

**Brother Print SDK for Android Manual
Ver.2.6
Appendix Device Settings**

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— Revision history —			
001	2014/09/25	Ver.2.5.1	New
002	2015/9/18	Ver.2.6	Added support for PJ-7 series

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Introduction

This appendix especially describes on device settings from Android client application to Brother Mobile Printers over Brother Print SDK.

This manual is designed for those who have experience in developing Android applications and programming.

Inquiry

The Software Development Kit (hereafter called SDK) provides information on modules and program development to use Brother Printers for various applications.

For inquiries regarding solutions, contact our offices in your country.

1. At the beginning

1.1. The list of supported models and interfaces

File printing			
Model	USB	BLUETOOTH	NET
MW-140BT	no	no	no
MW-145BT	yes	yes	no
MW-260	no	no	no
MW-260 TypeA	yes	yes	no
PJ-522	no	no	no
PJ-523	no	no	no
PJ-520	no	no	no
PJ-560	no	no	no
PJ-562	no	no	no
PJ-563	no	no	no
PJ-622	no	no	no
PJ-623	no	no	no
PJ-662	no	no	no
PJ-663	no	no	no
PJ-722	yes	no	no
PJ-723	yes	no	no
PJ-762	yes	yes	no
PJ-763	yes	yes	no
PJ-763MFi	yes	yes	no
PJ-773	yes	no	yes
RJ-4030	no	no	no
RJ-4040	no	no	no
RJ-3050	no	no	no
RJ-3150	no	no	no
TD-2020	no	no	no
TD-2120N	no	no	no
TD-2130N	no	no	no
TD-4000	no	no	no
TD-4100N	no	no	no
QL-710W	no	no	no
QL-720NW	no	no	no
PT-E550W	no	no	no

PT-P750W	no	no	no
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1.2.Attention

- It is necessary to enable Bluetooth adapter when you control Bluetooth setting.
- Bluetooth settings commands described in this document must NOT be used between startCommunication() and endCommunication() commands.
- As for MW-260, only “TypeA” is available.
- If you call API function (which is followed by * in the API list) in a thread, please do not call it again in other threads before it end. Because the printer cannot accept two connect requests at the same time.

2. How to implement

2.1. How to use API functions of SDK

2.1.1. Sample code for supporting Bluetooth settings

Import the library into source code.

```
import com.brother.ptouch.sdk.Printer;  
import com.brother.ptouch.sdk.PrinterInfo;  
import com.brother.ptouch.sdk.PrinterStatus;
```

The sample of Bluetooth settings

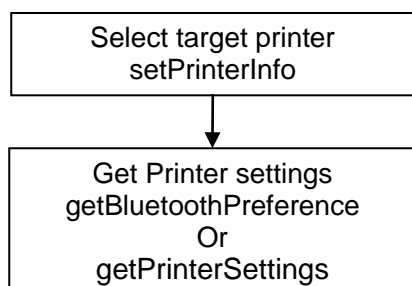
```
public void updateSettings(){  
    // define printer and printer setting information  
    Printer myPrinter = new Printer();  
    PrinterInfo myPrinterInfo = new PrinterInfo();  
  
    // Pass Bluetooth adapter to the library (Bluetooth only)  
    BluetoothAdapter bluetoothAdapter = BluetoothAdapter.getDefaultAdapter();  
    myPrinter.setBluetooth(bluetoothAdapter);  
    // Set printer information  
    myPrinterInfo = myPrinter.getPrinterInfo();  
    myPrinterInfo.printerModel = PrinterInfo.Model.MW_145;  
    ...  
    myPrinter.setPrinterInfo(myPrinterInfo);  
  
    // Set Bluetooth settings  
    PrinterStatus printResult = new PrinterStatus();  
    BluetoothPreference btPre = new BluetoothPreference();  
    btPre.enabledSsp = SSP.ENABLE;  
    printResult = mPrinter.setBluetoothPreference(btPref);  
}
```

For more details, please check the source code of sample application and Android Developers site.

