SmaPri Driver Developer Manual

Driver Settings (Android)

SATO CORPORATION

Rev.20240625

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Chapter:2

Driver Settings (Android)

2-1 Install / Uninstall

- Newly install –Overwrite install -Uninstall

Install SmaPri Driver from Google Play (Ver.1.19.0 or later) or APK file.
SmaPri Driver in Google Play and APK file are the same. There is no difference in functionality.

- Install

Open the Play Store app on your Android device and search for "SmaPri Driver".

On devices where the Play Store is not available, you can also install the app from APK file.
(Please contact us to get APK file.)
You can install it in the following ways:

- Install from the external storage
- Install from cloud storage (e.g., Google Drive, OneDrive)
- Install from development machine with USB connection

Note

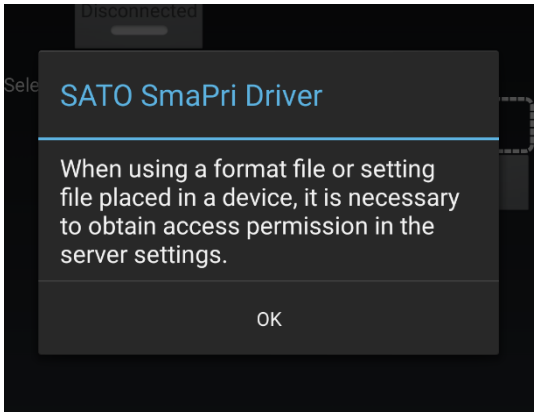
- SmaPri Driver in Google Play and SmaPri Driver in APK file cannot co-exist on one device.
- Enable installation of apps from unknown sources on your Android device. The setting procedure differs depending on the terminal and OS version, so please follow the procedure for your terminal.

When you start SmaPri Driver for the first time, the following access permission dialog will be displayed, and select Allow. Note that the displayed content may change depending on the device and OS version.

Note

- If you accidentally selected "Don't allow", please allow "Nearby devices" and "Notifications" in App permissions.

The following message will also be displayed on devices with Android 11 or later. If you want to place formatfiles in the device's shared storage, you will need permission to access the folder. For details, see 2-13. Local file access on Android 11 and later.



- Overwrite install

When run overwrite install, the setting value is taken over and the running server restart automatically after the overwrite install.

Note

When overwriting SmaPri Driver Ver.1.18.1 or earlier to Ver.1.19.0 or later, a dialog requesting permission for location information may be displayed at startup. Select Allow when prompted.

- Uninstall

Please be aware that all of the settings and data in the application will be deleted.
Select "SATO SmaPri Driver" from the application list and uninstall it. Follow the procedure for the terminal for the operation procedure.

2-2 Administration screen (status)

Change settings to start/stop server and connect / disconnect printer.

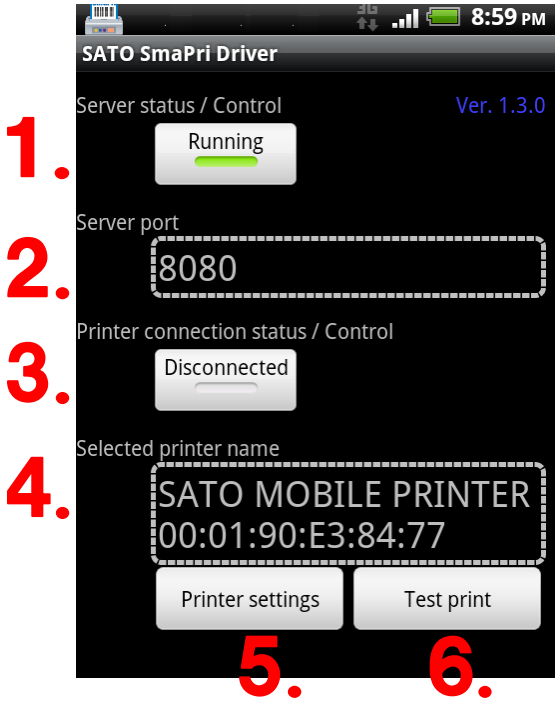
- How to Start

- Select "SATO SmaPri Driver" on the application list.
- Select "SATO SmaPri Driver" from the status bar.

- Starting Intents

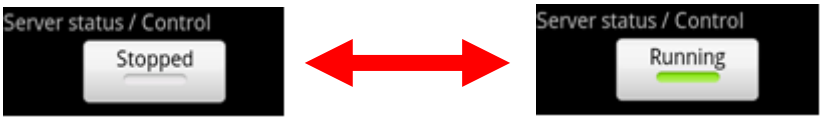
smapri:///View/Status

- Function Description



1) Server status / Control

Starts and stops SmaPri Driver.



While running, an icon is displayed on the status bar at the top of the screen.

(Before Ver.1.18.1)

Starting or stopping the server can also be performed using intent from upper level applications.

Server startup: smapri:///Service/Start

Server stop: smapri:///Service/Stop

2) Server URL

It shows the port number that receives HTTP requests from the client.

To change this setting, see "Administration screen (server settings)".

3) Printer connection status / Control

Connects and disconnects from the printer. Normally, no action is required.

When SmaPri Driver receives the request (or there is print data to the spooler) it automatically connects to the printer. And, if there is no communication with the printer over the value specified in the printer settings "Printer disconnection timer" will automatically cut off communication with the printer.

4) Selected printer name

Shows the printer specified as the connection destination.

For Bluetooth ····· Bluetooth device name and BD address

For LAN ····· IP address and TCP port number

For USB ····· USB device name and USB serial number

For Bluetooth, a list of devices will be displayed when you select "Bluetooth device", and you can select "Discover new device" or "NFC Pairing" for pairing. For more information, refer to "Bluetooth pairing" section. In case of "the device does not have pairing information" or "the device's Bluetooth is disabled", it is displayed as "unpaired".

5) Printer setting

Configure the communication settings with the printer.

For details, see "Administration screen (printer settings)".

6) Test print

Do a test print. This function is convenient for testing communication with the printer.

SmaPri Driver will check the status by directly connecting to the printer, before sending the test print data. If the printer is turn off will be displaying error message.

If test print failed, refer to "printer settings" at first.

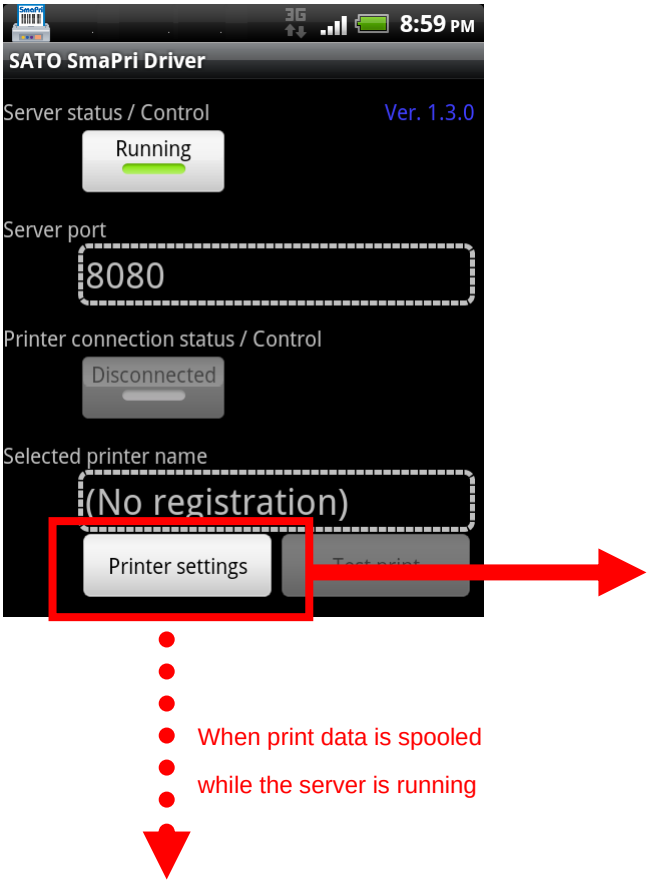
- MB2i series and MB4i series use "Status 3 (MB200i/MB201i,MB400i/MB410i)".
- PW208/PW208NX series use "Status 4" or "Status 3".
- Other models use "Status 4" or "Status 3".

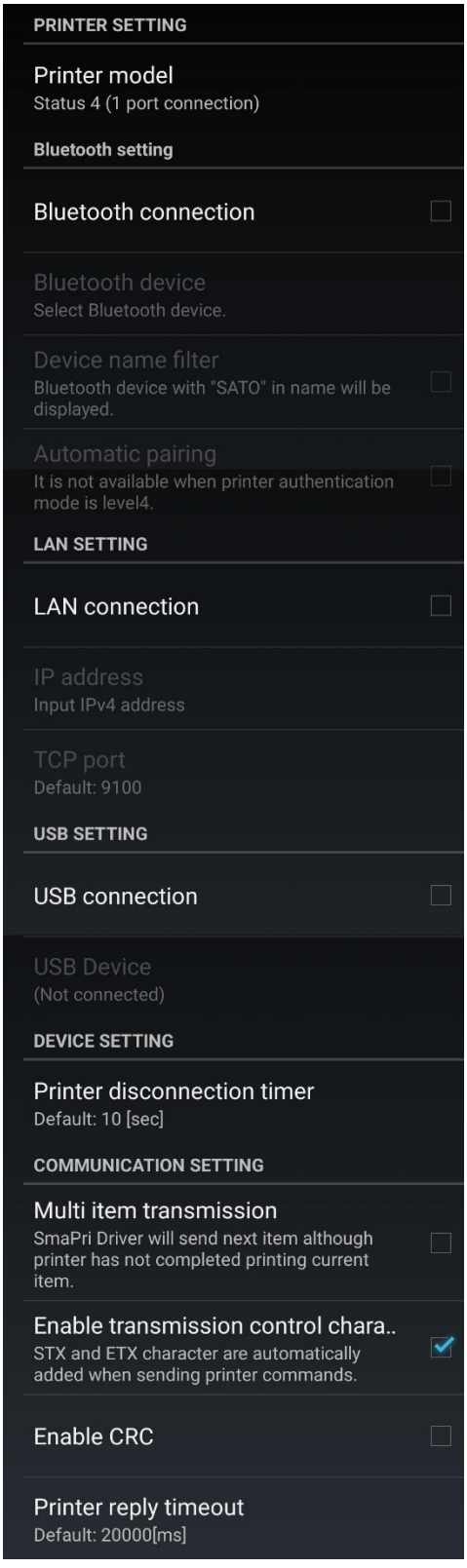
2-3 Administration screen (printer settings)

Configure settings related to printer connection.

- How to Start

- Select "Printer settings" on the "Administration screen (status)".

