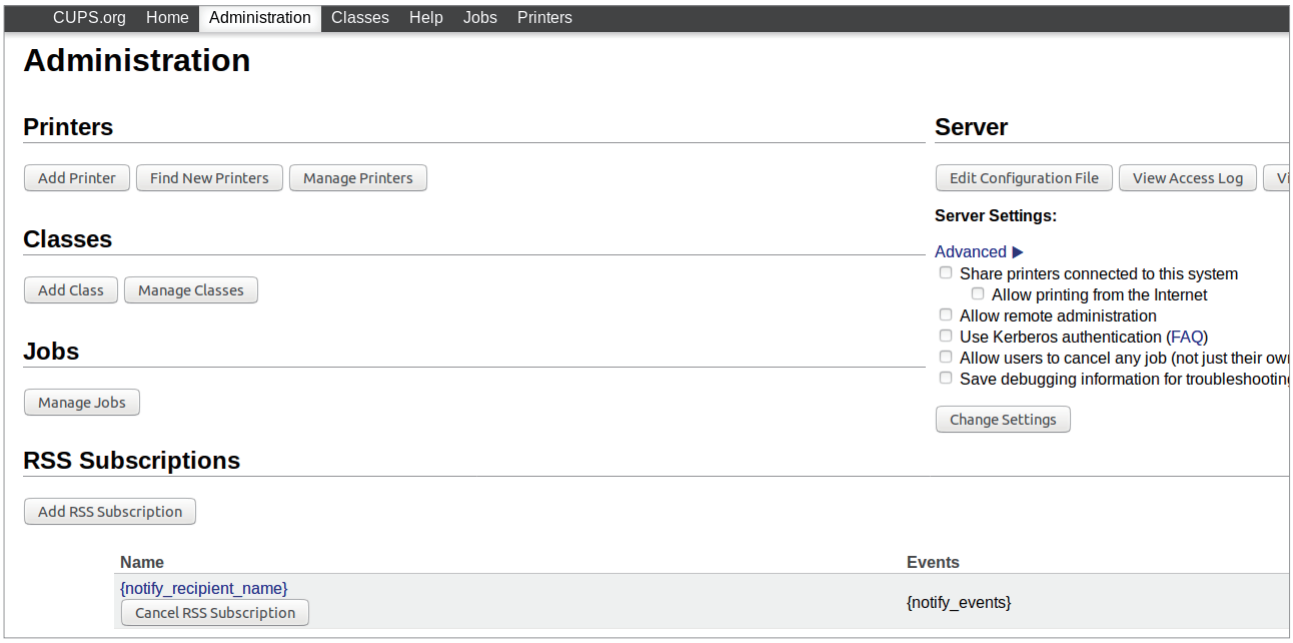
Series	Model	Driver
TSP100 series	TSP143IIU, TSP143IIIU, TSP143IV-UE, TSP143IV-UE SK	Star TSP100 Cutter (en)
TSP650II series	TSP654II	Star TSP650 Cutter (en)
TSP700II series	TSP743II	Star TSP700II (en)
TSP800II series	TSP847II	Star TSP800II (en)
mPOP series	POP10, POP10CI, POP10CBI	Star POP10 (en)
mC-Print3 series	MCP30	Star MCP30 (en)
	MCP31CI, MCP31CBI, MCP31L, MCP31LB, MCP31C, MCP31CB	Star MCP31 (en)
mC-Print2 series	MCP20, MCP20B	Star MCP20 (en)
	MCP21LB	Star MCP21 (en)
mC-Label3 series	MCL32CI, MCL32CBI	Star MCL32 (en)
SP700 series	SP742	Star SP700 Cutter(SP742) (en)
	SP747	Star SP700 Cutter(SP747) (en)
	SP712	Star SP700 Tear Bar(SP712) (en)
	SP717	Star SP700 Tear Bar(SP717) (en)
SK1-211/221 series	SK1-211, SK1-221	STAR Sanei SK1-211/221 (en)
SK1-211/221 Presenter series	SK1-211 Presenter, SK1-221 Presenter	STAR Sanei SK1-211/221 Presenter (en)
SK1-311/321 series	SK1-311, SK1-321	STAR Sanei SK1-311/321 (en)
SK1-311 Presenter series	SK1-311 Presenter	STAR Sanei SK1-311 Presenter (en)
SK1-41 series	SK1-41	STAR Sanei SK1-41 (en)
SK1-41 Presenter series	SK1-41 Presenter	STAR Sanei SK1-41 Presenter (en)
SK5-31 Presenter series	SK5-31 Presenter	STAR Sanei SK5-31 Presenter (en)

This completes printer installation and registration.



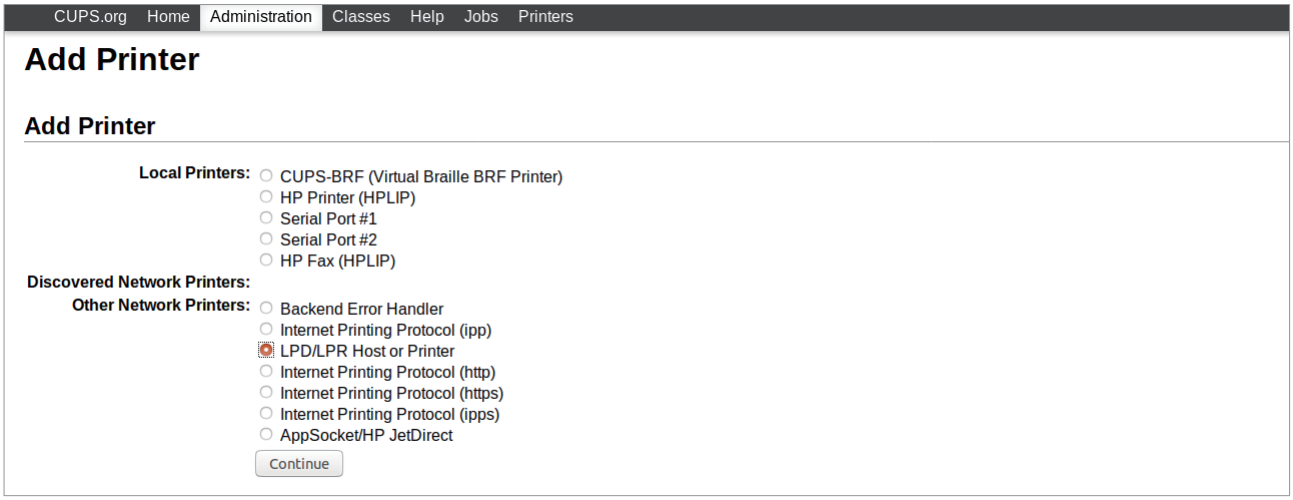
1.2.2 With the Ethernet Interface

1. Open your favorite web browser and navigate to "http://localhost:631/admin".

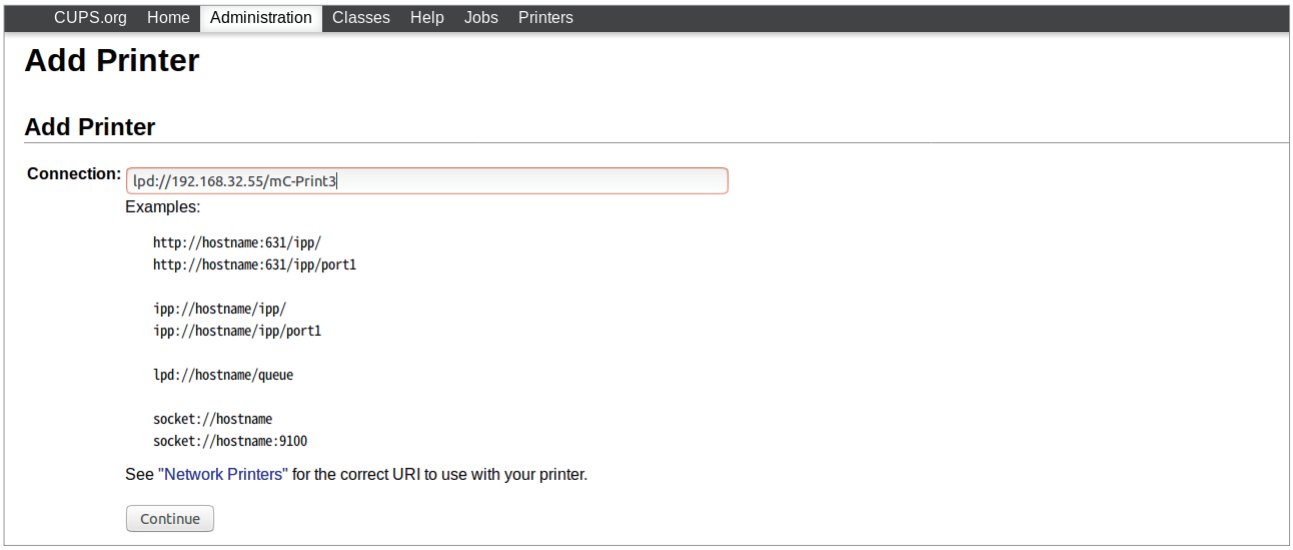


2. Click "Add Printer".
   Note: When a dialog box is displayed requesting certification, enter the root password and press [Yes].

3. Select the device (LPD/LPR HOST or Printer) to which the printer is connected. Then click "Continue".



4. Specify the printer device on the URI.
   Specify the Device URI for the LPD protocols as shown below.
   lpd://<host name>/<queue-name>
   Host name is the IP address of the printer to set. (Check using self-print.)
   After entering, click "Continue".



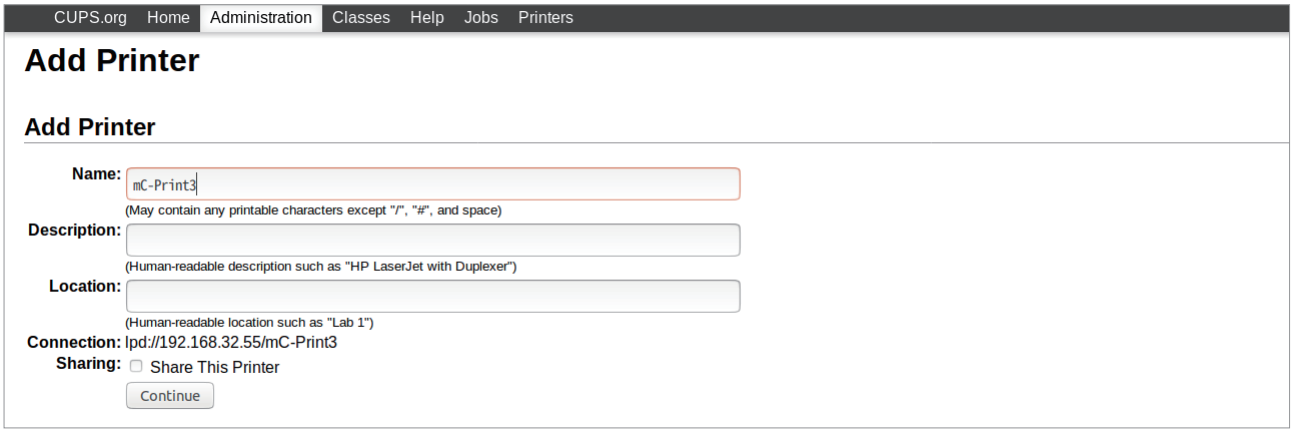
Point! When using port 9100, set the following.

Device: AppSocket/HP Jet Direct

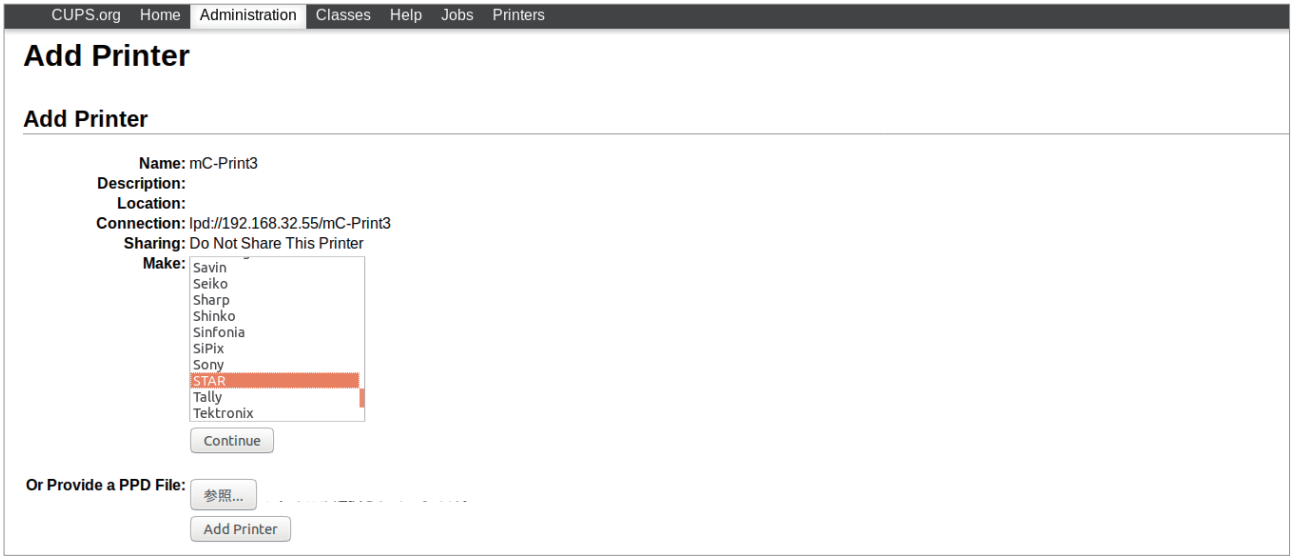
Device URI: [IP address of printer being set] : 9100

For example) **socket://192.168.32.228 : 9100**

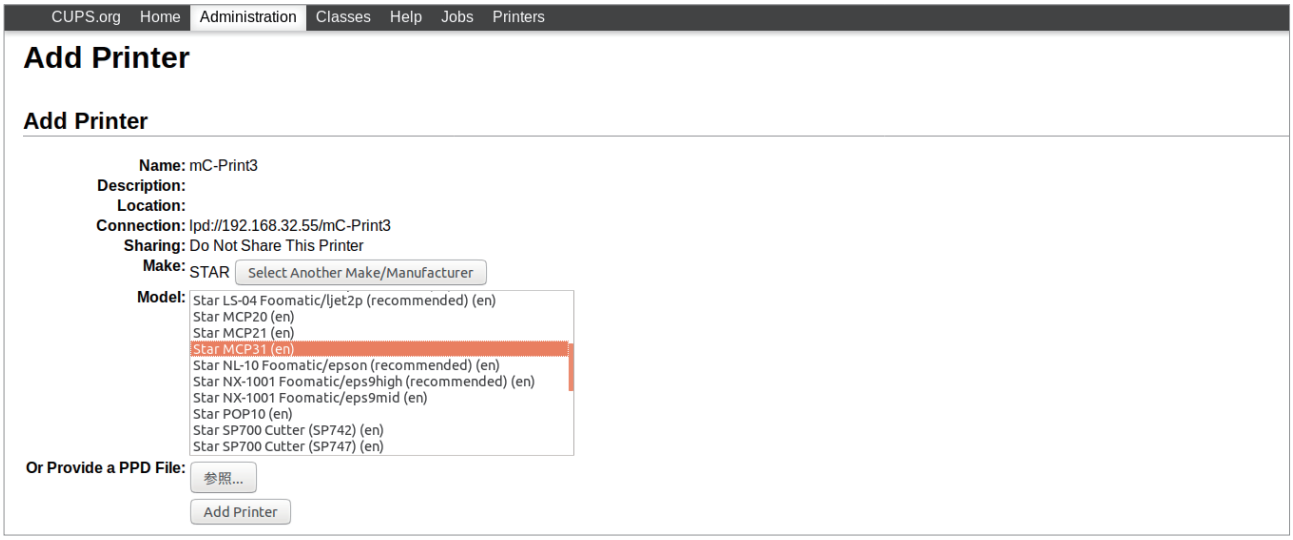
5. In the Add Printer screen, enter 'Name:', 'Location:' and 'Description:'. Then click "Continue". Location, and Description can be left blank.



