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## 1.Enum

---

### 1.1 PTTSCPrintSpeed

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCPrintSpeed) {  
    PTTSCPrintSpeed1      = 1,  
    PTTSCPrintSpeed2      = 2,  
    PTTSCPrintSpeed3      = 3,  
    PTTSCPrintSpeed4      = 4,  
    PTTSCPrintSpeed5      = 5,  
    PTTSCPrintSpeed6      = 6,  
    PTTSCPrintSpeed10     = 10,  
    PTTSCPrintSpeed12     = 12  
};
```

### 1.2 PTTSCPrintDensity

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCPrintDensity) {  
    PTTSCPrintDensity0     = 0,  
    PTTSCPrintDensity1     = 1,  
    PTTSCPrintDensity2     = 2,  
};
```

```

PTTSCPrintDensity3      = 3,
PTTSCPrintDensity4      = 4,
PTTSCPrintDensity5      = 5,
PTTSCPrintDensity6      = 6, ///< default
PTTSCPrintDensity7      = 7,
PTTSCPrintDensity8      = 8,
PTTSCPrintDensity9      = 9,
PTTSCPrintDensity10     = 10,
PTTSCPrintDensity11     = 11,
PTTSCPrintDensity12     = 12,
PTTSCPrintDensity13     = 13,
PTTSCPrintDensity14     = 14,
PTTSCPrintDensity15     = 15
};

```

## 1.3 PTTSCPrintDirection

- Code

```

typedef NS_ENUM(NSUInteger, PTTSCPrintDirection) {

    PTTSCPrintDirectionNormal    = 0,

    PTTSCPrintDirectionReverse   = 1

};

```

- Specification

Enum Name	Enum Value	Description
PTTSCPrintDirectionNormal	0	normal
PTTSCPrintDirectionReverse	1	Reverse

## 1.4 PTTSCPrintStyle

- Code

```

typedef NS_ENUM(NSUInteger, PTTSCPrintStyle) {

    PTTSCPrintStyleNormal    = 0,
    PTTSCPrintStyleMirror    = 1

};

```

- Specification

Enum Name	Enum Value	Description
PTTSCPrintStyleNormal	0	normal
PTTSCPrintStyleMirror	1	Mirror

## 1.5 PTTSCCharacterStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCCharacterStyle) {
    PTTSCCharacterStyleUSA = 0,
    PTTSCCharacterStyleBritish,
    PTTSCCharacterStyleGerman,
    PTTSCCharacterStyleFrench,
    PTTSCCharacterStyleDanish,
    PTTSCCharacterStyleItalian,
    PTTSCCharacterStyleSpanish,
    PTTSCCharacterStyleSwedish,
    PTTSCCharacterStyleSwiss,
    PTTSCCharacterStyleUnitedStates,
    PTTSCCharacterStyleMultilingual,
    PTTSCCharacterStyleSlavic,
    PTTSCCharacterStylePortuguese,
    PTTSCCharacterStyleCanadianOrFrench,
    PTTSCCharacterStyleNordic,
    PTTSCCharacterStyleTurkish,
    PTTSCCharacterStyleWindowsCentralEurope,
    PTTSCCharacterStyleWindowsLatin,
    PTTSCCharacterStyleWindowsGreek,
    PTTSCCharacterStyleWindowsTurkish
};
```

## 1.6 PTTSCBarcodeStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCBarcodeStyle) {
    PTTSCBarcodeStyle128 = 0,
    PTTSCBarcodeStyle128M,
    PTTSCBarcodeStyleEAN128,
    PTTSCBarcodeStyle25,
    PTTSCBarcodeStyle25C,
    PTTSCBarcodeStyle39,
    PTTSCBarcodeStyle39C,
    PTTSCBarcodeStyle93,
    PTTSCBarcodeStyleEAN13,
    PTTSCBarcodeStyleEAN132,
};
```

```

PTTSCBarcodeStyleEAN135,
PTTSCBarcodeStyleEAN8,
PTTSCBarcodeStyleEAN82,
PTTSCBarcodeStyleEAN85,
PTTSCBarcodeStyleCODA,
PTTSCBarcodeStylePOST,
PTTSCBarcodeStyleUPCA,
PTTSCBarcodeStyleUPCA2,
PTTSCBarcodeStyleUPCA5,
PTTSCBarcodeStyleUPCE,
PTTSCBarcodeStyleUPCE2,
PTTSCBarcodeStyleUPCE5,
PTTSCBarcodeStyleCPOST,
PTTSCBarcodeStyleMSI,
PTTSCBarcodeStyleMSIC,
PTTSCBarcodeStylePLESSY,
PTTSCBarcodeStyleITF14,
PTTSCBarcodeStyleEAN14,
PTTSCBarcodeStyle11
};

