# iOS TSPL Program Manual

## Bluetooth

## 1.Defined in the TSCBLEManager Class

### 1.1 sharedInstance
Singleton.

- (void) sharedInstance

### 1.2 startScan
Search for bluetooth printers.

- (void) startScan

### 1.3 stopScan
Stop searching for bluetooth printers.

-(void) stopScan

### 1.4 connectDevice
Connect a Printer.

-(void)connectDevice:(CBPeripheral *)peripheral

[Parameter]

-peripheral: Device.

### 1.5 disconnectRootPeripheral
Disconnect a Printer.

- (void) disconnectRootPeripheral

### 1.6 writeCommandWithData
Data printing.

- (void) writeCommandWithData: (NSData *) data

[Parameter]

- data: Data to print.

## 1.7 printerStatus
Get printer status

- (void)printerStatus:(TSCBLEPrinterStatusBlock)statusBlock;

[Parameter]

- statusBlock:Status callback result.


# TSCBLEManagerDelegte

## ★ TSCbleUpdatePeripheralList
Discover peripherals.

- (void) TSCbleUpdatePeripheralList: (NSArray *) peripherals RSSIList:

(NSArray *) rssiList

[Parameter]

- peripherals: Peripheral List.

- rssiList: Rssi List.

## ★ TSCbleConnectPeripheral
Peripheral connected succeeded.

- (void) TSCbleConnectPeripheral: (CBPeripheral *) peripheral

[Parameter]

- peripheral: Device.

## ★ TSCbleFailToConnectPeripheral
Peripheral connected failed.

- (void) TSCbleFailToConnectPeripheral: (CBPeripheral *) peripheral
error: (NSError *)error

[Parameter]

- peripheral: Device.

- error: Connect error.

# ★ TSCbleDisconnectPeripheral

Peripheral disconnected.

- (void) TSCbleDisconnectPeripheral: (CBPeripheral *) peripheral

[Parameter]

- peripheral: Device.

# ★ TSCbleWriteValueForCharacteristic

Send data succeeded.

- (void) TSCbleWriteValueForCharacteristic: (CBCharacteristic *) character error: (NSError *) error

[Parameter]

- character: Device attributes.

- error: Send error.

# ★ TSCbleReceiveValueForCharacteristic

Receive data from printer.

- (void) TSCbleReceiveValueForCharacteristic: (CBCharacteristic *) character error: (NSError *) error

[Parameter]

- character: Device attributes.

- error: Receive error.

# ★ TSCbleCentralManagerDidUpdateState

App Bluetooth status update.

- (void)TSCbleCentralManagerDidUpdateState:(NSInteger)state;

[Parameter]

- state: Bluetooth status value

| CBManagerStateUnsupported | The platform/hardware doesn't support Bluetooth Low Energy. |
| --- | --- |
| CBManagerStateUnauthorized | The app is not authorized to use Bluetooth Low Energy. |

| CBManagerStatePoweredOff | Bluetooth powered off. |
|---|---|
| CBManagerStatePoweredOn | Bluetooth power on. |

# WiFi

## 2.Defined in the TSCWIFIManager Class

### 2.1 sharedInstance
Singleton.

- (void) sharedInstance

### 2.2 connectWithHost
Connect a Printer.

- (void) connectWithHost: (NSString *) hostStr port: (UInt16 *) port

[Parameter]

- hostStr: Connect printer ip address.

- port: Port Number.

### 2.3 disconnect
Disconnect a Printer.

- (void) disconnect

### 2.4 writeCommandWithData
Data printing.

- (void)writeCommandWithData: (NSData *) data

[Parameter]

- data: Data to print.


## TSCWIFIManagerDelegate

### ★ TSCwifiConnectedToHost
Connected a Printer.

- (void) TSCwifiConnectedToHost: (NSString *) host port: (Uint16) port

[Parameter]

- host: IP Address.

- port: Port Number.

## ★ TSCwifiDisconnectWithError

Disconnected a Printer.

- (void) TSCwifiDisconnectWithError: (NSError *) error

[Parameter]

- error: error.

## ★ TSCwifiWriteValueWithTag

Print successful.

- (void) TSCwifiWriteValueWithTag:(long)tag

## ★ TSCwifiReceiveValueForData

Receive data from printer.

- (void) TSCwifiReceiveValueForData:(NSData *)data

[Parameter]

- data: Printer data.

# TSPL

## 3.Defined in the TSCCommand Class

### 3.1 sizeBymmWithWidth

Defines the label width and height.

+ (NSData *) sizeBymmWithWidth: (double) m andHeight: (double) n

[Parameter]

- m: label width

- n: label height

[Return value]

- NSData *: Send data.

## 3.2 sizeByinchWithWidth

Defines the label width and height.

