Android TSPL Program Manual

v3.1.6

1. Instruction

This manual describes how to implement TSPL printing.Constant variable are defined in TSPLConst class.

2. TSPLPrinter

2.1. TSPLPrinter

Constructor to create print objects.
TSPLPrinter(IDeviceConnection connection)

[Parameter]
➢ connection
Connected object, available via POSConnect.createDevice(deviceType).

2.2. size

This method defines the label width and length.
TSPLPrinter sizeInch(int width, int height)
English system (inch)
TSPLPrinter sizeMm(int width, int height)
Metric system (mm)

[Parameter]
➢ width
Label width (inch/mm)
➢ height
Label height (inch/ mm)

[Return]
TSPLPrinter Instance

2.3. gap

This method defines the gap distance between two labels
TSPLPrinter gapInch(double m, double n)
English system (inch)
TSPLPrinter gapMm(double m, double n)
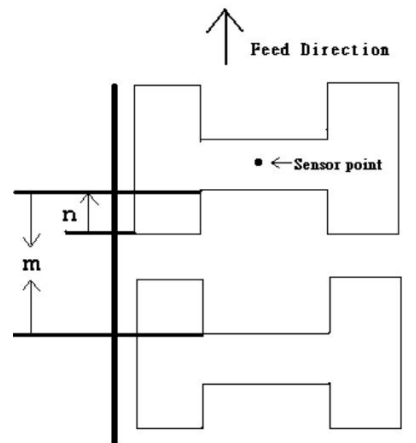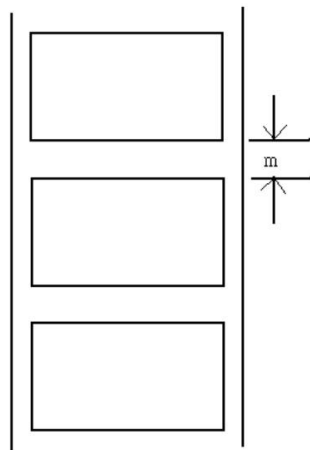Metric system (mm)

[Parameter]
➤ m
The gap distance between two labels
➤ n
The offset distance of the gap

[Return]
TSPLPrinter Instance

2.4. speed

This method defines the print speed
TSPLPrinter speed(double speed)

[Parameter]
➤ speed
Printing speed in inch per second

[Return]
TSPLPrinter Instance

2.5. density

This method sets the printing darkness.
TSPLPrinter density(int density)

[Parameter]
➢ Density
Darkness level, 0~15.

[Return]
TSPLPrinter Instance

2.6.　cls

This method clears the image buffer.
TSPLPrinter cls()

[Return]
TSPLPrinter Instance

2.7.　offset

This command defines the selective, extra label feeding length each form feed takes, which, especially in peel-off mode and cutter mode, is used to adjust label stop position, so as for label to register at proper places for the intended purposes. The printer back tracks the extra feeding length before the next run of printing.
TSPLPrinter offsetInch(double offset)
English system (inch)
TSPLPrinter offsetMm(double offset)
Metric system (mm)

[Parameter]
➢ offset
The offset distance (inch or mm)
-1 ≤ offset ≤ 1 (inch)

