

# CLK-T41 AC

**Receipt** Printer



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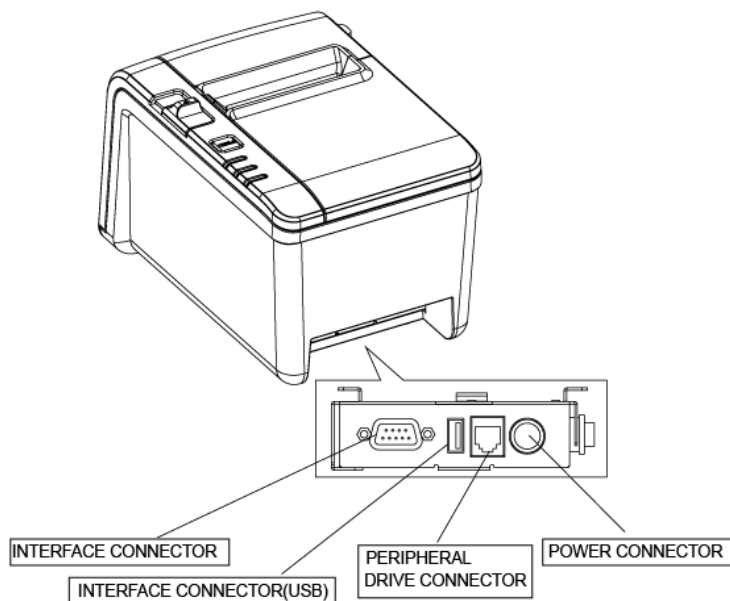
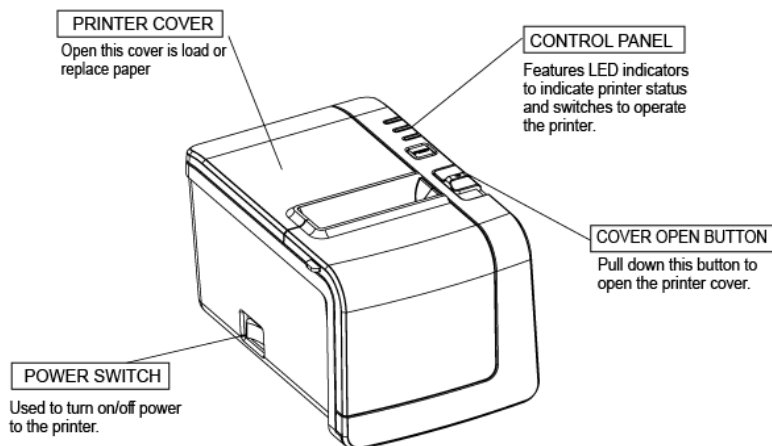
**OWNER'S MANUAL**

# CAS

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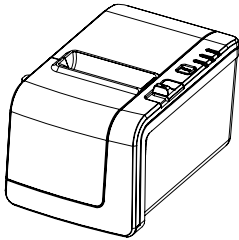
# 1. Parts Identifications



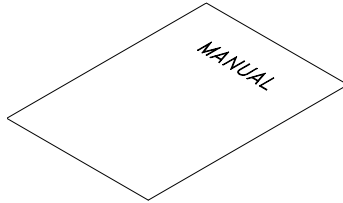
## 2. Setting Up the Printer

### 2-1. Unpacking

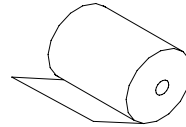
Your printer box should include these items. If any items are damaged or missing, please contact your dealer for assistance.



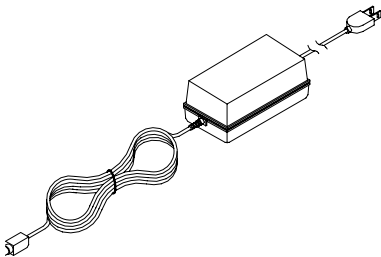
The Printer



User's Manual



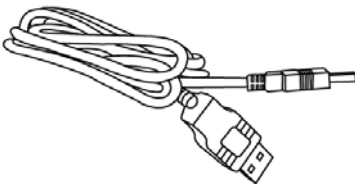
Roll Paper



Adaptor (Option)