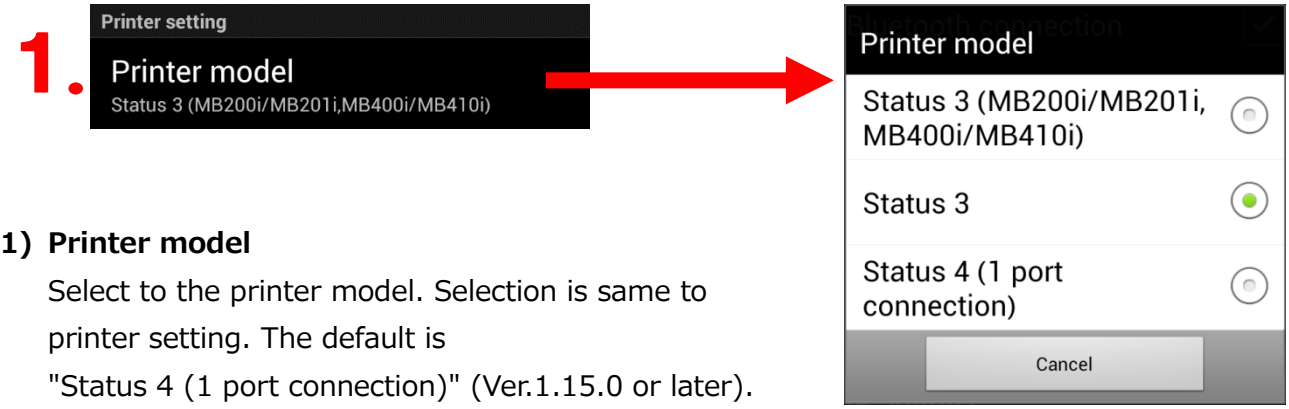




- Starting Intents

smapri:///View/PrinterSettings

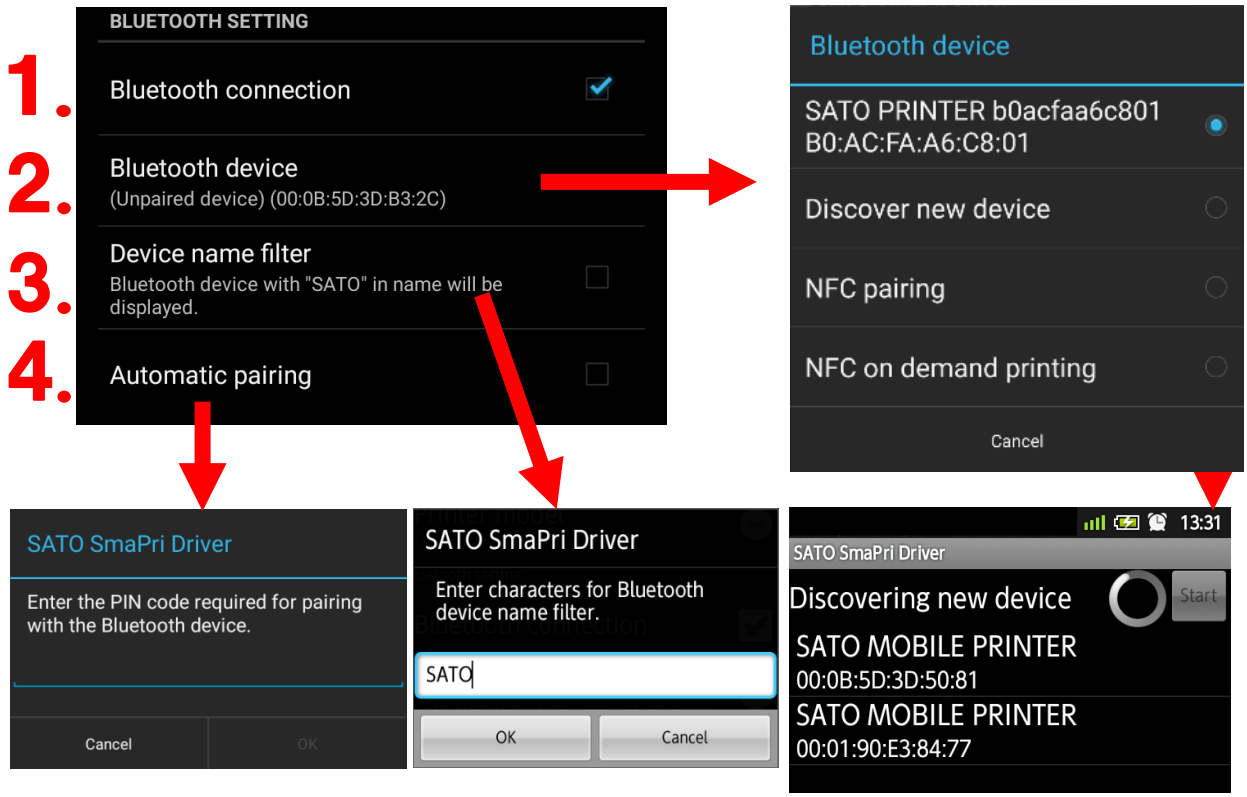
- Function Description (Printer settings)



1) Printer model

Select to the printer model. Selection is same to printer setting. The default is "Status 4 (1 port connection)" (Ver.1.15.0 or later).

- Function Description (Bluetooth settings)



1) Bluetooth connection

Connect to the printer via Bluetooth.

2) Bluetooth device

It shows the device name and BD address for the paired printer.

Select the printer to connect to.

You can also select "Discover new device" or “NFC pairing” to pairing.

For more information, refer to "Bluetooth pairing" section.

For “NFC on demand printing”, refer to "NFC Pairing / NFC on demand printing".

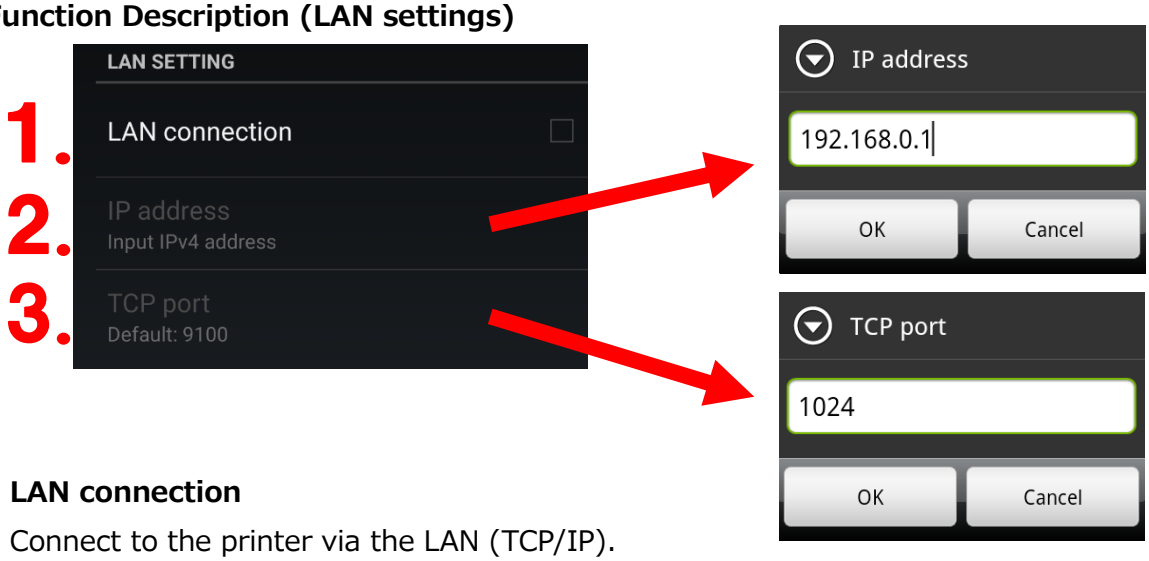
3) Use "Bluetooth device name filter"

It filters the devices of "Bluetooth device" list and "Device San" list with specified string.
Default setting is “disabled”. Default filter string is "SATO".

4) Automatic pairing

By entering the PIN code in advance, you will automatically pair with the printer.
The PIN code matches the setting value of the printer.
(ex.) Case of PW208 is "0000". Case of MB**xxx**i is "0000000000000000 (zero 16 times)".)
Default setting is “disabled”.
It cannot be used when the Bluetooth authentication level of the printer is set to level 4.
(The initial value of the certification level of CT4-LX is Level 4.)

- Function Description (LAN settings)



1) LAN connection

Connect to the printer via the LAN (TCP/IP).

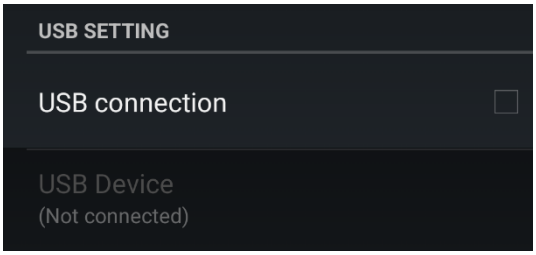
2) IP address

Set the IP address of the printer.

3) TCP port

Set the TCP port number. The default is "9100" (Ver.1.15.0 or later).

- Function Description (USB settings)



1) USB connection

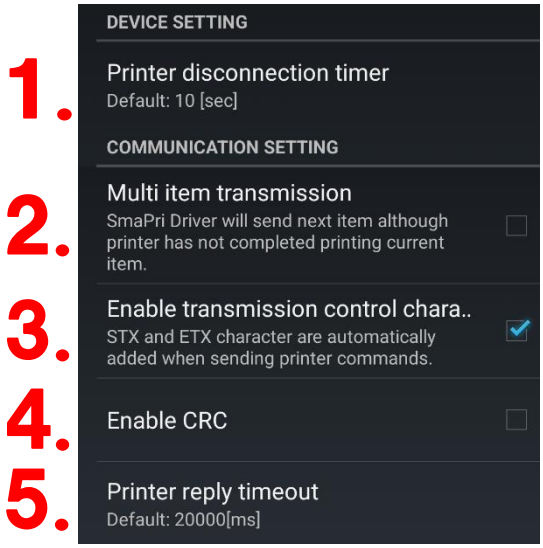
Connect to the printer via the USB.

For details, see 2-15.How to connect to printer via USB.

2) USB Device

The currently connected USB printer is displayed. You cannot change the settings.

- Function Description (Device setting, Communication setting)



1) Printer disconnection timer

Set the time to automatically disconnect from the printer. The default is "10 [sec]" (SmaPri Driver Ver.1.20.0 or later).

2) Multi item transmission

To specify print data transmit condition. The default is "Disabled".

Enable: Sending of next print item without waiting to complete printing current item.

Disabled: Sending of next print item waiting to complete printing current item.

3) Enable transmission control character

To specify automatically added transmission control character (STX/ETX) to the print data. The default is "Enable". Usually specifies "Enable", so it does not need to change.

If "Enable CRC" is "Enable", this item is always "Enable".

4) Enable CRC

The default is "Disabled". Normally you do not need to change it.

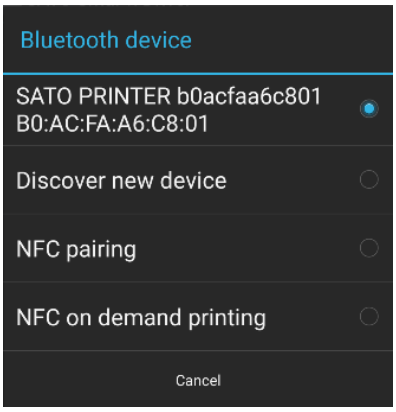
This setting must be same as the printer. If "Printer: Disabled" and "SmaPri Driver: Enable", will be the cause of the failure, such as print data is canceled.

5) Printer reply timeout

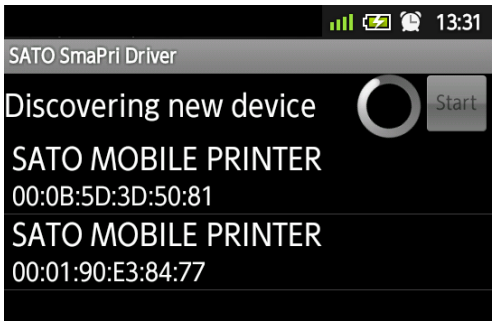
To set the timeout value when communicating with the printer and when sending and receiving data. The default is "20000 milliseconds (20 seconds)".

- Bluetooth pairing

1) Select "Discover new device" from the Bluetooth device list.



2) Automaticaly start to search for Bluetooth device.



3) Select the printer in device list.

