Printer Driver Manual

Ver1.6
August 23, 2001

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     1) Special function – by Printer

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Introduction

This manual describes about printer driver specifications for Ver.1.6.

1.Feature

You do not change DIPSW or MEMSW setting from the factory settings.

2. Function

- Control font function
- Barcode print function (Barcode font)
- Cash drawer select function
- Red print function
- Print mode select function

2.1.Control Font

Following functions are available by selecting "Control" font.

•It is impossible to print characters in Control font.•

2.1.1.Control Font list

Control font	Function	Command
A	Drive peripheral unit #1 (50ms)	\x1B\x07\x05\x05\x07
B	Drive peripheral unit #1 (100ms)	\x1B\x07\x0A\x0A\x07
C	Drive peripheral unit #1 (150ms)	\x1B\x07\x0F\x0F\x07
D	Drive peripheral unit #1 (200ms)	\x1B\x07\x14\x14\x07
E	Drive peripheral unit #1 (250ms)	\x1B\x07\x19\x19\x07
d	Drive peripheral unit #2 (200ms)	\x1A
6	<LF>	\x0A
7	<CR>	\x0D
F	Cut paper (Full cut : when the printer supports full and partial cut)	\x1Bd0
P	Cut paper (Partial cut : when the printer supports full and partial cut)	\x1Bd1
G	NV BIT IMAGE #• Normal mode print	\x0A\x1B\x1Cp\x01\x00
H	NV BIT IMAGE #• Normal mode print	\x0A\x1B\x1Cp\x02\x00
I	NV BIT IMAGE #• Normal mode print	\x0A\x1B\x1Cp\x03\x00
J	NV BIT IMAGE #• Normal mode print	\x0A\x1B\x1Cp\x04\x00
K	NV BIT IMAGE #• Normal mode print	\x0A\x1B\x1Cp\x05\x00
Q	NV BIT IMAGE #• Double width mode print	\x0A\x1B\x1Cp\x01\x01
R	NV BIT IMAGE #• Double width mode print	\x0A\x1B\x1Cp\x02\x01
S	NV BIT IMAGE #• Double width mode print	\x0A\x1B\x1Cp\x03\x01
T	NV BIT IMAGE #• Double width mode print	\x0A\x1B\x1Cp\x04\x01
U	NV BIT IMAGE #• Double width mode print	\x0A\x1B\x1Cp\x05\x01
V	NV BIT IMAGE #• Double height mode print	\x0A\x1B\x1Cp\x01\x02
W	NV BIT IMAGE #• Double height mode print	\x0A\x1B\x1Cp\x02\x02

X	NV BIT IMAGE #•　Double height mode print	\x0A\x1B\x1Cp\x03\x02
Y	NV BIT IMAGE #•　Double height mode print	\x0A\x1B\x1Cp\x04\x02
Z	NV BIT IMAGE #•　Double height mode print	\x0A\x1B\x1Cp\x05\x02
[	NV BIT IMAGE #•　Double width & height mode print	\x0A\x1B\x1Cp\x01\x03
]	NV BIT IMAGE #•　Double width & height mode print	\x0A\x1B\x1Cp\x02\x03
^	NV BIT IMAGE #•　Double width & height mode print	\x0A\x1B\x1Cp\x03\x03
_	NV BIT IMAGE #•　Double width & height mode print	\x0A\x1B\x1Cp\x04\x03
`	NV BIT IMAGE #•　Double width & height mode print	\x0A\x1B\x1Cp\x05\x03
a	Align position(left)	\x1B\x1Da\x00
b	Align position(center)	\x1B\x1Da\x01
c	Align position(right)	\x1B\x1Da\x02
e	Set line spacing to 3mm	\x1B0
f	Set line spacing to 4mm	\x1Bz1
g	International character set (U.S.A)	\x1BR\x00
h	International character set (France)	\x1BR\x01
i	International character set (Germany)	\x1BR\x02
j	International character set (U.K.)	\x1BR\x03
k	International character set (Denmark I)	\x1BR\x04
l	International character set (Sweden)	\x1BR\x05
m	International character set (Italy•)	\x1BR\x06
n	International character set (Spain I)	\x1BR\x07
o	International character set (Japan)	\x1BR\x08
p	International character set (Norway)	\x1BR\x09
q	International character set (Denmark II)	\x1BR\x0A
r	International character set (Spain II)	\x1BR\x0B
s	International character set (Latin America)	\x1BR\x0C
t	Set RED printing	\x1B4
u	Cancel RED printing	\x1B5
v	Start customer display transmitting	\x1BS
w	End customer display transmitting	\x1BG
x	Clear customer display	\x04\x01C1\x17

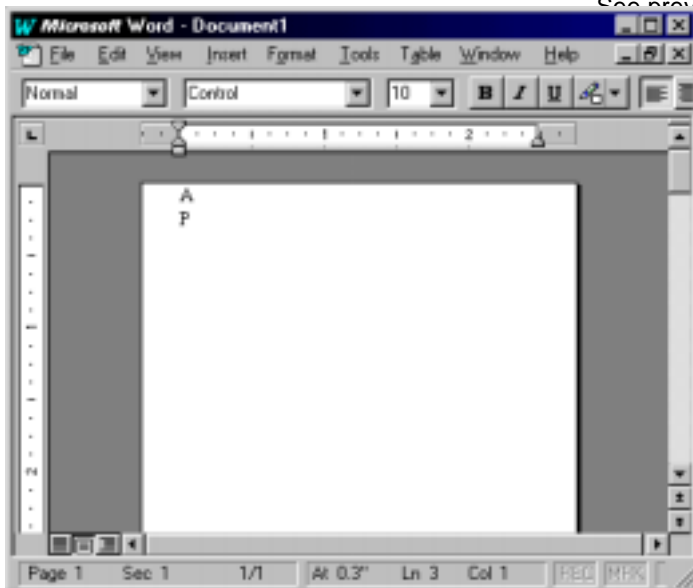Note: Above functions are available for printer which supports those functions.