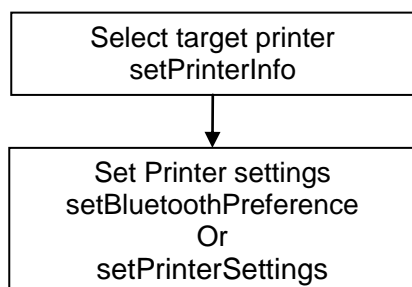
3. Processing Flow

Outline of a general flow of print processing.

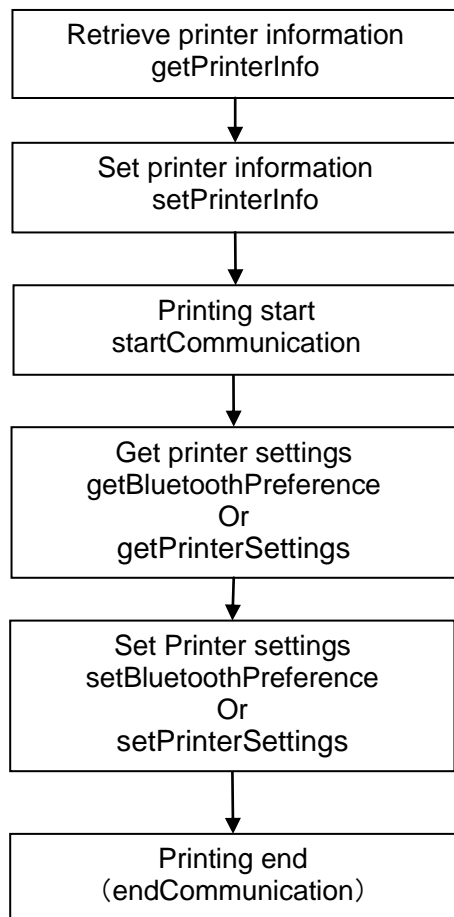
3.1. Processing Flow of Getting Printer settings



3.2. Processing Flow of Setting Printer settings



3.3.Processing Flow of Setting Printer settings and Getting Printer settings



4. API Reference

4.1. com.brother.ptouch.sdk.Printer class

4.1.1. Public Method List

Setting methods	
boolean	setPrinterInfo(PrinterInfo printerInfo) Sets the printer information.
void	setBluetooth(BluetoothAdapter bluetoothAdapter) Passes Bluetooth adapter to the library (Bluetooth only).
UsbDevice	getUsbDevice(UsbManager usbManager) Get a connected USB device.(only for USB)
void	setMessageHandle(Handler handler, int MsgType) Passes message handler to the library (if you want to use the messages from the library).

MW series setting methods	
PrinterStatus	updateBluetoothPreference(BluetoothPreference btPre) Updates Bluetooth settings of the target device
PrinterStatus	getBluetoothPreference(BluetoothPreference btPre) Gets Bluetooth settings from the target device.

*Only MW-145BT and MW-260 are available.

PJ-7 series setting methods	
PrinterStatus	updatePrinterSettings(Map<PrinterSettingItem, String> settings) Gets Printer settings from the target device.
PrinterStatus	getPrinterSettings(ArrayList<PrinterSettingItem>key, Map< PrinterSettingItem, String> settings) Updates Printer settings of the target device

*Do not call the function in different threads at the same time.

4.1.2. Method details

4.1.2.1. boolean setPrinterInfo([PrinterInfo](#) printerInfo)

[Interpretation]

Sets printer information.

[Argument]

printerInfo: Printer information class

[Return value]

true: Success
false: Failed

4.1.2.2. void setBluetooth(BluetoothAdapter bluetoothAdapter)

[Interpretation]

Passes Bluetooth adapter to the library (Bluetooth only).

[Argument]

bluetoothAdapter: Bluetooth adapter

[Return value]

None

4.1.2.3. void setMessageHandle(Handler handler, int MsgType)

[Interpretation]

Passes message handler to the library (if you want to use the messages from the library).

[Argument]

Handler: Message handler

MsgType: Identifies the messages

[Return value]

None

4.1.2.4. UsbDevice getUsbDevice(UsbManager usbManager)

[Interpretation]

Gets a connected USB device.