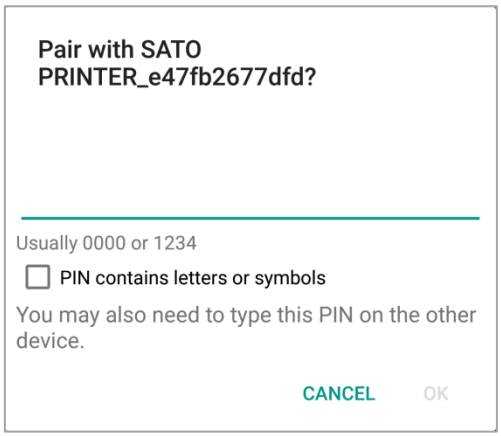
Tap "Start" to scan again if you cannot find the printer you want to connect to.

4) Enter PIN code and tap "OK".

The default PIN code is following.

- PW208 series, CL4NX/CL6NX series, CT4-LX: "0000" (4 seros)
- PT208 series, PT408e/PT412e: "0000000000000000" (16 zeros)
- Other model, please refer to "User Manual" of your printer.

* "PIN code request" may have been notified in the status bar.



PIN code inputs

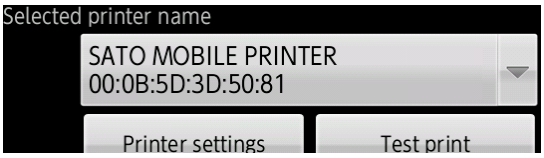
When the input of the pin code takes more than 12 seconds, error dialog is displayed. If you entered the correct pin code, you re-select the printer (BD address) and connect it.

*If the Bluetooth authentication level of the printer is "Level 4," the pairing procedure will be different.

-Confirm that the 6-digit number (random) displayed in the [pair with (Printer Name)] dialog matches the 6-digit number displayed on the printer and click [Set Pair].

-The printer side allows pairing by operating the buttons on the main unit or the touch panel.

5) If the pairing is successful, displaying the printer's name and BD address will be displayed on "Selected printer name" box.



6) Tap "Test Print" to confirm that the printer can print a test label.

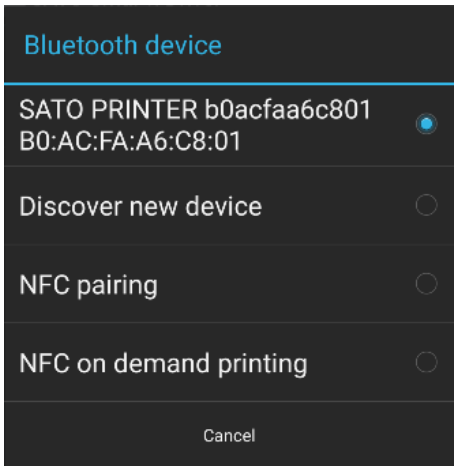
- How to pair with NFC

Perform pairing using NFC on the Android device.

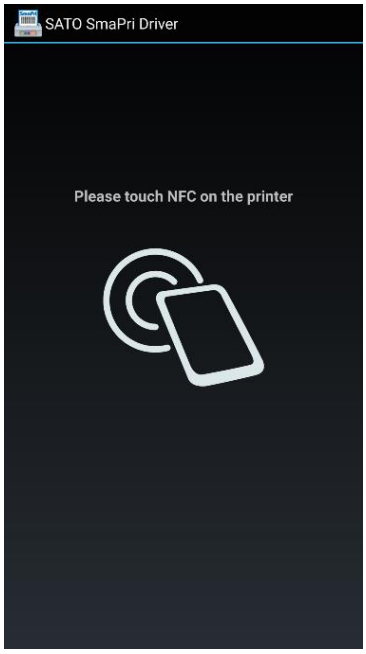
Data communication uses Bluetooth.

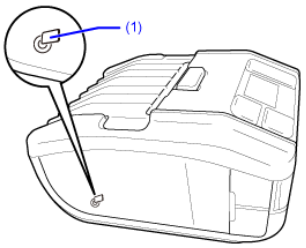
Available printers are PW208NX, PW4NX, CT4-LX, and CL4NX Plus series.

1) Select "NFC Pairing" from the list of Bluetooth devices.



2) When the "Please touch NFC on the printer" screen appears, bring the NFC on the Android device closer to the NFC mark on the printer.
*The printer must be turned on.

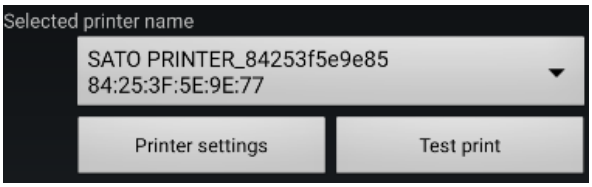




NFC position (PW208NX)

3) When connecting for the first time, a pair setting request is displayed on both the Android device and printer.
* For setting, refer to 4) of "Bluetooth pairing method".

4) If the pairing is successful, displaying the printer's name and BD address will be displayed on "Selected printer name" box.
Printer Connection Status is automatically set to "Connecting".

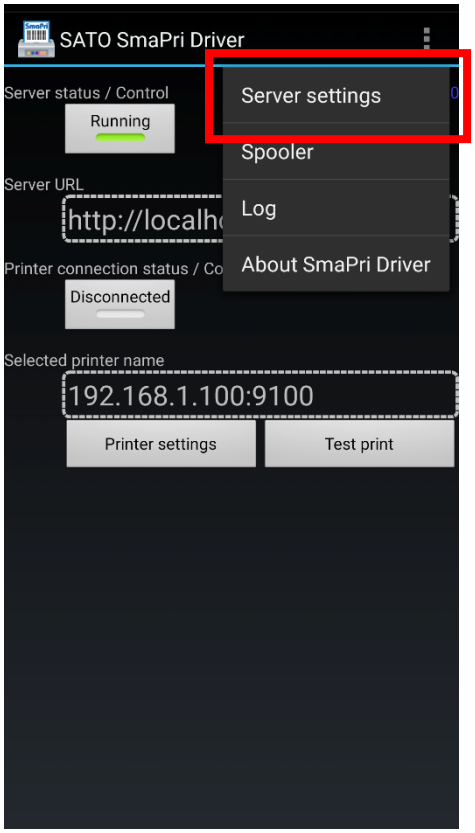


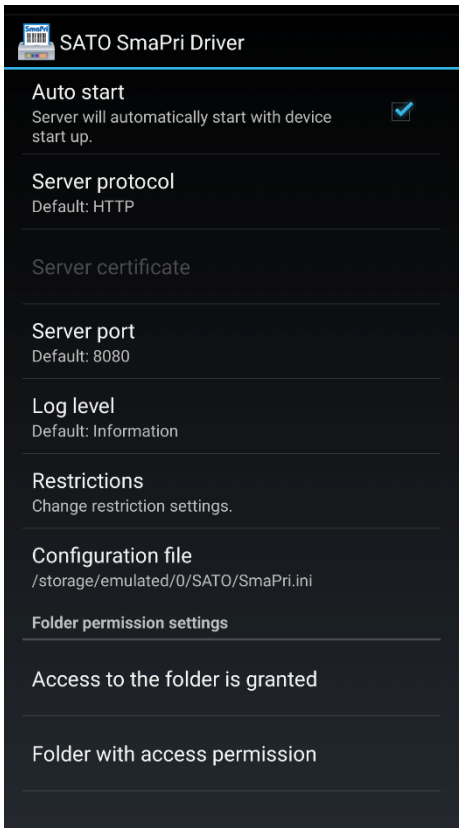
2-4 Administration screen (Server settings)

Configure server settings including server port number and log level.

- How to Start

- Display the menu from the "administration screen (status)" and select "Server settings".

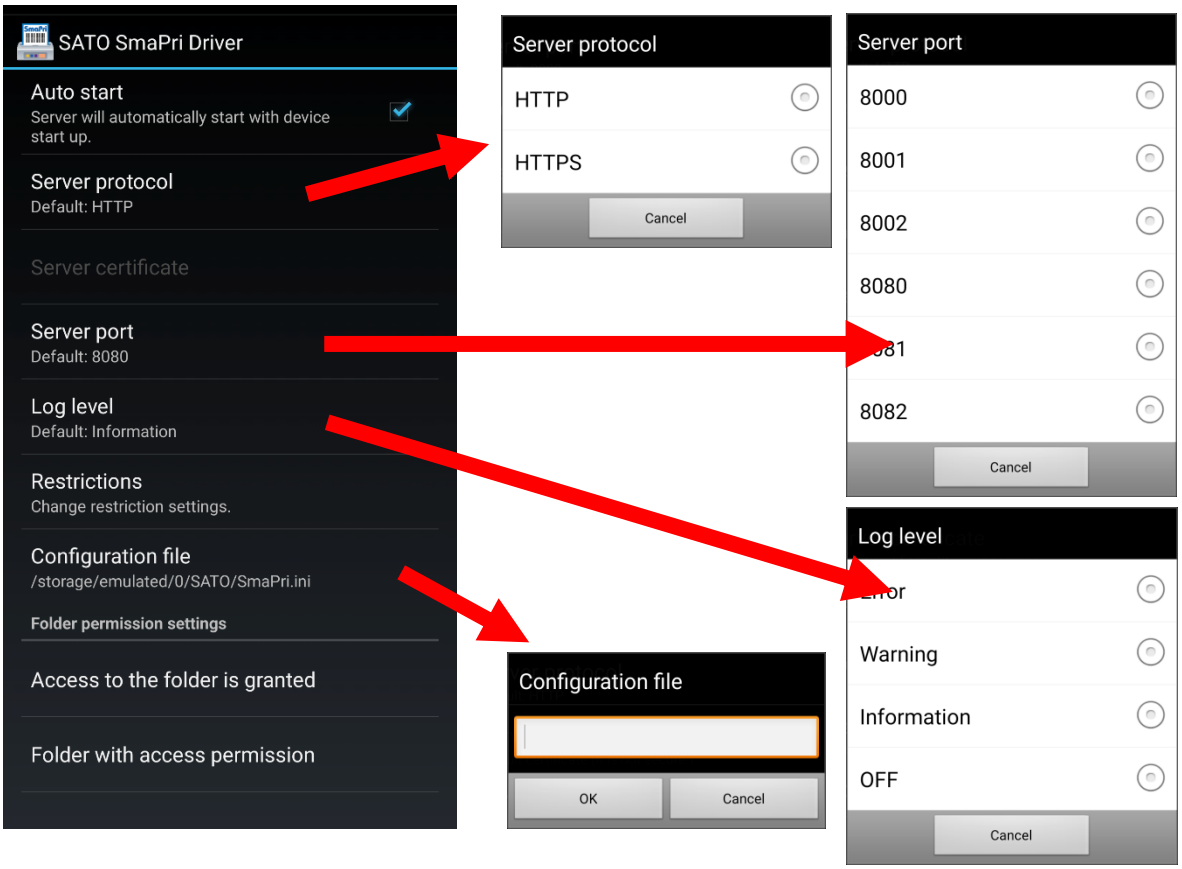




- Starting Intents

smapri:///View/ServerSettings

- Function Description



1) Auto start

The default is "Enable".

Enable: SmaPri Driver automatically starts when the Android device is turned on.

Disabled: SmaPri Driver does not automatically starts.

2) Server protocol

Select for server protocol (HTTP/HTTPS). The default is "HTTP". Usually specifies "HTTP", so it does not need to change. If you need to use "HTTPS", please refer to "Use HTTPS".

3) Server certificate

Select for using server certificate. Please refer to "Use HTTPS".

4) Server port

To set the port number that receives HTTP requests from the client. The default is "8080". In order to apply the settings, restart the SmaPri driver.

5) Log level

To set the operation log output level.

The default is "Information" (Ver.1.15.0 or later). All entries are output to the log.

To check the contents of the log, see "Administration screen (Log)".

Every HTTP requests will be saved into log when selects “information” log level. This may cause storing user name and password for basic authentication, GET request parameters and data as plain text in the log. Do not set to “information” if security is concerned. Recommend to enable “restrictions” to avoid unexpected log level change by user.