2.1.2. How to use Control font

- Select "Control" font
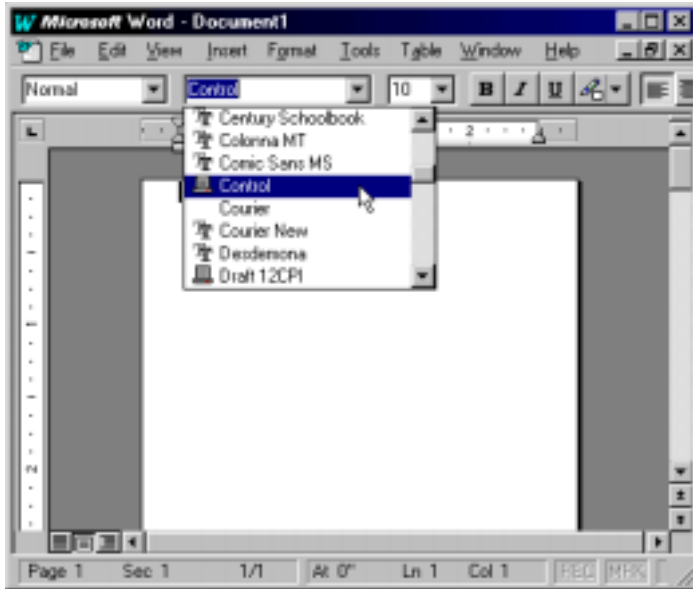
ind the font name
with printer mark.

- Execute Command (function)

See previous pages for each
ure.

se,

Fire peripheral Unit #1.

partial cut.

nts do not print on the paper.

2.2.BarCode print function

Following printers support bar code print.

TSP200, TSP400, TUP400, TSP800, TSP2000, TSP700, TSP600 and SCP700(*1)

(*1) : Thermal receipt only

Those printer drivers support barcode font. You can not see barcode image on the screen, just text data.

2.2.1.BarCode font list

Printer font name	column	characters	
UPC-E	12	Numeric (0-9)	
UPC-A	12	Numeric (0-9)	
JAN/EAN-8	8	Numeric (0-9)	
JAN/EAN-13	13	Numeric (0-9)	
CODE39	More than 1 column	Numeric (0-9) Symbols - . (space) $ / + % Alphabet: A to Z (capital letters only)	
ITF	More than 2 column (have to even columns)	Numeric (0-9)	
NW-7(Codabar)	More than 1 column	Numeric (0-9) Symbols - $: / . + Alphabet: A to D (capital letters only)	

Note: You have to set some parameters, such as mode, height.

2.2.2.BarCode format

How to print barcode using "barcode font"

1. Select barcode font

2. Set 2 parameters

   (1)   a to i : Select mode

   (2)   o to v: Select barcode height

3. Set barcode data following the parameter list rule.

   You have to add "z" at the end of the barcode data.

Example:

a p 0123456789 z

a: 2 dots (module)

p: 64dots – 8mm (barcode height)

0 – 9: barcode data

z: end of the barcode parameter

BarCode font parameters

| Parameter	UPC-E, UPC-A, JAN/EAN-8, JAN/EAN-13	CODE39,NW-7 (*)	ITF (*)	Note
a	2 dots	2 dots (6 dots)	2 dots (5 dots)	minimum module width narrow (wide)
b	3 dots	3 dots (9 dots)	4 dots (10 dots)	
c	4 dots	4dots (12 dots)	6 dots (15 dots)	
d	-	2 dots (5 dots)	2 dots (4 dots)	
e	-	3 dots (8 dots)	4 dots (8 dots)	
f	-	4dots (10 dots)	6 dots (12 dots)	
g	-	2 dots (4 dots)	2 dots (6 dots)	
h	-	3 dots (6 dots)	4 dots (9 dots)	
i	-	4 dots (8 dots)	6 dots (12 dots)	
o	Barcode height: 32 dots (4mm)			
p	Barcode height: 64 dots (8mm)			
q	Barcode height: 96 dots (12mm)			
r	Barcode height: 128 dots (16mm)			
s	Barcode height: 160 dots (20mm)			
t	Barcode height: 192 dots (24mm)			
u	Barcode height: 224 dots (28mm)			
v	Barcode height: 255 dots (31.9mm)			
z	End of the barcode data code			

* Numbers in the mode settings shows wide pattern dots.

Limitations

When using Barcode font, Characters below barcode is always printed. (fixed)
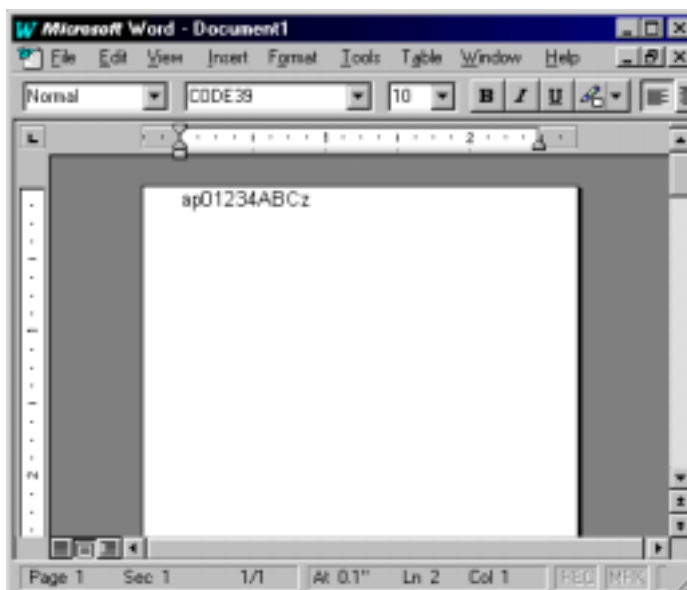
You can not delete characters below barcode.