6. Select "STAR" as the Make. Then click "Continue".



7. Select the printer model/driver. Then click "Add Printer".



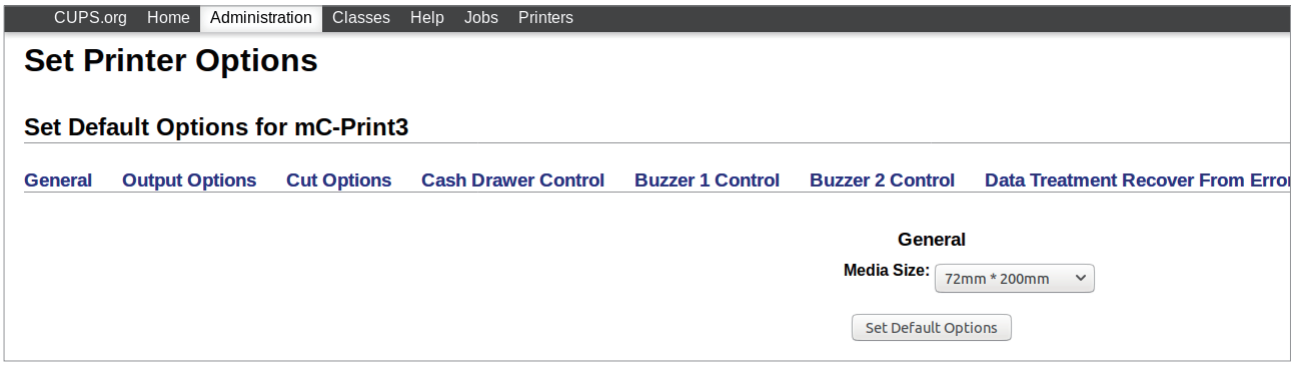
Note : In some versions of CUPS, Star model name is not displayed in the model/driver pull-down menu. In such cases, after performing the following, return to the previous page and reregister the printer.

```
$ su
# cp -fr /usr/share/cups/model/star /usr/share/ppd/star
```

Point! The correspondence table for printer models and drivers is shown below.

Series	Model	Driver
TSP100 series	TSP143IIIW, TSP143IIILAN, TSP143IV-UE, TSP143IV-UE SK	Star TSP100 Cutter (en)
TSP650II series	TSP654II	Star TSP650 Cutter (en)
TSP700II series	TSP743II	Star TSP700II (en)
TSP800II series	TSP847II	Star TSP800II (en)
mC-Print3 series	MCP30	Star MCP30 (en)
	MCP31CI, MCP31CBI, MCP31L, MCP31LB, MCP31C, MCP31CB	Star MCP31 (en)
mC-Print2 series	MCP20, MCP20B	Star MCP20 (en)
	MCP21LB	Star MCP21 (en)
SP700 series	SP742	Star SP700 Cutter(SP742) (en)
	SP747	Star SP700 Cutter(SP747) (en)
	SP712	Star SP700 Tear Bar(SP712) (en)
	SP717	Star SP700 Tear Bar(SP717) (en)
SK5-31 Presenter series	SK5-31 Presenter	STAR Sanei SK5-31 Presenter (en)

This completes printer installation and registration.



1.2.3 With the Bluetooth Interface

1 To pair them with the bluetooth printer, proceed as follows.

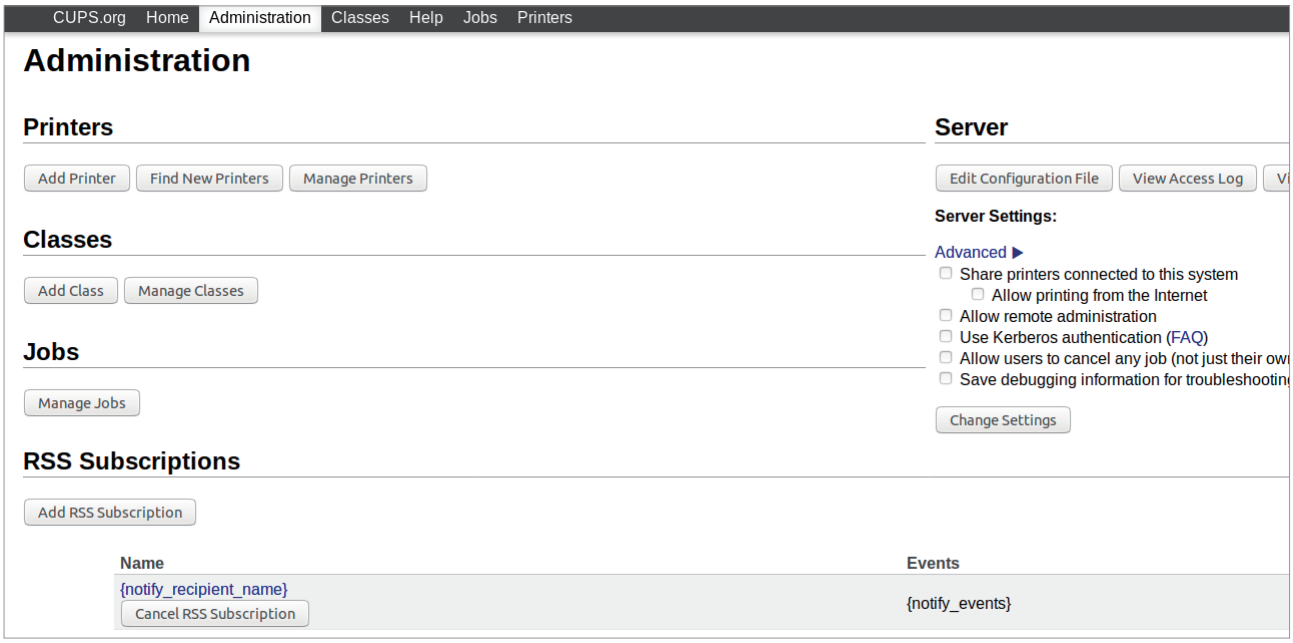
1) Turn the printer power ON.

2) **When using TSP650II, TSP700II, TSP800II and SP700**
Hold down the button of the bluetooth card for more than 10 seconds to set the pairing mode of the printer.

3) Click Bluetooth icon, and select "Set up new device". When click "Forward", the system find the printer.

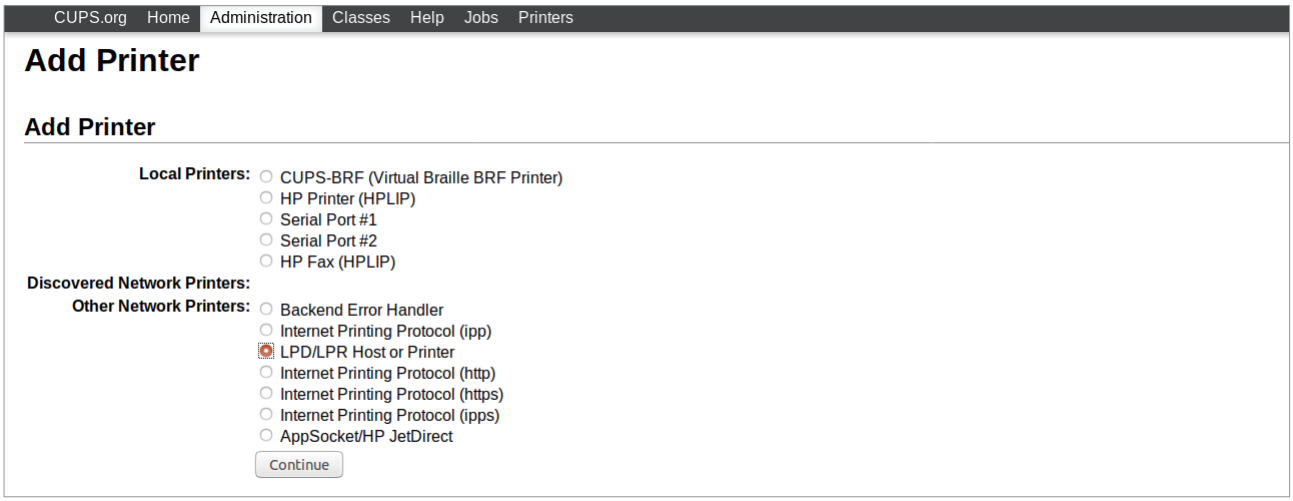
4) Select the printer which is displayed in the Serch panel, and click "Forward".
The system start the pairing. If the pairing is unsuccessful, please try again.

2. Open your favorite web browser and navigate to "http://localhost:631/admin".



3. Click "Add Printer".
Note: When a dialog box is displayed requesting certification, enter the root password and press [Yes].

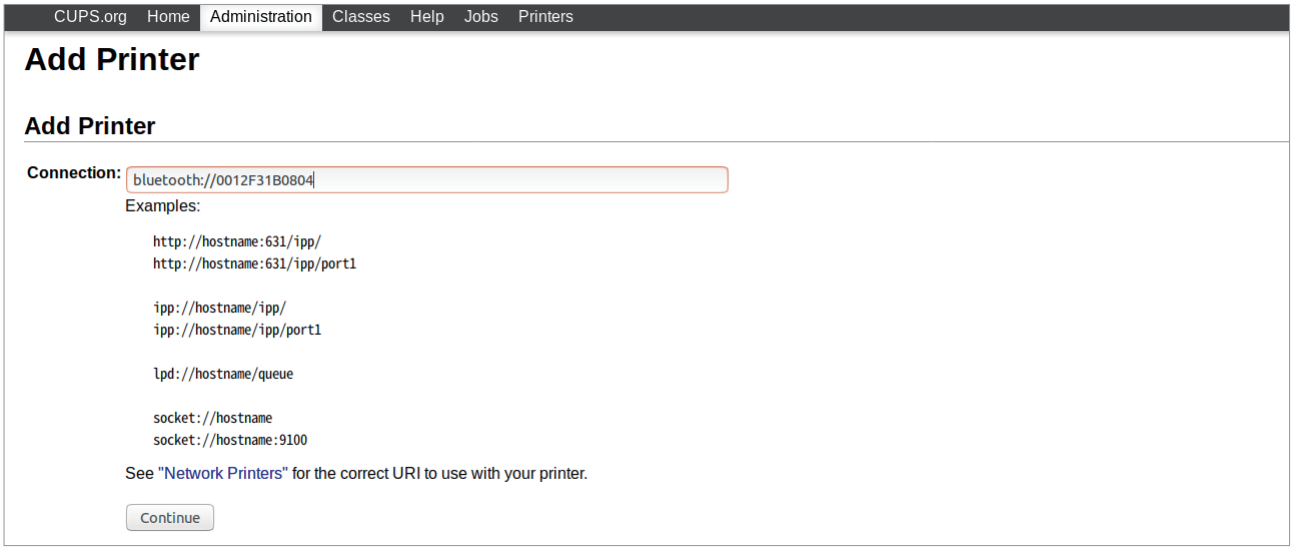
4. Select the 'LPD/LPH Host or Printer'. Then click “Continue”.



5. Specify the device URI for the printer as shown below and click "Continue".

   bluetooth://<<Bluetooth Address>>

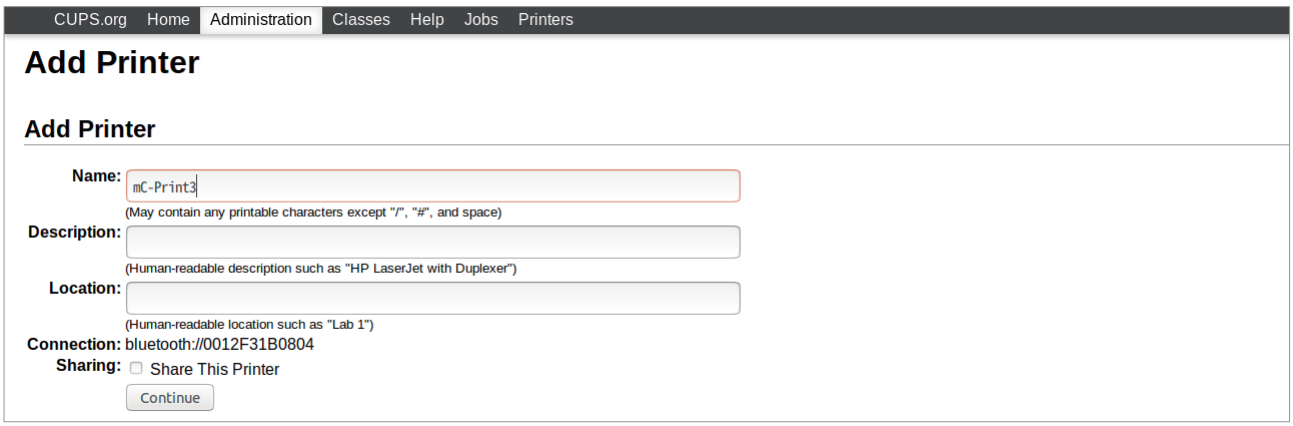
   ex. **bluetooth://0012f31B0804**



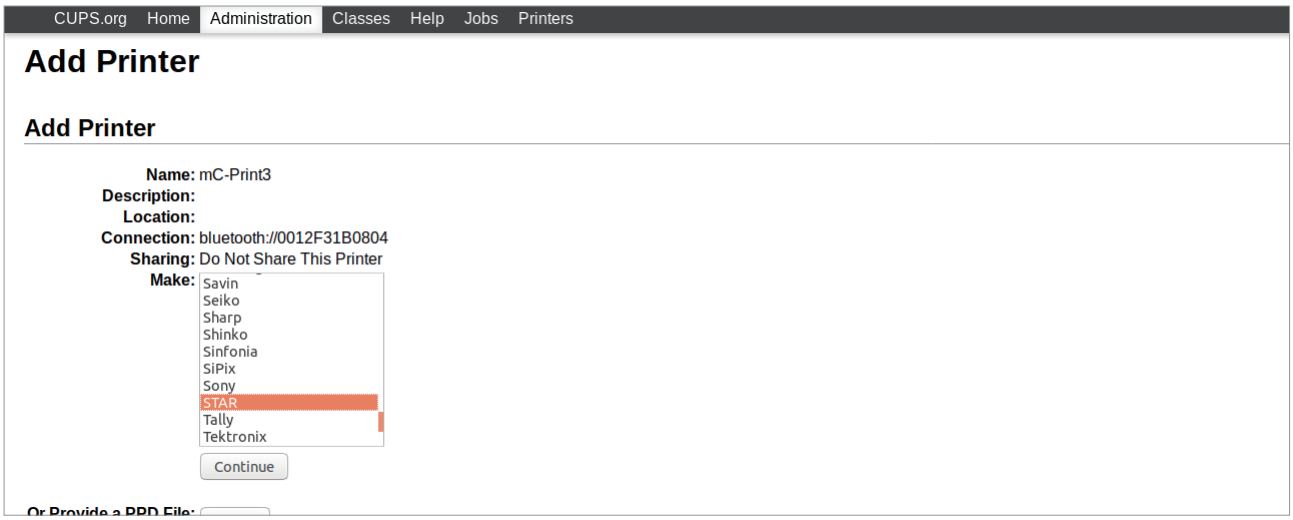
Point! The Bluetooth address is included in the Bluetooth information printed by self-print (by powering on while pressing the Feed button*).