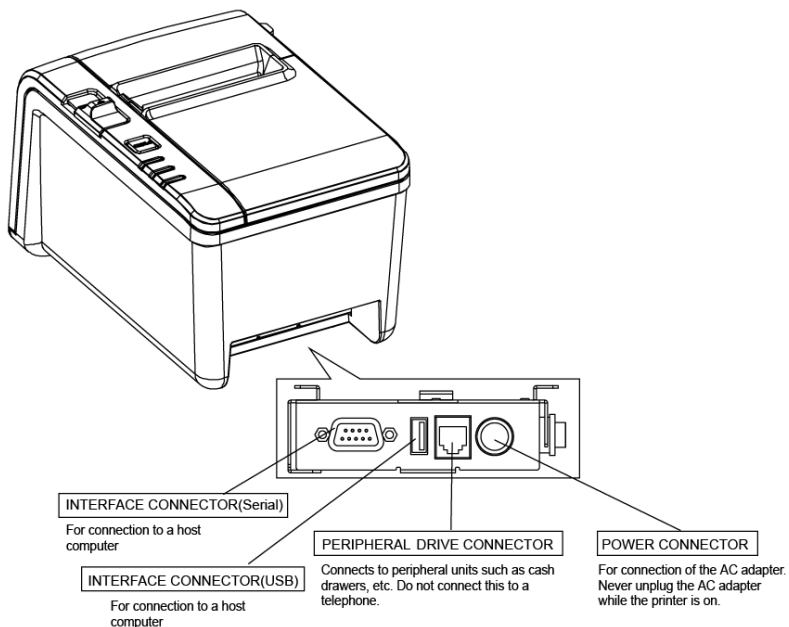
Interface Cable (Option)



Interface Cable USB (optional)

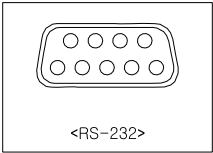
## 2-2. Connecting the Cables

You can connect up the cables required for printing to the printer. They all connect to the connector panel on the back of the printer, which is shown below :



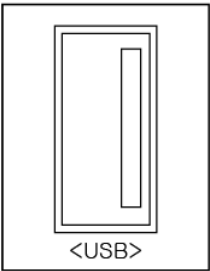
Before connecting any of the cables, make sure that both the printer and the computer are turned off.

2-2-1. Interface Connector



- Serial interface

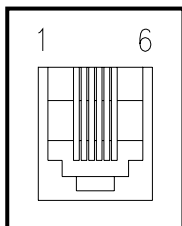
PIN	SIGNAL	I/O	DESCRIPTION
3	TxD	Output	Printer transmit data line RS-232C level
2	RxD	Input	Printer receive data line RS-232C level
4,7	DTR	Output	Printer handshake to host line RS-232C level
6	DSR	Input	Data Send Ready
5	GND	-	System Ground



PIN	SIGNAL	DESCRIPTION
1	+5V	+5V
2	DATA-	Printer transmit data line
3	DATA+	Printer transmit data line
4	GND	System Ground

## 2-2-2. Cash Drawer Connector

The printer can operate two cash drawers with a 6 pin RJ-11 modular connector. The driver is capable of supplying a maximum current of 1.0A for 510ms or less when not printing.



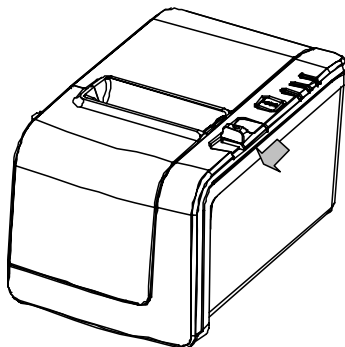
PIN	SIGNAL	DESCRIPTION
1	Signal GND	-
2	Drawer kick-out drive signal 1	Output
3	Drawer open/close signal	Input
4	+24V	-
5	Drawer kick-out drive signal 2	Output
6	Signal GND	-

## 2-3. Loading the Roll Paper

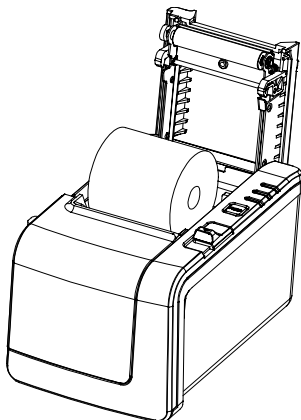
Notes: Be sure to use paper rolls that meet the specifications.  
Do not use paper rolls that have the paper glued to the core  
because the printer cannot detect the paper end correctly.  
(Turn off power switch)

☞ Turn off power switch.

1. Make sure that the printer is not receiving data; Otherwise, data may be lost.
2. Open the paper roll cover by sliding down the cover-open lever.

