Android TSC Program Manual

v2.1.2

1. Instruction

This manual describes how to implement TSC printing.Constant variable are defined in TSCConst class.

2. TSCPrinter

2.1. TSCPrinter

Constructor to create print objects.
TSCPrinter(IDeviceConnection connection)

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

2.2. size

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

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

[Return]
TSCPrinter Instance

2.3. gap

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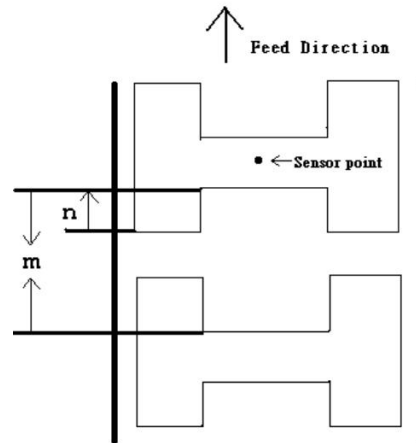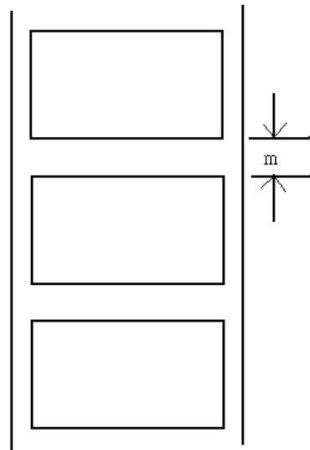TSCPrinter gapMm(double m, double n)
Metric system (mm)

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

[Return]
TSCPrinter Instance

2.4. speed

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

[Parameter]
➢ speed
Printing speed in inch per second

[Return]
TSCPrinter Instance

2.5. density

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

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

[Return]
TSCPrinter Instance

2.6. cls

This method clears the image buffer.
TSCPrinter cls()

[Return]
TSCPrinter 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.
TSCPrinter offsetInch(double offset)
English system (inch)
TSCPrinter offsetMm(double offset)
Metric system (mm)

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

[Return]
TSCPrinter Instance

2.8. direction

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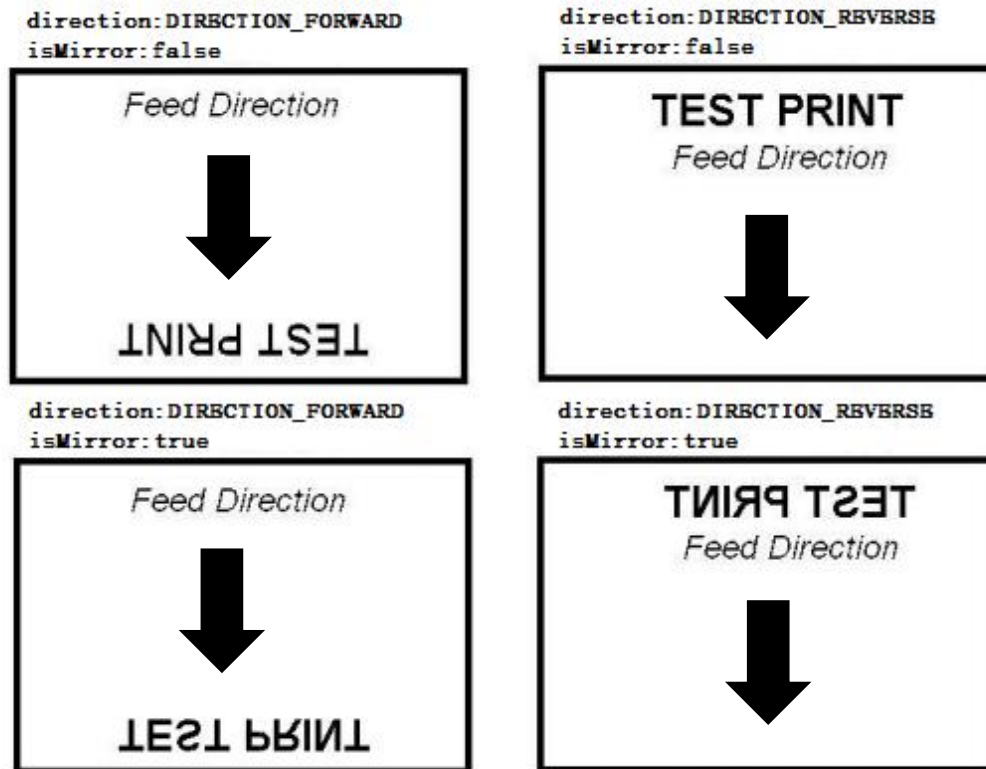TSCPrinter direction(int direction)

TSCPrinter 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]
TSCPrinter Instance

2.9. feed

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

[Parameter]
➢ length
Length,unit: dot

1 ≤ length ≤ 9999

[Return]

