

EPSON OPOS ADK MANUAL

APPLICATION DEVELOPMENT GUIDE

POSPrinter (TM-295)

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Section 1. Introduction

This manual describes the method of use and related items, as well as machine-specific precautions, when the EPSON TM-295 Series POS Printers are used with the EPSON OPOS ADK program.

This manual applies to the following devices.

Device List

Serial	Parallel
TM-295	TM-295P
TM-295M ^{*1}	TM-295PM ^{*1}

^{*1} South Asia character model.

Before reading the manual, see the following explanation about the characteristic of the TM-295 models.

- Station: Slip (7-pin Serial impact dot matrix)
- Smallest slip printer with printing in four directions.

Throughout the manual, the various model names will be referred to as TM-295.

Compatibility mode

The compatibility mode for upward compatibility was added in OPOS Ver2.60.

For the details of the compatibility mode, please refer to “EPSON OPOS ADK MANUAL APPLICATION DEVELOPMENT GUIDE Compatibility Mode”.

Section 2. Details on Settings

This section describes connection configurations and how to make the settings for the TM-295 Series printers.

2.1. References of Firmware Versions

Refer to the release notes (Relnote.txt).

2.2. Settings of DIP Switches

Confirm that the following settings have been made correctly.

1) Serial port

DIP-SW 1

No.	Setting	
1	OFF	Recommended
2	OFF	Recommended
3	OFF	Fixed at OFF
4	OFF	Fixed at OFF
5	OFF	Settable
6	OFF	Settable
7	OFF	Settable
8	OFF	Settable
9	OFF	Fixed at OFF
10	OFF	Fixed at OFF

- It is possible to change the settings of 1 (Processing of the data input error) and 2 (Specification of the received buffer capacity) of DIP-SW1 but it is recommended to leave them OFF.
- Set Dip-SW1-3 (Handshake) to DTR/DSR.
- Set Dip-SW1-4 (Parity shake) to 8.
- Set Dip-SW1-5 to Dip-SW1-8 accordance with the port information.
- The described set values are the default values. For the details, refer to the product manual of the POSPrinter. Also, if these settings are changed, make sure to change the port information using the SetupPOS utility.
- Make other settings in accordance with the settings described above.

2) Parallel Port

DIP-SW 1

No.	Setting	
1	OFF	Recommended
2	OFF	Recommended
3	OFF	Fixed at OFF
4	OFF	Fixed at OFF
5	OFF	Fixed at OFF
6	OFF	Fixed at OFF
7	OFF	Fixed at OFF
8	OFF	Fixed at OFF
9	OFF	Fixed at OFF
10	ON	Fixed at ON

- It is possible to change the settings of 1 (Auto line feed) and 2 (Specification of the received buffer capacity) of DIP-SW1 but it is recommended to leave them OFF.
- Make other settings in accordance with the settings described above.

2.3. Port Information

1) Port information when serial port is used

The port information that can be set with the SetupPOS utility is as follows.

Item	Setting range
Baud rate [bps]	1200,2400,4800,9600
Bit length [bit]	8
Parity	NONE, ODD, EVEN
Stop bit [bit]	1
Handshake	DTR/DSR
Output buffer length [byte]	2 to 64
Output interval time [ms]	0 to 9999

The default settings are as shown in the following table.

Item	Setting range
Baud rate [bps]	9600
Bit length [bit]	8
Parity	NONE
Stop bit [bit]	1
Handshake	DTR/DSR
Output buffer length [byte]	10
Output interval time [ms]	2500

2) Port information when using parallel port

The port information that can be set with the SetupPOS utility is as follows.

Item	Setting range
Output buffer length [byte]	2 to 64
Output interval time [ms]	0 to 9999

The default settings are as shown in the following table.

Item	Setting range
Output buffer length [byte]	10
Output interval time [ms]	2500

2.4. Device Settings

The following explanation is about the settings for TM-295.

2.4.1. Usable Device Specific Settings

For the TM-295, the following device specific settings are settable by the SetupPOS utility. For the detail, please refer to the Section 2 of “EPSON OPOS ADK MANUAL APPLICATION DEVELOPMENT GUIDE POSPrinter (TM Series)”.

Tab	Settings
General	Disable panel buttons
	Assume print complete when data output finishes
	Ignore firmware version check
	Homogenize Error Codes
	Output complete timeout
Slip	Removal feed length [line] (1-127)
	Reverse feed removal
Color Bitmap	Method
	Brightness
	Primary
Status Log	ERROR
	OFFLINE
	Log file name (full path name)
	Maximum file size [KB]

Section 3. Function Details

This section describes the functions of the TM-295 printers in details. Supplementary explanation of the parts not described in detail in the "UPOS" is also given here.