2.2.3.How to use BarCode font

- Select "Barcode font", in this case, CODE39.
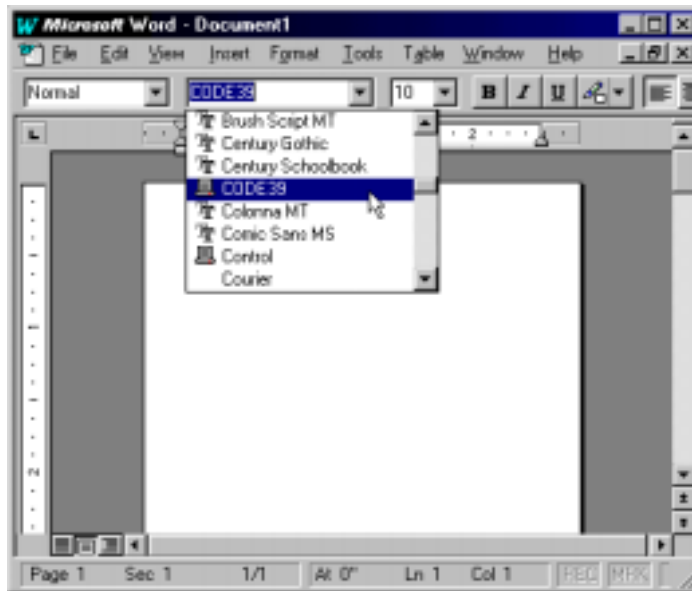
- Input barcode data, with parameters

          a: min. module width 2 dots

          p: barcode height 64 dots (8mm)

          0123ABC: barcode data

          z: End of barcode data code

2.3.Cash drawer select function

Select Peripheral unit in the Properties (for NT, Default Document Properties) of the printer.

Cash Drawer selection	Function	
No Cash Drawer	Without Cash Drawer	No command
Cash Drawer #1	Drive Peripheral unit #1	Output <BEL> command
Cash Drawer #2	Driver Peripheral unit #2	Output <SUB> command
Cash Drawer #1+#2	Both of #1 and #2	Output <BEL>, <SUB> command

Actual displays of 95/98 and NT
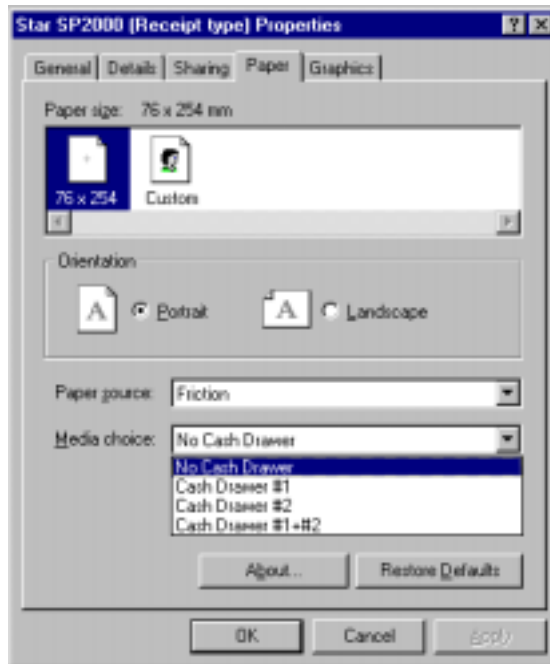
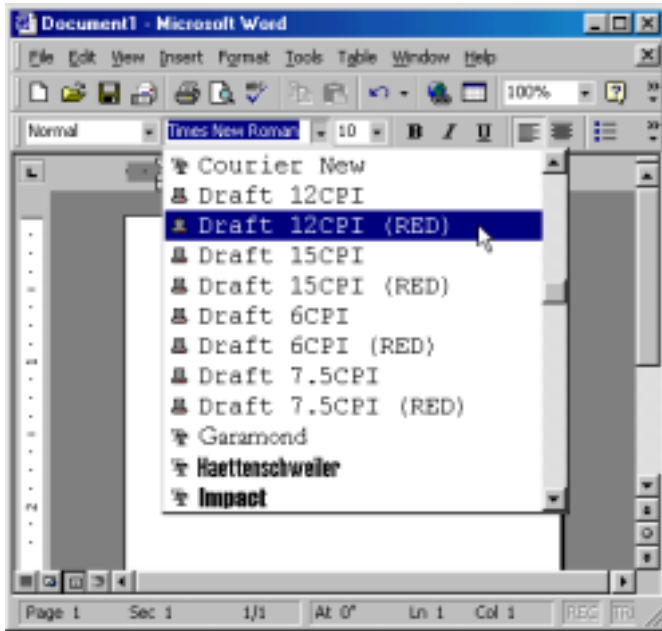[Windows95]   [WindowsNT]
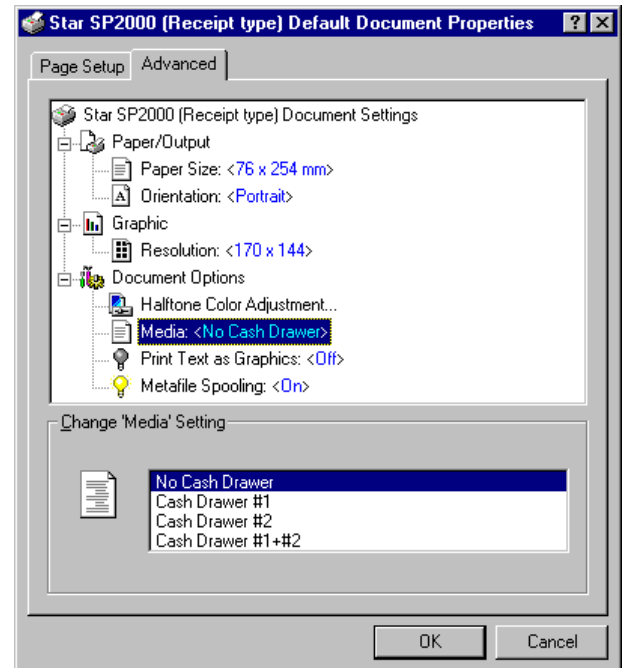
2.4.Red print function