+ (NSData *) sizeByinchWithWidth: (double) m andHeight: (double) n

[Parameter]

- m: label width

- n: label height

[Return value]

- NSData *: Send data.

## 3.3 gapBymmWithWidth

Defines the gap distance between to labels.

+ (NSData *) gapBymmWithWidth: (double) m andHeight: (double) n

[Parameter]

- m: the gap distance between two labels

- n: the offset distance of the gap

[Return value]

- NSData *: Send data.

## 3.4 gapByinchWithWidth
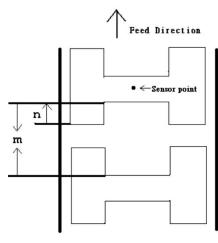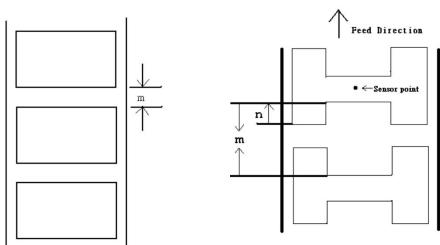
Defines the gap distance between to labels.

+ (NSData *) gapByinchWithWidth: (double) m andHeight: (double) n

[Parameter]

- m: the gap distance between two labels

- n: the offset distance of the gap

[Return value]

- NSData *: Send data.

## 3.5 blineBymmWithM

Sets the height of the black line and the user-defined extra label feeding length each from feed takes.

+ (NSData *) blineBymmWithM: (double) m andN: (double) n

[Parameter]

- m: the height of black line. 2.54 ~ 25.4mm

- n: the extra label feeding length. 0 ~ label length

[Return value]

- NSData *: Send data.

## 3.6 blineByinchWithM

Sets the height of the black line and the user-defined extra label feeding length each from feed takes.

+ (NSData *) blineByinchWithM: (double) m andN: (double) n

[Parameter]

- m: the height of black line. 0.1 ~ 1 inch

- n: the extra label feeding length. 0 ~ label length

[Return value]

- NSData *: Send data.

## 3.7 offSetBymmWithM

Sets the position of label under the pee-off mode.

+ (NSData *) offSetBymmWithM: (double) m

[Parameter]

- m: the offset distance

[Return value]

- NSData *: Send data.

## 3.8 offSetByinchWithM

Sets the position of label under the pee-off mode.

+ (NSData *) offSetByinchWithM: (double) m

[Parameter]

- m: the offset distance

[Return value]

- NSData *: Send data.

## 3.9 speed

Defines the print speed.

+ (NSData *) speed: (double) n

[Parameter]

- n: Printing speed in inch per second

[Return value]

- NSData *: Send data.

## 3.10 density

Sets the printing darkness.

+ (NSData *) density: (int) n

[Parameter]

- n: 0 ~ 15

[Return value]

- NSData *: Send data.

## 3.11 direction

Defines the print direction

+ (NSData *) density: (int) n

[Parameter]

- n: 0: forward   1: reverse

[Return value]

- NSData *: Send data.

## 3.12 cls
Clears the cache buffer

+ (NSData *) cls

[Return value]

- NSData *: Send data.

## 3.13 feed
Feeds label with the specified length

+ (NSData *) feed: (int) n

[Parameter]

- n: the length label feeds. 1 ~ 9999 by dot.

[Return value]

- NSData *: Send data.

## 3.14 backFeed
Feeds label in reverse.

+ (NSData *) backFeed: (int) n

[Parameter]

- n: the length babel feeds in reverse. 1 ~ 9999 by dot.

[Return value]

- NSData *: Send data.

## 3.15 formFeed
Feeds label to the beginning of next label

+ (NSData *) formFeed

[Return value]

- NSData *: Send data.

## 3.16 limitFeedBymm
Use to stop feeding paper while feed paper wrong

+ (NSData *) limitFeedBymm: (double) n

[Parameter]

- n: the limit length of wrong.

[Return value]

- NSData *: Send data.

## 3.17 limitFeedByinch
 Use to stop feeding paper while feed paper wrong

+ (NSData *) limitFeedByinch: (double) n

[Parameter]

- n: the limit length of wrong.

[Return value]

- NSData *: Send data.

## 3.18 home
 Feeds label until the sensor has determined origin

+ (NSData *) home

[Return value]

- NSData *: Send data.

## 3.19 referenceWithX
 Defines the reference point the of the label

+ (NSData *) referenceWithX: (int) x andY: (int) y

[Parameter]

- x: Horizontal coordinate.

- y: Vertical coordinate.

[Return value]

- NSData *: Send data.