```

## 1.7 PTTSCBarcodeReadableStyle

- Code

```

typedef NS_ENUM(NSUInteger, PTTSCBarcodeReadableStyle) {

    PTTSCBarcodeReadableStyleNot    = 0,

    PTTSCBarcodeReadableStyleHuman

};

```

- Specification

Enum Name	Enum Value	Description
PTTSCBarcodeReadableStyleNot	0	not
PTTSCBarcodeReadableStyleHuman		human

## 1.8 PTTSCStyleRotation

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCStyleRotation) {

    PTTSCStyleRotation0      = 0,
    PTTSCStyleRotation90     = 90,
    PTTSCStyleRotation180    = 180,
    PTTSCStyleRotation270    = 270

};
```

- Specification

Enum Name	Enum Value	Description
PTTSCStyleRotation0	0	normal
PTTSCStyleRotation90	90	rotate 90 degrees (clockwise)
PTTSCStyleRotation180	180	inverted 180 degrees
PTTSCStyleRotation270	270	read from bottom up, 270 degrees

## 1.9 PTTSCBarcodeRatio

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCBarcodeRatio) {

    PTTSCBarcodeRatio1 = 1,      ///< 1:1
    PTTSCBarcodeRatio2,          ///< 1:2
    PTTSCBarcodeRatio3,          ///< 1:3
    PTTSCBarcodeRatio4,          ///< 2:5
    PTTSCBarcodeRatio5           ///< 3:7

};
```

## 1.10 PTTSCQRcodeEcclevel

- Code

```
typedef NS_ENUM(UInt8, PTTSCQRcodeEcclevel) {

    PTTSCQRcodeEcclevelL      = 'L',

    PTTSCQRcodeEcclevelM      = 'M',

    PTTSCQRcodeEcclevelQ      = 'Q',

    PTTSCQRcodeEcclevelH      = 'H'

};
```

- Specification

Enum Name	Enum Value	Description
PTTSCQRcodeEcclevelL	'L'	high density level level
PTTSCQRcodeEcclevelM	'M'	standard level
PTTSCQRcodeEcclevelQ	'Q'	high reliability level
PTTSCQRcodeEcclevelH	'H'	ultra-high reliability level

## 1.11 PTTSCQRcodeWidth

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCQRcodewidth) {
    PTTSCQRcodewidth1      = 1,
    PTTSCQRcodewidth2,
    PTTSCQRcodewidth3,
    PTTSCQRcodewidth4,
    PTTSCQRcodewidth5,
    PTTSCQRcodewidth6,
    PTTSCQRcodewidth7,
    PTTSCQRcodewidth8,
    PTTSCQRcodewidth9,
    PTTSCQRcodewidth10
};
```

## 1.12 PTTSCQRCodeMode

- Code

```
typedef NS_ENUM(UInt8, PTTSCQRCodeMode) {
    PTTSCQRCodeModeAuto    = 'A',

    PTTSCQRCodeModeManual  = 'M'
};
```

- Specification

Enum Name	Enum Value	Description
PTTSCQRCodeModeAuto	'A',	auto
PTTSCQRCodeModeManual	'M'	Manual

# 1.13 PTTSCQRCodeModel

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCQRCodeModel) {  
  
    PTTSCQRCodeModelM1      = 0,  
  
    PTTSCQRCodeModelM2      = 1  
  
};
```

- Specification

Enum Name	Enum Value	Description
PTTSCQRCodeModelM1	0	(default), original version
PTTSCQRCodeModelM2	1	enhanced version

# 1.14 PTTSCQRcodeMask

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCQRcodeMask) {  
    PTTSCQRcodeMaskS0      = 1,  
    PTTSCQRcodeMaskS1,  
    PTTSCQRcodeMaskS2,  
    PTTSCQRcodeMaskS3,  
    PTTSCQRcodeMaskS4,  
    PTTSCQRcodeMaskS5,  
    PTTSCQRcodeMaskS6,  
    PTTSCQRcodeMaskS7,  
    PTTSCQRcodeMaskS8  
  
