

Class

XTSPLCommand

```
@interface XTSPLCommand : NSObject
```

getCommand:

Get Print Command

```
- (NSData*)getCommand;
```

Return Value

- NSData object containing the print data of the current TSPL object.

setCharEncoding:

Set Character Encoding

```
- (XTSPLCommand *)setCharEncoding:(NSStringEncoding)encoding;
```

Parameters

- `encoding`
Encoding format.

Return Value

- XTSPLCommand object.

addData:

Add Custom Data

```
- (XTSPLCommand *)addData:(NSData *)customData;
```

Parameters

- `customData`
Custom data content.

Return Value

- XTSPLCommand object.
-

sizeInch:

Set Label Size in Inches

```
- (XTSPLCommand *)sizeInch:(double)width height:(double)height;
```

Parameters

- `width`
Size width in inches.
- `height`
Size height in inches.

Return Value

- XTSPLCommand object.
-

sizeMm:

Set Label Size in Millimeters

```
- (XTSPLCommand *)sizeMm:(double)width height:(double)height;
```

Parameters

- `width`
Size width in mm.
- `height`
Size height in mm.

Return Value

- XTSPLCommand object.
-

gapInch:

Define the Gap Height Between Two Labels in Inches

```
- (XTSPLCommand *)gapInch:(double)m n:(double)n;
```

Parameters

- `m`
Gap height in inches.
- `n`
Gap height compensation value.

Return Value

- XTSPLCommand object.

gapMm:

Define the Gap Height Between Two Labels in Millimeters

```
- (XTSPLCommand *)gapMm:(double)m n:(double)n;
```

Parameters

- `m`
Gap height in mm.
- `n`
Gap height compensation value.

Return Value

- XTSPLCommand object.

speed:

Set Printer Print Speed

```
- (XTSPLCommand *)speed:(double)speed;
```

Parameters

- `speed`
Print speed in inches per second.

Return Value

- XTSPLCommand object.
-

density:

Set Printer Print Density

```
- (XTSPLCommand *)density:(int)density;
```

Parameters

- `density`
Density, range [0, 15].

Return Value

- XTSPLCommand object.
-

cls:

Clear Print Buffer

```
- (XTSPLCommand *)cls;
```

Return Value

- XTSPLCommand object.
-

offsetInch:

Set Label Paper Offset in Inches

```
- (XTSPLCommand *)offsetInch:(double)offset;
```

Parameters

- `offset`
Offset in inches.

Return Value

- XTSPLCommand object.
-

offsetMm:

Set Label Paper Offset in Millimeters

```
- (XTSPLCommand *)offsetMm:(double)offset;
```

Parameters

- `offset`
Offset in mm.

Return Value

- XTSPLCommand object.
-

direction:

Set Printer Print Direction

```
- (XTSPLCommand *)direction:(DirectionTSPL)direction;
```

Parameters

- `direction`
Print direction.

Return Value

- XTSPLCommand object.
-

direction:isMirror:

Set Printer Print Direction with Mirroring Option

```
- (XTSPLCommand *)direction:(DirectionTSPL)direction isMirror:(BOOL)isMirror;
```

Parameters

- `direction`
Print direction.
- `isMirror`
Whether to mirror the print.

Return Value

- XTSPCommand object.
-

feed:

Feed Forward

```
- (XTSPCommand *)feed:(int)length;
```

Parameters

- `length`
Feed length, unit is dot. Range [1, 9999].

Return Value

- XTSPCommand object.
-

referenceAtX:y:

Define the Origin Coordinates of the Label Paper

```
- (XTSPCommand *)referenceAtX:(int)x y:(int)y;
```

Parameters

- `x`
Horizontal coordinate, unit is dot.
- `y`
Vertical coordinate, unit is dot.

Return Value

- XTSPCommand object.
-

shift:

Move the Vertical Position of the Label Image

```
- (XTSPLCommand *)shift:(int)n;
```

Parameters

- `n`
Vertical coordinate of the label image, unit is dot, the maximum size that can be set is 1 inch.