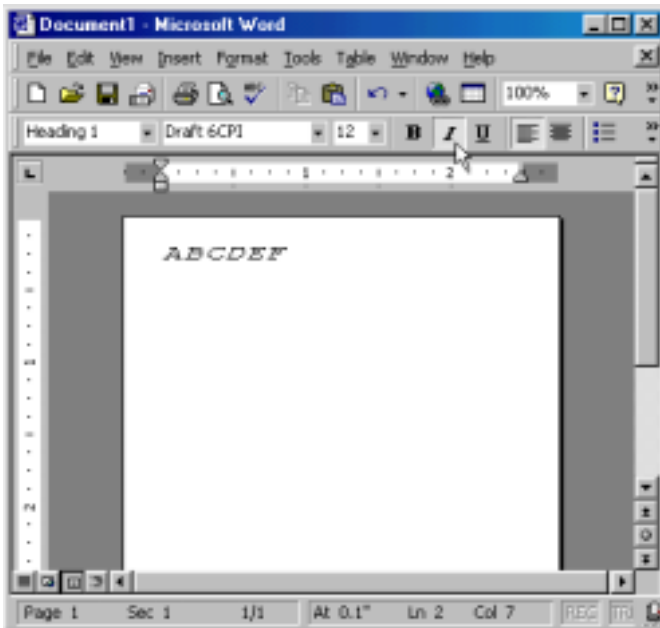This function is for Printers which support RED/BLACK print.

Method

Printer font :

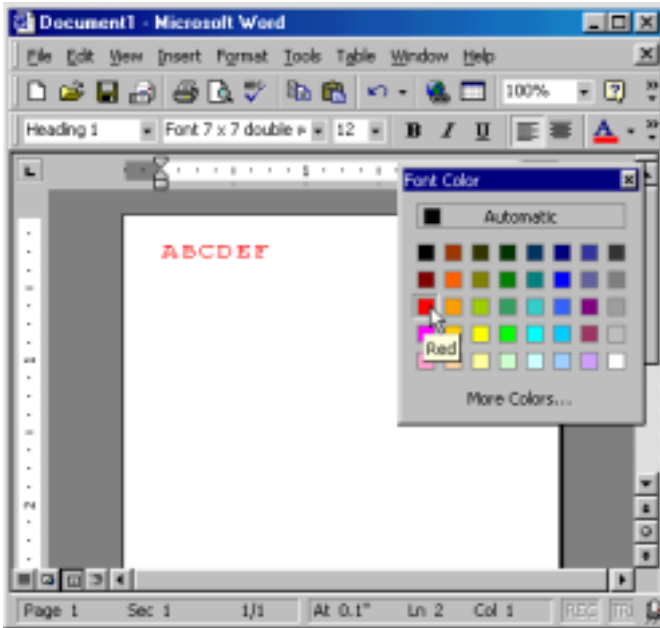rinter font which are including "(RED)" characters

Italic :

Italic font

Only available Win9x

Printer Font

TrueType Font

RED color :

RED color in the application.
e)

Printer Font
TrueType Font

Control font :
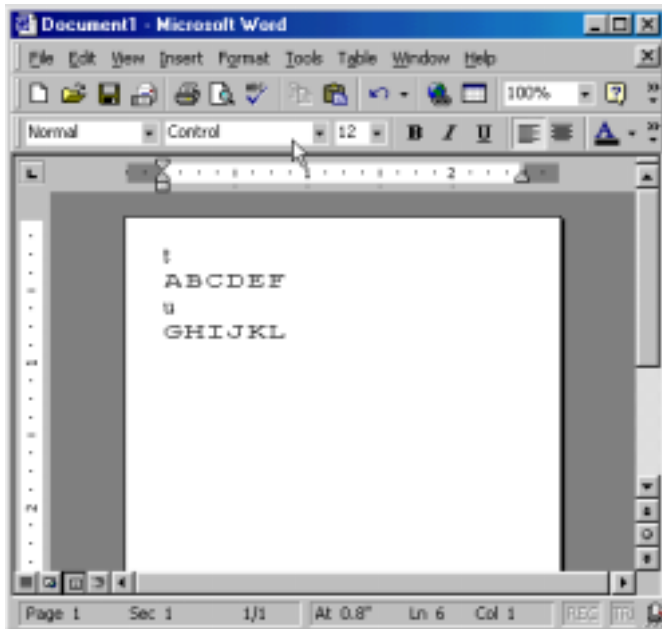
Set red printing" control font.
e type and Printer font,
graphic data can print red.

nter Font
eType Font

2.5.Print mode select function

Select Print mode in Printer property (For WinNT, Document property).

Mode	Function
Ticket Mode	Ticket type: Fixed page length
Receipt Mode	Receipt type: Variable page length (depending on data length)