3.1. Property Set Values and Default Values

The following explanation is about the property set values and the default values.

3.1.1. Capability Set Values

The following values are the Capability set values.

Capability Name	Set Value
CapTransaction	TRUE
CapCoverSensor	FALSE
CapConcurrentRecSlp	FALSE
CapConcurrentJrnSlp	FALSE
CapConcurrentJrnRec	FALSE
CapConcurrentPageMode	FALSE
CapCharacterSet	PTR CCS ASCII
CapMapCharacterSet	FALSE
CapJrnUnderline	FALSE
CapJrnNearEndSensor	FALSE
CapJrnItalic	FALSE
CapJrnEmptySensor	FALSE
CapJrnDwideDhigh	FALSE
CapJrnDwide	FALSE
CapJrnDhigh	FALSE
CapJrnColor	0
CapJrnCartridgeSensor	0
CapJrnBold	FALSE
CapJrn2Color	FALSE
CapJrnPresent	FALSE
CapRecPageMode	FALSE
CapRecUnderline	FALSE
CapRecStamp	FALSE
CapRecRotate180	FALSE
CapRecRight90	FALSE
CapRecPapercut	FALSE
CapRecNearEndSensor	FALSE
CapRecMarkFeed	0
CapRecLeft90	FALSE
CapRecItalic	FALSE
CapRecEmptySensor	FALSE
CapRecDwideDhigh	FALSE

CapRecDwide	FALSE
CapRecDhigh	FALSE
CapRecColor	0
CapRecCartridgeSensor	0
CapRecBold	FALSE
CapRecBitmap	FALSE
CapRecBarCode	FALSE
CapRec2Color	FALSE
CapRecPresent	FALSE
CapSlpUnderline	TRUE
CapSlpRotate180	TRUE
CapSlpRight90	TRUE
CapSlpNearEndSensor	FALSE
CapSlpLeft90	TRUE
CapSlpItalic	FALSE
CapSlpEmptySensor	TRUE
CapSlpDwideDhigh	TRUE
CapSlpDwide	TRUE
CapSlpDhigh	TRUE
CapSlpColor	PTR_COLOR_PRIMARY
CapSlpCartridgeSensor	0
CapSlpBothSidesPrint	FALSE
CapSlpBold	FALSE
CapSlpBitmap	TRUE
CapSlpBarCode	FALSE
CapSlp2Color	FALSE
CapSlpFullslip	TRUE
CapSlpPresent	TRUE
CapSlpPageMode	TRUE

3.1.2. List Properties

The List Properties are explained in the following.

List Property	Settings
CharacterSetList	(TM-295) "437,850,858,998"
	(TM-295M) ^{*1} "120,121,126,437,998" ^{*2}
JrnLineCharsList	" "
RecLineCharsList	" "
SlpLineCharsList	"35,42"
RecBarCodeRotationList	" "
RecBitmapRotationList	" "
SlpBarCodeRotationList	" "
SlpBitmapRotationList	"0,R90, L90, 180"
FontTypefaceList	" "

^{*1} Device is limited to South Asia model.

^{*2} The list is for South Asia character model.

3.1.3. Width and Height Properties

The width and height properties are described below.

Property	Settings		
	Default Value	Maximum value [dot]	Minimum value [dot]
RecLineSpacing	X	X	X
JrnLineSpacing	X	X	X
SlpLineSpacing	10	255	7
SlpLineHeight [dot]	7		
RecLineHeight [dot]	X		
JrnLineHeight [dot] ^{*1}	X		
SlpLineWidth [dot]	210		
RecLineWidth [dot]	X		
JrnLineWidth [dot] ^{*1}	X		
RecSidewaysMaxLines	X		
RecSidewaysMaxChars	X		
RecLinesToPaperCut	X		
SlpSidewaysMaxLines	21 ^{*1}		
SlpSidewaysMaxChars	80		
SlpMaxLines	0		

X : No settings

^{*1} It can be changed by the settings of the XxxLineSpacing or the XxxLineHeight.

3.1.4. Common Property Strings

The Device information properties are described below.

I/F	DeviceName	DeviceDescription
S	TM-295	EPSON TM-295 POS Printer
	TM-295M	EPSON TM-295M POS Printer
P	TM-295P	EPSON TM-295P POS Printer
	TM-295PM	EPSON TM-295PM POS Printer

I/F indicate the connected interface.