*__When using SP700:__ When the buzzer sounds once, release the FEED button.

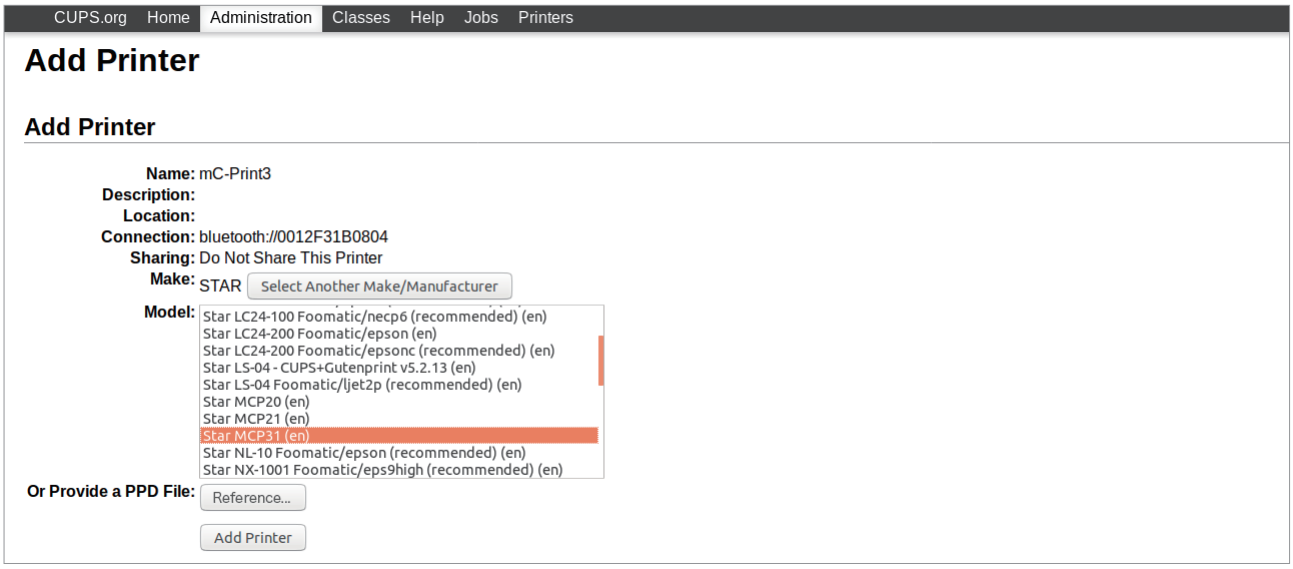
6. In the Add Printer screen, enter "Name:", "Description:" and "Location". Then click "Continue". Location, and Description can be left blank.



7. Select "STAR" as the Make. Then click "Continue".



8. Select the printer model. Then click "Add Printer".



Note : In some versions of CUPS, Star model name is not displayed in the model/driver pull-down menu. In such cases, after performing the following, return to the previous page and reregister the printer.

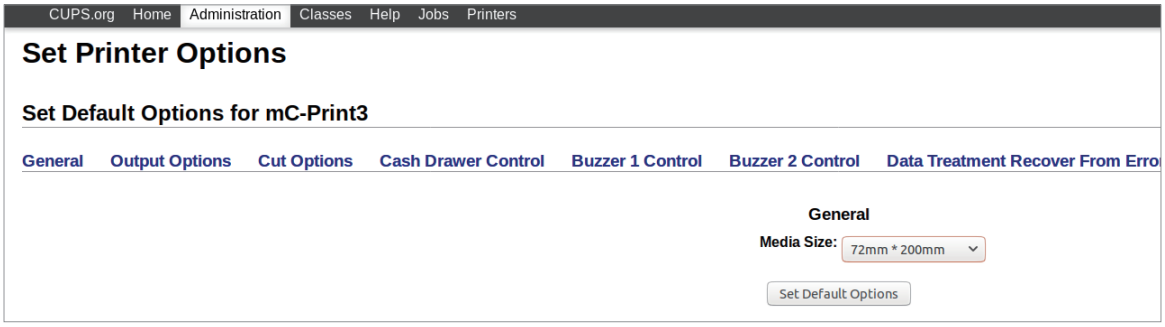
$ su
# cp -fr /usr/share/cups/model/star /usr/share/ppd/star

Point! The correspondence table for printer models and drivers is shown below.

Series	Model	Driver
TSP100 series	TSP143IIIBI	Star TSP100 Cutter (en)
TSP650II series	TSP654II	Star TSP650 Cutter (en)
TSP700II series	TSP743II	Star TSP700II (en)
TSP800II series	TSP847II	Star TSP800II (en)
mPOP series	POP10, POP10CBI	Star POP10 (en)
mC-Print3 series	MCP31CBI, MCP31LB, MCP31CB	Star MCP31 (en)
mC-Print2 series	MCP20B	Star MCP20 (en)
	MCP21LB	Star MCP21 (en)
mC-Label3 series	MCL32CBI	Star MCL32 (en)
SP700 series	SP742	Star SP700 Cutter (SP742) (en)

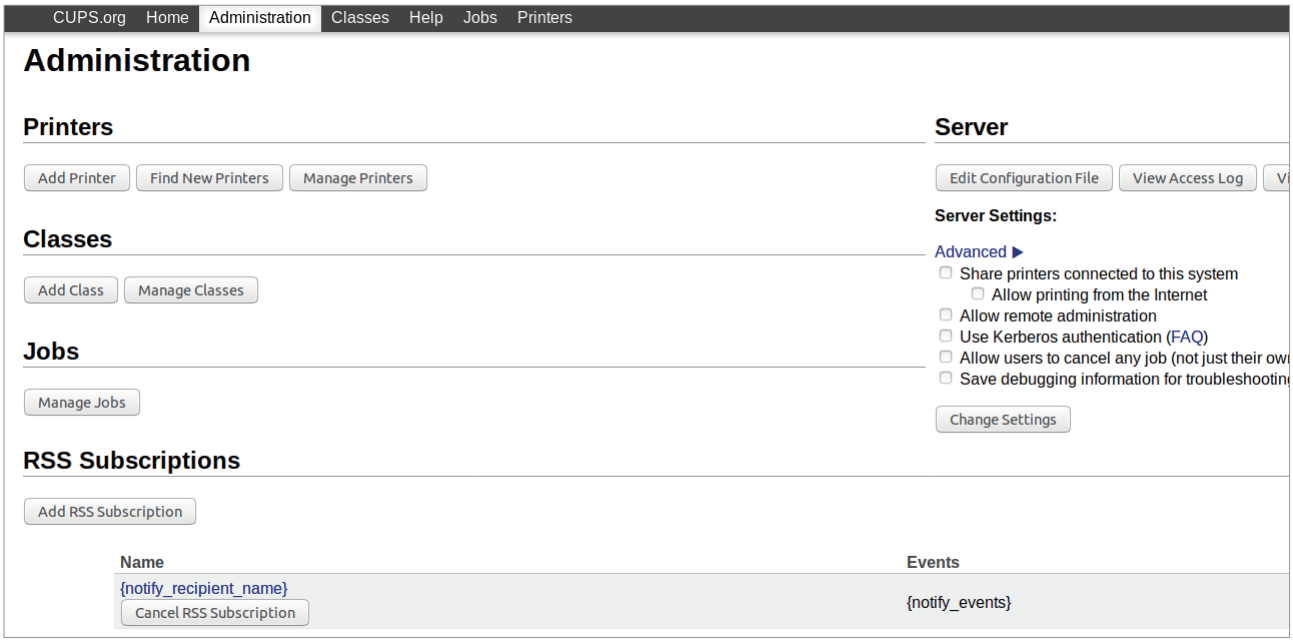
9. Select "Policies" and set "Error Policy:" to [retry-current-job].

This completes printer installation and registration.



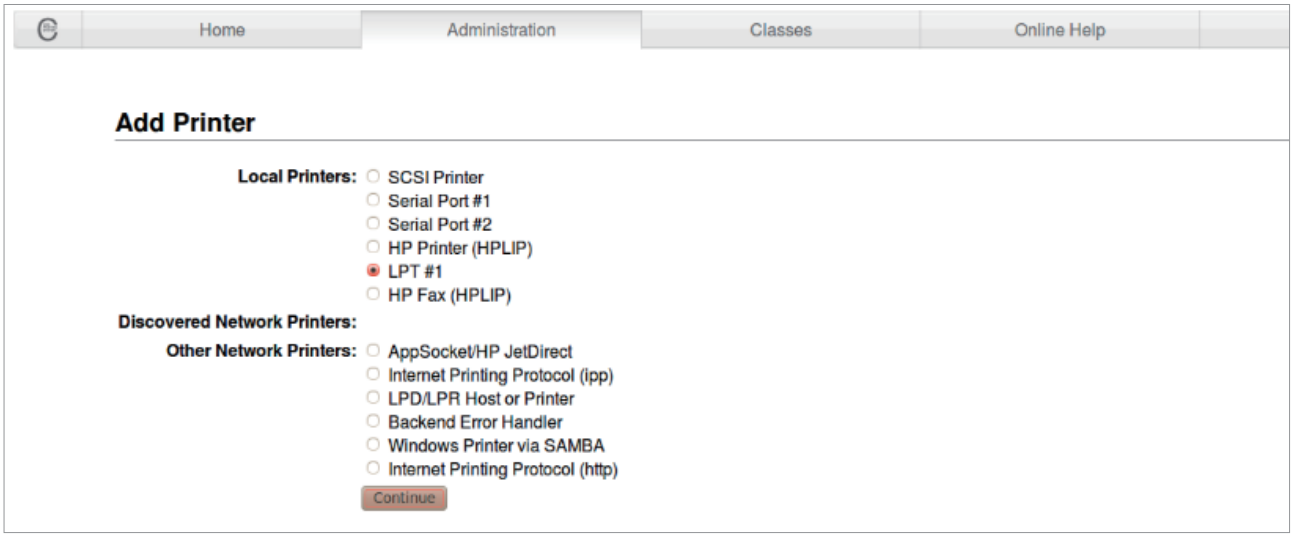
1.2.4 When Using a Parallel Interface

1. Open your favorite web browser and navigate to "http://localhost:631/admin".

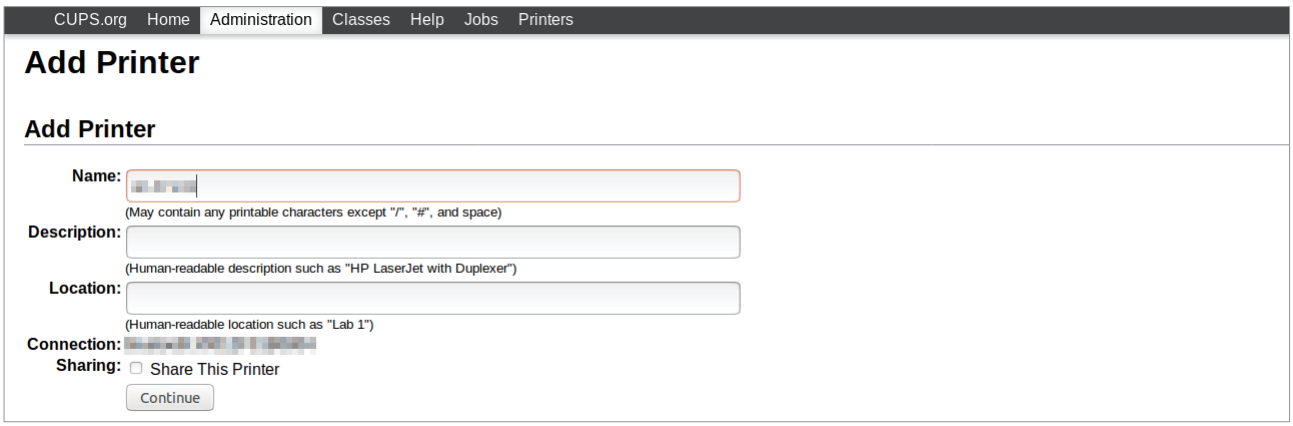


2. Click "Add Printer".
   Note: When a dialog box is displayed requesting certification, enter the root password and press [Yes].

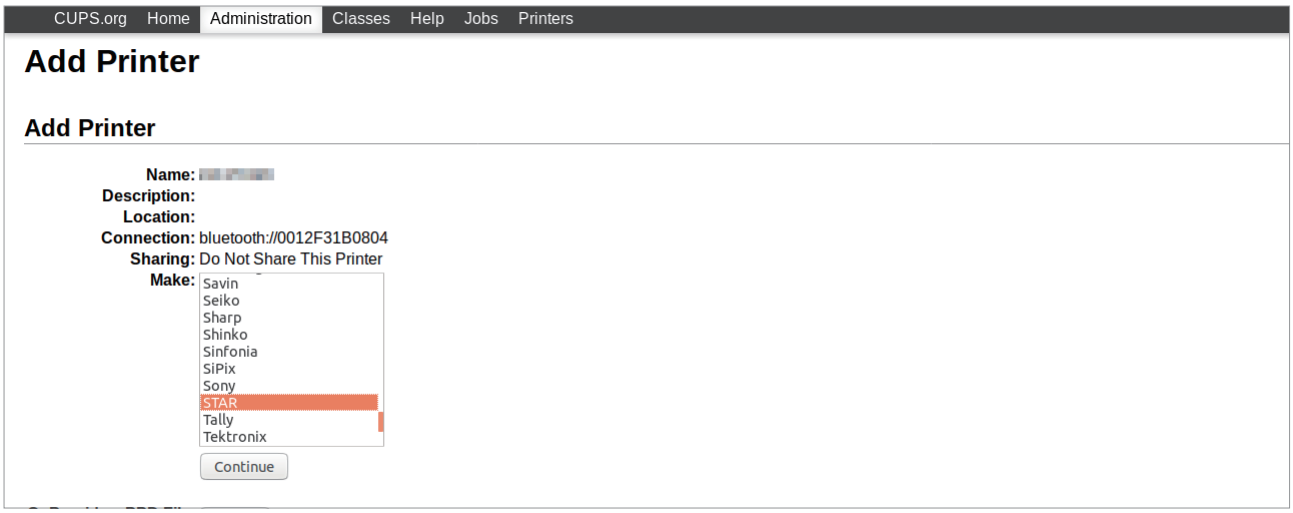
3. In the Add Printer screen, select "LPT #1". Then click "Continue".