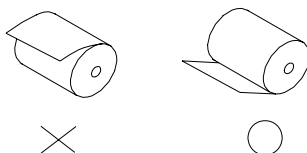


3. Remove the used paper roll core if there is one inside.
4. Insert new paper roll as shown.

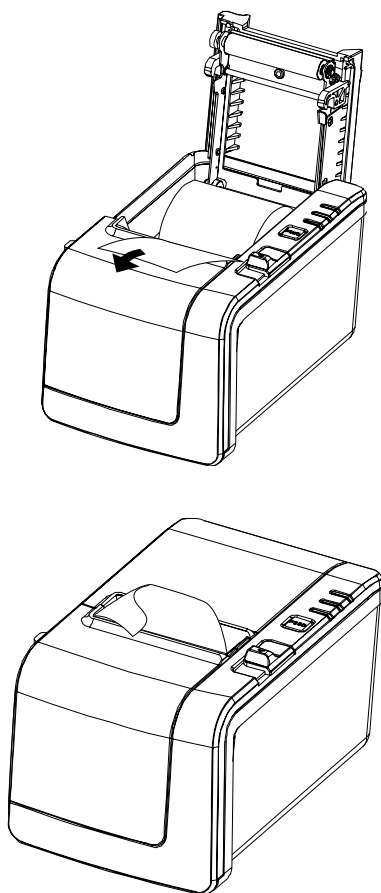




5. Be sure to note the correct direction that the paper comes off the roll.



6. Pull out a small amount of paper, as shown. Then, close the cover.



## 2-4. DIP SWITCH SETTING

The printer is set up at the factory to be appropriate for almost all users.

It does, however, offer some settings for users with special requirements.

It has DIP switches that allow you to change communication setting, such as handshaking and parity check, as well as print density.

Your printer has two sets of DIP switches. The functions of the switches are shown in the following tables.

**※Note : Power off. And open the cover of Dip Switch and change setting.**

### 2-4-1. Serial Interface Specification

DIP Switch Functions 1

SW	FUNCTION	ON	OFF	DEFAULT
2	Hexadecimal	HEXDUMP	NORMAL	OFF
3	Hand Shaking	X ON/OFF	DTR/DSR	OFF

DIP Switch Functions 2 (Baud rate selection)

Transmission speed	SW-7	SW-8
115200 baud	ON	ON
9600 baud	OFF	ON
19200 baud	ON	OFF
38400 baud	OFF	OFF

DIP Switch Functions 3

Print Density	SW-5	SW-6
Low Power	ON	ON
Normal	OFF	ON
Normal	ON	OFF
Dark	OFF	OFF

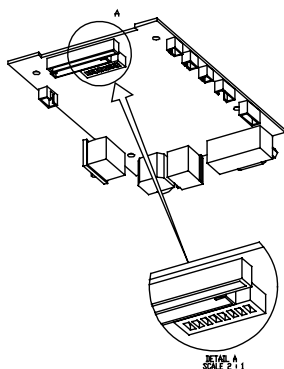
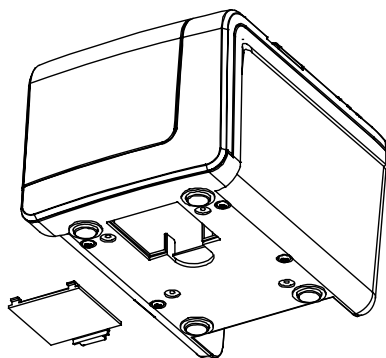
DIP Switch Functions 1

FUNCTION	SW-4
ESC Pos	OFF

## **CAUTION:**

Turn off the printer while removing the DIP switch cover to prevent an electric short, which can damage the printer.

1. Make sure the printer is turned off.
2. Remove the DIP switch cover by taking off as shown in the illustration below.



3. Set the switches using a pointed tool, such as tweezers or a small screwdriver.
4. Replace the DIP switch cover.

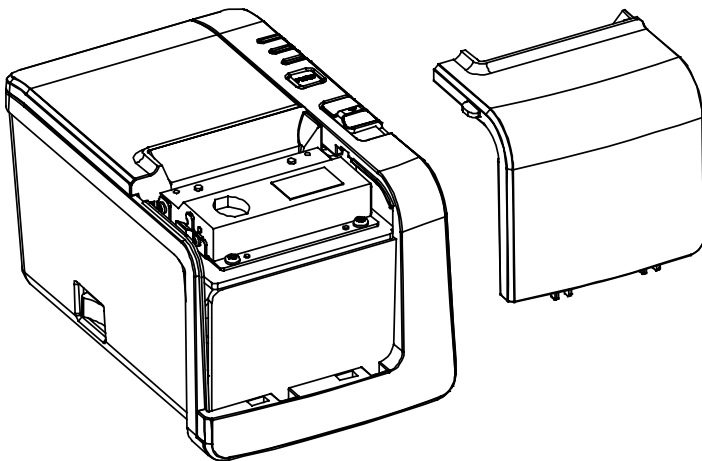
The new settings take effect when you turn on the printer.