Content	Log level			
	OFF	Error	War-ning	Infor-mation
- Server start and stop - HTTP communication error - Communication error with printer - Other serious errors	No	Yes	Yes	Yes
- Errors for HTTP requests and parameters (error content) - Errors when modifying settings with the administration screen	No	No	Yes	Yes
- HTTP communication connection and disconnection - Content of requests by HTTP communication and that result - Modifying setting with the administration screen	No	No	No	Yes

6) Restrictions

Limit to SmaPri Driver configuration changing.
For more information, refer to the "Administration screen (Restrictions)".

7) Configuration file

Input the full path of the configuration file. The configuration file will be imported during the SmaPri Driver startup. The default file path is "<external storage>/SATO/SmaPri.ini".
For more information, refer to "Importing the configuration file".

The external storage path is created using Android API* and may be set as an internal storage path depending on your device. If that happens, ensure that you reconfigure the file path accordingly.

* API: Environment.getExternalStorageDirectory()

From SmaPri Driver Ver.1.19.0, it is necessary to obtain access permission to the reference folder when using the setting file on a terminal with Android 11 or later.
For more information, refer to "Local file access on Android 11 and later".

8) Access to the folder is granted, Folder with access permission (Ver.1.19.0 or later)

From SmaPri Driver Ver.1.19.0, this menu will be displayed on devices with Android 11 or later. For more information, refer to "Local file access on Android 11 and later".

2-5 Administration screen (Restrictions)

Limit to SmaPri Driver configuration changing.

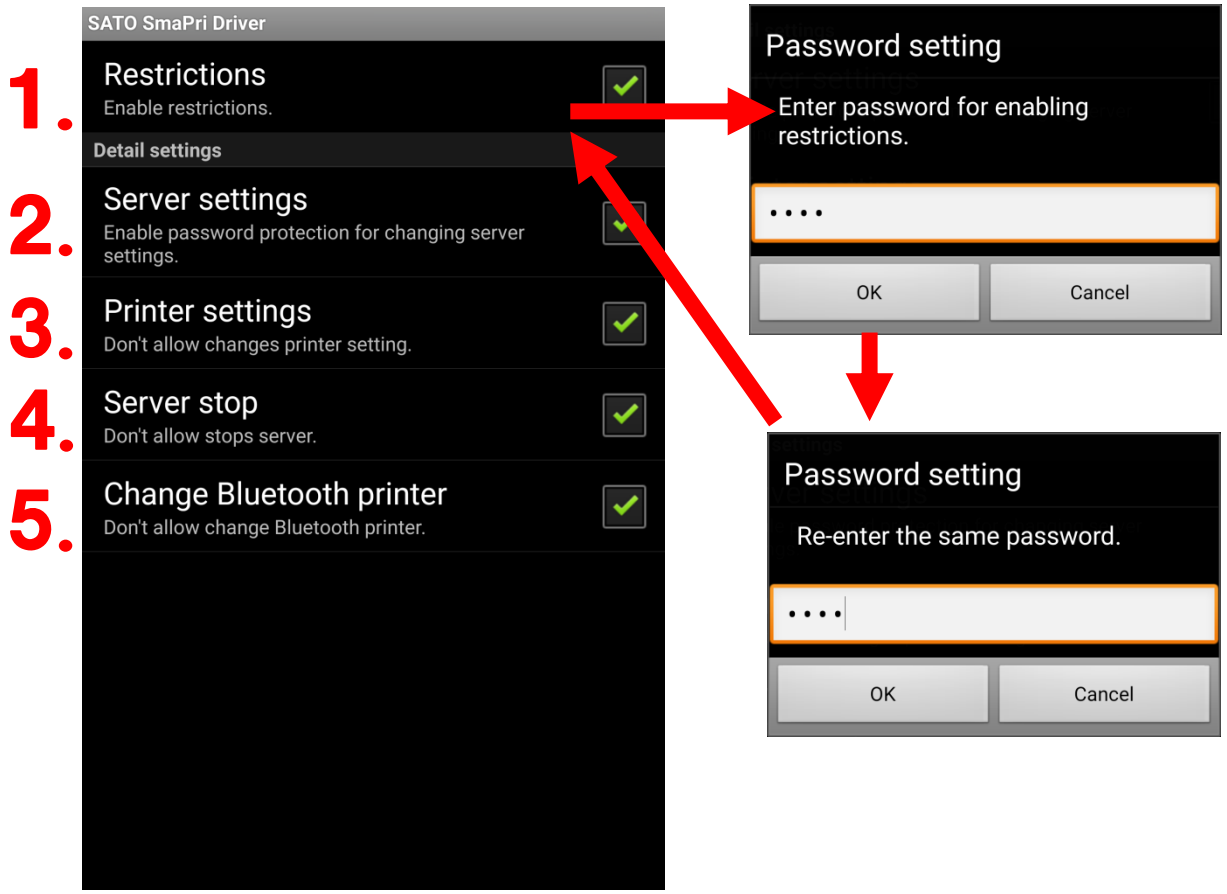
- How to Start

- Select "Restrictions" on the administration screen (server settings).

- Starting Intents

None

- Function Description



1) Restriction

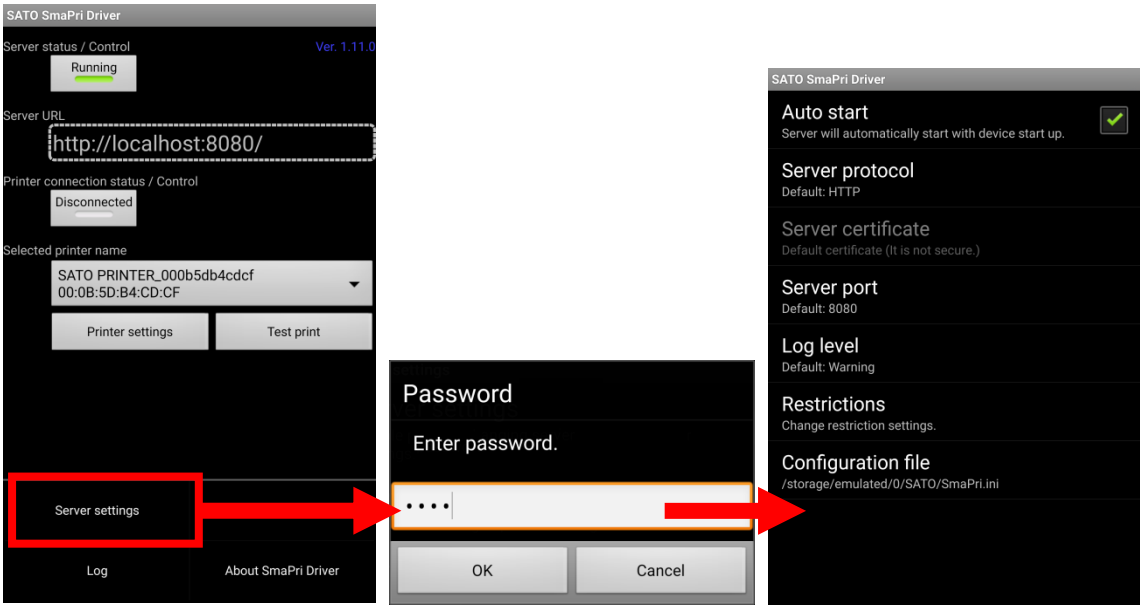
Enable restrictions. The default is "Disabled".

"Password setting" dialog will be displayed when you change to "Enable" this setting.

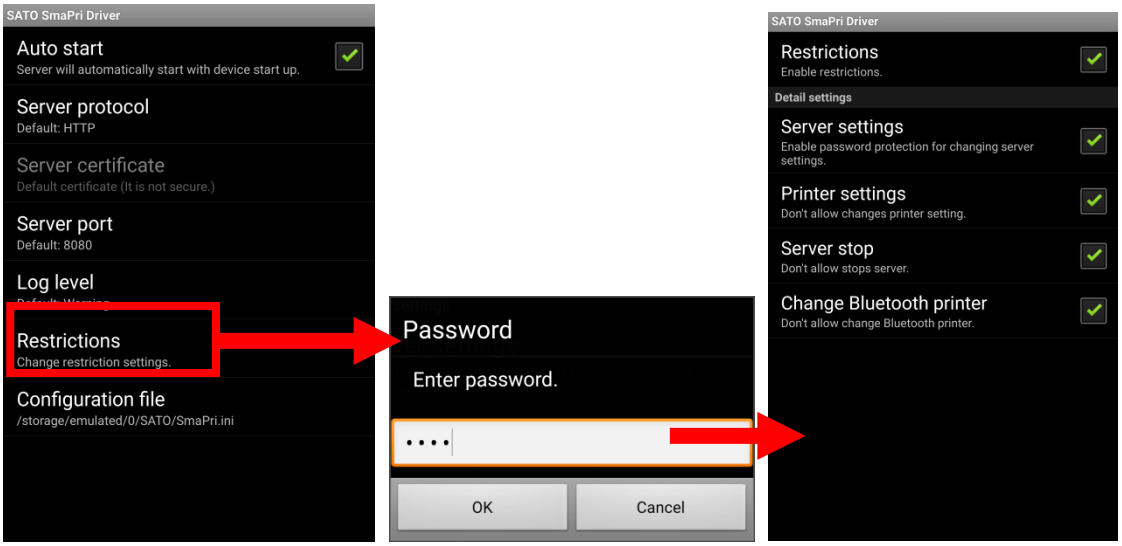
2) Server setting

Enable server setting restrictions. The default is "Enable".

Password will be required to enter to “Server setting” from administration screen.



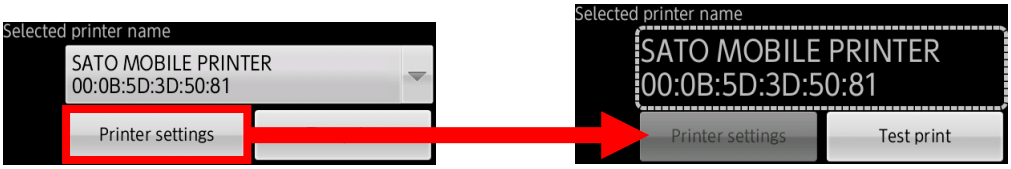
You will need to enter password when you select the "Restriction" in "Server setting".



3) Printer settings

Enable printer settings restriction. The default is "Enable".

It will disable "Printer settings" in administration screen



4) Server stop

Enable server stop restriction. The default is "Enable".

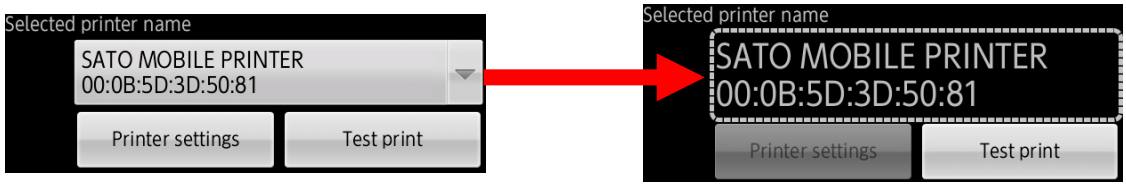
. "Server status / Control" button will be disabled in administration screen.

In case server was not running, the button will be disabled when server status is changed.

5) Bluetooth printer selection

Enable Bluetooth printer selection restrictions. The default is "Enable".

"Selected printer name" becomes display only.