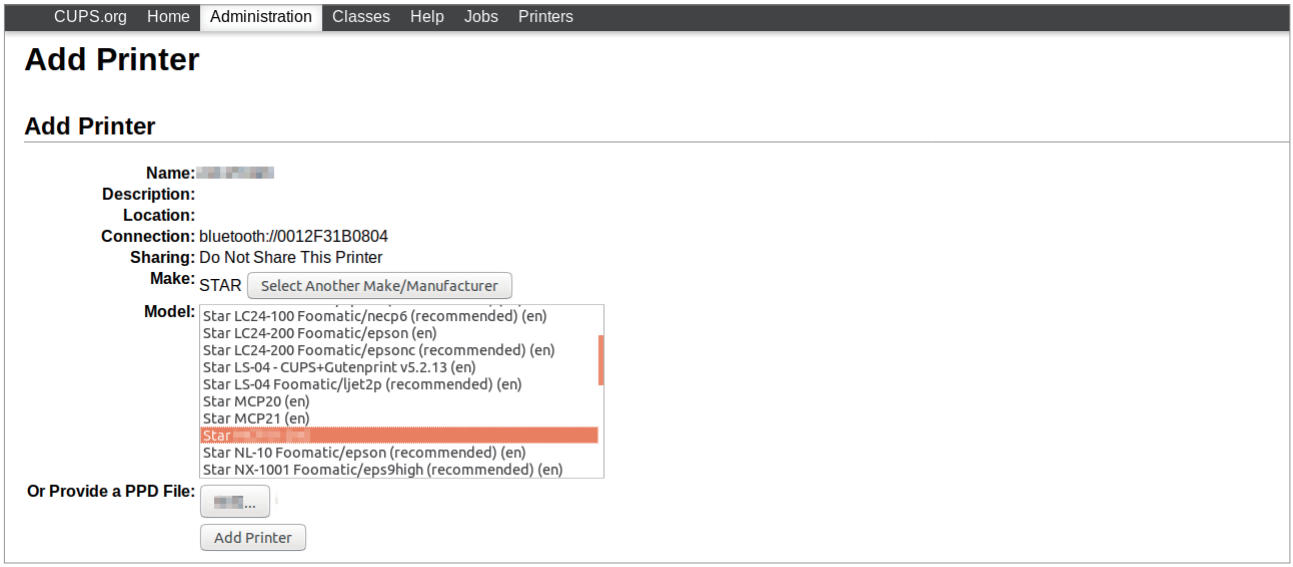
4. In the Add Printer screen, enter "Name:", "Description:" and "Location". Then click "Continue". Location, and Description can be left blank.



5. Select "STAR" as the Make. Then click "Continue".



6. Select the printer model. Then click "Add Printer".



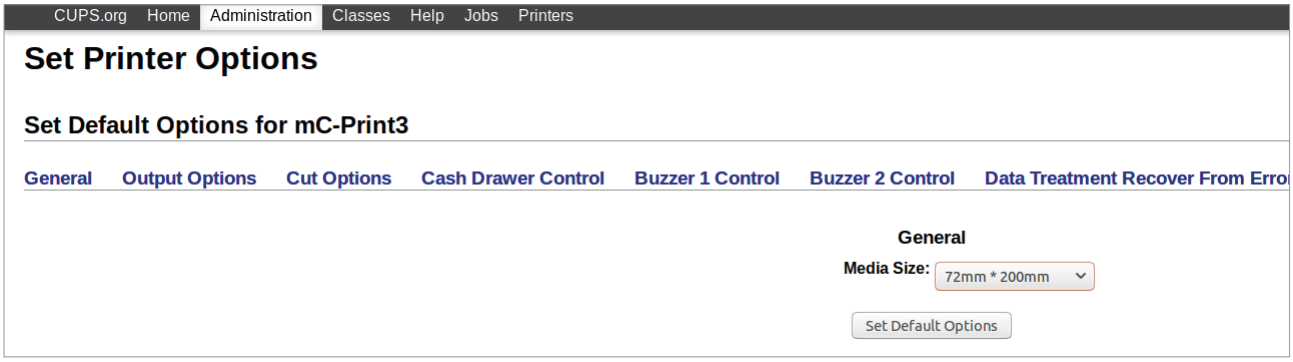
Note : In some versions of CUPS, Star model name is not displayed in the model/driver pull-down menu. In such cases, after performing the following, return to the previous page and reregister the printer.

$ su
# cp -fr /usr/share/cups/model/star /usr/share/ppd/star

Point! The correspondence table for printer models and drivers is shown below.

Series	Model	Driver
TSP650II series	TSP654II	Star TSP650 Cutter (en)
TSP700II series	TSP743II	Star TSP700II (en)
TSP800II series	TSP847II	Star TSP800II (en)
SP700 series	SP742	Star SP700 Cutter(SP742) (en)
	SP747	Star SP700 Cutter(SP747) (en)
	SP712	Star SP700 Tear Bar(SP712) (en)
	SP717	Star SP700 Tear Bar(SP717) (en)

This completes printer installation and registration.

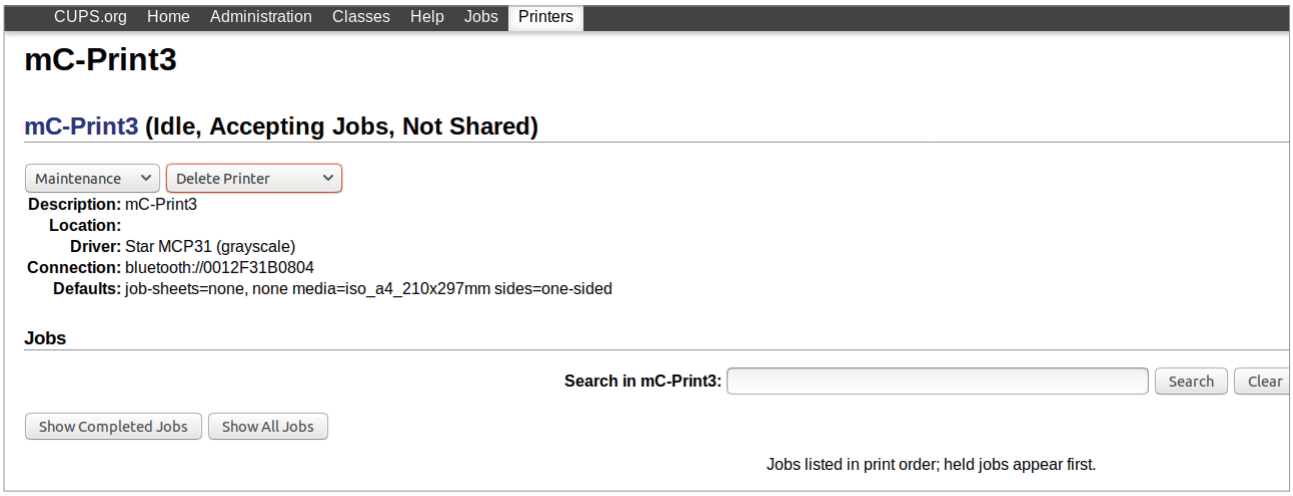


1.3. Uninstallation Procedures

To uninstall the driver, proceed as follows.

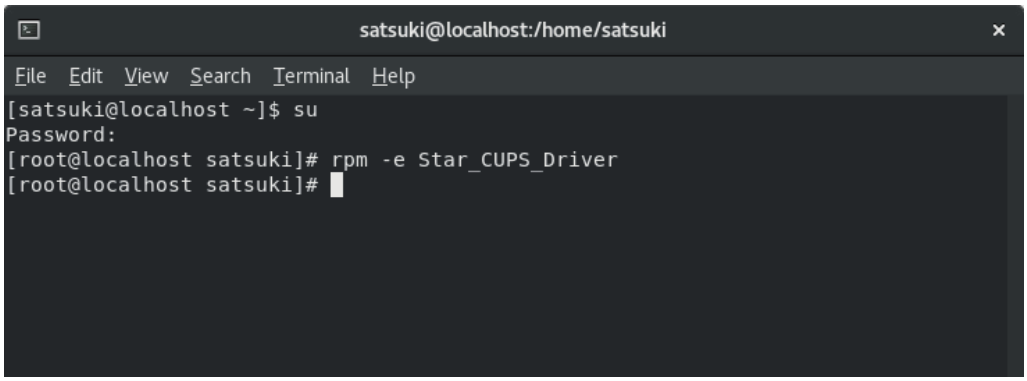
1. Open your favorite web browser and navigate to “http://localhost:631/printers”.
2. Select the registered printer queue.

3. Select the "Delete Printer".



4. Click on the “Delete Printer”.

5. Startup the terminal.
6. Use the "su" command to enable root account privileges.
   $ su
7. Run the rpm command using the "e" switches.
   rpm -e Star_CUPS_Driver



✱ ubuntu uninstalling procedures

$ cd "Source code highest level directory path"
$ su -
# make remove

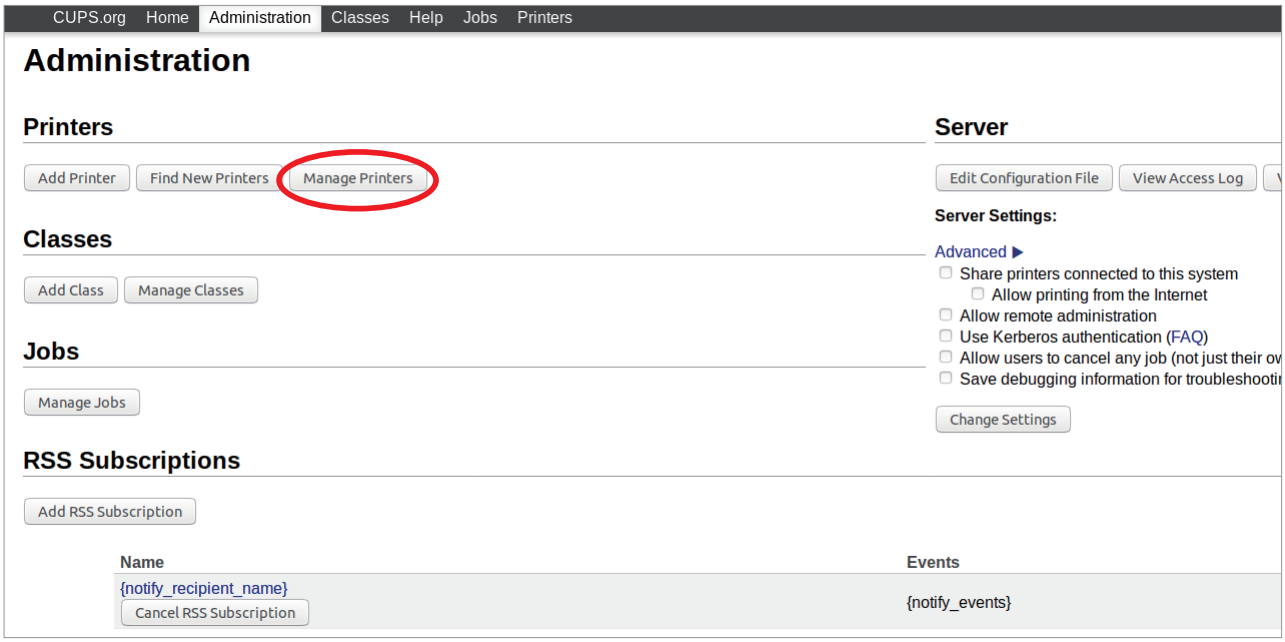
Note : If the folder /usr/share/ppd/star is copied while registering a printer, use the command below to delete the folder.

rm -fr /usr/share/ppd/star

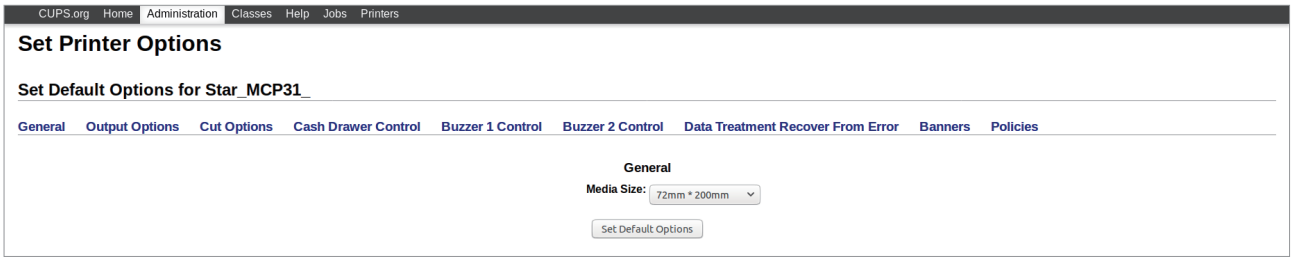
2. Setting the Printer Functions

Setting the printer functions is done on the Web browser CUPS management screen.

1. Access the CUPS management screen (http://localhost:631/admin) using the web browser. Click "Manage Printers".



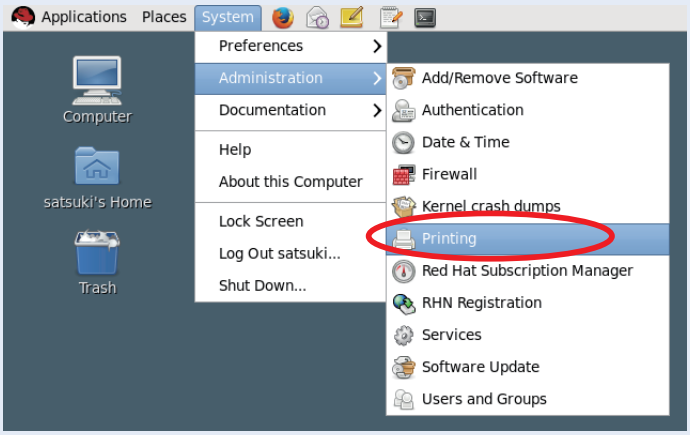
2. An earlier printer driver is registered, so to change the setting.



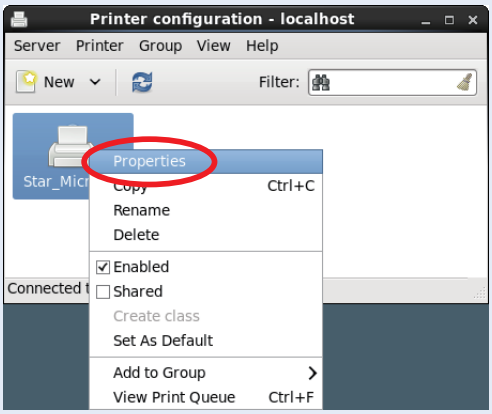
◆ When the printer function is not displayed on the CUPS management screen

With some OSs such like Red Hat 6.6 and CentOS 6.6, the printer function is not displayed on the CUPS management screen. Please set the printer function in the following steps.

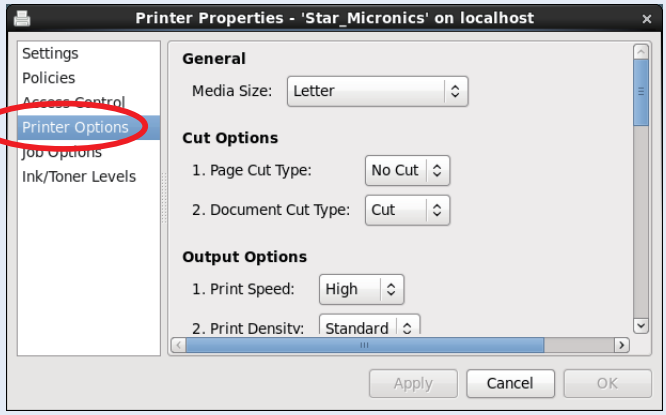
(1) Open "System - Administration - Printing".



(2) Right-click on the target printer icon and click "Properties" in the pull-down menu .



(3) Select [Printer Options] in the menu to display the setting items and set the printer functions.



2.1 Function List

Depending on the printer that you select, the functions that are displayed may differ, and only the ones displayed can be set.