[Argument]

usbManager: android.hardware.usb.UsbManager

[Return value]

UsbDevice: UsbDevice of Brother printer.

Null means no supported Brother printer is found.

4.1.2.5. [PrinterStatus](#) getBluetoothPreference([BluetoothPreference](#) btPre)

[Interpretation]

Gets Bluetooth settings from the MW series

[Argument]

btPre: store the result

[Return value]

[Printer status](#)

[Reference]

[Processing Flow of Getting Printer settings](#)

[Note]

btPre is an output argument. Please set instantiated object of BluetoothPreference.

4.1.2.6. [PrinterStatus](#) updateBluetoothPreference([BluetoothPreference](#) btPre)

[Interpretation]

Updates Bluetooth settings of the MW series

[Argument]

btPre:Bluetooth settings

[Return value]

[Printer status](#)

[Reference]

[Processing Flow of Setting Bluetooth settings](#)

[Note]

This method does not check if the request has been reflected on the device. Please check using [getBluetoothPreference\(\)](#).

4.1.2.7. [PrinterStatus](#) updatePrinterSettings(Map< PrinterSettingItem,String> settings)

[Interpretation]

Update device settings of the PJ-7 series

[Argument]

settings: Printer settings

[Return value]

[Printer status](#)

[Reference]

[Processing Flow of Setting Printer settings](#)

[Note]

The specified settings are not applied until the printer is restarted. Restart the printer. Confirm the values are properly applied by getPrinterSettings after the restart. [Refer to 4.2.2.6.2 about supported printer and setting items.](#) Some combination of parameters may not be available.

4.1.2.8. [PrinterStatus](#) getPrinterSettings(ArrayList<PrinterSettingItem>keys, Map< SettingCommand,String>values)

[Interpretation]

Gets device settings of the PJ-7 series

[Argument]

keys: Index of setting

values: stores the result

[Return value]

[Printer status](#)

[Note]

The argument “values” is an output argument. Please set instantiated object of Map< PrinterSettingItem,String>.

[Refer to 4.2.2.6.2 about supported printer and setting items.](#)

4.2.com.brother.ptouch.sdk.PrinterInfo Class

4.2.1. Member Variable

Field		
Type	Variable Name	Detail
Model	printerModel	Printer model
Port	port	Interface
String	ipAddress	IP address (detail in 4.2.2.1)
String	macAddress	Mac address (detail in 4.2.2.2)

4.2.2.Details of Member Variable

4.2.2.1. Model

Printer Model

Refer to [The list of supported models and interfaces](#)

4.2.2.2. Port

Interface

Refer to [The list of supported models and interfaces](#)

4.2.2.3.How to set IP address and MAC address

Print by Bluetooth	
Searches the printer which matches the Mac address from Bluetooth paired printer list to print. If there is no match printer, it results in error of no printer found.	

Print by Wi-Fi	
Set both MAC address and IP address	Searches the printer which matches both Mac address and IP address from printer list connected with Wi-Fi access point to print. If there is no match printer, it results in error of ERROR_NO_MATCH_ADDRESS.
Set IP address and do not set MAC address	Searches the printer which matches IP address from printer list connected with Wi-Fi access point to print.
Set MAC address and do not set IP address	Searches the printer which matches MAC address from printer list connected with Wi-Fi access point to print.
Do not set both MAC address and IP address	It results in error of ERROR_NO_ADDRESS.

Set address: sets PrinterInfo.macAddress or PrinterInfo.ipAddress by address characters.

Do not set address: sets PrinterInfo.macAddress or PrinterInfo.ipAddress by null characters.

4.2.2.4. Msg

Message

This library sends following message when performing print process.

Please use the following messages as necessary; e.g. if you want to display progress situation.