[Windows9x]   [WindowsNT]
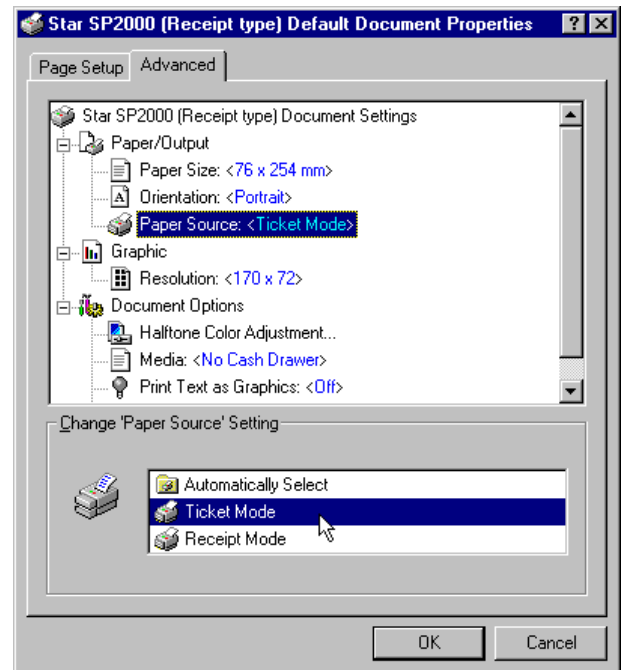
3.Print

3.1.Print mode select function
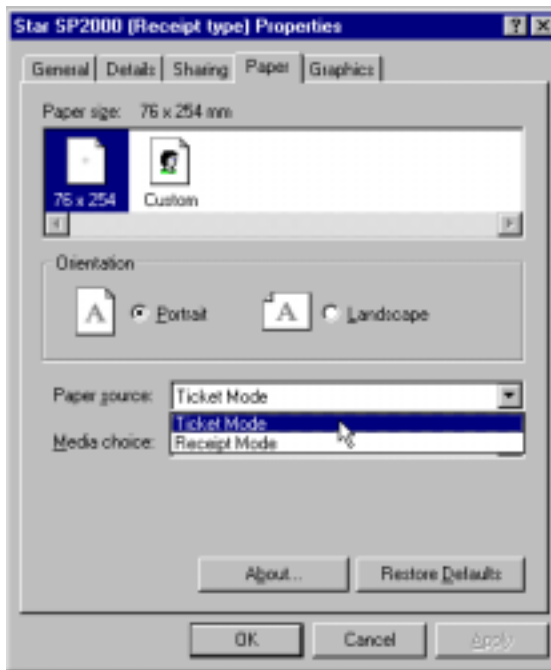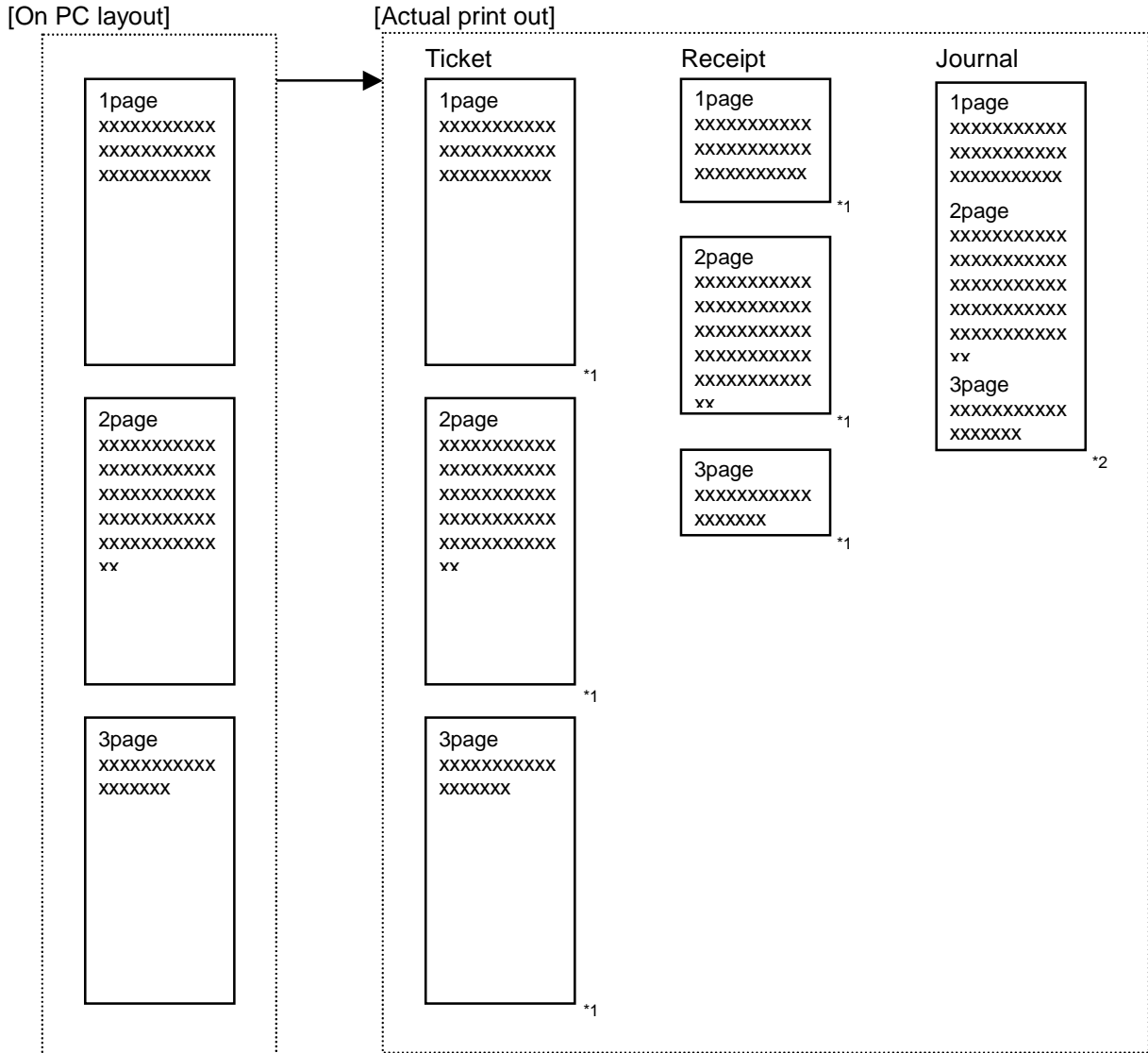
V1.6 supports following print pattern. Please refer to "4.2.Driver Name" for each print pattern.