[Return]
TSPLPrinter Instance

2.8.　direction

This method defines the printout direction and mirror image. This will be stored in the printer memory.
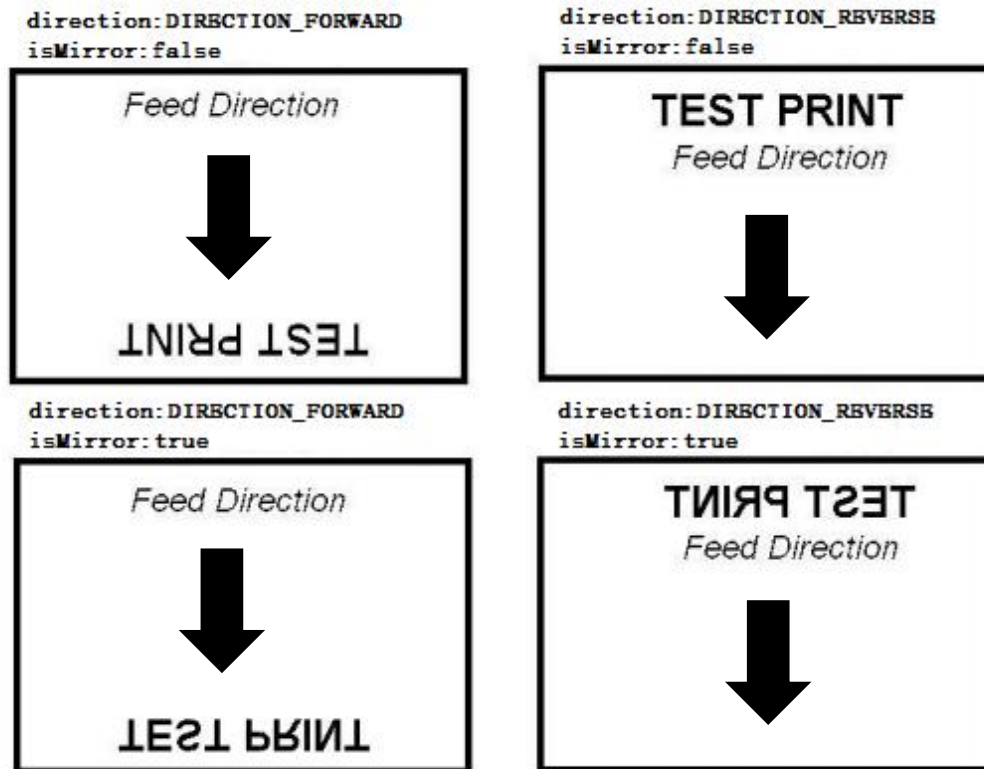TSPLPrinter direction(int direction)

TSPLPrinter direction(int direction, boolean isMirror)

[Parameter]
➢ direction

Printout direction

Variable	Description
DIRECTION_FORWARD	FORWARD
DIRECTION_REVERSE	REVERSE

➢ isMirror

mirror image(true or false),Default value:false.

[Return]
TSPLPrinter Instance

2.9. feed

This method feeds label with the specified length. The length is specified by dot.
TSPLPrinter feed(int length)

[Parameter]
➢ length

Length,unit: dot

1 ≤ length ≤ 9999

[Return]
TSPLPrinter Instance

2.10. reference

This method defines the reference point of the label. The reference (origin) point varies with the print direction.
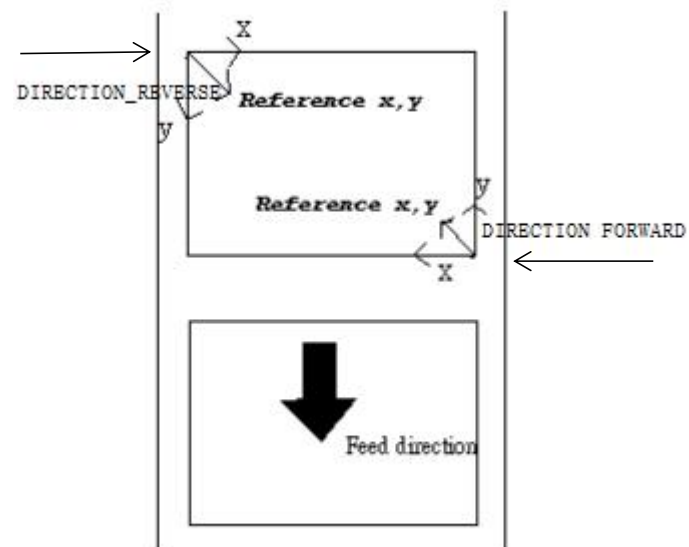TSPLPrinter reference(int x, int y)

[Parameter]
➢ x
Horizontal coordinate (in dots)
➢ y
Vertical coordinate (in dots)

[Return]
TSPLPrinter Instance

2.11. bar

This method draws a bar on the label format.