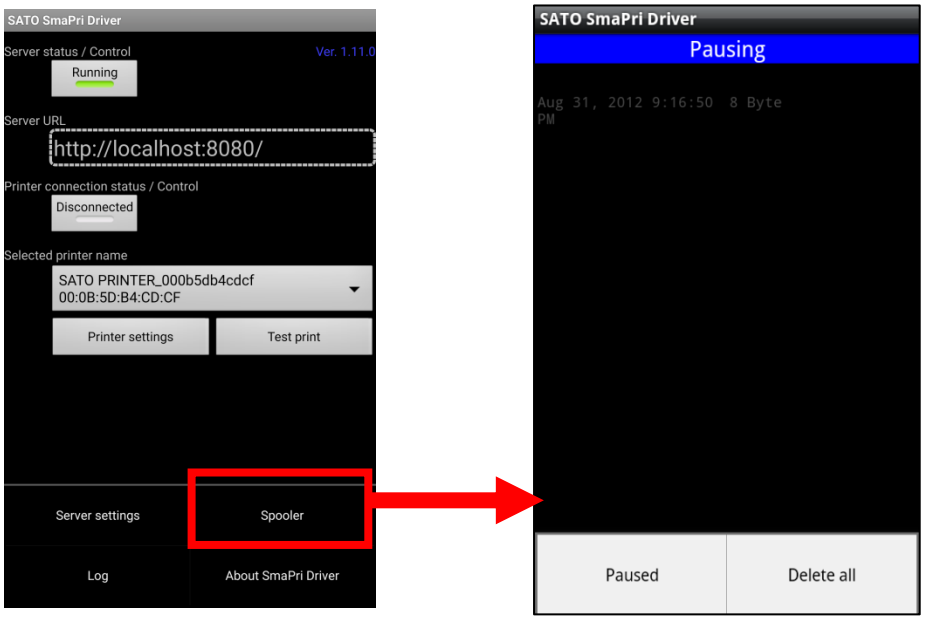


2-6 Administration screen (spooler display)

Set/get job name.

- How to Start

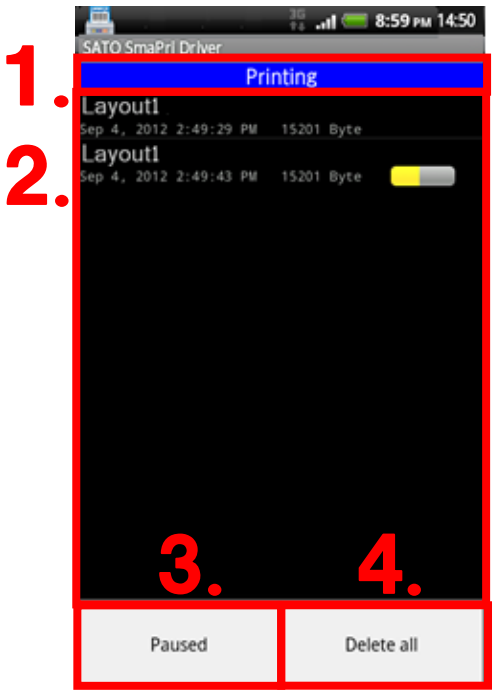
- Display the menu from the "administration screen (status)", and select "Spooler".
- Select "SATO SmaPri Driver" from the status bar if there are active print jobs.



- Starting Intents

smapri:///View/Spooler

- Function Description



"3" and "4" are displayed by pressing the menu key ("…") of your device.
If there is no menu key, it may be possible to display with long press of multitasking button.Please check with the device manufacturer for details.

1) Spooler status display

To show the status of the spooler as messages and colors.

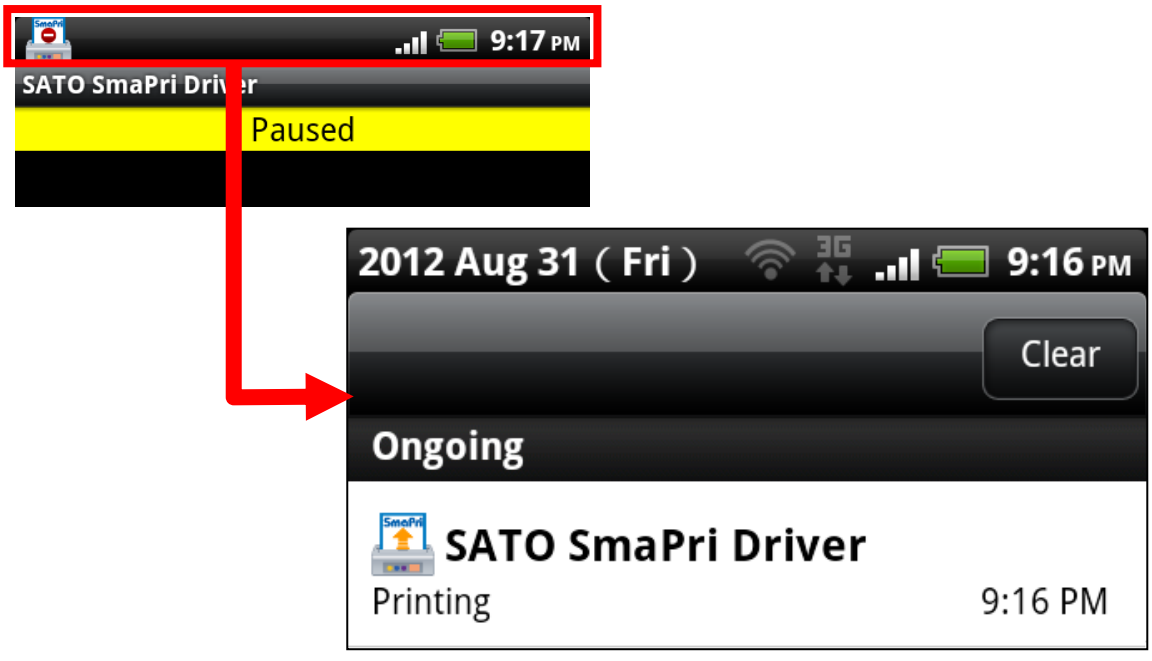
The spooler status is also displayed as an icon on the status bar at the top of the screen.

Spooler status	Color	Icon	Description
Standby	Blue		There is no data in the spooler. Regardless of the printer status, the spooler is always this status when there is no data in it.
Printing	Blue		Sending data to the printer or the printer is printing.
Offline	Yellow		The printer is offline. The printer status (no error, buffer near full, battery near end) is also displayed.
Paused			The spooler is paused.
Connection error	Red		The spooler cannot connect to the printer.
Printer error			The printer is in the error state. The error details are also displayed.

*With SmaPri Driver Ver.1.18.1 or earlier, the following icons are displayed.

Standby	Printing	Paused	error

You can also check the spooler status by opening the status bar.

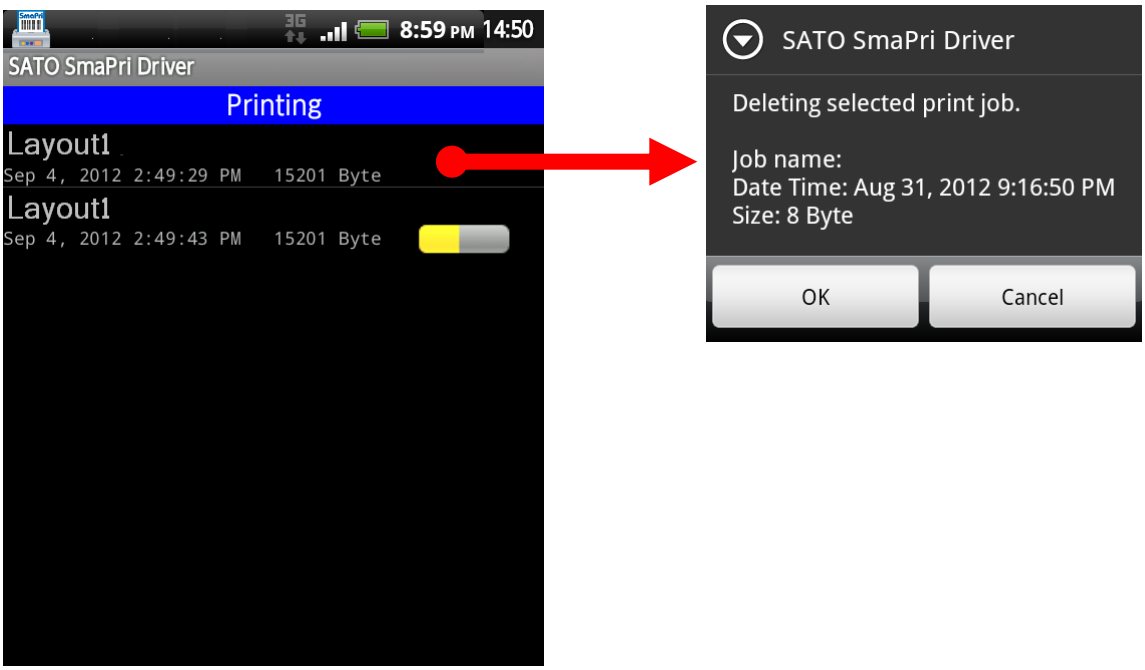


2) Print job list

"Job Name", "Created Date Time" and "Size" will be displayed.

The progress bar will be displayed if format with counter is processing as background task.

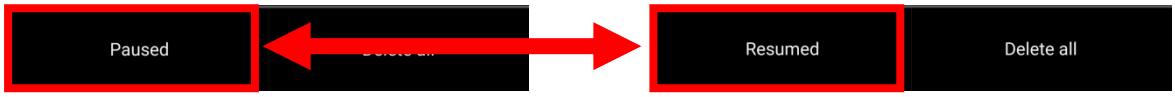
You can tap and hold the job to cancel and delete.



3) Paused/Resumed

You can pause and resume the spool.

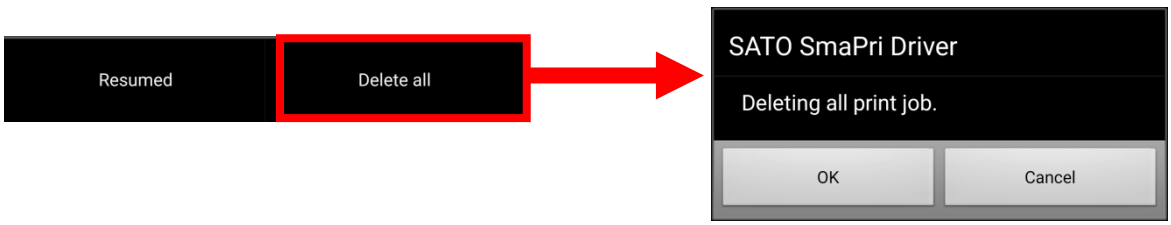
While sending data, the spool is paused after it finishes sending print data.



4) Delete all

To delete all spool print data.

To delete each item individually, tap and hold the data item.

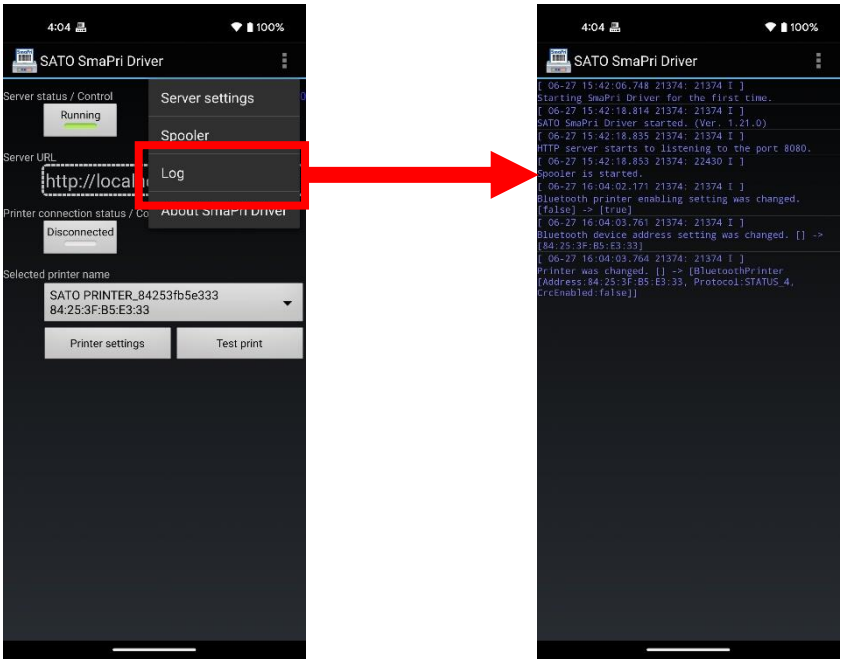


2-7 Administration screen (log)

Display log.