[On PC layout]   [Actual print out]

Ticket   Receipt   Journal

```
1page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
```

Ticket:
```
1page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
```
*1

Receipt:
```
1page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
```
*1

Journal:
```
1page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
2page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xx
3page
xxxxxxxxxxx
xxxxxxx
```
*2

```
2page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xx
```

Ticket:
```
2page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xx
```
*1

Receipt:
```
2page
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxxxx
xx
```
*1

```
3page
xxxxxxxxxxx
xxxxxxx
```

Ticket:
```
3page
xxxxxxxxxxx
xxxxxxx
```
*1

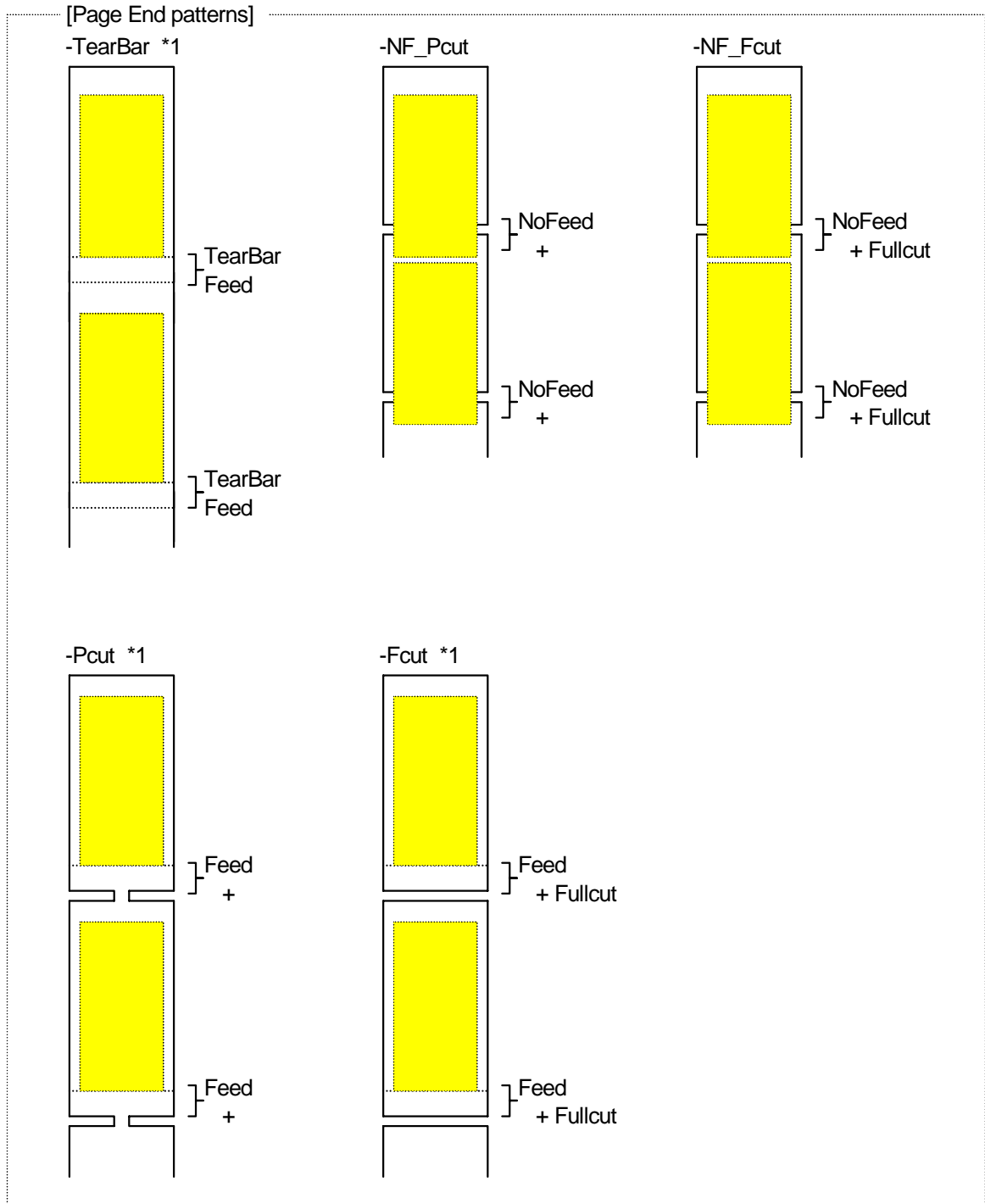Receipt:
```
3page
xxxxxxxxxxx
xxxxxxx
```
*1

*1   Treatment of the end page, see "3.2.Page End pattern"

*2   Journal type: Do not have multiple pages.

End page treatments are, 1. Feed paper until tear bar or 2. paper feed until cutterthen cut.

(cut type is depending on printer mechanism.)

3.2.Page End pattern (Cut/Tearbar)

V1.6 supports following Page End patterns. Refer to "4.2.Driver Name" for details.

[Page End patterns]

-TearBar　*1　　　　　　　　　　　-NF_Pcut　　　　　　　　　　　-NF_Fcut

TearBar
Feed

TearBar
Feed

NoFeed
+

NoFeed
+

NoFeed
+ Fullcut

NoFeed
+ Fullcut

-Pcut　*1　　　　　　　　　　　-Fcut　*1

Feed
+

Feed
+

Feed
+ Fullcut

Feed
+ Fullcut

　: Print area

*1　: Because, "TearBar","Pcut","Fcut" patterns, feed paper until Tearbar or Cutter, page length will be longer.