(It is not necessary whether you use the following messages or not.)

enum Msg	
MESSAGE_START_COMMUNICATION	Communication start
MESSAGE_START_CONNECT	Start connecting socket
MESSAGE_END_CONNECTED	Success socket connection
MESSAGE_START_GET_OUTPUT_STREAM	Start retrieving output stream
MESSAGE_END_GET_OUTPUT_STREAM	Finish retrieving output stream
MESSAGE_START_GET_INPUT_STREAM	Start retrieving input stream
MESSAGE_END_GET_INPUT_STREAM	Finish retrieving input stream
MESSAGE_START_SEND_STATUS_REQUEST	Start transmitting status request
MESSAGE_END_SEND_STATUS_REQUEST	Finish transmitting status request
MESSAGE_START_READ_PRINTER_STATUS	Start receiving printer status
MESSAGE_END_READ_PRINTER_STATUS	Finish receiving printer status
MESSAGE_START_CREATE_DATA	Start creating data
MESSAGE_END_CREATE_DATA	Finish creating data
MESSAGE_START_SEND_DATA	Start transmitting data
MESSAGE_END_SEND_DATA	Finish transmitting data
MESSAGE_START_SEND_TEMPLATE	Start transmitting template file
MESSAGE_END_SEND_TEMPLATE	Finish transmitting template file
MESSAGE_START_SOCKET_CLOSE	Start cutting off socket
MESSAGE_END_SOCKET_CLOSE	Finish cutting off socket
MESSAGE_PRINT_COMPLETE	Print success
MESSAGE_PRINT_ERROR	An error occurred
MESSAGE_PAPER_EMPTY	Paper empty
MESSAGE_END_COMMUNICATION	Communication finish
MESSAGE_START_COOLING	Cooling start
MESSAGE_END_COOLING	Cooling end
MESSAGE_WAIT_PEEL	Wait for peeling label
MESSAGE_START_UPDATE_BLUETOOTH_SETTING,	Start updating Bluetooth setting
MESSAGE_END_UPDATE_BLUETOOTH_SETTING,	End updating Bluetooth setting
MESSAGE_START_GET_BLUETOOTH_SETTING,	Start getting Bluetooth setting
MESSAGE_END_GET_BLUETOOTH_SETTING,	End getting Bluetooth setting

MESSAGE_START_GET_TEMPLATE_LIST,	Start getting the template list
MESSAGE_END_GET_TEMPLATE_LIST	End getting the template list
MESSAGE_START_REMOVE_TEMPLAT E_LIST,	Start removing templates
MESSAGE_END_REMOVE_TEMPLATE_ LIST	End removing templates

*For more details, please refer to source code of sample application.

4.2.2.5.Error Code

enum ErrorCode	
ERROR_NONE	No errors
ERROR_NOT_SAME_MODEL	Error: Found a different type of printer
ERROR_BROTHER_PRINTER_NOT_FO UND	Error: Cannot find a Brother printer
ERROR_PAPER_EMPTY	Error: Paper empty
ERROR_BATTERY_EMPTY	Error: Battery weak
ERROR_COMMUNICATION_ERROR	Error: Failed to retrieve printer status
ERROR_OVERHEAT	Error: Overheat error
ERROR_PAPER_JAM	Error: Paper Jam
ERROR_HIGH_VOLTAGE_ADAPTER	Error: High-voltage adaptor
ERROR_CHANGE_CASSETTE	Error: Cassette-change during printing
ERROR_FEED_OR_CASSETTE_EMPTY	Error: Feed error or paper empty
ERROR_SYSTEM_ERROR	Error: System error
ERROR_NO_CASSETTE	Error: No paper-cassette
ERROR_WRONG_CASSETTE_DIRECT	Error: Wrong paper-cassette direction
ERROR_CREATE_SOCKET_FAILED	Error: Failed to create socket
ERROR_CONNECT_SOCKET_FAILED	Error: Failed to connect *1
ERROR_GET_OUTPUT_STREAM_FAIL ED	Error: Failed to retrieve output stream
ERROR_GET_INPUT_STREAM_FAILED	Error: Failed to retrieve input stream
ERROR_CLOSE_SOCKET_FAILED	Error: Failed to close socket
ERROR_OUT_OF_MEMORY	Error: Insufficient memory *2
ERROR_SET_OVER_MARGIN	Error: Over set margin *3
ERROR_NO_SD_CARD	Error: No SD card
ERROR_FILE_NOT_SUPPORTED	Error: Non supported file
ERROR_EVALUATION_TIMEUP	Error: Expired trial period for PDF printing
ERROR_WRONG_CUSTOM_INFO	Error: Wrong information in custom paper setting file
ERROR_NO_ADDRESS	Error: not set IP and MAC address
ERROR_NO_MATCH_ADDRESS	Error: IP and Mac address is not match for selected printer
ERROR_FILE_NOT_FOUND	Error: File do not exist