};
```

# 1.15 PTTSCBitmapMode

- Code



```
typedef NS_ENUM(NSUInteger, PTTSCBitmapMode) {

    PTTSCBitmapModeOVERWRITE      = 0,
    PTTSCBitmapModeOR              = 1,
    PTTSCBitmapModeXOR             = 2,

    PTTSCBitmapModeCompress        = 3,
    PTTSCBitmapModeOVERWRITECompress = 16,
    PTTSCBitmapModeORCompress      = 17,
    PTTSCBitmapModeXORCompress     = 18

};
```

- Specification

Enum Name	Enum Value	Description
PTTSCBitmapModeCompress	3	Compatible with old models,New firmware has been deprecated

## 1.16 PTTSCTextVectorFontStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCTextVectorFontStyle) {

    PTTSCTextVectorFontStyle0      = 0,    ///< 8x12, not adjustet
    PTTSCTextVectorFontStyle1,      ///< 8x12
    PTTSCTextVectorFontStyle2,      ///< 12x20
    PTTSCTextVectorFontStyle3,      ///< 16x24
    PTTSCTextVectorFontStyle4,      ///< 24x32
    PTTSCTextVectorFontStyle5,      ///< 32x48
    PTTSCTextVectorFontStyle6,      ///< 14x19
    PTTSCTextVectorFontStyle7,      ///< 21x27
    PTTSCTextVectorFontStyle8,      ///< 14x25
    PTTSCTextVectorFontStyle9      ///< vector font,for chinese

};
```

## 1.17 PTTSCTextFontStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCTextFontStyle) {

    PTTSCTextFontStyle0      = 0,    ///< chinese:24x24    english:12x24
    PTTSCTextFontStyle1,      ///< chinese:16x16    english:8x16

};
```

## 1.18 PTTSCDMATRIXSize

- Code

```
typedef NS_ENUM(UInt8, PTTSCDMATRIXSize) {  
    PTTSCDMATRIXSizeX6    = 0,  
    PTTSCDMATRIXSizeX8  
};
```

## 2.Property

---

### 2.1 cmdData

- Code

```
@property(strong, nonatomic, readwrite) NSMutableData *cmdData;
```

- Specification

Data sent to the printer.

### 2.2 encoding

- Code

```
@property (nonatomic, assign) NSStringEncoding encoding;
```

- Specification

encode, default is GBK.

## 3.Method

---

### 3.1 View Printer Message

- Description

printer Print self-test message.

- Code

```
- (void)selfTest;
```

## 3.2 Append Command

- Description

append command.

- Paramater

Paramater	Description
cmd	command text. encode with encoding property.

- Code

```
- (void)appendCommand:(NSString *)cmd;
```

## 3.3 Set Print Area

- Description

This command defines the label width and length(mm).1mm == 8 dot

- Paramater

Paramater	Description
label_width	Label width
label_height	Label length

- Code

```
- (void)setPrintAreaSizeWithwidth:(NSInteger)label_width  
height:(NSInteger)label_height;
```

## 3.4 Set Label Distance

- Description

This command sets the distance between two labels(mm).

- Paramater

Paramater	Description
distance	The gap distance between two labels, $0 \leq \text{distance} \leq 25.4$ (mm)
offset	The offset distance of the gap offset $\leq$ label length (mm)

- Code

```
- (void)setGapWithDistance:(NSInteger)distance  
    offset:(NSInteger)offset;
```

## 3.5 Bline

- Description

This command sets the height of the black line and the user-defined extra label feeding length each form feed takes(mm).(height,offset is 0,0 : Continuous label)

- Paramater

Paramater	Description
height	The height of black line either in mm. $0 \leq m \leq 25.4$ (mm)
offset	The extra label feeding length. $0 \leq \text{offset} \leq \text{label length}$

- Code

```
- (void)setBlinewithHeight:(NSInteger)height  
    offset:(NSInteger)offset;
```

## 3.6 Offset Length

- Description

This command defines the selective, extra label feeding length(mm).

- Paramater

Paramater	Description
distance	The offset distance, $0 \leq \text{distance} \leq 25.4$ (mm)

- Code