4.Construction

4.1.File

OS	Model (Dir)	Driver	Files		
			Driver file	INF file	Ver *1
Windows9x	DP8340	DP8340Series	DP8340.DRV	DP8340.INF	3.10
	SP200	SP200Series	SP200.DRV	SP200.INF	3.10
	SP2000	SP2000Series	SP2000.DRV	SP2000.INF	1.60
	SP298	SP298, SCP700(Slip)	SP298.DRV	SP298.INF	1.60
	SP3x2	SP312/342, UP389	SP3X2.DRV	SP3X2.INF	1.60
	SP3x7	SP317/347	SP3X7.DRV	SP3X7.INF	1.60
	TSP200	TSP200	TSP200.DRV	TSP200.INF	1.60
	TSP2000	TSP2043	TSP2000.DRV	TSP2000.INF	1.60
	TSP400	TSP400/TUP400 Series	TSP400.DRV	TSP400.INF	1.60
	TSP550	TSP552	TSP550.DRV	TSP550.INF	1.60
	TSP600	TSP600Series	TSP600.DRV	TSP600.INF	1.60
	TSP700	TSP700Series	TSP700.DRV	TSP700.INF	1.60
	TSP800	TSP800Series	TSP800.DRV	TSP800.INF	1.60
WindowsNT Windows2000	DP8340	DP8340Series	DP8340.DLL	DP8340.INF	3.10
	SP200	SP200Series	SP200.DLL	SP200.INF	3.10
	SP2000	SP2000Series	SP2000.DLL	SP2000.INF	1.60
	SP298	SP298, SCP700(Slip)	SP298.DLL	SP298.INF	1.60
	SP3x2	SP312/342, UP389	SP3X2.DLL	SP3X2.INF	1.60
	SP3x7	SP317/347	SP3X7.DLL	SP3X7.INF	1.60
	TSP200	TSP200Series, SCP700(Thermal)	TSP200.DLL	TSP200.INF	1.60
	TSP2000	TSP2043	TSP2000.DLL	TSP2000.INF	1.60
	TSP400	TSP400/TUP400 Series	TSP400.DLL	TSP400.INF	1.60
	TSP550	TSP552	TSP550.DLL	TSP550.INF	1.60
	TSP600	TSP600Series	TSP600.DLL	TSP600.INF	1.60
	TSP700	TSP700Series	TSP700.DLL	TSP700.INF	1.60
	TSP800	TSP800Series	TSP800.DLL	TSP800.INF	1.60

*1: version information in printer property.

4.2.Driver Name

Star SP200 （ J / NF_Pcut ） +•

- Optin
- Cut type
- Paper type
- Printer series
- Company Name
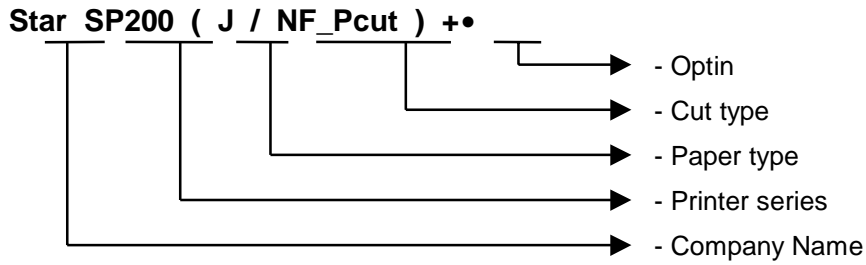
Item	Parameter		Note
Company name	Star		
Series	TSP482/492, TSP552, TSP2043, TSP743, TSP847 …etc		
Paper Type	J	Journal	
	S	Slip	
	-	Ticket or Receipt	
Cut type	TearBar	Feed paper until tear bar (No cut)	
	NF_Pcut	Partial cut only (without paper feed)	
	NF_Fcut	Full cut only (without paper feed)	
	Pcut	Feed paper until cutter then partial cut	
	Fcut	Feed paper until cutter then full cut	
	NF	No Eject+ Release+ wait until paper removed	Slip
	REV	Reverse direction eject, then release paper	Slip
	FWD	Eject then release paper	Slip
Option	SCD400	Customer display (SCD-400)	
	-	No option	

Following printers do not have a function to select "Ticket" and "Receipt" type. in WinNT/2000.

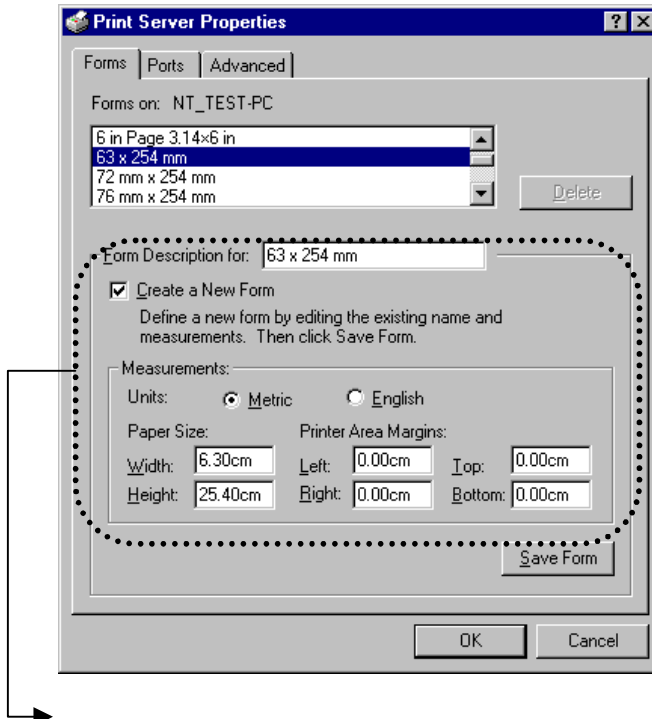| Printer	Note

DP8340 series	There are two types of driver.
	   - Star DP8340 (T/TearBar) ….. Ticket type
	   - Star DP8340 (R/TearBar)….. Receipt type

SP200 series	Receipt type driver ONLY

5.Attention in use

5.1.Paper setting for WinNT/2000 user

5.1.1.Add User Defined paper in Print Server Properties

Form Description for : Paper name

Paper width : Set "smaller than printable width", not "paper width"

In case of set "width" larger than printable area, we can not use.