The following is the list of the two connecting interfaces.:

S: Serial

P: Parallel

3.1.5. PageMode Print Properties

The Device information properties are described below.

Property	Station ^{*2}		
	Journal	Receipt	Slip
PageModeArea	-	-	"210", "480"
PageModeDescriptor ^{*1}	-	-	BM/BMR

^{*1} Following setting values are used for the PageModeDescriptor property.

BM : Bitmap printing is available.

BC : Barcode printing is available.

BMR : Rotated printing of bitmap is available.

BCR : Rotated printing of barcode is available.

^{*2} If the Station's CapRecPageMode and/or CapSlpPageMode property values are FALSE, the PageModeArea property shall have " " and the PageModeDescriptor property shall have "0" respectively as a setting value.

3.2. Methods

The following explanation is about supported/unsupported Methods, and the detailed information.

Method	Supported/Unsupported	Compatibility with the PageMode printing
PrintNormal	O	O
PrintTwoNormal	X	X
PrintImmediate	O	O ^{*1}
PrintBarCode	X	X
PrintBitmap	O	O ^{*2}
PrintMemoryBitmap	O	O ^{*2}
CutPaper	X	X
MarkFeed	X	X
ChangePrintSide	X	X
ValidateData	O	O
TransactionPrint	O	O
SetLogo	O	O
SetBitmap	O	O
RotatePrint	O	X
EndRemoval	O	O
BeginRemoval ^{*3}	O	O
EndInsertion	O	O
BeginInsertion	O	O
ClearPrintArea	O	O
PageModePrint	O	O

O : Supported

X : Unsupported

^{*1} If the specified Station is ready to print, the printing data shall not be stored in the PageMode printing buffer but, instead, go straight to printing. If the Station is not ready to print, an error is returned.

^{*2} If other than "LEFT" is specified for the printing position of bitmap, the printing shall be done, regardless of the PageModeHorizontalPosition property setting, based on the PageModePrintArea property setting in the horizontal direction.

^{*3} In the case of devices that only have a slip station, if BeginRemoval method is executed when a paper is not placed in the slip station, OPOS_SUCCESS is returned.

3.3. Escape Sequences

The following figure is about supported/unsupported Escape Sequences.

Escape Sequence	Value	Compatibility with the PageMode printing
#P	X	X
#fP	X	X
#sP	X	X
sL	X	X
#B	O	O
TL	O	O
bL	O	O
#R	X	X
#IF	0~9999	O
#uF Base Pitch [inch]	0~ approx. 50 cm	O
#rF Maximum [inch]	37	X
#E	0~65535	X
#fT	X	X
[!]bC	X	X
#uC	1	O
[!]iC	X	X
#rC	1	O
[!]rvC	X	X
#sC	X	X
#fC	X	X
[!]tbC	X	X
[!]tpC	X	X
1C	O	O
2C	O	O
3C	O	O
4C	O	O
#hC	1~2	O
#vC	1~2	O
cA	X	O ^{*1}
rA	X	O ^{*1}
IA	X	X
N	O	O

O : Supported

X : Unsupported

Numbers: Settable range

^{*1} Regardless of the PageModeHorizontalPosition property setting, center or right adjust what is to be printed based on the PageModePrintArea property setting in the horizontal direction.

3.4. Power Condition Reports

The TM-295 models do not support Power Condition Report.

3.5. Synchronous Processing

The TM-295 models do not use Process ID to determine output completion.

3.6. Printing Positions

The TM-295 models do not set printing position.

3.7. Electronic Logo Function (NVRAM)

The TM-295 models do not support the Electronic Logo Function.

3.8. Printable Bitmap Types and Sizes

The TM-295 models support the following bitmap commands. For the detail, please refer to the Section 3 of “EPSON OPOS ADK MANUAL APPLICATION DEVELOPMENT GUIDE POSPrinter (TM Series)”. The allowance ranges for bitmaps are as follows.

Bitmap command type	Allowance range
One-line bitmap	Inside paper width

3.9. Automatic Recovery Function

The TM-295 models do not have a function for automatic recovery when the power is turned on again after an interruption of power.

3.10. Maintenance Counter

The TM-295 models do not support the Maintenance Counter.

Section 4. Warnings

This section describes precautions in use of the TM-295.

- Full space characters cannot be printed.
- The EndInsertion method cannot clear waiting state for a slip insertion.