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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,    ///
```

1.17 PTTSCTextFontStyle

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCTextFontStyle) {
    PTTSCTextFontStyle0      = 0,    ///
```

1.18 PTTSCDMATRIXSize

- Code

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

1.19 PTTSCTextAlignment

- Code

```
typedef NS_ENUM(NSUInteger, PTTSCTextAlignment) {  
  
    PTTSCTextAlignmentLeft = 1,  
  
    PTTSCTextAlignmentCenter = 2,  
  
    PTTSCTextAlignmentRight = 3,  
  
};
```

- Specification

Enum Name	Enum Value	Description
PTTSCTextAlignmentLeft	1	left
PTTSCTextAlignmentCenter	2	center
PTTSCTextAlignmentRight	3	right

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 $\text{offset} \leq \text{label length}$ (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 mode:binary/dithering
compress	Compress mode:TIFF/ZPL2/LZO/None

- Code

```
- (void)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 Text

- Description

Print Text(Alignment, some models support).

- 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
alginment	text alginment
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
                           alginment:(PTTSCTextAlignment)alginment
                             text:(NSString *)text;
```

3.31 Print Word Wrap Text(Vector Fonts)

- Description

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

- Paramater

Parameter	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

3.32 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;
```

3.33 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;
```

3.34 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)setEllipseWithXStart:(NSInteger)x_start  
                      yStart:(NSInteger)y_start  
                      width:(NSInteger)width  
                     height:(NSInteger)height  
                    thickness:(NSInteger)thickness;
```

3.35 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;
```

3.36 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;
```

3.37 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;

```

3.38 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;

```

3.39 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;
```

3.40 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;
```

3.41 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;
```

3.42 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;
```

3.43 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;`

3.44 Number Of Cut

- Description

| Set number of printing labels per cut.

- Paramater

Paramater	Description
pieces	0 ~ 65535

- Code

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

3.45 Set continuous paper

- Description

| Set continuous paper.

- Code

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

3.46 Set label paper

- Description

- Set label paper.

- Code

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

3.47 Set black mark paper

- Description

- Set black mark paper

- Code

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