2.1.1 Thermal Printers

General

1. Media Size: (paper size)

The following paper sizes are available and can be set. In some cases, these settings will not work as expected depending on the application being used to print from.

Point! When a paper size is selected that exceeds the maximum printing width, the print is shrunk to fit the maximum printing width.

Paper Size	Supported Models			
	TSP100*	TSP654II	TSP700II	TSP800II
32 * 100mm	○**			
32 * 200mm	○**			
32 * 1500mm	○**			
34.5 * 100mm	○**			
34.5 * 200mm	○**			
34.5 * 1500mm	○**			
50.8 * 30mm	○	○	○	
⋮	⋮	⋮	⋮	
50.8 * 200mm	○	○	○	
50.8 * 1500mm		○	○	
50.8 * 2000mm	○	○	○	
52 * 30mm			○	
⋮			⋮	
52 * 200mm			○	
52 * 1500mm			○	
52 * 2000mm			○	
52.5 * 30mm			○	
⋮			⋮	
52.5 * 200mm			○	
52.5 * 1500mm			○	
52.5 * 2000mm			○	
72 * 30mm	○	○	○	
⋮	⋮	⋮	⋮	
72 * 200mm	○	○	○	
72 * 1500mm		○	○	
72 * 2000mm	○	○	○	
80 * 30mm			○	
⋮			⋮	
80 * 200mm			○	
80 * 1500mm			○	
80 * 2000mm			○	

* **TSP100:** TSP100IV, TSP100IV SK, TSP100IIIW/LAN/BI/U, TSP100IIU

** Only the TSP100IV SK is supported.

Paper Size	Supported Models			
	TSP100*	TSP654II	TSP700II	TSP800II
104 * 30mm				○
⋮				⋮
104 * 200mm				○
104 * 1500mm				○
104 * 2000mm				○
A4	○	○	○	○
Letter	○	○	○	○
Legal	○	○	○	○

Paper Size	Supported Models			
	mPOP	mC-Print3	mC-Print2	mC-Label3
34.5 * 100mm				○
34.5 * 200mm				○
34.5 * 1500mm				○
48 * 100mm	○	○	○	○
48 * 200mm	○	○	○	○
48 * 1500mm	○	○	○	○
50.8 * 100mm	○	○	○	○
50.8 * 200mm	○	○	○	○
50.8 * 1500mm	○	○	○	○
52.5 * 100mm				○
52.5 * 200mm				○
52.5 * 1500mm				○
54 * 100mm	○		○	○
54 * 200mm	○		○	○
54 * 1500mm	○		○	○
72 * 100mm		○		○
72 * 200mm		○		○
72 * 1500mm		○		○
A4	○	○	○	○
Letter	○	○	○	○
Legal	○	○	○	○

Output Options

• Print Speed:

Sets the print speed. Note that the setting also affects the print quality.

Setting	Default	Details
High	✓	Print quality has priority over speed.
Middle *		Print quality and speed are in the middle.
Low		Best quality, but slow print speed.

* Not supported by the mPOP series.

Point! This function is supported by TSP100, TSP650II,TSP700II,TSP800II, mPOP, mC-Print3 and mC-Label3 series.

• Print Density:

This sets the printing Density.

Setting Value	Default	Details
-3 to -1 *		Larger value with - (minus) makes print density lighter.
Standard	✓	Prints with normal density.
+1 to +3 or +4		Larger value with + (plus) makes print density darker.

* Not supported by the mPOP and mC-Print2 series.

Point! This function is supported by TSP100, 650II, mPOP, mC-Print3, mC-Print2 and mC-Label3 series.

• Page Type:

This sets the page type.

Setting	Default	Details
Variable Length	✓	Does not output blank data until the bottom of the page. Receipt ends after final data is printed.
Fixed Length		Outputs blank data as a blank until the bottom of the page. Receipt ends after printing the length specified by paper size.
Black Mark *		Outputs blank data as a blank until the black mark. Receipt ends after the black mark is detected.
Label(Gap) *		If you want the printer to feed paper until the head of the label detected by the transmission sensor.

* This setting value is not supported depending on the model.

• **Top Search:**

Selects whether the printer executes a reverse-feed before print.

Setting	Default	Details
Disable	✓	No reverse-feed before print.
Enable		Executes reverse-feed before print.

Point! This function is supported by TSP700II and TSP800II series.

Note : This function is available only when the **Cut Options** setting is configured to 'Full Cut'. The function is not available when 'PartialCut' is selected.

• **Top Margin:**

Selects whether the printer executes a reverse-feed before print.

Setting	Default	Details
Disable	✓*1	No reverse-feed before print. The default margins (11 mm) are applied.
2mm to 10mm *3		Set the margin from the cut position to the print start position.
3mm	✓*2	Set the margin from the cut position to the print start position to 3mm.

*1 mC-Print3 series *2 mC-Label3 series *3 Not supported by the mC-Label3 series

Point! This function is supported by MCP31L, MCP31LB, MCP31C, MCP31CB and mC-Label3 series.

Limitation for Top Margin Setting :

When the top margin is set to 10 mm or less, the paper length (cut length) should not exceed 50mm. (If the cut paper remains at the paper-exit, a paper jam may occur. There is no limitation when the cut paper is removed.)

Mark Detection < mC-Label3 only >

• **Mark Detection:**

If this feature is set to **Enable**, the printer will detect the cut position (black mark or gap) when turned on.

Setting	Default	Details
Disable	✓	The cutting position is not detected at the first printing after turning on the power.
Enable		The cutting position is detected at the first printing after turning on the power.

Cut Options

• **Page Cut Type:**

This sets the cutting method for the end of all pages, excluding the last page.

Setting	Default	Details
No Cut	✓	Does not perform a cut and page feed.
Partial Cut		Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.
Full Cut *		Paper is fed to cutting position, then a full cut is applied.
Cut *		Paper is fed to cutting position, then a full cut or partial cut is applied.

* This setting value is not supported depending on the model.

• **Document Cut Type:**

This sets the cutting method for the last page.

Setting	Default	Details
No Cut		Does not perform a cut and page feed.
Partial Cut	✓	Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.
Full Cut *		Paper is fed to cutting position, then a full cut is applied.
Tear Bar/Tear Off *		Paper is fed to the tear bar (cutting position).
Cut *		Paper is fed to cutting position, then a full cut or partial cut is applied.

* This setting value is not supported depending on the model.

Data Treatment Recover From Error

• **Data Treatment Recover From Error:**

When the error occurs, you can handle the unprinted data which has already been sent to the printer as below.

Setting	Default	Details
No Use		The paper feed operation is not performed.
Clear Data By Document Unit	✓	After the recovery, the unprinted data of the remainder is canceled after the recovery from the error.

Point! This function is supported by other than the TSP100IIU.

When using the TSP700II, TSP800II, TSP143IIIW and TSP143IIILAN

Note: This feature does not operate correctly with old firmware.

If you are using the firmware below, select "No Use".

TSP700II	Firmware version less than 3.0
TSP800II	Firmware version less than 1.2
TSP143IIIW	Firmware version less than 1.3
TSP143IIILAN	Firmware version less than 1.2

You can check the firmware version by executing test printing. (For test printing, turn power ON while holding down the FEED button.)

You can update the firmware of TSP143IIIW and TSP143IIILAN from the dedicated utility. For details, please check our website.

Firmware updates for other models, please contact your STAR dealer.

Cash Drawer Control

• **Cash Drawer:**

This sets the operations of the cash drawer.

Setting Value	Default Value	Details
Do Not Open Drawers	✓	No cash drawer drive.
Open Drawer 1		Drives cash drawer 1 immediately after printing.
Open Drawer 2		Drives cash drawer 2 immediately after printing.
Open Drawer 1 and 2		Drives cash drawers 1 and 2 immediately after printing.

Note : If you are using POP10CI and POP10CBI, cash drawer 2 is not supported.

• **Cash Drawer 1 Pulse Width:**

This sets the cash drawer 1 pulse width.

Setting Value	Default Value	Details
10 milliseconds		Sets the pulse width to 0.01 seconds.
100 milliseconds		Sets the pulse width to 0.1 seconds.
200 milliseconds	✓	Sets the pulse width to 0.2 seconds.
300 milliseconds		Sets the pulse width to 0.3 seconds.
400 milliseconds		Sets the pulse width to 0.4 seconds.
500 milliseconds		Sets the pulse width to 0.5 seconds.
600 milliseconds		Sets the pulse width to 0.6 seconds.
700 milliseconds		Sets the pulse width to 0.7 seconds.
800 milliseconds		Sets the pulse width to 0.8 seconds.
900 milliseconds		Sets the pulse width to 0.9 seconds.
1000 milliseconds		Sets the pulse width to 1.0 seconds.
1100 milliseconds		Sets the pulse width to 1.1 seconds.
1200 milliseconds		Sets the pulse width to 1.2 seconds.

Note : The pulse width for cash drawer 2 is fixed at 200 milliseconds.

Buzzer 1 Control and Buzzer 2 Control

• **Buzzer 1 (or Buzzer 2):**

This sets the drive of either buzzer 1 or buzzer 2.

Setting Value	Default Value	Details
No Use	✓	Buzzer 1 or buzzer 2 is not used.
Document Top		Executes buzzer 1 (or 2) at the top of the document.
Document Bottom		Executes buzzer 1 (or 2) at the bottom of the document.

Cautions : When a device other than a buzzer or mC-Sound, such as a cash drawer, is connected, select 'No Use'. If the wrong setting is selected, the device may be damaged.

• **Buzzer 1 (Buzzer 2) - On Time:**

This sets the time to ring buzzer 1 or buzzer 2.

Setting Value	Default Value	Details
20 milliseconds	✓	Sets to 0.02 seconds.
40 milliseconds		Sets to 0.04 seconds.
100 milliseconds		Sets to 0.1 seconds.
200 milliseconds		Sets to 0.2 seconds.
500 milliseconds		Sets to 0.5 seconds.
1000 milliseconds		Sets to 1.0 seconds.
2000 milliseconds		Sets to 2.0 seconds.
5000 milliseconds		Sets to 5.0 seconds.

• **Buzzer 1 (Buzzer 2) - Off Time:**

This sets buzzer 1 or buzzer 2 off time.

Setting Value	Default Value	Details
20 milliseconds	✓	Sets to 0.02 seconds.
40 milliseconds		Sets to 0.04 seconds.
100 milliseconds		Sets to 0.1 seconds.
200 milliseconds		Sets to 0.2 seconds.
500 milliseconds		Sets to 0.5 seconds.
1000 milliseconds		Sets to 1.0 seconds.
2000 milliseconds		Sets to 2.0 seconds.
5000 milliseconds		Sets to 5.0 seconds.

• **Buzzer 1 (Buzzer 2) - Repeat:**

This sets the number of times to ring buzzer 1 (or buzzer 2) driven by the timing set at 1:Buzzer 1 (or Buzzer 2).

The buzzer will stop regardless of the number of times set to ring by pressing the "FEED".

Setting Value	Default Value	Details
1	✓	Rings buzzer 1 (or buzzer 2) Once.
2		Rings buzzer 1 (or buzzer 2) twice.
3		Rings buzzer 1 (or buzzer 2) three times.
5		Rings buzzer 1 (or buzzer 2) five times.
10		Rings buzzer 1 (or buzzer 2) ten times.
15		Rings buzzer 1 (or buzzer 2) fifteen times.
20		Rings buzzer 1 (or buzzer 2) twenty times.

Note : The buzzer ringing time and off time should not exceed 90 seconds in total.

mC-Sound Control <mC-Print3 and TSP100IV series>

• **mC-Sound:**

This sets mC-Sound operation.

Setting Value	Default Value	Details
No Use	✓	Does not activate mC-Sound.
Document Top		Executes mC-Sound at the top of the document.
Document Bottom		Executes mC-Sound at the bottom of the document.

Cautions :

1) *When a device other than a buzzer or mC-Sound, such as a cash drawer, is connected, select 'No Use'. If the wrong setting is selected, the device may be damaged.*
2) *If you play sound from the printer drivers, the values which are set in 'Sound Area', 'Sound Number', and 'Volume' of mC-Sound Control will take priority. This will apply even when the sound source and volume are set using the mC-Sound DIP switches.*

• **mC-Sound - Sound Storage Area:**

Selects the sound storage area for mC-Sound. The sound source can be set with the combination of sound storage area and sound number. The sound sources which can be set are as shown in the list of setting sound sources.

Setting Value	Default Value	Details
1	✓	Sets to sound storage area 1.
2		Sets to sound storage area 2.

• **mC-Sound - Sound Number:**

Selects the sound storage area for mC-Sound. The sound source can be set with the combination of sound storage area and sound number. The sound sources which can be set are as shown in the list of setting sound sources.

Setting Value	Default Value	Details
0	✓	Sets to sound number 0.
1		Sets to sound number 1.
2		Sets to sound number 2.
3		Sets to sound number 3.
4		Sets to sound number 4.
5		Sets to sound number 5.
6		Sets to sound number 6.
7		Sets to sound number 7.

■ **Setting Sound Sources**

Sound Storage Area	Sound Number	Sound Source
1	0	Sound1
1	1	Sound2
1	2	Sound3
1	3	Sound4
1	4	Sound5
1	5	Sound6
1	6	Sound7
1	7	Sound8

Sound Storage Area	Sound Number	Sound Source
2	0	Sound9
2	1	Sound10
2	2	Sound11
2	3	Sound12
2	4	Sound13
2	5	Sound14
2	6	Sound15
2	7	Sound16

• **mC-Sound - Sound Volume:**

Selects the mC-Sound sound volume.

Setting	Default	Details
0 (Mute)		mC-Sound is muted.
1		Sets the mC-Sound sound volume to 1.
2 (Low)		Sets the mC-Sound sound volume to 2.
3		Sets the mC-Sound sound volume to 3.
4		Sets the mC-Sound sound volume to 4.
5		Sets the mC-Sound sound volume to 5.
6 (Medium)	✓	Sets the mC-Sound sound volume to 6.
7		Sets the mC-Sound sound volume to 7.
8		Sets the mC-Sound sound volume to 8.
9		Sets the mC-Sound sound volume to 9.
10		Sets the mC-Sound sound volume to 10.
11		Sets the mC-Sound sound volume to 11.
12 (High)		Sets the mC-Sound sound volume to 12.
13		Sets the mC-Sound sound volume to 13.
14		Sets the mC-Sound sound volume to 14.
15		Sets the mC-Sound sound volume to 15.

• **mC-Sound - Repeat:**

Sets the number of times to repeat mC-Sound playback.

Setting	Default	Details
1	✓	Sets mC-Sound to play 1 time.
2		Sets mC-Sound to play 2 time.
3		Sets mC-Sound to play 3 time.
4		Sets mC-Sound to play 4 time.
5		Sets mC-Sound to play 5 time.
6		Sets mC-Sound to play 6 time.
7		Sets mC-Sound to play 7 time.
8		Sets mC-Sound to play 8 time.
9		Sets mC-Sound to play 9 time.
10		Sets mC-Sound to play 10 time.

Taken Sensor Control <mC-Label3 and TSP143IV-UE SK only >

• **Hold Print:**

Set the printer operation when paper hold is detected at the paper exit.

Setting	Default	Details
Disable		Print data no matter when paper is in the paper exit or not.
Enable	✓	Wait for the next print job until the paper is removed from the printer paper exit.

2.1.2 Dot Matrix Printers

General

1. Media Size: (paper size)

The following paper sizes are available and can be set.