Return Value

- XTSPLCommand object.

barAtX:andY:width:height:

Print a Bar at the Specified Position

```
- (XTSPLCommand *)barAtX:(int)x andY:(int)y width:(int)width height:(int)height;
```

Parameters

- `x`
Bar starting horizontal coordinate, unit is dot.
- `y`
Bar starting vertical coordinate, unit is dot.
- `width`
Bar width, unit is dot.
- `height`
Bar height, unit is dot.

Return Value

- XTSPLCommand object.

boxAtX:y:width:height:thickness:

Print a Box at the Specified Position

```
- (XTSPLCommand *)boxAtX:(int)x y:(int)y width:(int)width height:(int)height thickness:(int)thickness;
```

Parameters

- `x`
Box upper left X coordinate.
- `y`
Box upper left Y coordinate.
- `width`
Box width.
- `height`
Box height.
- `thickness`
Border thickness.

Return Value

- XTSPCommand object.

ellipseAtX:andY:andWidth:andHeight:andThickness:

Draw an Ellipse

```
- (XTSPCommand *)ellipseAtX:(int)x andY:(int)y andWidth:(int)width andHeight:(int)height andThickness:(int)thickness;
```

Parameters

- `x`
X coordinate of the upper left corner, unit is dot.
- `y`
Y coordinate of the upper left corner, unit is dot.
- `width`
Width of the ellipse, unit is dot.
- `height`
Height of the ellipse, unit is dot.
- `thickness`
Ellipse line thickness, unit is dot.

Return Value

- XTSPCommand object.

backFeed:

Label Backfeed

```
- (XTSPLCommand *)backFeed:(int)length;
```

Parameters

- `length`
Backfeed length, unit is dot. Range [1, 9999].

Return Value

- XTSPLCommand object.
-

formFeed:

Print and Feed Forward to the Next Label

```
- (XTSPLCommand *)formFeed;
```

Return Value

- XTSPLCommand object.
-

home:

Print and Feed Forward to the Label Starting Position

```
- (XTSPLCommand *)home;
```

Return Value

- XTSPLCommand object.
-

print:

Print Label

```
- (XTSPLCommand *)print;
```

Return Value

- XTSPCommand object.
-

print:n:

Print Label with Copies

```
- (XTSPCommand *)print:(int)m n:(int)n;
```

Parameters

- `m`
Specify how many sets of labels to print.
- `n`
Print how many copies of each set.

Return Value

- XTSPCommand object.
-

barcodeAtX:y:codeType:height:readable:andRotation:narrow:wide:content:

Print Barcode at Specified Position

```
- (XTSPCommand *)barcodeAtX:(int)x  
    y:(int)y  
    codeType:(NSString *)codeType  
    height:(int)height  
    readable:(ReadableType)readable  
    andRotation:(TSPLRotation)rotation  
    narrow:(int)narrow  
    wide:(int)wide  
    content:(NSString *)content;
```

Parameters

- `x`
Barcode starting horizontal coordinate, unit is dot.
- `y`
Barcode starting vertical coordinate, unit is dot.
- `codeType`
Barcode type, available types refer to Barcode Code Types in `XConstants.h`.

Variable	Description
kBarcodeTypeCode128	Code 128, auto switch code subset.
kBarcodeTypeCode128Manual	Code 128, manual switch code subset.
kBarcodeTypeEAN128	EAN128, auto switch code subset.
kBarcodeTypeInterleaved25	Interleaved 2 of 5.
kBarcodeTypeInterleaved25C	Interleaved 2 of 5 with check digit.
kBarcodeTypeCode39	Code 39, auto switch standard and full ASCII mode.
kBarcodeTypeCode39C	Code 39 with check digit.
kBarcodeTypeCode93	Code 93.
kBarcodeTypeEAN13	EAN 13.
kBarcodeTypeEAN13_2	EAN 13 with 2-digit add-on.
kBarcodeTypeEAN13_5	EAN 13 with 5-digit add-on.
kBarcodeTypeEAN8	EAN 8.
kBarcodeTypeEAN8_2	EAN 8 with 2-digit add-on.
kBarcodeTypeEAN8_5	EAN 8 with 5-digit add-on.
kBarcodeTypeCodabar	Codabar.
kBarcodeTypePostnet	Postnet.
kBarcodeTypeUPCA	UPC-A.
kBarcodeTypeUPCA_2	UPC-A with 2-digit add-on.
kBarcodeTypeUPCA_5	UPC-A with 5-digit add-on.
kBarcodeTypeUPCE	UPC-E.
kBarcodeTypeUPCE_2	UPC-E with 2-digit add-on.
kBarcodeTypeUPCE_5	UPC-E with 5-digit add-on.
kBarcodeTypeCpost	China post.
kBarcodeTypeMSI	MSI.
kBarcodeTypeMSIC	MSI with check digit.
kBarcodeTypePlessey	PLESSEY.
kBarcodeTypeITF14	ITF14.