- How to Start

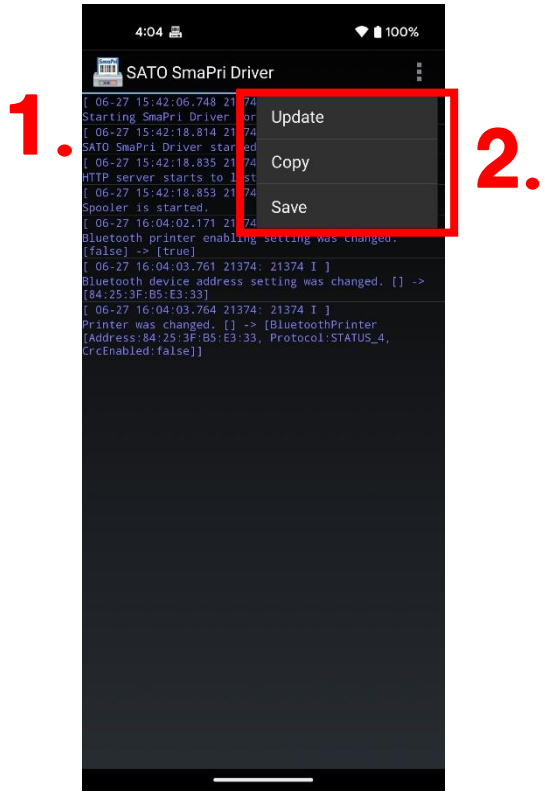
- Display the menu from the "administration screen (status)", and select "Log".



- Starting Intents

None

- Function Description



1) Log list

Shows logs last 246 entries.

* The log is saved up to 7 days (Including the day). Since contents not shown in the log list are also internally recorded, please save the log to a file and check it.

The log is recorded in the following format:

```
[ 06-25 11:50:36.585 10324: 10324 I ]
SATO SmaPri Driver started. (Ver. 1.21.0)
```

Log information	Content
1st row (space delimited)	Log date and time, thread ID, Log level (E: Error, W: Warning, I: Information)
2nd row and later	Detail information (e.g., the content of the request received from the host application, the content of the error and its cause)

Text color of logs is different by severity. Error is red, Warning is yellow, and Information is blue. **Log level** can be changed with **Administration screen (server settings)**.

[Example of error log]

```
[ 06-25 17:17:04.394 10324: 27085 E ]
Failed to connect to the printer. (BluetoothPrinter
[Address:84:25:3F:B5:E3:33, Protocol:STATUS_4,
CrcEnabled:false])
java.io.IOException: read failed, socket might closed
or timeout, read ret: -1
 at
android.bluetooth.BluetoothSocket.readAll(BluetoothSoc
```

2) Update, Copy, Save

Update: To refresh the log list to show the latest log.

Copy: Copy the displayed log information (maximum 256 entries) to clipboard.

Save: Save the log information to a file.

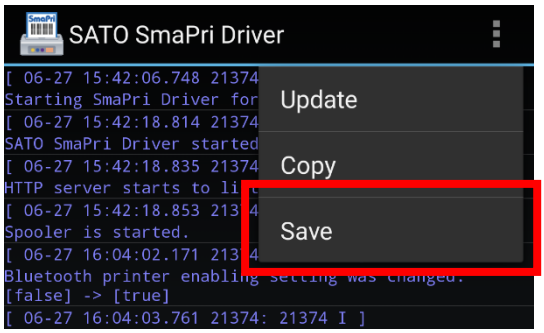
Note

SmaPri Driver logs will be initialized when you do the following:

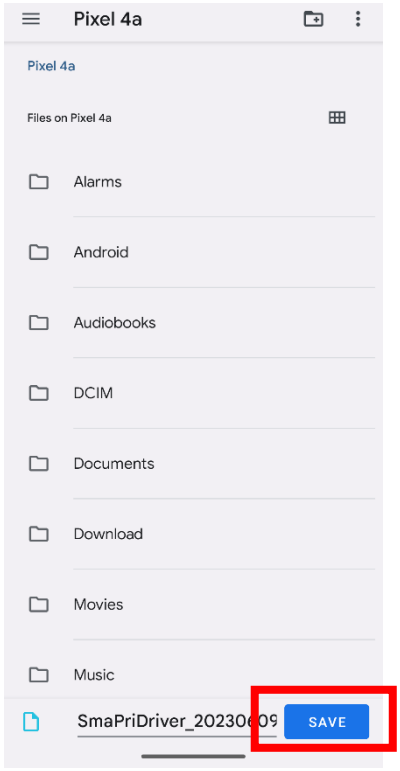
- Uninstall SmaPri Driver.
- Update SmaPri Driver from older version to Ver.1.16.0 or later (Due to changes in the logging method).

- Save the log to a file

1) Select “Save”.

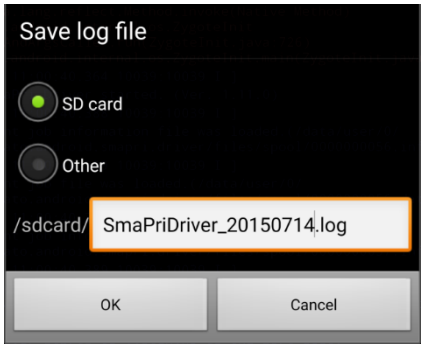


2) The log save screen will appear. Select "Save".

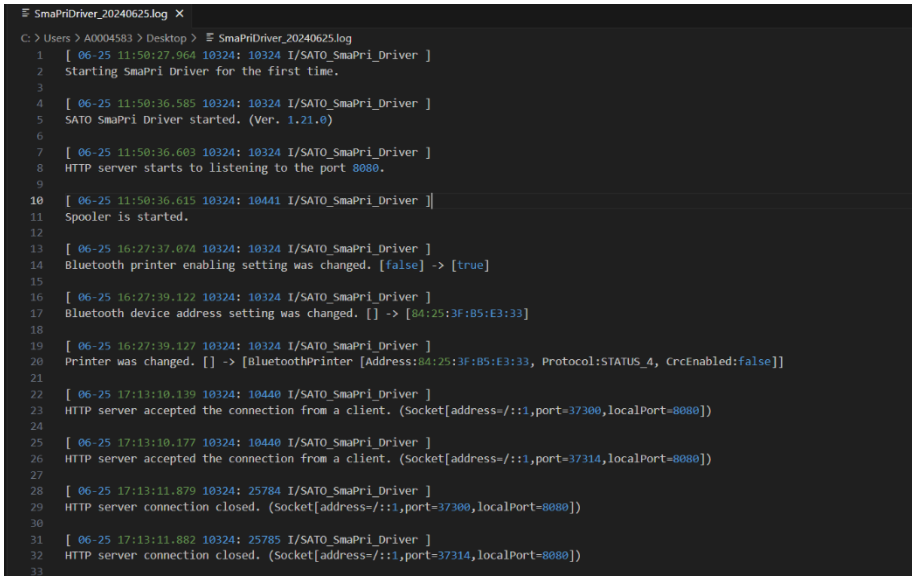


Note

- The default file name is “SmaPriDriver_YYYYMMDD.log”.
- If device is running Android 10 or earlier, the following screen will be displayed.



3) A Log file is saved in the device's shared storage.
4) Copy the log file to PC. For example, connect device and PC with a USB cable and copy the file to PC with Explorer.
5) The log file can be opened in a text editor such as Notepad.



2-8 Importing the configuration file

Import administration settings from the configuration file.

The configuration file will be imported during the SmaPri Driver startup if the full path of a valid configuration file has been specified at the server settings screen.
ASCII, UTF-8 (with BOM) and UTF-16 (with BOM) can be used to encode the configuration file.
A notification will be displayed in the status bar during import.

- Use on devices with Android 11 or later

From SmaPri Driver Ver.1.19.0, it is necessary to obtain access permission to the reference folder when using the setting file on a terminal with Android 11 or later.
For more information, refer to "Local file access on Android 11 and later".

- Configuration file structure

1) Parameter

Specify one parameter per line using the following format.

Parameter Name = Value

2) File encoding

ASCII, UTF-8 (with BOM) and UTF-16 (with BOM) can be used.

UTF-8 and UTF-16 files will be identified by their byte order marks.

3) Special characters

Character type	説明
Newline characters	CR, LF, CR+LF
Whitespace characters	Spaces before and after parameter names and values are ignored.
Upper-case, Lower-case	Parameter names and enumeration values are not case sensitive.
Double quotes	Can be used to quote values, and function as the escape character for a double quote used in values; Cannot be used in parameter names.
Semicolons	Lines starting with the semicolon are treated as comments and ignored.
Blank lines	Lines with only spaces or a line break are ignored.

- Configuration parameters

You can only import settings whose parameters are included in the configuration file.

Values marked with the asterisk (*) are default settings for SmaPri Driver.

Parameter name	Values	Description
Auto start (server)		
server_automatic_start	false	Do not start automatically
	true	Start automatically (*)
Server protocol		
server_protocol	http	HTTP (*)
	https	HTTPS
Server certificate		
server_certificate_type	custom	Custom server certificate (imported certificate)
Password for keystore file (the custom server certificate)		
custom_key_store_password	A string of one or more characters	
Passphrase for private key (of the custom server certificate)		
custom_private_key_password	A string of one or more characters	
Server port number		
server_port	1～65535	Default: 8080
Log level		
log_level	error	Error
	warning	Warning
	information	Information (*)
	off	OFF
Restrictions		
restriction_enabled	false	Disable (*)
	true	Enable
Password for Restrictions		
restriction_password	Any character string	
Restrictions - Server setting		
restriction_server_settings_enabled	false	Allow changes (*)
	true	Do not allow changes
Restrictions - Printer setting		
restriction_printer_settings_enabled	false	Allow changes (*)
	true	Do not allow changes
Restrictions - Server stop		

restriction_server_stop_enabled	false	Allow stop (*)
	true	Do not allow stop
Restrictions - Change Bluetooth printer		
restriction_bluetooth_printer_switching_enabled	false	Allow switch (*)
	true	Do not allow switch
Configuration file (for importing settings)		
import_settings_file_location	File path Default: /mnt/sdcard/SATO/SmaPri.ini	
Communication protocol between SmaPri and printer		
printer_type	mobile	Status 3 (MB200i/MB201i, MB400i/MB410i)
	status3	Status 3
	status4_1port	Status 4 (1 port connection) (*)
	standard	Old compatibility (Status 3)
Printer I/F type		
printer_interface_type	bluetooth	Bluetooth connection (*)
	lan	LAN connection
	usb	USB connection
Bluetooth address		
bluetooth_device_address	BD address Example: 00:01:90:E3:84:77	
Bluetooth device name filter		
bluetooth_device_filter_enabled	false	Disable (*)
	true	Enable
Bluetooth device name filter character string		
bluetooth_device_filter_string	Default: SATO	
Bluetooth automatic pairing		
bluetooth_auto_bonding_enabled	false	Disable (*)
	true	Enable
Bluetooth automatic pairing PIN		
bluetooth_auto_bonding_pin_code	1 to 16 digits ASCII string.	
Bluetooth insecure connection * If this function is enabled, it will be possible to connect without pairing, but communication contents will not be encrypted. Please use it after recognizing the security risk.		
bluetooth_insecure_connection	false	Disable (*)
	true	Enable

IP address (LAN connection)		
lan_printer_ip_address	IP address Example: 192.168.1.1	
TCP port (LAN connection)		
lan_printer_tcp_port	1～65535 (default: 9100)	
Printer disconnection timer		
connection_timeout	-1	Do not disconnect
	0	Every label print
	1～2147483647	Seconds (default: 10) (*)
Multi item transmission		
multi_item_sending	false	Single item (*)
	true	Multi item
Enable transmission control character		
tc_character_enabled	false	Disable
	true	Enable (*)
Enable CRC		
crc_enabled	false	Disable (*)
	true	Enable
Printer reply timeout		
receive_timeout	1～2147483647 [ms] Default: 20000 [ms]	
Notification after importing configuration file		
import_notification	false	Disable
	true	Enable (*)
Delete configuration file after import		
delete_me	false	Keep the file (*)
	true	Delete the file

- Configuration file example

```
restriction_enabled = true                    ; Enabled restrictions.
restriction_password = "1234"                 ; Set "1234" to password of restrictions.
restriction_server_settings_enabled = true    ; Restrictions to server setting.
printer_type = status4_1port                  ; Set communication protocol to "status 4".
printer_interface_type = bluetooth            ; Set communication interface to "Bluetooth".
bluetooth_device_address = 00:01:90:E3:84:77  ; Set BD address.
delete_me = true                              ; Delete configuration file after import.
```

2-9 Application integration using intent

Display administration screen and start/stop server using intent.