```
- (void)setOffsetwithDistance:(NSInteger)distance;
```

## 3.7 Form Feed

- Description

This command feeds label to the beginning of next label.

- Code

```
- (void)feedToNextLabel;
```

## 3.8 Feed Length

- Description

This command feeds label with the specified length.

- Paramater

Paramater	Description
length	The length is specified by dot. $1 \leq \text{length} \leq 9999$

- Code

```
- (void)setFeedLength:(NSInteger)length;
```

## 3.9 Print Speed

- Description

This command defines the print speed.

- Paramater

Paramater	Description
speed	Printing speed in inch per second

- Code

```
- (void)setPrintSpeed:(PTTSCPrintSpeed)speed;
```

## 3.10 Print Density

- Description

This command sets the printing darkness.

- Paramater

Paramater	Description
density	0: specifies the lightest level,15: specifies the darkest level

- Code

```
- (void)setPrintDensity:(PTTSCPrintDensity)density;
```

## 3.11 Print Direction And Mirror

- Description

This command defines the printout direction and mirror image.

- Paramater

Paramater	Description
direction	normal or reverse
mirror	normal or mirror

- Code

```
- (void)setPrintDirection:(PTTSCPrintDirection)direction mirror:
(PTTSCPrintStyle)mirror;
```

## 3.12 Set Label Reference Point

- Description

This command defines the reference point of the label.

- Paramater

Paramater	Description
x_pos	Horizontal coordinate (in dots)
y_pos	Vertical coordinate (in dots)

- Code

```
- (void)setReferenceXPos:(NSInteger)x_pos
yPos:(NSInteger)y_pos;
```

## 3.13 International Character Set

- Description

This command defines the code page of international character set.

- Paramater

Paramater	Description
codepage	Name or number of code page

- Code

```
- (void)setCodePage: (PTTSCCharacterStyle)codepage;
```

## 3.14 Clear Buffer

- Description

This command clears the image buffer.

- Code

```
- (void)setCLS;
```

## 3.15 Feeds Label In Reverse

- Description

This command feeds the label in reverse. The length is specified by dot.

- Paramater

Paramater	Description
distance	unit: dot,(1,9999)

- Code

```
- (void)setBackFeed: (NSInteger)distance;
```

## 3.16 Feeds Label In Reverse

- Description

This command feeds the label in reverse. The length is specified by dot.

- Paramater

Paramater	Description
distance	unit: dot,(1,9999)

- Code

```
- (void)setBackUP: (NSInteger)distance;
```

## 3.17 Feed label until the internal sensor has determined the origin

- Description

This command will feed label until the internal sensor has determined the origin.

- Code

```
- (void)setHome;
```

## 3.18 Begin Print,Set Print Copies

- Description

This command prints the label format currently stored in the image buffer.

- Paramater

Paramater	Description
sets	Specifies how many sets of labels will be printed.
copies	Specifies how many copies should be printed for each particular label set.

- Code

```
- (void)printwithSets:(NSInteger)sets copies:(NSInteger)copies;
```

## 3.19 Control Frequency

- Description

This command controls the sound frequency of the beeper. There are 10 levels of sounds.

- Paramater

Paramater	Description
level	Sound level: 0~9
interval	Sound interval: 1~4095

- Code

```
- (void)setSoundwithLevel:(NSInteger)level interval:(NSInteger)interval;
```



## 3.20 Set Cutter

- Description

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

- Code

```
- (void)setCut;
```

## 3.21 Set Feed Length

- Description

If the gap sensor is not set to a suitable sensitivity while feeding labels, the printer will not be able to locate the correct position of the gap.

- Paramater

Paramater	Description
max_len	The maximum length for sensor detecting.

- Code

```
- (void)setLimitFeed:(NSInteger)max_len;
```

## 3.22 Font Bold

- Description

Set font bold.

- Paramater

Paramater	Description
bold	true:bold false:not bold

- Code

```
- (void)setFontBold:(BOOL)bold;
```

## 3.23 Draws Bar

- Description

This command draws a bar on the label format.

- Paramater

Paramater	Description
x_pos	The upper left corner x-coordinate (in dots)
y_pos	The upper left corner y-coordinate (in dots)
width	Bar width (in dots)
height	Bar height (in dots)

- Code