## **CAUTION:**

When the paper is jammed with cutter, the top cover might be stuck. In this case, repeat power on and off several times.

If the top cover is still stuck, please follow the steps to release the papers from jamming.

1. Make sure the printer is turned off.
2. Take out cutter cover as shown.



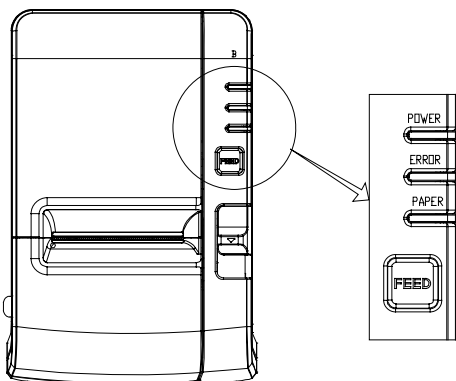
3. Turn the wheel with finger to a direction until paper is released from the cutter.

## 3. Control panel and other functions.

### 3-1. Control panel

You can control the basic paper feeding operations of the printer with the button on the control panel. The indicator lights help you to monitor the printer's status.

#### Control Panel



#### Button

The button can be disabled by the ESC c 5 command.

Press the FEED button once to advance paper one line. You can also hold down the FEED button to feed paper continuously.

### 3-2. Error indicating

This section explains the different patterns signaled by the two LED indicators located on the top cover of the printer.

STATUS	PAPER	ERROR	POWER	REMARKS
	RED	RED	GREEN	
Power off	OFF	OFF	OFF	Normal power is not supplied to the printer
Power on	OFF	OFF	ON	Normal power is supplied to the printer
On line	OFF	OFF	ON	Normal error-free mode
Cover open	ON	ON	ON	Close cover
Paper empty	ON	ON	ON	Insert new paper roll
Test mode	OFF	OFF	ON	Ignored error led

## 4. Self Test

The self-test lets you know if your printer is operating properly. It checks the control circuits, printer mechanisms, print quality, ROM version and DIP switch settings.

This test is independent of any other equipment or software.

### Running the self test

1. Make sure the printer is turned off and the printer cover is closed properly.
2. While holding down the FEED button, turn on the printer using the switch on the front of the printer to begin the self-test. The Self Test prints the printer settings and then prints the following, Cuts the paper, and pauses. (Error LED On)

Self test Printing

Please press the PAPER FEED button.

3. Press the FEED button to continue printing. The printer prints a pattern using the built-in character set.
4. The self test automatically ends and cuts the paper after printing the following:

**\*\*\* Completed \*\*\***

The printer is ready to receive data as soon as it completes the self-test.

## 5. Hexadecimal Dump

This feature allows experienced users to see exactly what data is coming to the printer. This can be useful in finding software problems.

When you turn on the hex dump function, the printer prints all commands and other data in hexadecimal format along with a guide section to help you find specific commands.

To use the hex dump feature, follow these steps:

1. After you make sure that the printer is off and Dip s/w 1-2 is ON, turn on the printer.
2. Run any software program that sends data to the printer. The printer prints “Hexadecimal Dump” and then all the codes it receives in a two-column format. The first column contains the hexadecimal codes and the second column gives the ASCII characters that correspond to the codes.

## Hexadecimal Dump

1B 21 00 1B 26 02 40 40 .!..& . @ @

1B 25 01 1B 63 34 00 1B .%.. c4 ..

41 42 43 44 45 46 47 48 ABCDEFGH

□ A period (.) is printed for each code that has no ASCII equivalent.

3. Turn off the printer, and make sure that Dip sw 1-2 off.

4. Turn on the printer.

## 6. Specifications

### Important!

When connecting or disconnecting the power supply from the printer, be sure that the following cautions are observed.

Use a power supply (Limited Power Supply) of DC 24V $\pm$ 10% and more than 2.5A. Be careful about installing the printer in an area where there is noise.

Take the appropriate measure to protect against electrostatic AC line noise, etc.

### 6-1. General Specifications

(1) Printing Method Direct line thermal printing.

(2) Print speed 140mm/sec.