## 3.20 codePage
 Set international coding

+ (NSData *) codePage: (NSString *) str

[Parameter]

- str:

| Variable | Describe |
|----------|----------|
| 437 | United States |
| 850 | Multilingual |
| 852 | Slavic |
| 860 | Portuguese |
| 863 | Canadian / French |
| 865 | Nordic |
| 1250 | Central Europe |
| 1252 | Latin I |
| 1253 | Greek |
| 1254 | Turkish |

[Return value]

- NSData *: Send data.

# 3.21 print
Prints the label format currently stored in the image buffer.

+ (NSData *) print: (int) m

[Parameter]

- m: print count.

[Return value]

- NSData *: Send data.

# 3.22 cut
Cuts the labels.

+ (NSData *) cut

[Return value]

- NSData *: Send data.

## 3.23 soundWithLevel

Sets the sound frequency of the beeper.

+ (NSData *) soundWithLevel: (int) level andInterval: (int) interval

[Parameter]

- level: sound level 0 ~ 9.

- interval: sound interval 1 ~ 4095. by ms

[Return value]

- NSData *: Send data.

## 3.24 selfTest

The printer will print out the printer information.

+ (NSData *) selfTest

[Return value]

- NSData *: Send data.

## 3.25 initialPrinter

Restore printer settings to default.

+ (NSData *) initialPrinter

[Return value]

- NSData *: Send data.

## 3.26 barWithX

Draws a bar on the label format

+ (NSData *) barWithX: (int) x andY: (int) y andWidth:(int) w andHeight: (int) h

[Parameter]

- x: the upper left corner x-coordinate.

- y: the upper left corner y-coordinate.

- w: bar width.

- h: bar height.

[Return value]

- NSData *: Send data.

# 3.27 barcodeWithX

Prints 1D barcodes

+ (NSData *) barcodeWithX: (int) x andY: (int) y andCodeType: (NSString *) codetype andHeight: (int) height andHunabReadable: (int) readable andRotation: (int) rotation andNarrow: (int) narrow andWide: (int) wide andContent: (NSString *) content usStrEnCoding: (NSStringEncoding) strEnCoding

[Parameter]

- x: the x-coordinate.

- y: the y-coordinate.

- codetype:

| Variable | Describe |
| --- | --- |
| 128 | Code 128, switching code subset automatically |
| 128M | Code 128, switching code subset manually |
| EAN128 | EAN 128, switching code subset automatically |
| 25 | Interleaved 2 of 5 |
| 25C | Interleaved 2 of 5 with check digit |
| 39 | Code 39 |
| 39C | Code 39 with check digit |
| 93 | Code 93 |
| EAN13 | EAN 13 |
| EAN13+2 | EAN 13 with 2 digits add−on |
| EAN13+5 | EAN 13 with 5 digits add−on |
| EAN8 | EAN 8 |
| EAN8+2 | EAN 8 with 2 digits add−on |
| EAN8+5 | EAN 8 with 5 digits add−on |
| CODA | Codabar |
| POST | Postnet |

| Variable | Describe |
| --- | --- |
| UPCA | UPC–A |
| UPCA+2 | UPC–A with 2 digits add–on |
| UPA+5 | UPC–A with 5 digits add–on |
| UPCE | UPC–E |
| UPCE+2 | UPC–E with 2 digits add–on |
| UPE+5 | UPC–E with 5 digits add–on |
| CPOST | China post |
| MSI | MSI |
| MSIC | MSI with check digit |
| PLESSEY | PLESSEY |
| ITF14 | ITF14 |
| EAN14 | EAN14 |
| 11 | Code 11 |
| TELEPEN | Telepen |
| TELEPENN | Telepen number |
| PLANET | Planet |
| CODE49 | Code 49 |
| DPI | Deutsche Post Identcode |
| DPL | Deutsche Post Leitcode |

- height: bar height. by dot.

- readable: HRI readable, 0 ~ 3.

| Variable | Describe |
| --- | --- |
| 0 | NONE |
| 1 | LEFT |
| 2 | MIDDLE |
| 3 | RIGHT |

- rotation: 0, 90, 180, 270

- narrow: space of uint by dot. default: 2.

- wide: width of uint by dot. default: 2.

- content: barcode's content.

- strEnCoding: content's encoding.

[Return value]

- NSData *: Send data.

# 3.28 bitmapWithX

Draws bitmap images.

+ (NSData *) bitmapWithX: (int) x andY: (int) y andMode: (int) mode andImage: (UIImage *) image

[Parameter]

- x: the x-coordinate.

- y: the y-coordinate.

- mode

| Variable | Describe |
|----------|----------|
| 0 | OVERWRITE |
| 1 | OR |
| 2 | XOR |

- image: bitmap data.

[Return value]

- NSData *: Send data.

# 3.29 boxWithX

Draws rectangles on the label.