In some cases, these settings will not work as expected depending on the application being used to print from.

Point! When a paper size is selected that exceeds the maximum printing width, the print is shrunk to fit the maximum printing width.

Paper Size	SP700
45 * 30mm	○
45 * 40mm	○
⋮	⋮
45 * 190mm	○
45 * 200mm	○
45 * 1500mm	○
45 * 2000mm	○
48 * 30mm	○
48 * 40mm	○
⋮	⋮
48 * 190mm	○
48 * 200mm	○
48 * 1500mm	○
48 * 2000mm	○

Paper Size	SP700
60 * 30mm	○
60 * 40mm	○
⋮	⋮
60 * 190mm	○
60 * 200mm	○
60 * 1500mm	○
60 * 2000mm	○
63 * 30mm	○
63 * 40mm	○
⋮	⋮
63 * 190mm	○
63 * 200mm	○
63 * 1500mm	○
63 * 2000mm	○

Output Options

• **Bidirectional Printing:**

Use this feature to select either unidirectional or bidirectional printing. Note that the setting affects both the print speed and the print quality. Available settings are as follows.

Setting Value	Default Value	Details
Budirectional	✓	Printer prints in both directions.
Unidirectional		Printer prints in one direction only.

• **Page Type:**

This sets the page type.

Setting Value	Default Value	Details
Variable Length	✓	Does not output blank data until the bottom of the page. Receipt ends after final data is printed.
Fixed Length		Outputs blank data as a blank until the bottom of the page. Receipt ends after printing the length specified by paper size.

• **Resolution:**

This sets the print quality (resolution).

Setting Value	Default Value	Details
170 x 72 DPI	✓	Print width is 170 dpi; print height is 72 dpi.
85 x 72 DPI		Print width is 85 dpi; print height is 72 dpi.

Data Treatment Recover From Error

• **Data Treatment Recover From Error:**

When an error occurs, you can handle the unprinted data which has already been sent to the printer as below.

Setting	Default Value	Details
No Use		After the recovery, the unprinted data of the remainder is printed after the recovery from the error.
Clear Data By Document Unit	✓	After the recovery, the unprinted data of the remainder is canceled after the recovery from the error.

Note : This feature does not operate correctly with old firmware. If you are using version 3.0 or earlier of the firmware, select 'No Use'. You can check the firmware version by executing Self-Printing. To update the printer's firmware, contact your STAR dealer.

Cut Options (Cutter Model)

• Page Cut Type:

This sets the cutting method for the end of all pages, excluding the last page.

Setting Value	Default Value	Details
No Cut	✓	Does not perform a cut and page feed.
Partial Cut		Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.

• Document Cut Type:

This sets the cutting method for the last page.

Setting Value	Default Value	Details
No Cut		Does not perform a cut and page feed.
Partial Cut	✓	Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.

Feed Options (Tear Bar Model)

• Page Feed Type:

This sets the page feed operation for the end of all pages, excluding the last page.

Setting Value	Default Value	Details
No Feed	✓	The paper feed operation is not performed.
Tear Bar		Paper is fed to the tear bar (cutting position).

• Document Feed Type:

This sets the page feed operation for the last page.

Setting Value	Default Value	Details
No Feed		The paper feed operation is not performed.
Tear Bar	✓	Paper is fed to the tear bar (cutting position).

Cash Drawer Control

• **Cash Drawer:**

This sets the operations of the cash drawer.

Setting Value	Default Value	Details
Do Not Open Drawers	✓	No cash drawer drive.
Open Drawer 1		Drives cash drawer 1 immediately after printing.
Open Drawer 2		Drives cash drawer 2 immediately after printing.
Open Drawer 1 and 2		Drives cash drawers 1 and 2 immediately after printing.

• **Cash Drawer 1 Pulse Width:**

This sets the cash drawer 1 pulse width.

Setting Value	Default Value	Details
10 milliseconds		Sets the pulse width to 0.01 seconds.
100 milliseconds		Sets the pulse width to 0.1 seconds.
200 milliseconds	✓	Sets the pulse width to 0.2 seconds.
300 milliseconds		Sets the pulse width to 0.3 seconds.
400 milliseconds		Sets the pulse width to 0.4 seconds.
500 milliseconds		Sets the pulse width to 0.5 seconds.
600 milliseconds		Sets the pulse width to 0.6 seconds.
700 milliseconds		Sets the pulse width to 0.7 seconds.
800 milliseconds		Sets the pulse width to 0.8 seconds.
900 milliseconds		Sets the pulse width to 0.9 seconds.
1000 milliseconds		Sets the pulse width to 1.0 seconds.
1100 milliseconds		Sets the pulse width to 1.1 seconds.
1200 milliseconds		Sets the pulse width to 1.2 seconds.

Note : 1) Do not enable the cash drawer and buzzer at the same time.
2) The pulse width for cash drawer 2 is fixed at 200 milliseconds.

Buzzer 1 Control and Buzzer 2 Control

• **Buzzer 1 (or Buzzer 2):**

This sets the drive of either buzzer 1 or buzzer 2.

Setting Value	Default Value	Details
No Use	✓	Buzzer 1 or buzzer 2 is not used.
Document Top		Executes buzzer 1 (or 2) at the top of the document.
Document Bottom		Executes buzzer 1 (or 2) at the bottom of the document.

Cautions : When a device other than a buzzer, such as a cash drawer, is connected, select the 'No Use'. There is the possibility that the connected device and the circuit can be damaged by using the buzzer control command.

• **Buzzer 1 (Buzzer 2) - On Time:**

This sets the time to ring buzzer 1 or buzzer 2.

Setting Value	Default Value	Details
20 milliseconds	✓	Sets to 0.02 seconds.
40 milliseconds		Sets to 0.04 seconds.
100 milliseconds		Sets to 0.1 seconds.
200 milliseconds		Sets to 0.2 seconds.
500 milliseconds		Sets to 0.5 seconds.
1000 milliseconds		Sets to 1.0 seconds.
2000 milliseconds		Sets to 2.0 seconds.
5000 milliseconds		Sets to 5.0 seconds.

• **Buzzer 1 (Buzzer 2) - Off Time:**

This sets buzzer 1 or buzzer 2 off time.

Setting Value	Default Value	Details
20 milliseconds	✓	Sets to 0.02 seconds.
40 milliseconds		Sets to 0.04 seconds.
100 milliseconds		Sets to 0.1 seconds.
200 milliseconds		Sets to 0.2 seconds.
500 milliseconds		Sets to 0.5 seconds.
1000 milliseconds		Sets to 1.0 seconds.
2000 milliseconds		Sets to 2.0 seconds.
5000 milliseconds		Sets to 5.0 seconds.

• **Buzzer 1 (Buzzer 2) - Repeat:**

This sets the number of times to ring buzzer 1 (or buzzer 2) driven by the timing set at 1:Buzzer 1 (or Buzzer 2).

The buzzer will stop regardless of the number of times set to ring by pressing the "FEED".

Setting Value	Default Value	Details
1	✓	Rings buzzer 1 (or buzzer 2) once.
2		Rings buzzer 1 (or buzzer 2) twice.
3		Rings buzzer 1 (or buzzer 2) three times.
5		Rings buzzer 1 (or buzzer 2) five times.
10		Rings buzzer 1 (or buzzer 2) ten times.
15		Rings buzzer 1 (or buzzer 2) fifteen times.
20		Rings buzzer 1 (or buzzer 2) twenty times.

Note : 1) Do not enable the cash drawer and buzzer at the same time.
2) The buzzer ringing time and off time should not exceed 90 seconds in total.

2.1.3 Kiosk Printers

General

1. Media Size: (paper size)

The following paper sizes are available and can be set.

In some cases, these settings will not work as expected depending on the application being used to print from.

Paper Size	Supported Models					
	SK1 311, SK1 321	SK1 311 Presenter	SK1 211, SK1 221	SK1 211 Presenter, SK1 221 Presenter	SK1-41, SK1-41 Presenter	SK5-31 Presenter
54mm * 100mm	○	○	○	○		○
54mm * 200mm	○	○	○	○		○
54mm * 1500mm	○	○	○	○		○
56mm * 100mm	○	○	○	○		○
56mm * 200mm	○	○	○	○		○
56mm * 1500mm	○	○	○	○		○
68mm * 100mm	○	○				○
68mm * 200mm	○	○				○
68mm * 1500mm	○	○				○
72mm * 100mm	○	○			○	○
72mm * 200mm	○	○			○	○
72mm * 1500mm	○	○			○	○
80mm * 100mm	○	○			○	○
80mm * 200mm	○	○			○	○
80mm * 1500mm	○	○			○	○
A4	○	○	○	○	○	○
Letter	○	○	○	○	○	○
Legal	○	○	○	○	○	○

Output Options

• Print Density:

Sets the printing density.

Setting	Default	Details
Standard	✓	Prints with normal density.
+1 to +3		Larger value with +(plus) makes print density darker.

• Print Speed:

Sets the print speed.

Setting	Default	Details
250mm	✓ *1	Sets print speed to 250 mm/sec.
220mm		Sets print speed to 220 mm/sec.
200mm		Sets print speed to 200 mm/sec.
190mm		Sets print speed to 190 mm/sec.
170mm		Sets print speed to 170 mm/sec.
150mm	✓ *2	Sets print speed to 150 mm/sec.
130mm		Sets print speed to 130 mm/sec.
110mm		Sets print speed to 110 mm/sec.

*1 Other than SK5-31 presenter series *2 SK5-31 presenter series

• Page Type:

Sets the page type.

Setting	Default	Details
Variable Length	✓	Does not output blank data until the bottom of the page. Receipt ends after final data is printed.
Fixed Length		Outputs blank data as a blank until the bottom of the page. Receipt ends after printing the length specified by paper size.
Black Mark		Outputs blank data as a blank until the black mark. Receipt ends after the black mark is detected.
Label *		Outputs blank data as a blank until the the head of the label detected by the transmission sensor..

* This setting value is supported by Non-presenter model.

Note : **Label*** setting is not supported when the presenter and bezel are connected.
Also, SK1-311/321 and SK1-211/221 support Label setting from firmware 1.1 or later.

Mark Detection

• **MarkDetection:**

If this feature is set to **Enable**, the printer will detect the black mark or label position when turned on.

Setting	Default	Details
Disable	✓	At power on, does not execute paper feed in accordance with detection of black mark or label position.
Enable		At power on, feeds paper according to black mark or label position.

Cut Options

• **Cut Type <Presenter only>:**

This sets the cutting method.

Setting	Default	Details
Full Cut All Pages	✓	Cuts all pages.(Feeds each page to the cut position, then cuts it.)
Full Cut Last Pages		Cuts last page of document. (Does not cut each page.)

• **Page Cut Type <Non-presenter only>:**

This sets the cutting method for the end of all pages, excluding the last page.

Setting	Default	Details
No Cut	✓	Does not perform a cut and page feed.
Partial Cut		Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.
Full Cut		Paper is fed to cutting position, then a full cut is applied.

• **Document Cut Type <Non-presenter only>:**

This sets the cutting method for the last page.

Setting	Default	Details
No Cut		Does not perform a cut and page feed.
Partial Cut	✓	Feeds paper to cutting position, then cuts the paper, leaving one uncut point in center of paper.
Full Cut		Paper is fed to cutting position, then a full cut is applied.

Data Treatment Recover From Error

• **Data Treatment Recover From Error:**

When an error occurs, you can handle the unprinted data which has already been sent to the printer as below.

Setting	Default	Details
No Use		After the recovery, the unprinted data of the remainder is printed after the recovery from the error.
Clear Data By Document Unit	✓	After the recovery, the unprinted data of the remainder is canceled after the recovery from the error.

Bezel Control (Optional) <Non-Presenter only>

• **Bezel Hold Print:**

Sets bezel operation.

Setting	Default	Details
Disable	✓	Print data no matter when paper is in the bezel or not.
Enable		Wait to print data until the paper in the bezel is removed.

> ***Note*** :
> For SK1-311/321 and SK1-211/221, **Bezel Hold Print** function is supported by firmware 1.1 or later.

Presenter Control <Presenter only>

• **Presenter Action:**

Sets presenter operation.

Setting	Default	Details
Loop - Hold - Retract	✓	After printing is completed, presents (outputs and holds) the printed paper and waits for it to be removed. Retracts the paper if it is not removed within the specified retraction time.
Loop - Hold - Eject		After printing is completed, presents (outputs and holds) the printedpaper and waits for it to be removed. Ejects the paper if it is not removed within the specified retraction time.
No Loop - Hold - Retract		Begins outputting the paper while printing is in progress, then holds it and waits for its removal. Retracts the paper if it is not removed within the specified retraction time.
No Loop - Hold - Eject		Begins outputting the paper while printing is in progress, then holds it and waits for its removal. Ejects the paper if it is not removed within the specified retraction time.
No Loop - No Hold - Eject		Outputs the paper while printing is in progress, and then ejects it. Does not hold the paper.

• **Presenter Timeout:**

Sets amount of time "Presenter Action".

Setting	Default	Details
Do Not Timeout	✓	Holds paper until it is removed.
10 - 120 seconds		Sets amount of time presenter will hold out the printed paper before either retracting or ejecting it. Can be set in 10-second increments.

> ***Note*** : If the Presenter Action is set to "NoLoop - NoHold - Eject", the Presenter Timeout setting is meaningless and the presenter will eject the paper without holding it.

LED Control (Optional*)

***SK1-41 and SK1-41 presenter are not supported**

• LED Control:

Sets LED operation.

Setting	Default	Details
Disable	✓	LED not used.
Printing		Printing LED blinks during printing.
Error		Error LED blinks when error occurs. (paper out, etc.)
Printing + Error		Printing LED blinks during printing, and Error LED blink when error occur. (paper out, etc.)
Printing + Error + Idle		Printing LED blinks during printing, Error LED blink when error occur and Idle LED blinks or lights when idle.

Note : Except SK5-31 presenter, **"Printing + Error + Idle"** setteing is supported by firmware 1.1 or later.

• Printing LED Interval:

Sets the blink interval for the Printing LED.

Setting	Default	Details
Default (100 millisec)	✓	Blink every 0.1 seconds.
200 millisec		Blink every 0.2 seconds.
500 millisec		Blink every 0.5 seconds.
1000 millisec		Blink every once per seconds.

• Error LED Interval:

Sets the blink interval for the Error LED.

Setting	Default	Details
Default (100 millisec)	✓	Blink every 0.1 seconds.
200 millisec		Blink every 0.2 seconds.
500 millisec		Blink every 0.5 seconds.
1000 millisec		Blink every once per seconds.

• Idle LED Interval:

Sets the lighting or blink interval for the Idle LED.

Setting	Default	Details
Default (Always On)	✓	Always lights.
100 millisec		Blink every 0.1 seconds.
200 millisec		Blink every 0.2 seconds.
500 millisec		Blink every 0.5 seconds.
1000 millisec		Blink every once per seconds.

Note : Except SK5-31 presenter, **Idle LED Interval** function is supported by firmware 1.1 or later.

3. Guidelines for Using an Ethernet Environment

The printer's IP address must be set in advance to use a printer that supports LAN using this driver. If your LAN environment does not allow acquisition of an IP address from a DHCP server, set the IP address to the printer in advance.