You can perform SmaPri Driver functions (e.g. display main administration screen, start/stop server) from other applications or the Web browser using intent (custom URL scheme).

- Intent List

URI	Function	Supplement
smapri:///View/Status	Display administration screen (status)	
smapri:///View/ServerSettings	Display administration screen (server settings)	
smapri:///View/PrinterSettings	Display administration screen (printer settings)	Supp. 1
smapri:///View/Spooler	Display administration screen (spooler display)	
smapri:///View/NfcPairing	Display NFC Pairing screen	Supp. 4
smapri:///Service/Start	Start server	Supp. 2
smapri:///Service/Stop	Stop server	Supp. 3

Supplement 1: Display administration screen (printer settings)

- The following message appears when the spooler is processing print jobs.

"Printer setting cannot be changed while spooling. Wait for printing all print jobs or pause the spooler to change settings."

When you tap "OK", the spooler is not displayed.

When you tap "Spooler", the spooler display appears.

- The following message appears when SmaPri Driver is connected to a printer.

"Printer will be disconnected. Do you want to continue?"

When you tap "Yes", printer will be disconnected and the printer settings screen appears.

When you tap "No", the printer settings screen appears but no changes can be made.

Supplement 2: Start server

- The configuration file path can be specified using the "import_setting_file_location" option parameter.

ex) smapri:///Service/Start?import_settings_file_location=/storage/emulated/0/SmaPri.ini

From SmaPri Driver Ver.1.19.0, it is necessary to obtain access permission to the reference folder when using the setting file on a terminal with Android 11 or later.

For more information, refer to "Local file access on Android 11 and later".

Supplement 3: Stop server

- The following message appears when the spooler is processing print jobs.

"Print jobs exist in spooler. Do you want to stop server?"

When you tap "Yes", server will stop after print commands are generated for all print jobs.

When you tap "No", the request to stop the server will not be performed.

- Request example

Call the screen "Spooler Display" from web browser (by HTML link).

ex) Spooler Display

Supplement 4) Display the NFC pairing screen

If NFC is disabled, an error message is displayed and the OS setting screen opens.

"NFC is disabled on the device. Please enable NFC in a setting screen."

If there is no NFC module, an error message will be displayed.

“NFC is not available on the device.”

2-10 File transfer to device storage

Transfer some files with USB connection.

You can copy files between your PC and Android device using a USB cable. This chapter describes the procedure for transferring the following files.

- Format file (*.spfmtz)

  For details, please refer to "HTTP Reference".
- Log file (SmaPriDriver_YYYYMMDD.log)

  Please refer to "Administration screen (log)" for save method.
- Configuration file (SmaPri.ini)

  If "Configuration file" exists in the path specified on "Administration screen (server settings)", import the setting values.

  Please refer to "Administration screen (server settings)" and "Importing the configuration file".

- Transfer files

Format file, Configuration file

(1) Connect your PC and Android device with a USB cable.

(2) Open the internal shared storage of the Android device in Explorer.

If it is not displayed, set the USB mode to file transfer on the Android device side.

(3) Place the format file in an appropriate directory. *

(4) Place the configuration file in the "SATO" folder directly under the internal shared storage.

*The following restrictions occur on Android 11 or later devices due to OS specifications.

- Files in directories after "/storage/emulated/0/Android/data" cannot be referenced.

- Access permission to the reference folder is required (SmaPri Driver Ver.1.19.0 or later). For more information, refer to "Local file access on Android 11 and later".

Log file

(1) Save the log file to the terminal from 2-7. Administration screen (Log) of SmaPri Driver.

(2) Connect your PC and Android device with a USB cable.

(3) Open the internal shared storage of the Android device in Explorer.

If it is not displayed, set the USB mode to file transfer on the Android device side.

(4) Copy the log file (SmaPriDriver_YYYYMMDD.log) saved directly under the internal shared storage to the desktop, etc.

2-11 Use HTTPS

You can use HTTPS on SmaPri Driver.

It is no longer necessary to set the SmaPri Driver to HTTPS when sending requests to the SmaPri Driver from a web application running on an HTTPS server.
According to the specifications of Google Chrome version 94 or later, requests to SmaPri Driver can be used as "http://localhost:8080/" if the upper web application is SSL enabled.

For more information, refer to "Support SSL on web app".

2-12 NFC pairing / NFC on demand printing

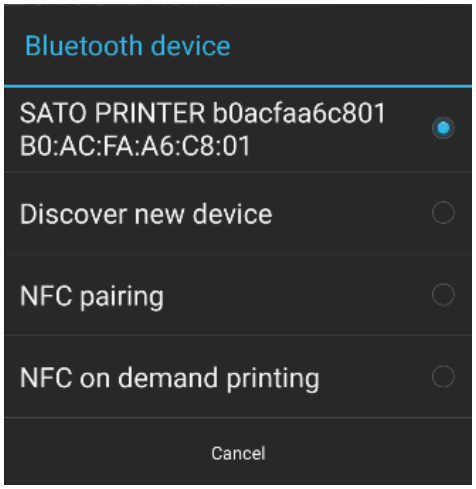
You can easily pair and connect to Bluetooth with NFC.

You can easily pair and connect Bluetooth by holding Android NFC over the printer NFC.
(Compatible version: Ver.1.16.0 or later).
In this section, we will explain how to automatically pair and connect by touching NFC called "NFC pairing" and prints on the printer when you touch the NFC called "NFC on-demand printing".

-Available printer (as of 2024/01)
PW208NX, PW4NX, CT4-LX, CL4NX Plus, CL6NX Plus

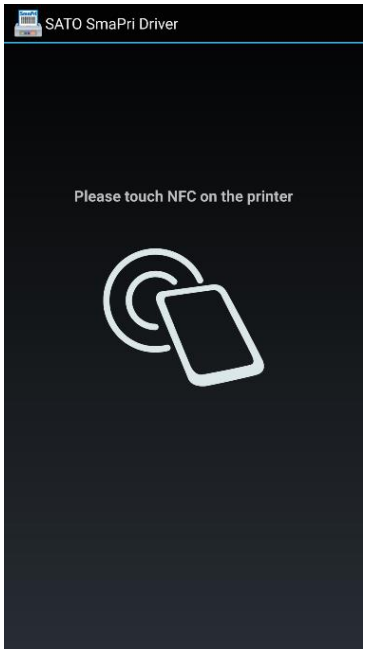
-How to use NFC pairing
For details, refer to "How to pair with NFC".

-Test printing with NFC on-demand printing
1) Select "NFC on demand printing" from the list of Bluetooth devices.



2) Press the “Test print” button.

3) When the "Please touch NFC on the printer" screen appears, bring the NFC on the Android device closer to the NFC mark on the printer.



4) If the connection is successful, printing will start.

Please refer to the practice manual for application development.

2-13 Local file access on Android 11 and later

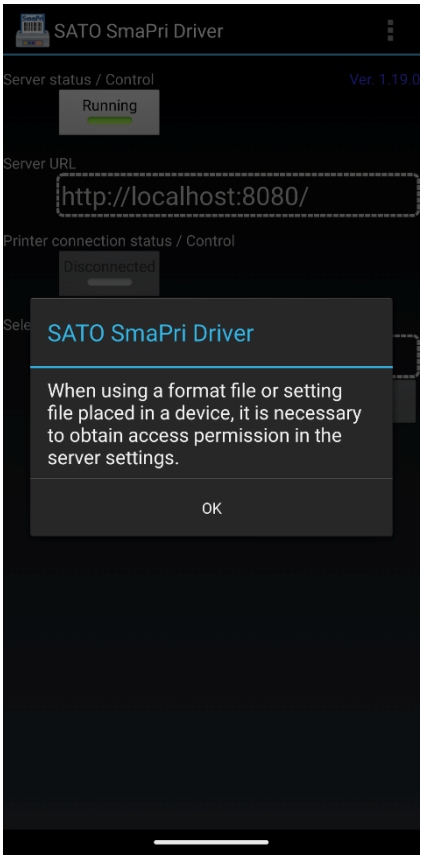
From SmaPri Driver Ver.1.19.0, it is necessary to obtain access permission to the reference folder when placing format files, setting files, etc. in folders in the internal shared storage on devices with Android 11 or later.

conditions

- SmaPri Driver (Android) version is Ver.1.19.0 or later
- Android device OS is Android 11 or later
- Reference destinations such as format files refer to local files (file://)

Please refer to the procedure on the next page to obtain access permission to the local folder.

Also, if you install SmaPri Driver Ver.1.19.0 or later on a terminal with Android 11 or later, the following dialog will be displayed at the first startup. If you select "OK", the dialog will not appear until you reinstall.

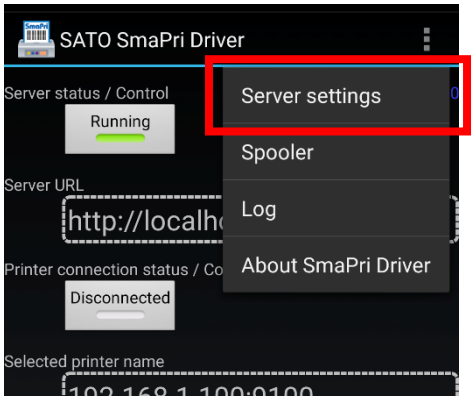


- Procedure for obtaining folder access permission

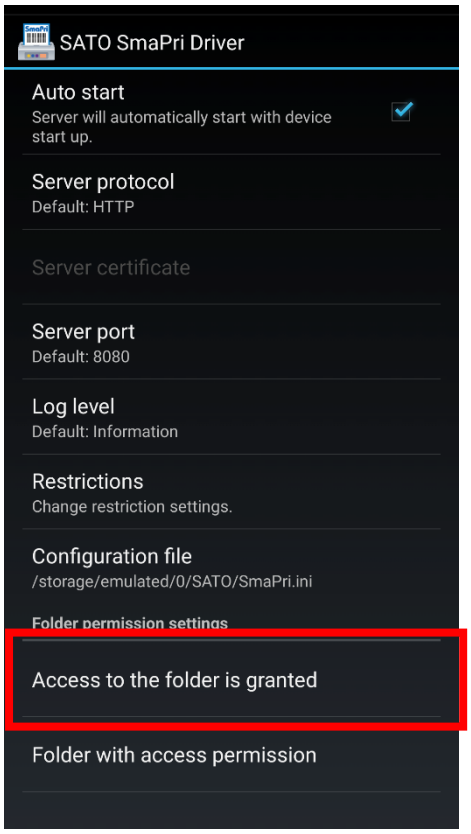
As an example, the procedure when the reference destination of the format file is the SATO folder of the internal shared storage is explained.