TSPLPrinter bar(int x, int y, int width, int height)

[Parameter]
➢ x
The upper left corner x-coordinate (in dots)
➢ y
The upper left corner y-coordinate (in dots)
➢ width
width Bar width (in dots)
➢ height
height Bar height (in dots)

[Return]
TSPLPrinter Instance

2.12. box

This method draws rectangles on the label.
TSPLPrinter box(int x, int y, int width, int height, int thickness)

[Parameter]
➢ x
Specify x-coordinate of upper left corner (in dots)
➢ y
Specify y-coordinate of upper left corner (in dots)
➢ width
width rectangles width (in dots)
➢ height
height rectangles height (in dots)
➢ thickness
line thickness Line thickness (in dots)

[Return]
TSPLPrinter Instance

2.13. backFeed

This method feeds the label in reverse. The length is specified by dot.
TSPLPrinter backFeed(int length)

[Parameter]
➢ length
Length unit: dot

1 ≤ length ≤ 9999

[Return]
TSPLPrinter Instance

2.14. formFeed

This method feeds label to the beginning of next label.
TSPLPrinter formFeed()

[Return]
TSPLPrinter Instance

2.15. home

This method will feed label until the internal sensor has determined the origin. Size and gap of the label should be defined before using this method.
TSPLPrinter home()

[Return]
TSPLPrinter Instance

2.16. print

This method prints the label format currently stored in the image buffer.
void print()
void print(int count)

[Parameter]
➢   count
Specifies how many sets of labels will be printed. Default value:1.

[Return]
TSPLPrinter Instance

2.17. codePage

This method defines the code page of international character set.
TSPLPrinter codePage(String page)

[Parameter]
➢   page

Name or number of code page.

7-bit code page		8-bit code page		Windows code page		ISO code page	
page	Name	page	Name	page	Name	page	Name
USA	USA	**437**	United States	**1250**	Central Europe	**8859-1**	Latin 1
BRI	British	**737**	Greek	**1251**	Cyrillic	**8859-2**	Latin 2
GER	German	**850**	Multilingual	**1252**	Latin I	**8859-3**	Latin 3
FRE	French	**851**	Greek 1	**1253**	Greek	**8859-4**	Baltic
DAN	Danish	**852**	Slavic	**1254**	Turkish	**8859-5**	Cyrillic
ITA	Italian	**855**	Cyrillic	**1255**	Hebrew	**8859-6**	Arabic
SPA	Spanish	**857**	Turkish	**1256**	Arabic	**8859-7**	Greek
SWE	Swedish	**860**	Portuguese	**1257**	Baltic	**8859-8**	Hebrew
SWI	Swiss	**861**	Icelandic	**1258**	Vietnam	**8859-9**	Turkish
		862	Hebrew	**932**	Japanese Shift-JIS	**8859-10**	Latin 6
		863	Canadian/French	**936**	Simplified Chinese GBK	**8859-15**	Latin 9
		864	Arabic	**949**	Korean		
		865	Nordic	**950**	Traditional Chinese Big5		
		866	Russian	**UTF-8**	UTF 8		
		869	Greek 2				

[Return]
TSPLPrinter Instance

2.18. sound

This method controls the sound frequency of the beeper. There are 10 levels of sounds. The timing control can be set by the "interval" parameter.
TSPLPrinter sound(int level, int interval)

[Parameter]
➤   level
Sound level:0~9
➤   interval
Sound interval: 1~4095.(in ms)

[Return]
TSPLPrinter Instance

2.19. limitFeed

Limit the maximum length of the fixed clearance correction execution, and if the gap presence cannot be measured within this length range, set the sensor mode in the continuous paper mode.
TSPLPrinter limitFeedInch(int length)
English system (inch)
TSPLPrinter limitFeedMm(int length)
Metric system (mm)