<code>kBarcodeTypeEAN14</code>	EAN14.
<code>kBarcodeTypeCode11</code>	Code 11.
<code>kBarcodeTypeTelepen</code>	Telepen.

- `height`
Barcode height, unit is dot.
- `readable`
Whether to print readable characters, default is `ReadableTypeLeft`, displayed on the left.
- `rotation`
Barcode rotation type.
- `narrow`
Narrow bar code ratio factor, unit is dot, default is 2.
- `wide`
Wide bar code ratio factor, unit is dot, default is 2.
- `content`
Barcode content.

Return Value

- XTSPCommand object.

codaBlockFAtX:andY:andRotation:andContent:

Draw CODABLOCK F Type Barcode

```
- (XTSPCommand *)codaBlockFAtX:(int)x andY:(int)y andRotation:(TSPLRotation)rotation
andContent:(NSString *)content;
```

Parameters

- `x`
X coordinate.
- `y`
Y coordinate.
- `rotation`
Rotation angle.
- `content`
CODABLOCK barcode content.

Return Value

- XTSPLCommand object.
-

codePage:

Set Printer International Code Page

```
- (XTSPLCommand *)codePage:(NSString *)code;
```

Parameters

- `code`
Code page name.

Return Value

- XTSPLCommand object.
-

sound:interval:

Set Printer Buzzer Beep Times and Interval

```
- (XTSPLCommand *)sound:(int)level interval:(int)interval;
```

Parameters

- `level`
Sound volume: 0~9.
- `interval`
Sound interval: 1~4095.

Return Value

- XTSPLCommand object.
-

country:

Select International Character Set

```
- (XTSPLCommand *)country:(NSString *)code;
```

Parameters

- `code`
Available character set code.

Return Value

- XTSPLCommand object.
-

limitFeedInch:

Limit Forward Feed in Inches

```
- (XTSPLCommand *)limitFeedInch:(double)length;
```

Parameters

- `length`
Limit length in inches.

Return Value

- XTSPLCommand object.
-

limitFeedMm:

Limit Forward Feed in Millimeters

```
- (XTSPLCommand *)limitFeedMm:(double)length;
```

Parameters

- `length`
Limit length in mm.

Return Value

- XTSPLCommand object.
-

bitmapAtX:y:mode:image:

Print Bitmap

```
- (XTSPLCommand *)bitmapAtX:(int)x y:(int)y mode:(BMPMode)mode image:(NSImage *)image;
```

Parameters

- `x`
Bitmap upper left X coordinate.
- `y`
Bitmap upper left Y coordinate.
- `mode`
Bitmap mode.
- `image`
Bitmap object.

Return Value

- XTSPLCommand object.

zlibBitmapAtX:y:mode:image:

Transfer Compressed Image to Printer

```
- (XTSPLCommand *)zlibBitmapAtX:(int)x y:(int)y mode:(BMPMode)mode image:(NSImage *)image;
```

Parameters

- `x`
Bitmap upper left X coordinate.
- `y`
Bitmap upper left Y coordinate.
- `mode`
Bitmap mode.
- `image`
Bitmap object.

Return Value

- XTSPLCommand object.

putBmpAtX:andY:andFileName:

Print BMP Format Image

```
- (XTSPLCommand *)putBmpAtX:(int)x andY:(int)y andFileName:(NSString *)filename;
```

Parameters

- `x`
BMP image X coordinate.
- `y`
BMP image Y coordinate.
- `filename`
Downloaded BMP image name.