For example, SP2000, paper width is 76mm, and printable area is 63mm, so you have to set

Width value smaller than 63mm.

5.1.2.Problem in User Defined Paper

Right margin between the User Defined Paper and Default Paper (already installed in driver) are different. (see following Word sample)

a.   In case of Default Paper :Right and Left margin are set as "0.00mm".

When you set margins are 0.00mm, then warning message will appear.

Please click "fix" button to set margins.
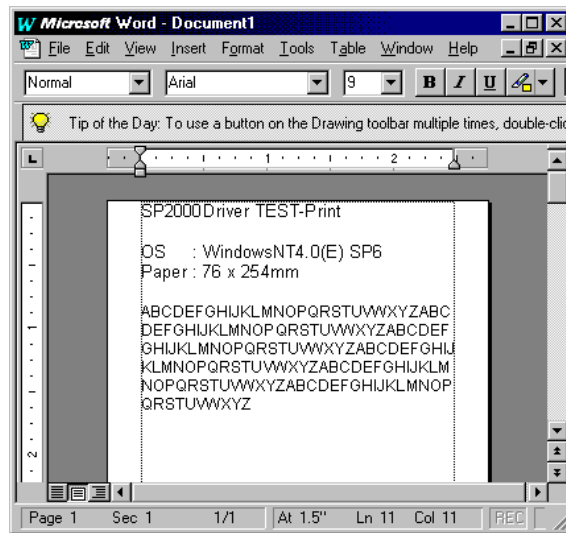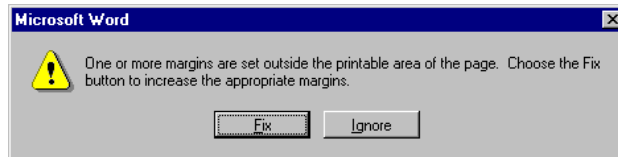
b.   User Defined Paper (in case of set "63 x 254mm") - margins are 0.00mm

User Defined Paper size width is smaller than actual maximum printable size.

The right and left margins do not appear on the screen.
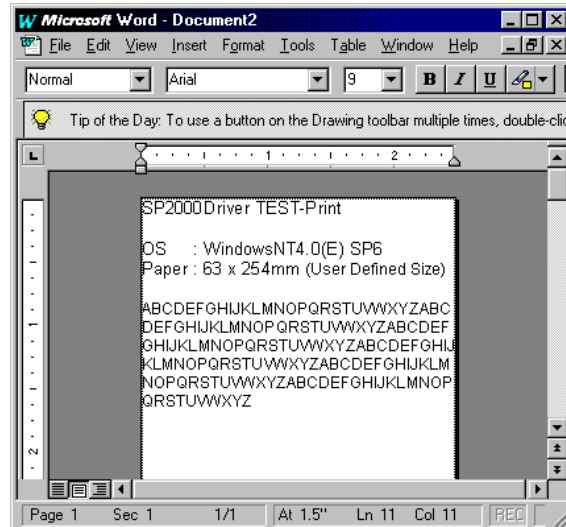
5.2.Microsoft Word
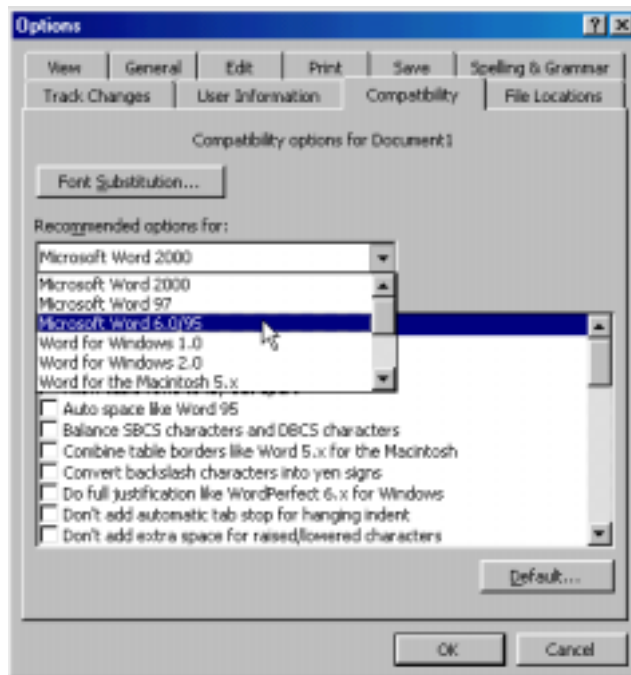
You can not use "Printer font" correctly in later than Word97 format document.

To use "Printer font", please save word file as Word6.0/95 format.

5.3.Limitation

- Please use appropriate universal drivers in each OS.
- Please do not use True Type font and Printer font, graphic data mixture in a same line.
  It will be a cause of misalignment.
- You can not see barcode on a screen in case of use "barcode font", and also page length is different from page setting by application.
- It will be a cause of misalignment when use more than 2 kinds of "Printer font".
- You can not print character with "control font"
- When the receipt including barcode by printer font, the page length which is set by application, some times wrong.
- You can not use "Printer font" correctly in later than Word97 format document.
  To use "Printer font", please save word file as Word6.0/95 format rather than Word97.
- The maximum user define paper size is 20 inches in DP8340 Series WindowNT/2000 driver.
- SP200 series WindowsNT/2000 driver is only Receipt type.
  SP200 series Windows9X driver is both "Receipt" and "Ticket " type.

6. History

Contents	Date
New	2000/12/07

1). DP8340
    Debug Page Length bug in Receipt type driver
2). SP300
    Debug Page Length bug in Receipt type driver
3). Add TSP700 Printer driver
	2001/04/09

1). Add TSP600 Printer driver. 2). Receipt/Ticket mode is selected by the printer property. Release as Version1.6	2001/08/23