```
- (void)drawBarWithXPos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    width:(NSInteger)width
    height:(NSInteger)height;
```

## 3.24 1D Barcodes

- Description

This command prints 1D barcodes.

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate of the bar code on the label
y_pos	Specify the y-coordinate of the bar code on the label
type	code type
height	Bar code height (in dots)
readable	0: not readable 1: human readable
rotation	Rotation
ratio	The ratio of wide to narrow bars
context	The maximum number of digits of bar code content

- Code

```
- (void)printBarcodeWithXPos:(NSInteger)x_pos
                        yPos:(NSInteger)y_pos
                        type:(PTTSCBarcodeStyle)type
                        height:(NSInteger)height
                        readable:(PTTSCBarcodeReadableStyle)readable
                        rotation:(PTTSCStyleRotation)rotation
                        ratio:(PTTSCBarcodeRatio)ratio
                        context:(NSString *)context;
```

## 3.25 QR Code

- Description

This command prints QR code.

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate of the qr code on the label
y_pos	Specify the y-coordinate of the qr code on the label
ecc_level	Error correction recovery level
width	cell width
mode	mode
rotation	Rotation
model	model
mask	mask
context	qrcode context

- Code

```
- (void)printQRcodewithXPos:(NSInteger)x_pos
                        yPos:(NSInteger)y_pos
                        eccLevel:(PTTSCQRcodeEccLevel)ecc_level
                        cellwidth:(PTTSCQRcodewidth)width
                        mode:(PTTSCQRcodeMode)mode
                        rotation:(PTTSCStyleRotation)rotation
                        model:(PTTSCQRcodeModel)model
                        mask:(PTTSCQRcodeMask)mask
                        context:(NSString *)context;
```

## 3.26 Print Bitmap

- Description

Print Bitmap.

- Paramater

Paramater	Description
xpos	Specify the x-coordinate
ypos	Specify the y-coordinate
mode	Graphic modes
image	Image
bitmapMode	Bitmap mpde:binary/dithering
compress	Compress mode:TIFF/ZPL2/LZO/None

- Code

```
- (BOOL)addBitmapwithXPos:(NSInteger)xpos
    yPos:(NSInteger)ypos
    mode:(PTTSCBitmapMode)mode
    image:(CGImageRef)image
    bitmapMode:(PTBitmapMode)bitmapMode
    compress:(PTBitmapCompressMode)compress;
```

## 3.27 Print Text(Matrix Fonts)

- Description

Print Text(Printer for dot matrix font).

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate
y_pos	Specify the y-coordinate
font	Font type
rotation	Rotation
x_multiplication	Horizontal multiplication,up to 10x
y_multiplication	Vertical multiplication,up to 10x
text	print context

- Code

```
- (void)appendTextWithXpos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    font:(PTTSCTextFontStyle)font
    rotation:(PTTSCStyleRotation)rotation
    xMultiplication:(NSInteger)x_multiplication
    yMultiplication:(NSInteger)y_multiplication
    text:(NSString *)text;
```

## 3.28 Print Word Wrap Text(Matrix Fonts)

- Description

Print word wrap text(Printer for dot matrix font).

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate
y_pos	Specify the y-coordinate
font	Font type
rotation	Rotation
x_multiplication	Horizontal multiplication,up to 10x
y_multiplication	Vertical multiplication,up to 10x
safeHeight	Height of text field.Part will not print more than height
width	width of text field.if width is 0,not auto line
lineSpacing	line space.
text	print context

- Code

```
- (NSInteger)printAutoTextwithXpos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    font:(PTTSCTextFontStyle)font
    rotation:(PTTSCStyleRotation)rotation
xMultiplication:(NSInteger)x_multiplication
yMultiplication:(NSInteger)y_multiplication
    safeHeight:(NSInteger)safeHeight
    width:(NSInteger)width
    lineSpacing:(NSInteger)lineSpacing
    text:(NSString *)text;
```

## 3.29 Print Text

- Description

Print Text(Printer for vector fonts and dot fonts).

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate
y_pos	Specify the y-coordinate
font	Font type
rotation	Rotation
x_multiplication	Horizontal font size,If the type is 9, said the font size, or said is magnification
y_multiplication	Vertical font size,If the type is 9, said the font size, or said is magnification
text	print context

- Code