Return Value

- XTSPLCommand object.

putBmpAtX:andY:andFileName:contrast:

Print BMP Format Image

```
- (XTSPLCommand *)putBmpAtX:(int)x andY:(int)y andFileName:(NSString *)filename  
contrast:(int)contrast;
```

Parameters

- `x`
BMP image X coordinate.
- `y`
BMP image Y coordinate.
- `filename`
Downloaded BMP image name (supports ZPL *.GRF files).
- `contrast`
Grayscale contrast ratio, default is 80, recommended range is 60 to 100.

Return Value

- XTSPLCommand object.

putPcxAtX:andY:andFileName:

Print PCX Format Image

```
- (XTSPLCommand *)putPcxAtX:(int)x andY:(int)y andFileName:(NSString *)filename;
```

Parameters

- `x`
PCX image X coordinate.
- `y`
PCX image Y coordinate.
- `filename`
Downloaded PCX image name (case sensitive).

Return Value

- XTSPLCommand object.

qrCodeAtX:andY:ecLevel:cellWidth:mode:rotation:content:

Print QR Code at Specified Position

```
- (XTSPLCommand *)qrCodeAtX:(int)x  
    andY:(int)y  
    ecLevel:(NSString *)ecclevel  
    cellWidth:(int)cellwidth  
    mode:(NSString *)mode  
    rotation:(TSPLRotation)rotation  
    content:(NSString *)content;
```

Parameters

- `x`
QR code upper left X coordinate.
- `y`
QR code upper left Y coordinate.
- `ecclevel`
Error correction level: `kECCLevelL` (7%), `kECCLevelM` (15%), `kECCLevelQ` (25%), `kECCLevelH` (30%).
- `cellwidth`
QR code cell size, range [1, 10].
- `mode`
QR code encoding mode: `kQRCodeModeAuto` (auto generate encoding), `kQRCodeModeManual` (manual generate encoding).

- `rotation`
Rotation angle [0, 90, 180, 270].
- `content`
QR code content.

Return Value

- XTSPLCommand object.

dataMatrixAtX:andY:width:height:content:

Draw DataMatrix 2D Barcode

```
- (XTSPLCommand *)dataMatrixAtX:(int)x  
    andY:(int)y  
    width:(int)width  
    height:(int)height  
    content:(NSString *)content;
```

Parameters

- `x`
X coordinate (unit DOT).
- `y`
Y coordinate (unit DOT).
- `width`
Barcode area width (unit DOT).
- `height`
Barcode area height (unit DOT).
- `content`
DataMatrix data content.

Return Value

- XTSPLCommand object.

pdf417AtX:y:width:height:rotate:content:

Draw PDF417 2D Barcode

```
- (XTSPLCommand *)pdf417AtX:(int)x
    y:(int)y
    width:(int)width
    height:(int)height
    rotate:(TSPLRotation)rotate
    content:(NSString *)content;
```

Parameters

- `x`
X coordinate (unit DOT).
- `y`
Y coordinate (unit DOT).
- `width`
Expected width (unit DOT).
- `height`
Expected height (unit DOT).
- `rotate`
Counterclockwise rotation (0, 90, 180, 270).
- `content`
PDF417 barcode data content.

Return Value

- XTSPLCommand object.

textAtX:y:font:content:

Print Text at Specified Position

```
- (XTSPLCommand *)textAtX:(int)x y:(int)y font:(NSString *)font content:(NSString *)content;
```

Parameters

- `x`
Text upper left X coordinate.
- `y`
Text upper left Y coordinate.
- `font`
Font name, available font names refer to Font name in XConstants.h.
- `content`
Text content.

Return Value

- XTSPCommand object.

textAtX:y:font:xRatio:yRatio:content:

Print Text with Magnification Ratios

```
- (XTSPCommand *)textAtX:(int)x y:(int)y font:(NSString *)font xRatio:(int)xRatio  
yRatio:(int)yRatio content:(NSString *)content;
```

Parameters

- `x`
Text upper left X coordinate.
- `y`
Text upper left Y coordinate.
- `font`
Font name, available font names refer to Font name in XConstants.h.
- `xRatio`
Text horizontal magnification ratio, range [1, 10].
- `yRatio`
Text vertical magnification ratio, range [1, 10].
- `content`
Text content.