URL example) file:///storage/emulated/0/SATO/sample.spfmtz

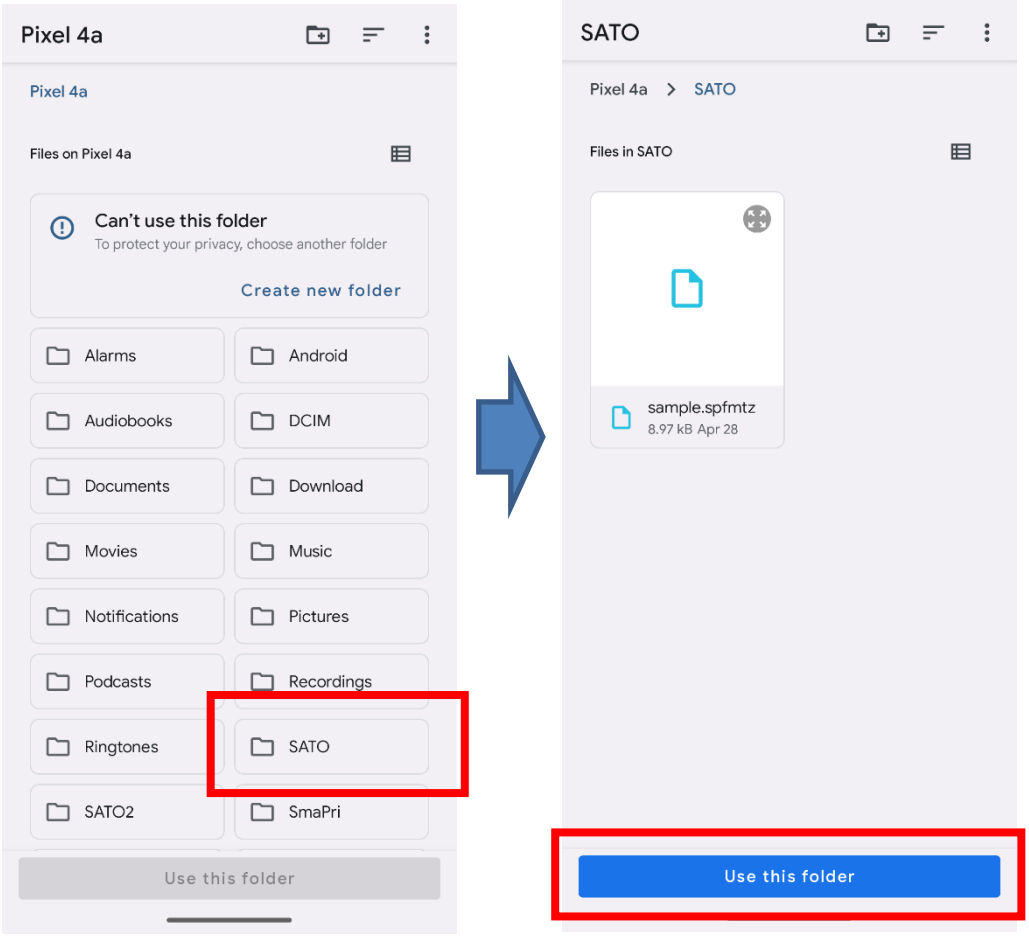
1) Select "Server Settings".



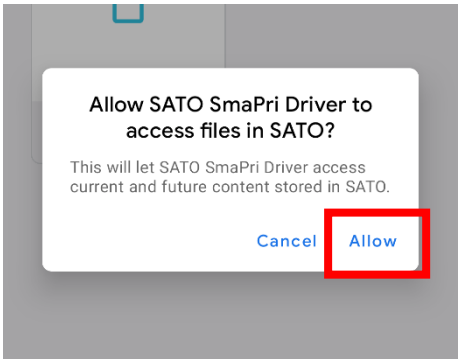
2) Select "Access to the folder is granted".



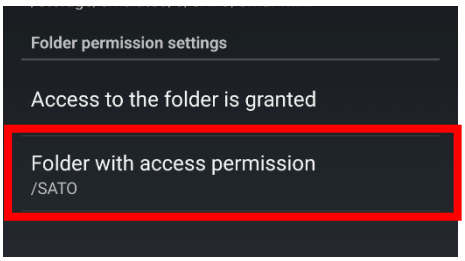
3) The folder selection screen opens. Select the folder where the format file is located (SATO folder here) and select "Use this folder".



4) Select "Allow".



5) Return to the server settings. Confirm that the folder name ("/SATO") is displayed in "Folder with access permission ".



6) Run the Format/Print request to make sure the label can be printed.

If there are other folders that require access permissions, repeat steps 1) to 5).

Other restrictions

- The folder name for which you have obtained permission is case-sensitive depending on the OS. Please make sure that the case of the URL specified in the "__format_archive_url" parameter of the format print request matches the case of the folder name on the terminal.

- If you uninstall SmaPri Driver, the folder permission information will be deleted. Please re-obtain access permissions to the folder after reinstalling.

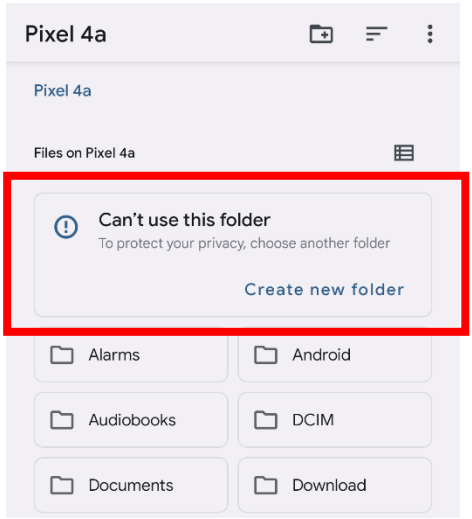
- If you want to refer to a file in a subfolder of a folder for which you have permission, please obtain permission for the subfolder.

Error example)

Failed to download file from the URL[file:///storage/emulated/0/SATO/sample.spfmtz]. (/storage/emulated/0/SATO/sample.spfmtz: open failed : EACCES (Permission denied))

- Access permissions cannot be obtained for some local folders.
  - Directly under the internal shared storage (/storage/emulated/0/, /sdcard)
  - Download folder (/storage/emulated/0/Download, /sdcard/Download)
  - Android folder (/Android, /Android/data, /Android/obb, etc.)

  For folders for which access permissions cannot be obtained, "Can't use this folder" is displayed on the folder selection screen. If the file is placed in the corresponding folder, change the folder.



2-14 Support SSL on web app

Due to the specifications of Google Chrome version 94 or later, when using the SmaPri Driver from a web application, please support SSL on your web app.

If the URL of the web application is http (http://example.com/), the request to SmaPri Driver (http://localhost:8080/) will be blocked by the browser and will result in a transmission error. See the Chrome developer site below for details.
https://developer.chrome.com/blog/private-network-access-update/

Note

- It is not necessary to set the server protocol of SmaPri Driver to HTTPS.
- Please check the operation of the browser for the web application in the intranet environment. Please support SSL on your web app if the request is blocked by your browser.

Example

1) When the URL of the web application is "http://license.sato.co.jp/"
Sending requests to SmaPri Driver (http://localhost:8080/) fails.
As an example, when using XMLHttpRequest in JavaScript, HTTP status code 0 is returned. The browser's developer mode log will show an error stating that the request was blocked, such as:

```
[Log (sample)]
Access to XMLHttpRequest at 'http://localhost:8080/Format/Print…' from origin
'http://license.sato.co.jp' has been blocked by CORS policy: The request client is not a secure
context and the resource is in more-private address space `local`.
```

2) When the URL of the web application is "https://license.sato.co.jp/"
Requests to the SmaPri Driver (http://localhost:8080/) are successfully sent.

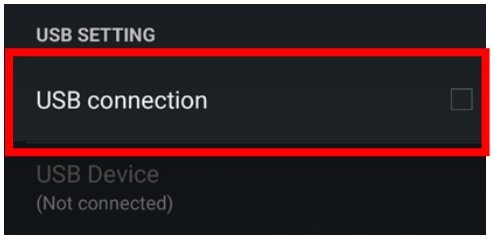
2-15 How to connect to printer via USB

SmaPri Driver Ver.1.21.0 or later, you can print by connecting Android device and printer with a USB cable.

- How to connect

1) Turn on the printer.

2) In printer settings on SmaPri Driver, check "USB connection."

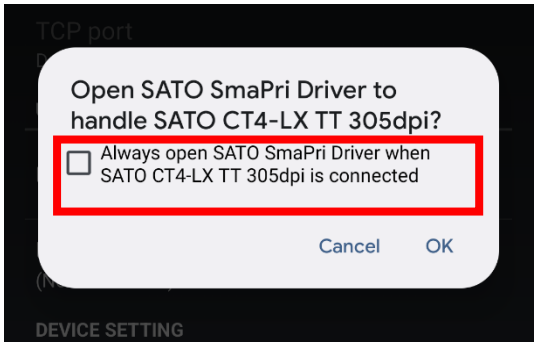


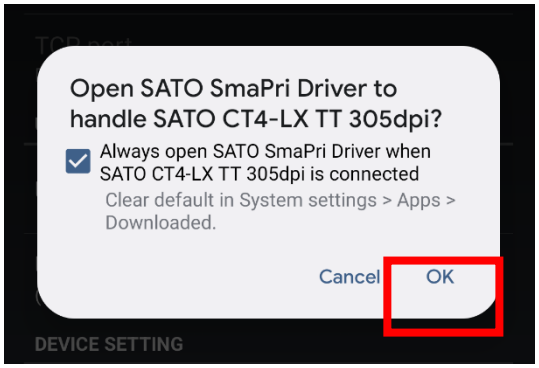
Note

- Select the communication protocol to "Status 4 (1 port connection)".

3) Connect Android device and printer with a USB cable.

USB permission dialog appears. Check "Always open SATO SmaPri Driver" and select “OK”.

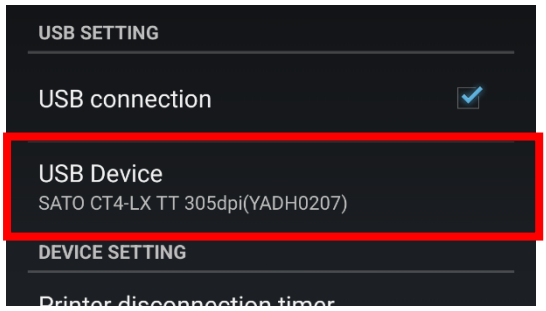




Note

- If select "Cancel", please reconnect the USB cable.
- If do not check "Always open SATO SmaPri Driver", USB permission dialog will be displayed again when you reconnect the USB cable.
- The displayed content of the permission dialog may vary depending on the Android version.

4) Verify that the printer information is displayed on “USB device”.



5) Perform Test print, and verify that the test label is printed.

- Restrictions

- Please connect the USB cable to Android device while the screen is unlocked (you can operate the device's screen). If the printer is not recognized, please check if it is recognized by reconnecting the USB cable.
- Only one printer can be connected at a time. Do not connect two or more printers at the same time. This may cause problems such as printing stopping midway or the output destination changing unintentionally.
- If the printer's LCD screen is off, it may not be recognized even if connect the USB cable. In that case, you may be able to recognize it by operating the buttons on the printer itself to turn on the screen.
- Others, if the printer is not recognized, try reconnecting the USB cable to see if it is recognized.