```
- (void)appendTextForVectorWithXpos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    font:(PTTSCTextVectorFontStyle)font
    rotation:(PTTSCStyleRotation)rotation
    xMultiplication:(NSInteger)x_multiplication
    yMultiplication:(NSInteger)y_multiplication
    text:(NSString *)text;
```

### 3.30 Print Word Wrap Text(Vector Fonts)

- Description

Print word wrap text(Printer for vector fonts and dot fonts).

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate
y_pos	Specify the y-coordinate
font	Font type
rotation	Rotation
x_multiplication	Horizontal font size,If the type is 9, said the font size, or said is magnification
y_multiplication	Vertical font size,If the type is 9, said the font size, or said is magnification
safeHeight	Height of text field.Part will not print more than height
width	width of text field.if width is 0,not auto line
lineSpacing	line space.
text	print context

- Code

```
- (NSInteger)printAutoTextForVectorWithXpos:(NSInteger)x_pos
                        yPos:(NSInteger)y_pos
                        font:(PTTSCTextVectorFontStyle)font
                        rotation:(PTTSCStyleRotation)rotation
xMultiplication:(NSInteger)x_multiplication
yMultiplication:(NSInteger)y_multiplication
safeHeight:(NSInteger)safeHeight
width:(NSInteger)width
lineSpacing:(NSInteger)lineSpacing
text:(NSString *)text;
```

## 3.31 Reverses

- Description

This command reverses a region in image buffer.

- Paramater

Paramater	Description
x_start	The x-coordinate of the starting point (in dots)
y_start	The y-coordinate of the starting point (in dots)
x_width	X-axis region width (in dots)
y_height	Y-axis region height (in dots)



- Code

```
- (void)setReverseWithXStart:(NSInteger)x_start
    yStart:(NSInteger)y_start
    xwidth:(NSInteger)x_width
    yHeight:(NSInteger)y_height;
```

## 3.32 Draws Rectangles

- Description

This command draws rectangles on the label.

- Paramater

Paramater	Description
x_start	Specify x-coordinate of upper left corner (in dots)
y_start	Specify y-coordinate of upper left corner (in dots)
x_end	Specify x-coordinate of lower right corner (in dots)
y_end	Specify y-coordinate of lower right corner (in dots)
thickness	Line thickness (in dots)

- Code

```
- (void)setBoxWithXStart:(NSInteger)x_start
    yStart:(NSInteger)y_start
    xEnd:(NSInteger)x_end
    yEnd:(NSInteger)y_end
    thickness:(NSInteger)thickness;
```

## 3.33 Draw Ellipse

- Description

Draw an ellipse on the label.

- Paramater

Paramater	Description
x_start	Specify x-coordinate of upper left corner (in dots)
y_start	Specify 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	Thickness of the ellipse (in dots)

- Code

```
- (void)setEllipewithXStart:(NSInteger)x_start
      yStart:(NSInteger)y_start
      width:(NSInteger)width
      height:(NSInteger)height
      thickness:(NSInteger)thickness;
```

## 3.34 Draw Circle

- Description

This command draws a circle on the label.

- Paramater

Paramater	Description
x_start	Specify x-coordinate of upper left corner (in dots)
y_start	Specify y-coordinate of upper left corner (in dots)
diameter	Specify the diameter of the circle (in dots)
thickness	Thickness of the circle (in dots)

- Code

```
- (void)setCirclewithXStart:(NSInteger)x_start
      yStart:(NSInteger)y_start
      diameter:(NSInteger)diameter
      thickness:(NSInteger)thickness;
```

### 3.35 Clear Specified BBuffer

- Description

This command clears a specified region in the image buffer.

- Paramater

Paramater	Description
x_start	The x-coordinate of the starting point (in dots)
y_start	The x-coordinate of the starting point (in dots)
x_width	The region width in x-axis direction (in dots)
y_height	The region height in y-axis direction (in dots)

- Code

```
- (void)setEraseWithXStart:(NSInteger)x_start
    yStart:(NSInteger)y_start
    xwidth:(NSInteger)x_width
    yHeight:(NSInteger)y_height;
```

### 3.36 DataMatrix 2D Barcode

- Description

This command is used to define the DataMatrix 2D bar code.

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate of the bar code on the label
y_pos	Specify the y-coordinate of the bar code on the label
width	The expected width of barcode area (in dots)
height	The expected height of barcode area (in dots)
xm	Module size (in dots)
row	Symbol size of row: 10 to 144
col	Symbol size of col: 10 to 144
expression	Barcode content

- Code