Return Value

- XTSPCommand object.

textAtX:y:font:rotation:xRatio:yRatio:content:

Print Text at Specified Position

```
- (XTSPCommand *)textAtX:(int)x y:(int)y font:(NSString *)font rotation:  
(TSPRotation)rotation xRatio:(int)xRatio yRatio:(int)yRatio content:(NSString  
)content;
```

Example

```
let command = XTSPLCommand()  
command  
  .sizeMm(70, height: 85)  
  .gapMm(2, n: 0)  
  .cls()  
  .textAt(x: 0, y: 50, font: kFNT_8_12, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_8_12")  
  .textAt(x: 0, y: 100, font: kFNT_12_20, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_12_20")  
  .textAt(x: 0, y: 150, font: kFNT_16_24, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_16_24")  
  .textAt(x: 0, y: 200, font: kFNT_24_32, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_24_32")  
  .textAt(x: 0, y: 250, font: kFNT_32_48, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_32_48")  
  .textAt(x: 0, y: 300, font: kFNT_14_19, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_14_19")  
  .textAt(x: 0, y: 350, font: kFNT_14_25, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_14_25")  
  .textAt(x: 0, y: 400, font: kFNT_21_27, rotation: .rotation0, xRatio: 1, yRatio: 1,  
content: "kFNT_21_27")  
  .print()
```

Parameters

- `x`
Text upper left X coordinate.
- `y`
Text upper left Y coordinate.
- `font`
Font name, common font names refer to Font name in `XConstants.h`.

Variable	Description
<code>FNT_8_12</code>	8 x 12 alphanumeric font
<code>FNT_12_20</code>	12 x 20 alphanumeric font
<code>FNT_16_24</code>	16 x 24 alphanumeric font
<code>FNT_24_32</code>	24 x 32 alphanumeric font
<code>FNT_32_48</code>	32 x 48 alphanumeric font
<code>FNT_14_19</code>	14 x 19 alphanumeric font OCR-B
<code>FNT_14_25</code>	14 x 25 alphanumeric font OCR-A
<code>FNT_21_27</code>	21 x 27 alphanumeric font OCR-B
<code>FNT_SIMPLIFIED_CHINESE</code>	Simplified Chinese 24x24 font (GB code)
<code>FNT_TRADITIONAL_CHINESE</code>	Traditional Chinese 24x24 font (Big5 code)
<code>FNT_KOREAN</code>	Korean 24x24 font (KS code)

- `rotation`
Rotation angle [0, 90, 180, 270].
- `xRatio`
Text horizontal magnification ratio, range [1, 10].
- `yRatio`
Text vertical magnification ratio, range [1, 10].
- `content`
Text content.

Return Value

- XTSPCommand object.

textBlockAtX:y:width:height:font:rotation:x_mul:y_mul:content:

Print Paragraph of Text at Specified Position

```
- (XTSPLCommand *)textBlockAtX:(int)x
    y:(int)y
    width:(int)width
    height:(int)height
    font:(NSString *)font
    rotation:(TSPLRotation)rotation
    x_mul:(int)x_mul
    y_mul:(int)y_mul
    content:(NSString *)content;
```

Parameters

- `x`
Text X starting coordinate.
- `y`
Text Y starting coordinate.
- `width`
Text area width.
- `height`
Text area height.
- `font`
Font name, available common font names refer to Font name in XConstants.h.
- `rotation`
Text rotation direction (0, 90, 180, 270).
- `x_mul`
Horizontal magnification ratio, maximum 10x, range [1, 10].
- `y_mul`
Vertical magnification ratio, maximum 10x, range [1, 10].
- `content`
Text content.

Return Value

- XTSPLCommand object.

eraseAtX:y:width:height:

Erase Content in Specified Area

```
- (XTSPLCommand *)eraseAtX:(int)x y:(int)y width:(int)width height:(int)height;
```

Parameters

- `x`
Area upper left X coordinate.
- `y`
Area upper left Y coordinate.
- `width`
Area width.
- `height`
Area height.

Return Value

- XTSPLCommand object.

reverseAtX:y:width:height:

Reverse Print Content in Specified Area

```
- (XTSPLCommand *)reverseAtX:(int)x y:(int)y width:(int)width height:(int)height;
```

Parameters

- `x`
Area upper left X coordinate.
- `y`
Area upper left Y coordinate.
- `width`
Area width.
- `height`
Area height.