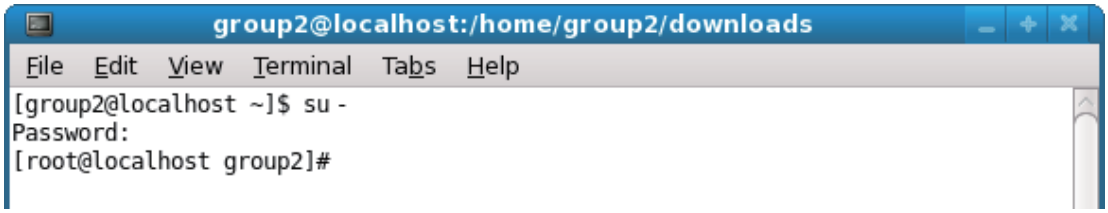
3.1 Setting a Temporary IP Address

Use the following procedures to set a temporary IP address to the printer. By setting a temporary IP address, it is possible to connect to a printer that has not been set with an IP address.

> ***Caution :*** Printer settings should be done by a user with administrator rights.

Point! A MAC address of the printer to be set is necessary for the temporary IP address. Confirm the MAC address in a self-print from the printer. See the Hardware Manual for details on running a self-print.

1. Startup the terminal.
2. Use the "su" command to enable root account privileges.



3. Execute the following command in the terminal to set a temporary IP address to the printer.

    1. arp -d [Printer temporary IP address]
    2. arp -s [Printer temporary IP address] [Printer MAC address]
    3. ping -c 4 [Printer temporary IP address]
    4. arp -d [Printer temporary IP address]

Example of temporary IP address (192.168.32.228)

```
arp -d 192.168.32.228
arp -s 192.168.32.228 00:11:62:04:83:98
ping -c 4 192.168.32.228
arp -d 192.168.32.228
```

Note: When you use Ubuntu, do not input "su -" command and input "sudo arp" command instead of "arp" command.
The temporary IP address set here is erased when the printer power is turned off.
Continue by setting the IP address.

Uset "exit" command to exit super user status.

3.2 Setting the IP Address (TELNET Utility)

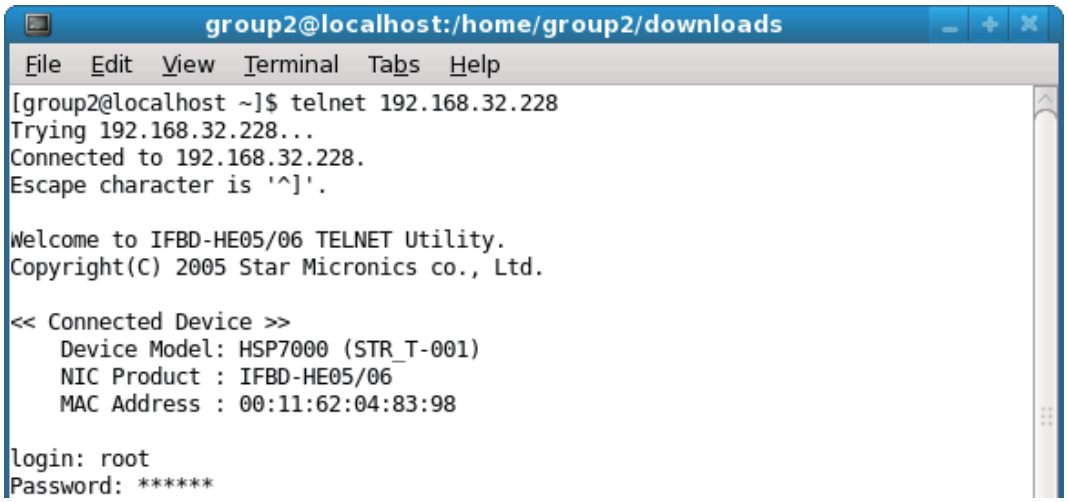
The Telnet command connects directly to the printer to make settings.

1. Startup the terminal.
2. Use the Telnet command to connect to the printer to set.

   Ex. >telnet 192.168.32.228 (The IP address of the printer to be set.)

> ***Note:*** **You cannot connect to a printer that does not have an IP address. See section 3.1 Setting a Temporary IP Address for details on setting such an address on the printer in advance.**

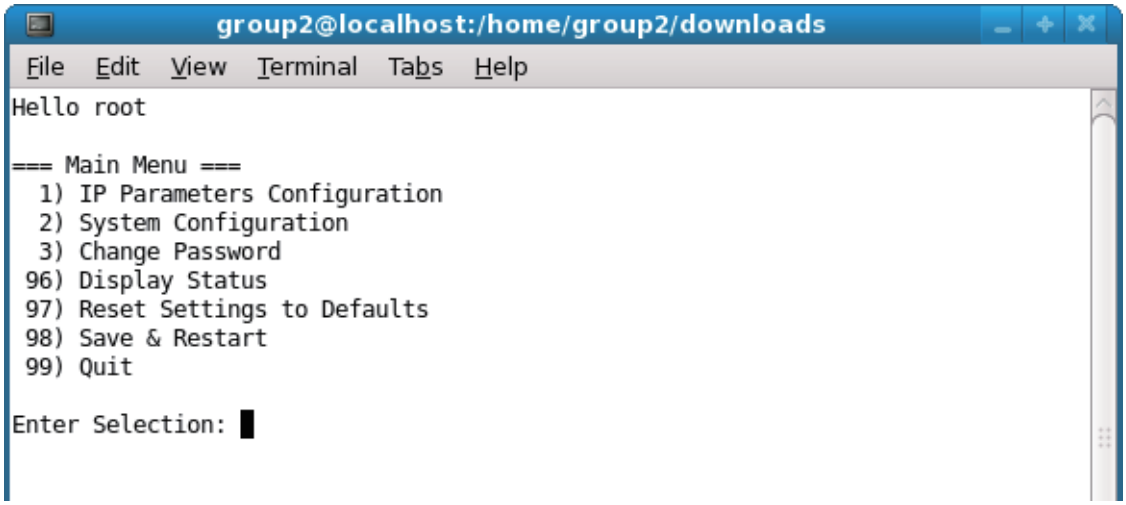
3. Log-in to the printer to be set as a "root" user.
   The default password is "public."
   To change the password, input the changed password.



4. The following menu is displayed.

   1) IP Parameters Configuration
   2) System Configuration
   3) Change Password
   96) Display Status
   97) Reset Settings to Defaults
   98) Save and Restart
   99) Quit
   Enter Selection

Input the number that corresponds to your selection.



5. When all settings are completed, save the changes using "98(Save and Restart)" - "1(Save & Restart device & Configuration printing)", or "2 (Save & Restart device)". The settings of the printer will be saved. Reset the printer.

4. Guidelines for Using the lpr Command

When printing useing the lpr command from the command line, you can specify options with the following format.

$lpr -o [option]=[value] -o [option]=[value] ... [Filename]

In [option] and [value], specify the name shown in the command "specify name" in section 4.1 List of Supported Functions".
Also for options not specified, print using the default driver settings.

Point! Use the printer name confirmed using the "lpstat -p" command, when specifying the printer name using the option "-P".

Use Example 1

Printer Name :	TSP100
File Name :	sample1.txt
Paper Size * :	50.8 * 200mm
Margin(top) * :	0mm
Margin(bottom) * :	0mm
Margin(left)* :	0mm
Margin(right)* :	0mm

* This option is not a printer driver option, but an OS standard option.

```
$ lpr -P TSP100 -o media="X50D8MMY200MM"
-o page-top=0 -o page-bottom=0 -o page-left=0
-o page-right=0 sample1.txt
```

Use Example 2

File Name :	sample2.txt
Print Speed :	Low

```
$ lpr -o PrintSpeed=2Low sample2.txt
```

Use Example 3

File Name :	sample3.txt
Document Cut Type :	No Cut

```
$ lpr -o DocCutType=0NoCutDoc sample3.txt
```

4.1 Function List

See section 2.1 Function List for the details on the functions.

	Option Name		Command		Supported Model								
	option	value	[option]	[value]	TSP 143 *1	TSP 654II	TSP 743II	TSP 847II	POP 10/ 10CI	MCP 30	MCP 31 *3	MCP 20/ 20B /21LB	MCL 32CI/ 32CBI
Output Option	Print Speed	High	**PrintSpeed**	**0High**	●	●	●	●	●	●	●		●
		Middle		**1Middle**	○	○	○	○		○	○		○
		Low		**2Low**	○	○	○	○	○	○	○		○
	Print Density	-3	**PrintDensity**	**0Minus3**	○	○				○	○		○
		-2		**1Minus2**	○	○				○	○		○
		-1		**2Minus1**	○	○				○	○		○
		Standard		**3ZERO**	●	●			●	●	●	●	●
		+1		**4Plus1**	○	○			○	○	○	○	○
		+2		**5Plus2**	○	○			○	○	○	○	○
		+3		**6Plus3**	○	○			○	○	○	○	○
		+4		**7Plus4**						○	○		
	Page Type	Variable Length	**PageType**	**0Variable**	●	●	●	●	●	●	●	●	●
		Fixed Length		**1Fixed**	○	○	○	○	○	○	○	○	○
		Black Mark		**2BlackMark**									○
		Label(Gap)		**9Label**									○
	Top Search	Disable	**TopSearch**	**0Disable**			●	●					
		Enable		**1Enable**			○	○					
	Top Margin	Disable	**TopMargin**	**0Dsable**							●		○
		2mm		**1Millimeter2**							○		
		3mm		**2Millimeter3**							○		●
		4mm		**3Millimeter4**							○		
		5mm		**4Millimeter5**							○		
		6mm		**5Millimeter6**							○		
		7mm		**6Millimeter7**							○		
		8mm		**7Millimeter8**							○		
		9mm		**8Millimeter9**							○		
		10mm		**9Millimeter10**							○		
Mark Detection	MarkDetection	Disable	**BlackMark Detection**	**1Disable**									●
		Enable		**2Enable**									○
Cut Options (Cutter)	Page Cut Type	No Cut	**PageCutType**	**0NoCutPage**	●	●	●	●	●	●	●	●	●
		Partial Cut		**1PartialCutPage**	○	○	○	○	○	○	○	○	○
		Full Cut		**2FullCutPage**			○	○	○			○	○
		Cut		**1CutPage**									
	Document Cut Type	No Cut	**DocCutType**	**0NoCutDoc**	○	○	○	○	○	○	○	○	○
		Partial Cut		**1PartialCutDoc**	●	●	●	●	●	●	●	●	●
		Full Cut		**2FullCutDoc**			○	○	○			○	○
		Tear Bar		**3TearBarDoc**				○					
		Tear Off		**3TearOffDoc**									○
		Cut		**1CutDoc**									
Data Treatment Recover From Error	Data Treatment Recover From Error	No Use	**DataTreatment RecoverFrom Error**	**0NoUse**	●*2	○	○	○	○	○	○	○	○
		Clear Data By Document Unit		**1ClearDataBy Document Unit**	○*2	●	●	●	●	●	●	●	●

*1 **TSP143:** TSP143IV-UE, TSP143IV-UE SK, TSP143IIIW/LAN/BI/U, TSP100IIU

*2 TSP143IV-UE, TSP143IV-UE SK, TSP143IIIW/LAN/BI/U

*3 MCP31 : MCP31CI, MCP31CBI, MCP31L, MCP31LB, MCP31C, MCP31CB

* ● is the default setting value

	Option Name		Command Name		Supported Model								
	option	value	[option]	[value]	TSP 143 *1	TSP 654II	TSP 743II	TSP 847II	POP 10/ 10CI	MCP 30	MCP 31 *3	MCP 20 /20B /21LB	MCL 32CI/ 32CBI
Cash Drawer Control	Cash Drawer	Do Not Open Drawers	**CashDrawer Setting**	**0DoNot OpenDrawers**	●	●	●	●	●	●	●	●	●
		Open Drawer 1		**1OpenDrawer1**	○	○	○	○	○	○	○	○	○
		Open Drawer 2		**2OpenDrawer2**	○	○	○	○	○	○	○	○	○
		Open Drawer 1 and 2		**3OpenDrawer3**	○	○	○	○	○	○	○	○	○
	Cash Drawer 1 Pulsh Width	10 milliseconds	**CashDrawer1 PulseWidth**	**0Millis10**	○	○	○	○	○	○	○	○	○
		100 milliseconds		**1Millis100**	○	○	○	○	○	○	○	○	○
		200 milliseconds		**2Millis200**	●	●	●	●	●	●	●	●	●
		300 milliseconds		**3Millis300**	○	○	○	○	○	○	○	○	○
		400 milliseconds		**4Millis400**	○	○	○	○	○	○	○	○	○
		500 milliseconds		**5Millis500**	○	○	○	○	○	○	○	○	○
		600 milliseconds		**6Millis600**	○	○	○	○	○	○	○	○	○
		700 milliseconds		**7Millis700**	○	○	○	○	○	○	○	○	○
		800 milliseconds		**8Millis800**	○	○	○	○	○	○	○	○	○
		900 milliseconds		**9Millis900**	○	○	○	○	○	○	○	○	○
		1000 milliseconds		**10Millis1000**	○	○	○	○	○	○	○	○	○
		1100 milliseconds		**11Millis1100**	○	○	○	○	○	○	○	○	○
		1200 milliseconds		**12Millis1200**	○	○	○	○	○	○	○	○	○
Buzzer 1 Control/ Buzzer 2 Control	Buzzer 1 / Buzzer2	No Use	**Buzzer1Setting / Buzzer2Setting**	**0NoUse**		●	●			●	●	●	●
		Document Top		**1DocumentTop**		○	○			○	○	○	○
		Document Bottom		**2DocumentBtm**		○	○			○	○	○	○
	Buzzer1- On Time / Buzzer2 - On Time	20 milliseconds	**Buzzer1OnTime / Buzzer2OnTime**	**0Millis20**		●	●			●	●	●	●
		40 milliseconds		**1Millis40**		○	○			○	○	○	○
		100 milliseconds		**2Millis100**		○	○			○	○	○	○
		200 milliseconds		**3Millis200**		○	○			○	○	○	○
		500 milliseconds		**4Millis500**		○	○			○	○	○	○
		1000 milliseconds		**5Millis1000**		○	○			○	○	○	○
		2000 milliseconds		**6Millis2000**		○	○			○	○	○	○
		5000 milliseconds		**7Millis5000**		○	○			○	○	○	○
	Buzzer1 - Off Time / Buzzer2 - Off Time	20 milliseconds	**Buzzer1OffTime / Buzzer2OffTime**	**0Millis20**		●	●			●	●	●	●
		40 milliseconds		**1Millis40**		○	○			○	○	○	○
		100 milliseconds		**2Millis100**		○	○			○	○	○	○
		200 milliseconds		**3Millis200**		○	○			○	○	○	○
		500 milliseconds		**4Millis500**		○	○			○	○	○	○
		1000 milliseconds		**5Millis1000**		○	○			○	○	○	○
		2000 milliseconds		**6Millis2000**		○	○			○	○	○	○
		5000 milliseconds		**7Millis5000**		○	○			○	○	○	○
	Buzzer1- Repeat / Buzzer2 - Repeat	1	**Buzzer1Repeat / Buzzer2Repeat**	**0Repeat1**		●	●			●	●	●	●
		2		**1Repeat2**		○	○			○	○	○	○
		3		**2Repeat3**		○	○			○	○	○	○
		5		**3Repeat5**		○	○			○	○	○	○
		10		**4Repeat10**		○	○			○	○	○	○
		15		**5Repeat15**		○	○			○	○	○	○
		20		**6Repeat20**		○	○			○	○	○	○