```
- (void)drawDmatrixBarcodeWithXPos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    width:(NSInteger)width
    height:(NSInteger)height
    xm:(PTTSCDMATRIXSize)xm
    row:(NSInteger)row
    col:(NSInteger)col
    expression:(NSString *)expression;
```

## 3.37 PDF417 Barcode

- Description

This command defines a PDF417 2D barcode.

- Paramater

Paramater	Description
x_pos	Specify the x-coordinate of the bar code on the label
y_pos	Specify the y-coordinate of the bar code on the label
width	The expected width of barcode area (in dots)
height	The expected height of barcode area (in dots)
rotate	Rotation counterclockwise.
option	Details are given in the documentation
expression	Barcode content

- Code

```
- (void)printPDF417WithXPos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos
    width:(NSInteger)width
    height:(NSInteger)height
    rotate:(PTTSCStyleRotation)rotate
    option:(NSString *)option
    expression:(NSString *)expression;
```

## 3.38 AZTEC Barcode

- Description

This command defines a AZTEC 2D barcode.

- Paramater

Paramater	Description
xPos	Specify the x-coordinate of the bar code on the label
yPos	Specify the y-coordinate of the bar code on the label
rotate	Rotation
size	Element module size (1 to 20), default is 6
ecp	Error control (& symbol size/type) parameter
flg	0 : input message is straight bytes 1:input uses
menu	Menu symbol (0 : no, 1 : yes), default is 0
multi	Number of symbols (1 to 26), default is 6
rev	Output to be reversed (0 : no, 1 : yes), default is 0
aztecData	Barcode content

- Code

```
- (void)printAztecWithXPos:(NSInteger)xPos
                    yPos:(NSInteger)yPos
                rotate:(PTTSCStyleRotation)rotate
                    size:(NSInteger)size
                    ecp:(NSInteger)ecp
                    flg:(NSInteger)flg
                    menu:(NSInteger)menu
                    multi:(NSInteger)multi
                    rev:(NSInteger)rev
                aztecData:(NSString *)aztecData;
```

## 3.39 BMP Format Image

- Description

This command prints BMP format images.

- Paramater

Paramater	Description
filename	The downloaded BMP filename.
x_pos	The x-coordinate of the BMP format image
y_pos	The y-coordinate of the BMP format image

- Code

```
- (void)printBMPWithFilename:(NSString *)filename
    xPos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos;
```

## 3.40 PCX Format Image

- Description

This command prints PCX format images.

- Paramater

Paramater	Description
filename	The downloaded PCX filename.
x_pos	The x-coordinate of the PCX format image
y_pos	The y-coordinate of the PCX format image

- Code

```
- (void)printPCXWithFilename:(NSString *)filename
    xPos:(NSInteger)x_pos
    yPos:(NSInteger)y_pos;
```

## 3.41 Set The Counter

- Description

Counters can be a real counter or a variable. This setting sets the counter number in the program and its increments.

- Paramater

Paramater	Description
counterNumber	counter number. There are 51 counters available (@0~@50) in the printer.
step	The increment of the counter, can be positive or negative. (-99999999 ~ 99999999)

- Code

```
- (void)setCounterWithCounterNumber:(NSInteger)counterNumber
    step:(NSInteger)step;
```

## 3.42 Cutter Status

- Description

This setting activates or deactivates the cutter.

- Paramater

Paramater	Description
status	true:Set printer to cut label at the end of printing job false: Disable cutter function

- Code

```
- (void)setCutterStatus:(BOOL)status;
```

## 3.43 Number Of Cut

- Description

Set number of printing labels per cut.

- Paramater

Paramater	Description
pieces	0 ~ 65535

- Code

```
- (void)setCutterPieces:(NSInteger)pieces;
```

## 3.44 Set continuous paper

- Description

Set continuous paper.

- Code

```
- (void)setReceiptPaper;
```

## 3.45 Set label paper

- Description

Set label paper.

- Code

```
- (void)setLabelPaper;
```

## 3.46 Set black mark paper

- Description

Set black mark paper

- Code

```
- (void)setBlackMarkPaper;
```