+ (NSData *) boxWithX: (int) x andY: (int) y andEndX: (int) x_end andEndY: (int) y_end andThickness: (int) thickness

[Parameter]

- x: the x-coordinate of upper left corner.

- y: the y-coordinate of upper left corner.

- x_end: the x-coordinate of lower right corner.

- y_end: the y-coordinate of lower right corner.

- thickness: the line width.

[Return value]

- NSData *: Send data.

# 3.30 ellipseWithX

Draws ellipse on the label.

+ (NSData *) ellipseWithX: (int) x andY: (int) y andWidth: (int) width andHeight: (int) height andThickness: (int) thickness

[Parameter]

- x: the x-coordinate of upper left corner(in dots).

- y: the y-coordinate of upper left corner(in dots).

- width: specify the width of the ellipse(in dots).

- height: specify the height of the ellipse(in dots).

- thickness: the line width(in dots).

[Return value]

- NSData *: Send data.

# 3.31 eraseWithX

Clears the specified region.

+ (NSData *) eraseWithX: (int) x andY: (int) y andWidth: (int) width andHeight: (int) height

[Parameter]

- x: the x-coordinate of starting point.

- y: the y-coordinate of starting point.

- width: the region width.

- height: the region height.

[Return value]

- NSData *: Send data.

## 3.32 qrCodeWithX

Prints qr code.

+ (NSData *) qrCodeWithX: (int) x andY: (int) y andEccLevel: (NSString *) ecclevel andCellWidth: (int) cellwidth andMode:(NSString *) mode andRotation: (int) rotation andContent: (NSString *) content usStrEnCoding: (NSStringEncoding) strEnCoding

[Parameter]

- x: the x-coordinate.

- y: the y-coordinate.

- ecclevel:

| Variable | Describe |
| --- | --- |
| L | 7% |
| M | 15% |
| Q | 25% |
| H | 30% |

- cellwidth: 1 ~ 10.

- mode:

| Variable | Describe |
| --- | --- |
| A | Auto–generated coding |
| M | Manual–generated coding |

- rotation: 0, 90, 180, 270

- content: qr data.

- strEnCoding: content's coding.

[Return value]

- NSData *: Send data.

## 3.33 reverseWithX

Reverses a region.

+ (NSData *) reverseWithX: (int) x andY: (int) y andWidth: (int) width andHeight: (int) height

[Parameter]

- x: the x-coordinate of starting point.

- y: the y-coordinate of starting point.

- width: the region width.

- height: the region height.

[Return value]

- NSData *: Send data.

## 3.34 textWithX

Prints text on label.

+ (NSData *) textWithX: (int) x andY: (int) y andFont: (NSString *) font andRotation: (int) rotation andX_mul: (int) x_mul andY_mul: (int) y_mul andContent: (NSString *) content usStrEnCoding: (NSStringEncoding) strEnCoding

[Parameter]

- x: the x-coordinate of starting point.

- y: the y-coordinate of starting point.

- font:

| Variable | Describe |
|----------|----------|
| 0 | Monotye CG Triumvirate Bold Condensed, font width and height is stretchable |
| 1 | 8 * 12 fixed pitch dot font |
| 2 | 12 * 20 fixed pitch dot font |
| 3 | 16 * 24 fixed pitch dot font |
| 4 | 24 * 32 fixed pitch dot font |
| 5 | 32 * 48 fixed pitch dot font |
| 6 | 14 * 19 fixed pitch dot font |
| 7 | 21 * 27 fixed pitch dot font |
| 8 | 14 * 25 fixed pitch dot font |

- rotation: 0, 90, 180, 270

- x_mul: horizontal multiplication, up to 10x.

- y_mul: vertical multiplication, up to 10x.

- content: text string.

- strEnCoding: content's encoding.

[Return value]

- NSData *: Send data.

# 3.35 setAutoResponse

Set printer automatic return information

+ (NSData *)setAutoResponse:(AutoResponse)response

| Variable | Describe |
|----------|----------|
| OFF | Turn off the printer automatic return information function |
| ON | Turn on the printer automatic return information function |
| BATCH | Turn on the printer's automatic return information function to return information after the completion of the whole batch of tasks |

[Return value]

- NSData *: Send data.

# 3.36 zlibBitmapWithX

Draw bitmap images, support compression

+(NSData *) zlibBitmapWithX:(int) x andY:(int) y andMode:(int) mode andImage:(UIImage*) image;

[Parameter]

- x: the x-coordinate.

- y: the y-coordinate.

- mode：

| Variable | Describe |
|:---:|:---|
| 0 | OVERWRINTE |
| 1 | OR |
| 2 | XOR |
| 3 | OVERWRINTE + zlib |
| 4 | OR +zlib |
| 5 | XOR + zilb |

- image:bitmap data.

[Return value]

- NSData *: Send data.