* ● is the default setting value

	Option Name		Command Name		Supported Model								
	option	value	[option]	[value]	TSP 143 *1	TSP 654II	TSP 743II	TSP 847II	POP 10/ 10CI	MCP 30	MCP 31 *3	MCP 20/ 20B/ 21LB	MCL 32CI/ 32CBI
mC-Sound Control	mC-Sound	No Use	MelodySpeaker Setting	0NoUse	●*4					●	●		
		Document Top		1DocumentTop	○*4					○	○		
		Document Bottom		2DocumentBtm	○*4					○	○		
	mC-Sound Sound Storage Area	1	MelodySpeaker SoundStorageArea	0Area1	●*4					●	●		
		2		1Area2	○*4					○	○		
	mC-Sound Sound Number	0	MelodySpeaker SoundNumber	0Number0	●*4					●	●		
		1		1Number1	○*4					○	○		
		2		2Number2	○*4					○	○		
		3		3Number3	○*4					○	○		
		4		4Number4	○*4					○	○		
		5		5Number5	○*4					○	○		
		6		6Number6	○*4					○	○		
		7		7Number7	○*4					○	○		
	mC-Sound Sound Volume	0(Mute)	MelodySpeaker SoundVolume	0Volume0	○*4					○	○		
		1		1Volume1	○*4					○	○		
		2(Low)		2Volume2	○*4					○	○		
		3		3Volume3	○*4					○	○		
		4		4Volume4	○*4					○	○		
		5		5Volume5	○*4					○	○		
		6(Medium)		6Volume6	●*4					●	●		
		7		7Volume7	○*4					○	○		
		8		8Volume8	○*4					○	○		
		9		9Volume9	○*4					○	○		
		10		10Volume10	○*4					○	○		
		11		11Volume11	○*4					○	○		
		12(High)		12Volume12	○*4					○	○		
		13		13Volume13	○*4					○	○		
		14		14Volume14	○*4					○	○		
		15		15Volume15	○*4					○	○		
	mC-Sound Repeat	1	MelodySpeaker Repeat	0Repeat1	●*4					●	●		
		2		1Repeat2	○*4					○	○		
		3		2Repeat3	○*4					○	○		
		4		3Repeat4	○*4					○	○		
		5		4Repeat5	○*4					○	○		
		6		5Repeat6	○*4					○	○		
		7		6Repeat7	○*4					○	○		
		8		7Repeat8	○*4					○	○		
		9		8Repeat9	○*4					○	○		
		10		9Repeat10	○*4					○	○		
Taken Sensor Control	Hold Print	Disable	TakenSensor HoldPrint	0Disable	○*5								○
		Enable		1Enable	●*5								●

*4 TSP143IV-UE, TSP143IV-UE SK only

*5 TSP143IV-UE SK only

* ●is the default setting value.

4.1.2 Dot Matrix Printers

	Option Name		Command		Supported Model			
	option	value	[option]	[value]	SP712	SP717	SP742	SP747
Output Option	Bidirectional Printing	Bidirectional	**BidiPrinting**	**0Bidirectional**	●	●	●	●
		Unidirectional		**1Unidirectional**	○	○	○	○
	Page Type	Variable Length	**PageType**	**0Variable**	●	●	●	●
		Fixed Length		**1Fixed**	○	○	○	○
	Resolution	170 x 72 DPI	**Resolusion**	**170x72dpi**	●	●	●	●
		85 x 72 DPI		**85x72dpi**	○	○	○	○
Cut Options (Cutter)	Page Cut Type	No Cut	**PageCutType**	**0NoCutPage**			●	●
		Partial Cut		**1PartialCutPage**			○	○
		Full Cut		**2FullCutPage**				
	Document Cut Type	No Cut	**DocCutType**	**0NoCutDoc**			○	○
		Partial Cut		**1PartialCutDoc**			●	●
		Full Cut		**2FullCutDoc**				
Feed Options (TearBar)	Page Feed Type	No Feed	**PageCutType**	**0NoCutPage**	●	●		
		Tear Bar		**3TearBarPage**	○	○		
	Document Feed Type	No Feed	**DocCutType**	**0NoCutDoc**	○	○		
		Tear Bar		**3TearBarDoc**	●	●		
Cash Drawer Control	Cash Drawer	Do Not Open Drawers	**CashDrawerSetting**	**0DoNotOpenDrawers**	●	●	●	●
		Open Drawer 1		**1OpenDrawer1**	○	○	○	○
		Open Drawer 2		**2OpenDrawer2**	○	○	○	○
		Open Drawer 1 and 2		**3OpenDrawer3**	○	○	○	○
	Cash Drawer 1 Pulsh Width	10 milliseconds	**CashDrawer1PulseWidth**	**0Millis10**	○	○	○	○
		100 milliseconds		**1Millis100**	○	○	○	○
		200 milliseconds		**2Millis200**	●	●	●	●
		300 milliseconds		**3Millis300**	○	○	○	○
		400 milliseconds		**4Millis400**	○	○	○	○
		500 milliseconds		**5Millis500**	○	○	○	○
		600 milliseconds		**6Millis600**	○	○	○	○
		700 milliseconds		**7Millis700**	○	○	○	○
		800 milliseconds		**8Millis800**	○	○	○	○
		900 milliseconds		**9Millis900**	○	○	○	○
		1000 milliseconds		**10Millis1000**	○	○	○	○
		1100 milliseconds		**11Millis1100**	○	○	○	○
		1200 milliseconds		**12Millis1200**	○	○	○	○
Data Treatment Recover From Error	Data Treatment Recover From Error	No Use	**DataTreatment RecoverFrom Error**	**0NoUse**	○	○	○	○
		Clear Data By Document Unit		**1ClearDataBy DocumentUnit**	●	●	●	●

* ●is the default setting value.

	Option Name		Command		Supported Model			
	option	value	[option]	[value]	SP712	SP717	SP742	SP747
Buzzer1 Control / Buzzer2 Control	Buzzer1 / Buzzer2	No Use	**Buzzer1Setting / Buzzer2Setting**	**0NoUse**	●	●	●	●
		Document Top		**1DocumentTop**	○	○	○	○
		Document Bottom		**2DocumentBtm**	○	○	○	○
	Buzzer1- On Time / Buzzer2 - On Time	20 milliseconds	**Buzzer1OnTime / Buzzer2OnTime**	**0Millis20**	●	●	●	●
		40 milliseconds		**1Millis40**	○	○	○	○
		100 milliseconds		**2Millis100**	○	○	○	○
		200 milliseconds		**3Millis200**	○	○	○	○
		500 milliseconds		**4Millis500**	○	○	○	○
		1000 milliseconds		**5Millis1000**	○	○	○	○
		2000 milliseconds		**6Millis2000**	○	○	○	○
		5000 milliseconds		**7Millis5000**	○	○	○	○
	Buzzer1 - Off Time / Buzzer2 - Off Time	20 milliseconds	**Buzzer1OffTime / Buzzer2OffTime**	**0Millis20**	●	●	●	●
		40 milliseconds		**1Millis40**	○	○	○	○
		100 milliseconds		**2Millis100**	○	○	○	○
		200 milliseconds		**3Millis200**	○	○	○	○
		500 milliseconds		**4Millis500**	○	○	○	○
		1000 milliseconds		**5Millis1000**	○	○	○	○
		2000 milliseconds		**6Millis2000**	○	○	○	○
		5000 milliseconds		**7Millis5000**	○	○	○	○
	Buzzer1- Repeat / Buzzer2 - Repeat	1	**Buzzer1Repeat / Buzzer2Repeat**	**0Repeat1**	●	●	●	●
		2		**1Repeat2**	○	○	○	○
		3		**2Repeat3**	○	○	○	○
		5		**3Repeat5**	○	○	○	○
		10		**4Repeat10**	○	○	○	○
		15		**5Repeat15**	○	○	○	○
		20		**6Repeat20**	○	○	○	○

* ●is the default setting value.

4.1.3 Kiosk Printers

	Option Name		Command		Supported Model						
	option	value	[option]	[value]	SK1-211/221	SK1-211/221 presenter	SK1-311/321	SK1-311 presenter	SK1-41	SK1-41 presenter	SK5-31 presenter
Output Options	Print Density	Standard	PrintDensity	3ZERO	●	●	●	●	●	●	●
		+1		4Plus1	○	○	○	○	○	○	○
		+2		5Plus2	○	○	○	○	○	○	○
		+3		6Plus3	○	○	○	○	○	○	○
	Print Speed	250mm	PrintSpeed	0_250mm	●	●	●	●	●	●	
		220mm		1_220mm	○	○	○	○	○	○	
		200mm		2_200mm	○	○	○	○	○	○	
		190mm		3_190mm	○	○	○	○	○	○	
		170mm		4_170mm	○	○	○	○	○	○	
		150mm		5_150mm	○	○	○	○	○	○	●
		130mm		6_130mm	○	○	○	○	○	○	○
		110mm		7_110mm	○	○	○	○	○	○	○
	Page Type	Variable Length	PageType	0Variable	●	●	●	●	●	●	●
		Fixed Length		1Fixed	○	○	○	○	○	○	○
		Black Mark		2BlackMark	○	○	○	○	○	○	○
		Label		9Label	○		○		○		
Mark Detection	MarkDetection	Disable	BlackMark Detection	1Disable	●	●	●	●	●	●	●
		Enable		2Enable	○	○	○	○	○	○	○
Cut Options	Cut Type	Full Cut All Pages	CutType	0FullCutAllPages		●		●		●	●
		Full Cut Last Pages		1FullCutLastPages		○		○		○	○
	Page Cut Type	No Cut	PageCutType	0NoCutPage	●		●		●		
		Partial Cut		1PartialCutPage	○		○		○		
		Full Cut		2FullCutPage	○		○		○		
	Document Cut Type	No Cut	DocCutType	0NoCutDoc	○		○		○		
		Partial Cut		1PartialCutDoc	●		●		●		
		Full Cut		2FullCutDoc	○		○		○		
Bezel Control (Optional)	Bezel Hold Print	Disable	BezelHoldPrint	0Disable	●		●				●
		Enable		1Enable	○		○				○
Presenter Control	Presenter Action	Loop - Hold - Retract	Presenter Action	0LoopHoldRetract		●		●		●	●
		Loop - Hold - Eject		1LoopHoldEject		○		○		○	○
		No Loop - Hold - Retract		2NoLoopHold Retract		○		○		○	○
		No Loop - Hold - Eject		3NoLoopHoldEject		○		○		○	○
		No Loop - No Hold - Eject		4NoLoopNoHold Eject		○		○		○	○
	Presenter Timeout	Do Not Timeout	Presenter Timeout	0DoNotTimeout		●		●		●	●
		10 seconds		1Timeout10sec		○		○		○	○
		20 seconds		2Timeout20sec		○		○		○	○
		30 seconds		3Timeout30sec		○		○		○	○
		40 seconds		4Timeout40sec		○		○		○	○
		50 seconds		5Timeout50sec		○		○		○	○
		60 seconds		6Timeout60sec		○		○		○	○
		70 seconds		7Timeout70sec		○		○		○	○
		80 seconds		8Timeout80sec		○		○		○	○
		90 seconds		9Timeout90sec		○		○		○	○
		100 seconds		10Timeout100sec		○		○		○	○
		110 seconds		11Timeout110sec		○		○		○	○
		120 seconds		12Timeout120sec		○		○		○	○

	Option Name		Command		Supported Model						
	option	value	[option]	[value]	SK1-211/221	SK1-211/221 presenter	SK1-311/321	SK1-311 presenter	SK1-41	SK1-41 presenter	SK5-31 presenter
LED Control (Optional)	LED Control	Disable	LEDControl	0Disable	●	●	●	●			●
		Printing		1PrintingLEDEnable	○	○	○	○			○
		Error		2ErrorLEDEnable	○	○	○	○			○
		Printing + Error		3Printing AndErrorLEDEnable	○	○	○	○			○
		Printing + Error + Idle		4PrintingAndError AndIdleLEDEnable	○	○	○	○			○
	Printing LED Interval	Default (100 millisec)	Printing LEDInterval	0PrintingLEDDefault	●	●	●	●			●
		200 millisec		1Printing LED200milliseconds	○	○	○	○			○
		500 millisec		2Printing LED500milliseconds	○	○	○	○			○
		1000 millisec		3Printing LED1000milliseconds	○	○	○	○			○
	Error LED Interval	Default (100 millisec)	Error LEDInterval	0ErrorLEDDefault	●	●	●	●			●
		200 millisec		1Error LED200milliseconds	○	○	○	○			○
		500 millisec		2Error LED500milliseconds	○	○	○	○			○
		1000 millisec		3Error LED1000milliseconds	○	○	○	○			○
	Idle LED Interval	Default (Always On)	IdleLEDInterval	0IdleLEDDefault	●	●	●	●			●
		100 millisec		1Idle LED100milliseconds	○	○	○	○			○
		200 millisec		2Idle LED200milliseconds	○	○	○	○			○
		500 millisec		3Idle LED500milliseconds	○	○	○	○			○
		1000 millisec		4Idle LED1000milliseconds	○	○	○	○			○
Data Treatment Recover From Error	DataTreatment RecoverFromError	No Use	DataTreatment RecoverFrom Error	0NoUse	○	○	○	○	○	○	○
		Clear Data By Document Unit		1ClearDataBy DocumentUnit	●	●	●	●	●	●	●

5. Revision History

Rev. No.	Date	Content
Rev. 1.0	Jan. 2009	New release Corresponded to the latest version (starcupsdrv3.0).
Rev. 2.0	Mar. 2010	TSP143IIU is supported.
Rev. 3.0	May. 2010	TSP800II is supported.
Rev. 4.0	Sep. 2010	Added support for Star cups driver 3.2.0. Added support for new models of 'Data Treatment Recover From Error Command' and 'Buzzer Command'.
Rev. 5.0	Dec. 2012	Added support for Star cups driver 3.4.0. TSP650II is supported.
Rev. 6.0	May 2014	Added support for Star cups driver 3.4.2. Added Bluetooth interface support to TSP700II, TSP800II and SP742.
Rev. 6.1	Jan. 2015	Added support for Star cups driver 3.5.0.
Rev. 6.2	Jun. 2016	Added support for Star cups driver 3.6.0. TSP100IIIW / LAN / BI are supported.
Rev. 6.3	Mar. 2017	TSP100IIIU is supported.
Rev. 6.4	Jun. 2018	mPOP, mC-Print3 and mC-Print2 are supported.
Rev. 6.5	Nov. 2018	mC-Sound is supported.
Rev. 6.6	Jul. 2019	Added a new model MCP30 (mC-Print3 series).
Rev. 7.0	Dec. 2019	Integrate manuals (Thermal Printers, FVP10 and Dot Matrix Printers) Added new models SK1 series and SK1 Presenter series.
Rev. 7.1	May 2020	MCP31C and MCP31CB (mC-Print3 series) are supported.
Rev. 7.2	Oct. 2021	TSP143IV-UE is supported.
Rev. 7.3	Mar. 2022	POP10CI is supported.
Rev. 7.4	Oct. 2022	mC-Label3 is supported. End of support TSP143U, TSP143GT, TSP143LAN and FVP10.
Rev. 7.5	Aug. 2023	TSP143IV-UE SK is supported. SK1-41, SK1-41 presenter and SK5-31 presenter are supported.
Rev. 7.6	Nov. 2023	MCP31CI, MCP31CBI are supported.
Rev. 7.7	Feb. 2024	POP10CBI is supported.

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