Return Value

- XTSPLCommand object.

cut:

Perform Paper Cutting

```
- (XTSPLCommand *)cut;
```


Return Value

- XTSPLCommand object.
-

setPeel:

Set Peel Mode

```
- (XTSPLCommand *)setPeel:(BOOL)isOpen;
```

Parameters

- `isOpen`
Whether to enable peel mode.

Return Value

- XTSPLCommand object.
-

setTear:

Set Tear Mode

```
- (XTSPLCommand *)setTear:(BOOL)isOpen;
```

Parameters

- `isOpen`
Whether to enable tear mode.

Return Value

- XTSPLCommand object.
-

setCutter:

Set Cutter Working Mode

```
- (XTSPLCommand *)setCutter:(int)pieces;
```

Parameters

- `pieces`
 - `0`: Disable cutter function.
 - `-1`: Set the printer to cut after the entire print job is finished.
 - `pieces >= 1`: Set to cut multiple labels at a time ($1 \leq \text{pieces} \leq 65535$).

Example

```
setCutter(0) // Disable cutter function
setCutter(-1) // Set the printer to cut after the entire print job is finished
setCutter(1) // Set to cut 1 label at a time
```

Return Value

- XTSPLCommand object.

blineInch:n:

Set Black Mark Spacing (Inches)

```
- (XTSPLCommand *)blineInch:(double)m n:(double)n;
```

Parameters

- `m`
Black mark height, range: [0.1, 1] feet or [2.54, 25.4] mm.
- `n`
Additional paper feed length. Range [0, label length].

Return Value

- XTSPLCommand object.

blineMm:n:

Set Black Mark Spacing (Millimeters)

```
- (XTSPLCommand *)blineMm:(double)m n:(double)n;
```

Parameters

- `m`
Black mark height, range: [0.1, 1] feet or [2.54, 25.4] mm.
- `n`
Additional paper feed length. Range [0, label length].

Return Value

- XTSPLCommand object.
-

gapDetect:

Gap Calibration

```
- (XTSPLCommand *)gapDetect;
```

Return Value

- XTSPLCommand object.
-

blinedDetect:

Black Mark Calibration

```
- (XTSPLCommand *)blinedDetect;
```

Return Value

- XTSPLCommand object.
-

autoDetect:

Auto Calibration

```
- (XTSPLCommand *)autoDetect;
```

Return Value

- XTSPLCommand object.
-

initialPrinter:

Restore Printer to Factory Settings

```
- (XTSPLCommand *)initialPrinter;
```

Note

- Use with caution. Please distinguish it from the `initializePrinter` method of `XESCommand`.

Return Value

- XTSPLCommand object.
-

move:

Move Files from DRAM to FLASH

```
- (XTSPLCommand *)move;
```

Return Value

- XTSPLCommand object.
-

files:

Print Current Memory Capacity

```
- (XTSPLCommand *)files;
```

Return Value

- XTSPLCommand object.
-

killDRAM:

Delete Files in DRAM

```
- (XTSPLCommand *)killDRAM:(NSString *)filename;
```

Parameters

- `filename`
File name.

Example

```
killDRAM("FILENAME") // Delete the corresponding file in DRAM
killDRAM("*.PCX") // Delete all PCX files in DRAM
killDRAM("*") // Delete all files in DRAM
```

Return Value

- XTSPLCommand object.

killFLASH:

Delete Files in Built-in FLASH

```
- (XTSPLCommand *)killFLASH:(NSString *)filename;
```

Parameters

- `filename`
File name.

Example

```
killFLASH("FILENAME") // Delete the corresponding file in FLASH
killFLASH("*.PCX") // Delete all PCX files in FLASH
killFLASH("*") // Delete all files in FLASH
```

Return Value

- XTSPLCommand object.

autoResponse:

Set Printer Auto Response

```
- (XTSPLCommand *)autoResponse:(AutoResMode)mode;
```

Parameters

- `mode`

Mode options: ON/OFF/BATCH.

Return Value

- XTSPCommand object.
-