[Parameter]
➢ length
The maximum length for sensor detecting

[Return]
TSPLPrinter Instance

2.20. barCode

This method prints 1D barcodes.
TSPLPrinter barcode(int x, int y, String codeType, int height, String content)
public TSPLPrinter barcode(int x, int y, String codeType, int height, boolean readable, int rotation, String content)
TSPLPrinter barcode(int x, int y, String codeType, int height, int readable, int rotation, int narrow, int wide, String content)

[Parameter]
➢ x
Specify the x-coordinate bar code on the label
➢ y
Specify the y-coordinate bar code on the label
➢ codeType
Code type

Variable	Description
CODE_TYPE_128	Code 128, switching code subset automatically.
CODE_TYPE_128M	Code 128, switching code subset manually.
CODE_TYPE_EAN128	EAN128, switching code subset automatically.
CODE_TYPE_25	Interleaved 2 of 5.
CODE_TYPE_25C	Interleaved 2 of 5 with check digit.
CODE_TYPE_39	Code 39, switching standard and full ASCII mode automatically.

CODE_TYPE_39C	Code 39 with check digit.
CODE_TYPE_93	Code 93.
CODE_TYPE_EAN13	EAN 13.
CODE_TYPE_EAN13_2	EAN 13 with 2 digits add-on.
CODE_TYPE_EAN13_5	EAN 13 with 5 digits add-on.
CODE_TYPE_EAN8	EAN 8.
CODE_TYPE_EAN8_2	EAN 8 with 2 digits add-on.
CODE_TYPE_EAN8_5	EAN 8 with 5 digits add-on.
CODE_TYPE_CODA	Codabar.
CODE_TYPE_POST	Postnet.
CODE_TYPE_UPCA	UPC-A.
CODE_TYPE_UPCA_2	UPC-A with 2 digits add-on.
CODE_TYPE_UPCA_5	UPC-A with 5 digits add-on.
CODE_TYPE_UPCE	UPC-E.
CODE_TYPE_UPCE_2	UPC-E with 2 digits add-on.
CODE_TYPE_UPCE_5	UPC-E with 5 digits add-on.
CODE_TYPE_CPOST	China post.
CODE_TYPE_MSI	MSI.
CODE_TYPE_MSIC	MSI with check digit.
CODE_TYPE_PLESSEY	PLESSEY.
CODE_TYPE_ITF14	ITF14.
CODE_TYPE_EAN14	EAN14.
CODE_TYPE_11	Code 11.
CODE_TYPE_TELEPEN	Telepen.
CODE_TYPE_TELEPENN	Telepen number.
CODE_TYPE_PLANET	Planet.
CODE_TYPE_CODE49	Code 49.
CODE_TYPE_DPI	Deutsche Post Identcode.
CODE_TYPE_DPL	Deutsche Post Leitcode.

➢ height

Bar code height (in dots)

➢ readable

human readable , Default value:READABLE_LEFT

Variable	Description
READABLE_NONE	not readable
READABLE_LEFT	human readable aligns to left
READABLE_CENTER	human readable aligns to center
READABLE_RIGHT	human readable aligns to right

➢ rotation

Default value:ROTATION_0

Variable	Description
ROTATION_0	No rotation
ROTATION_90	Rotate 90 degrees clockwise
ROTATION_180	Rotate 180 degrees clockwise
ROTATION_270	Rotate 270 degrees clockwise

➢ narrow
Width of narrow element (in dots), Default value:2
➢ wide
Width of wide element (in dots),Default value:2
➢ content
Content of barcode

[Return]
TSPLPrinter Instance

2.21. bitmap

This method draws bitmap images.
TSPLPrinter bitmap(int x, int y, int mode, int width, Bitmap bmp)
TSPLPrinter bitmap(int x, int y, int mode, int width, Bitmap bmp, AlgorithmType algorithmType)
Transferring images to printers through compression, only applicable to some models
TSPLPrinter bitmapCompression(int x, int y, int mode, int width, Bitmap bmp, AlgorithmType algorithmType)

[Parameter]
➢ x
Specify the x-coordinate
➢ y
Specify the y-coordinate
➢ mode
Graphic modes listed below:

Variable	Description
BMP_MODE_OVERWRITE	OVERWRITE,Only applicable to bitmap method
BMP_MODE_OR	OR,Only applicable to bitmap method
BMP_MODE_XOR	XOR,Only applicable to bitmap method
BMP_MODE_OVERWRITE_C	OVERWRITE, Only applicable to bitmapCompression method
BMP_MODE_OR_C	OR, Only applicable to bitmapCompression method
BMP_MODE_XOR_C	XOR, Only applicable to bitmapCompression method

➢ width
Print width of picture

> bmp

Bitmap data

> algorithmType

Algorithm type. Default is AlgorithmType.Threshold.

AlgorithmType.Dithering

AlgorithmType.Threshold

[Return]

TSPLPrinter Instance

2.22. qrcode

This method prints QR code.

TSPLPrinter qrcode(int x, int y, int cellWidth, int rotation, String data)

TSPLPrinter qrcode(int x, int y, String ecLevel, int cellWidth, int rotation, String data)

TSPLPrinter qrcode(int x, int y, String ecLevel, int cellWidth, String mode, int rotation, String data)

TSPLPrinter qrcode(int x, int y, String ecLevel, int cellWidth, String mode, int rotation, String model, String mask, String data)

[Parameter]

> x

The upper left corner x-coordinate of the QR code

> y

The upper left corner y-coordinate of the QR code

> ecLevel

Error correction recovery level

Variable	Description
EC_LEVEL_L	Error correction Level L (7%)
EC_LEVEL_M	Error correction Level M (15%)
EC_LEVEL_Q	Error correction Level Q (25%)
EC_LEVEL_H	Error correction Level H (30%)

> cellWidth

Cell size:1~10

> mode

Auto / manual encode

Variable	Description
QRCODE_MODE_AUTO	Auto
QRCODE_MODE_MANUAL	Manual

> rotation

Clockwise rotation angle, Default value:ROTATION_0

Variable	Description
ROTATION_0	0 degree
ROTATION_90	90 degree
ROTATION_180	180 degree
ROTATION_270	270 degree

➢ model

Variable	Description
QRCODE_MODEL_M1	(default), original version
QRCODE_MODEL_M2	enhanced version (Almost smart phone is supported by this version.)

➢ mask

S0~S8, default is S7

➢ data

QRCode data content.

[Return]

TSPLPrinter Instance

2.23. text

This method prints text on label.

TSPLPrinter text(int x, int y, String font, String content)

TSPLPrinter text(int x, int y, String font, int xRatio, int yRatio, String content)

TSPLPrinter text(int x, int y, String font, int rotation, int xRatio, int yRatio, String content)

[Parameter]

➢ x

The x-coordinate of the text

➢ y

The y-coordinate of the text

➢ font

Font name

Variable	Description
FNT_8_12	8 x 12 fixed pitch dot font
FNT_12_20	12 x 20 fixed pitch dot font
FNT_16_24	16 x 24 fixed pitch dot font
FNT_24_32	24 x 32 fixed pitch dot font
FNT_32_48	32 x 48 dot fixed pitch font
FNT_14_19	14 x 19 dot fixed pitch font OCR-B

FNT_14_25	14 x25 dot fixed pitch font OCR-A
FNT_21_27	21 x 27 dot fixed pitch font OCR-B
FNT_SIMPLIFIED_CHINESE	Simplified Chinese 24x24
FNT_TRADITIONAL_CHINESE	Traditional Chinese 24x24
FNT_KOREAN	Korean text 24x24

➢ rotation

Clockwise rotation angle, Default value:ROTATION_0

Variable	Description
ROTATION_0	0 degree
ROTATION_90	90 degree
ROTATION_180	180 degree
ROTATION_270	270 degree

➢ xRatio

Horizontal multiplication, up to 10x

Available factors: 1~10

➢ yRatio

Vertical multiplication, up to 10x

Available factors: 1~10

➢ content

Content of text string

[Return]
TSPLPrinter Instance

2.24. erase

This method clears a specified region in the image buffer.