ERROR_TEMPLATE_FILE_NOT_MATCH_MODEL	Error: Template file is not a match for selected printer
ERROR_TEMPLATE_NOT_TRANS_MODEL	Error: Selected printer model do not support Template transmission
ERROR_COVER_OPEN	Error: The cover is open (RJ/TD/PT-E550W)
ERROR_WRONG_LABEL	Error: Wrong roll or wrong label
ERROR_PORT_NOT_SUPPORTED	Error: Unsupported interface
ERROR_WRONG_TEMPLATE_KEY	Error: No file specified by the template key exists
ERROR_CANCEL	Error: printing is cancelled
ERROR_TEMPLATE_NOT_PRINT_MODEL	Error: Selected printer model do not support Template print
ERROR_BUSY	Error: Busy (PT/RJ-3xxx/TD-4xxx)
ERROR_PRINTER_SETTING_NOT_SUPPORTED	Error: Device setting is not supported on the selected printer.
ERROR_INTERNAL_ERROR	Error: Internal error
ERROR_INVALID_PARAMETER	Error: Invalid parameter is set
ERROR_TEMPLATE_NOT_CONTROL_MODEL	Error: Selected model does not support removing templates / getting the template list
ERROR_TEMPLATE_NOT_EXIST	Error: Template in the printer does not exist

*1 It may be able to resolve when you set disable PIN code for MW-140BT and MW-260.

*2 Image size as a small when printing image.

*3 Change margin set value as a small or image size as a small.

4.2.2.6. PrinterSettingItem

key	value
NET_BOOTMODE	Network Settings at power cycle 0: On by default 1: Off by default 2. Keep Current State
NET_INTERFACE	Selected Interface 1: Wireless LAN only 2: Wireless Direct only 3: Wireless LAN & Wireless Direct
NET_IPV4_BOOTMETHOD	Boot Method: 0:Auto 3:DHCP 5:Bootp 6:RARP 7:Static
NET_STATIC_IPV4ADDRESS	Static IP address For example:"167.0.0.1"
NET_SUBNETMASK	Subnet Mask For example:"255.255.255.0"
NET_GATEWAY	Gateway For example:"167.0.0.1"
NET_DNS_IPV4_BOOTMETHOD	DNS Server Method 2:Auto

	1:Static
NET_PRIMARY_DNS_IPV4ADDRESS	Primary DNS Server Address For example:"167.0.0.1"
NET_SECOND_DNS_IPV4ADDRESS	Secondary DNS Server Address For example:"167.0.0.1"
NET_NODENAME	Node Name The Node Name is an alphanumeric string of 1-32 characters.
WIRESSDIRECT_KEY_CREATE_MODE	SSID/Network key Generation 1:AUTO 0:STATIC
WIRESSDIRECT_SSID	SSID(Network Name)between 1 and 25 ASCII characters for the SSID You can only specify a setting when [STATIC] is selected as WIRESSDIRECT_KEY_CREATE_MODE
WIRESSDIRECT_NETWORK_KEY*1	Network Key The Node Name is an alphanumeric string of 1-63 characters. You can only specify a setting when [STATIC] is selected as WIRESSDIRECT_KEY_CREATE_MODE
BT_ISDISCOVERABLE	Visible to Other Devices 0: Disable 1:Enable
BT_DEVICENAME	Bluetooth Device Name
BT_BOOTMODE	Bluetooth on Power On 0: On by default 1: Off by default 2. Keep Current State
PRINTER_PAVEROFFTIME	Auto power on time(AC/DC) 0[None],1/2/3/4/5/6/7/8/9/10/15/20/25/30/40/50/60/90/120minutes
PRINTER_PAVEROFFTIME_BATTERY	Auto power on time(Li-ion) 0[None],1/2/3/4/5/6/7/8/9/10/15/20/25/30/40/50/60/90/120minutes
PRINT_JPEG_HALFTONE	JPEG Printing Halftone mode 0: Simple Binary 1: Error Diffusion
PRINT_JPEG_SCALE	Scale the JPEG image to fit media 0: Disable 1: Enable
PRINT_DENSITY	Print Density Setting 0 (light)-10 (dark)
PRINT_SPEED	Print Speed Setting 0 (fast)-3(slow)