TSCPrinter Instance

2.10. reference

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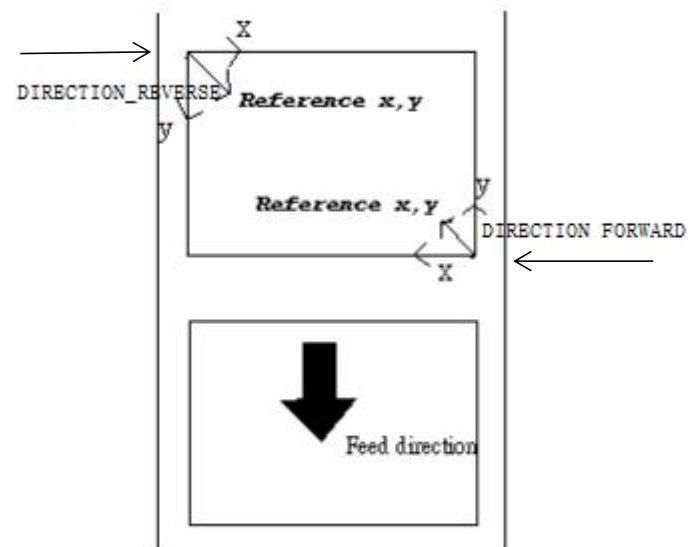
TSCPrinter reference(int x, int y)

[Parameter]

➢   x

Horizontal coordinate (in dots)

➢   y

Vertical coordinate (in dots)

[Return]

TSCPrinter Instance

2.11. bar

This method draws a bar on the label format.

TSCPrinter 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]
TSCPrinter Instance

2.12. box

This method draws rectangles on the label.
TSCPrinter 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]
TSCPrinter Instance

2.13. backFeed

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

[Parameter]
➤   length
Length unit: dot

1 ≤ length ≤ 9999

[Return]
TSCPrinter Instance

2.14. formFeed

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

[Return]
TSCPrinter 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.
TSCPrinter home()

[Return]
TSCPrinter 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]
TSCPrinter Instance

2.17. codePage

This method defines the code page of international character set.
TSCPrinter codePage(int page)

[Parameter]
➢   page

Name or number of code page.

Variable	Description
PAGE_437	United States
PAGE_850	Multilingual
PAGE_852	Slavic
PAGE_860	Portuguese
PAGE_863	Canadian/French
PAGE_865	Nordic
PAGE_1250	Central Europe
PAGE_1252	Latin I
PAGE_1253	Greek
PAGE_1254	Turkish

[Return]
TSCPrinter 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.
TSCPrinter sound(int level, int interval)

[Parameter]
➢ count
Sound level
➢ interval
Sound interval: 1~4095.(in ms)

[Return]
TSCPrinter 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.
TSCPrinter limitFeedInch(int length)
English system (inch)
TSCPrinter limitFeedMm(int length)
Metric system (mm)

[Parameter]

> length

The maximum length for sensor detecting

[Return]

TSCPrinter Instance

2.20. barCode

This method prints 1D barcodes. The available barcodes are listed below:

TSCPrinter barcode(int x, int y, String codeType, int height, String content)

public TSCPrinter barcode(int x, int y, String codeType, int height, boolean readable, int rotation, String content)

TSCPrinter 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

> 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]

TSCPrinter Instance

2.21. bitmap

This method draws bitmap images.
TSCPrinter bitmap(int x, int y, int mode, int width, Bitmap bmp)

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

Variable	Description
BMP_MODE_OVERWRITE	OVERWRITE
BMP_MODE_OR	OR
BMP_MODE_XOR	XOR

➢ width
Image width
➢ bmp
Bitmap data

[Return]
TSCPrinter Instance

2.22. qrcode

This method prints QR code.
TSCPrinter qrcode(int x, int y, int cellWidth, int rotation, String data)
TSCPrinter qrcode(int x, int y, String ecLevel, int cellWidth, int rotation, String data)
TSCPrinter qrcode(int x, int y, String ecLevel, int cellWidth, String mode, int rotation, String data)
TSCPrinter qrcode(int x, int y, String ecLevel, int cellWidth, String mode, int rotation, int model, int 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

➢ data

QRCode data content.

[Return]

TSCPrinter Instance

2.23. text

This method prints text on label.

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

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

TSCPrinter 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]

TSCPrinter Instance

2.24. erase

This method clears a specified region in the image buffer.

TSCPrinter 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]
TSCPrinter Instance

2.25. reverse

This method reverses a region in image buffer.
TSCPrinter 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]
TSCPrinter Instance

2.26. cut

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

[Return]
TSCPrinter 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.
TSCPrinter setPeel(boolean isOpen)

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

[Return]
TSCPrinter 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
TSCPrinter 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]
TSCPrinter 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.
TSCPrinter blineInch(double m, double n)
English system (inch)
TSCPrinter 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
$0 \leq n \leq label length$

[Return]

TSCPrinter 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.

TSCPrinter sendData(byte[] data)

TSCPrinter sendData(List<byte[]> datas)

[Parameter]

➢ data

Byte array to be sent

➢ datas

Byte array collection to be sent

[Return]

TSCPrinter Instance