TSPLPrinter erase(int x, int y, int width, int height)

[Parameter]

➢ x

The x-coordinate of the starting point (in dots)

➢ y

The y-coordinate of the starting point (in dots)

➢ width

The region width in x-axis direction (in dots)

➢ height

The region height in y-axis direction (in dots)

[Return]
TSPLPrinter Instance

2.25. reverse

This method reverses a region in image buffer.
TSPLPrinter reverse(int x, int y, int width, int height)

[Parameter]
➢   x
The x-coordinate of the starting point (in dots)
➢   y
The y-coordinate of the starting point (in dots)
➢   width
X-axis region width (in dots)
➢   height
Y-axis region height (in dots)

[Return]
TSPLPrinter Instance

2.26. cut

This command activates the cutter to immediately cut the labels without back feeding the label.
TSPLPrinter cut()

[Return]
TSPLPrinter Instance

2.27. setPeel

This method is used to enable/disable the self-peeling function. The default setting for this function is false. When this function is set true, the printer stops after each label printing, and does not print the next label until the peeled label is taken away. This setting will be saved in printer memory when turning off the power.
TSPLPrinter setPeel(boolean isOpen)

[Parameter]
➢   isOpen
true:Enable the self-peeling function
false:Disable the self-peeing function

[Return]

TSPLPrinter Instance

2.28. setTear

This method is used to enable/disable feeding of labels to gap/black mark position for tearing off.
This setting will be saved in printer memory when turning off the power
TSPLPrinter setTear(boolean isOpen)

[Parameter]
➢   isOpen
true:The label gap will stop at the tear off position after print.
false:The label gap will NOT stop at the tear off position after print. The
beginning of label will be aligned to print head.

[Return]
TSPLPrinter Instance

2.29. bline

This method sets the height of the black line and the user-defined extra label feeding length each
form feed takes.
TSPLPrinter blineInch(double m, double n)
English system (inch)
TSPLPrinter blineMm(double m, double n)
Metric system (mm)

[Parameter]
➢   m
The height of black line either in inch or mm
➢   n
The extra label feeding length
0 ≤ n ≤ label length

[Return]
TSPLPrinter Instance

2.30. printerStatus

Get printer status
void printerStatus(IDataCallback callback)

void printerStatus(int timeout, IDataCallback callback)

[Parameter]
➢ timeout
Receive timeout, Unit is ms,Default is 5000ms
➢ callback
The callback content is the corresponding printer state
public interface IStatusCallback {
    void receive(int status);
}

status(HEX)	Description
00	Normal
01	Head opened
02	Paper Jam
03	Paper Jam and head opened
04	Out of paper
05	Out of paper and head opened
08	Out of ribbon
09	Out of ribbon and head opened
0A	Out of ribbon and paper jam
0B	Out of ribbon, paper jam and head opened
0C	Out of ribbon and out of paper
0D	Out of ribbon, out of paper and head opened
10	Pause
20	Printing
80	Other error
-1	Receive timeout

2.31. isConnect

Query connection status
void isConnect(IStatusCallback callback)

[Parameter]
➢ callback
Status callback.
public interface IStatusCallback {
    void receive(int status);
}

status	Description
STS_CONNECT	connect
STS_DISCONNECT	disconnect

2.32. setCharSet

Set character encoding,Default is "gbk"
void setCharSet(String charSet)

[Parameter]
➢ charSet
Character set name.

2.33. sendData

This function is used to send data to the printer.
TSPLPrinter sendData(byte[] data)
TSPLPrinter sendData(List<byte[]> datas)

[Parameter]
➢ data
Byte array to be sent
➢ datas
Byte array collection to be sent

[Return]
TSPLPrinter Instance

ImageUtils

handleImageEffect

This method is used to adjust the contrast and brightness of the image.
static Bitmap handleImageEffect(Bitmap bmp, float contrast, float brightness)

[Parameter]
➢ bmp
Original image
➢ contrast
Contrast,The range is 0~2
➢ brightness
Brightness,The range is -255~255

[Return]
   processed image object