*Confirm [4.2.2.6.1 The list of supported Items and interfaces](#) by printer models.

*1: Write only)

4.2.2.6.1.The list of supported Items and interfaces

PJ-773

PrinterSettingItem	USB	Net
NET_BOOTMODE	YES	YES

NET_INTERFACE	YES	NO
NET_IPV4_BOOTMETHOD	YES	YES
NET_STATIC_IPV4ADDRESS	YES	YES
NET_SUBNETMASK	YES	YES
NET_GATEWAY	YES	YES
NET_DNS_IPV4_BOOTMETHOD	YES	YES
NET_PRIMARY_DNS_IPV4ADDRESS	YES	YES
NET_SECOND_DNS_IPV4ADDRESS	YES	YES
NET_NODENAME	YES	YES
WIRESSDIRECT_KEY_CREATE_MODE	YES	NO
WIRESSDIRECT_SSID	YES	NO
WIRESSDIRECT_NETWORK_KEY	YES	NO
PRINTER_PAVEROFFTIME	YES	YES
PRINTER_PAVEROFFTIME_BATTERY	YES	YES
PRINT_JPEG_HALFTONE	YES	NO
PRINT_JPEG_SCALE	YES	NO
PRINT_DENSITY	YES	NO
PRINT_SPEED	YES	NO

PJ-762/PJ-763/PJ-763MFi

PrinterSettingItem	USB	Bluetooth
BT_ISDISCOVERABLE	YES	YES
BR_DEVICENAME	YES	YES
BT_BOOTMODE	YES	YES
PRINTER_PAVEROFFTIME	YES	YES
PRINTER_PAVEROFFTIME_BATTERY	YES	YES
PRINT_JPEG_HALFTONE	YES	YES
PRINT_JPEG_SCALE	YES	YES
PRINT_DENSITY	YES	YES
PRINT_SPEED	YES	YES

PJ-722/PJ-723

PrinterSettingItem	USB
PRINTER_PAVEROFFTIME	YES
PRINTER_PAVEROFFTIME_BATTERY	YES
PRINT_JPEG_HALFTONE	YES
PRINT_JPEG_SCALE	YES
PRINT_DENSITY	YES
PRINT_SPEED	YES

4.3. com.brother.ptouch.sdk.PrinterStatus Class

Fields		
Type	Variable Name	Detail
ErrorCode	errorCode	Error code

4.4.com.brother.ptouch.sdk.BluetoothPreference Class

4.4.1.Member Variable

Fields		
Type	Variable Name	Detail
SSP	enabledSsp	Enable / disable of Secure Simple Pairing The default value is NOCHANGE.
PowerSaveMode	powerMode	The power-saving settings can be specified. The default value is NOCHANGE.

4.4.1.1. SSP

Secure Simple Pairing

enum SSP	
ENABLE	Enable Secure Simple Pairing(SSP)
DISABLE	Disable Secure Simple Pairing(SSP) When SSP is disabled, PIN code input and encryption is enabled for MW-145BT.
NOCHANGE	Not change If changing SSP setting is not intended, NOCHANGE should be set.

4.4.1.2.PowerSaveMode

Power-saving mode

enum PowerSaveMode	
CONNECTION_MODE	Connection time priority
STANDARD_MODE	Standard
ECO_MODE	Power-saving mode priority
NOCHANGE	Not change If changing PowerSaveMode is not intended, NOCHANGE should be set.