(3) Dot density	203 DPI(Hor / Ver)	203 / 203(0.125mm / 0.125mm dot)
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(4) Printing Width	203 DPI	Max 56mm (448 dots)
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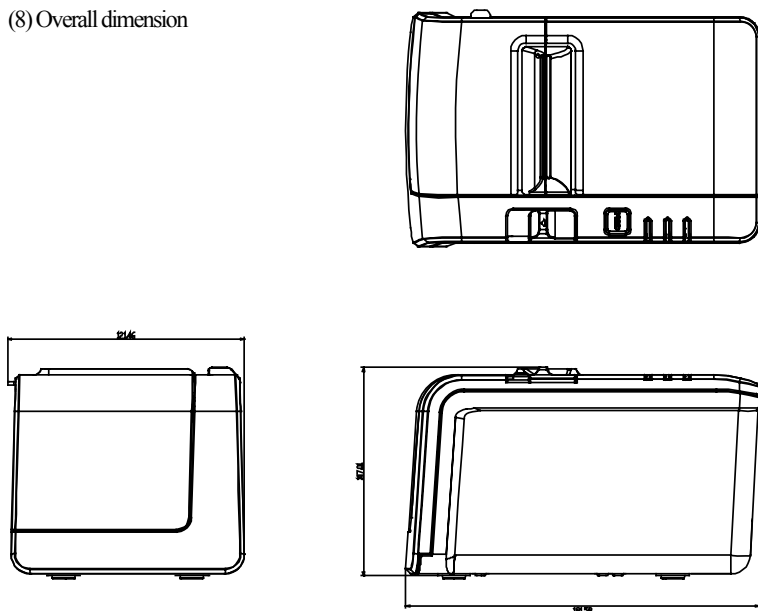
(5) Number of print columns.  
No. of columns

	Font "A"	Font "B"
203 DPI	37	49

(6) Roll paper Refer to chapter 2 for details on the recommended roll Paper.  
Paper width : 58.5mm ~ 59.5mm  
Roll diameter : Max. Ø60mm

(7) Weight 1.7kg

(8) Overall dimension



## 6-2. Auto Cutter Specifications

- |                        |   |
|------------------------|---|
| (1) Cutting Frequency  | Max. 30 cuts per minute   |
| (2) Thickness of paper | 0.065 ~ 0.1mm   |
| (3) Cutter Life        | 1.0 million cuttings<br>(if the paper thickness is between 65 and 100 $\mu\text{m}$ ) |

## 6-3. Interface

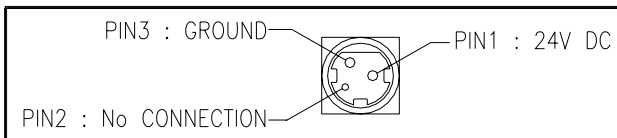
RS232C Serial Interface Only

## 6-4. Electrical Characteristics

- |                         |   |
|-------------------------|---|
| (1) Input Voltage       | DC 24V $\pm$ 10%  |
| (2) Current Consumption | Operating : Approx. 1.5A (at ASCII printing)<br>Peak : Approx. 10 A<br>(at print duty 100%, For 10 seconds or less)<br>Stand-by : Approx. 0.15A |



### (3) Power Connector



#### ♣Important!

When using a printer power supply other than optional AC adaptor, be sure that the following cautions are observed.

Use a power supply (Limited Power Supply) of DC 24V±10% and more than 2.5A.

Be careful about installing the printer in an area where there is noise.

Take the appropriate measure to protect against electrostatic AC line noise, etc.

## 6-5. Environmental Requirements

### (1) Operating

Temperature 5°C to 40°C

Humidity 10% to 90% RH(without condensation)

### (2) Transport/Storage(except paper)

Temperature -20°C to 60°C

Humidity 10% to 90% RH(without condensation)

## 6-6. Reliability

### (1) MCBF

50 million lines (based on an average printing rate of 12.5% with paper thickness in the range 65µm to 75µm)

35 million lines (based on an average printing rate of 12.5% with paper thickness in the range 76µm to 150µm)

### (2) Head Life

100 million pulses, 100Km

### (3) Cutter Life

1.0 million cuttings

(if the paper thickness is between 65 and 100µm)

## 6-7. Certification

(1)FCC PART15 CLASS A

(2)CE EMCD/LVD

(3)UL/cUL

(4)MIC

(5)TUV RoHS

(6) e-Mark

## 7. Command List

No.	Command	Function
1	HT	Horizontal tab
2	LF	Print and line feed
3	CR	Print and carriage return
4	FF	Print and return to standard mode(in page mode)
5	CAN	Cancel print data in page mode
6	DLE EOT	Real-time status transmission
7	DLE ENQ	Real-time request to printer
8	DLE DC4	Generate pulse at real-time
9	ESC FF	Print data in page mode
10	ESC SP	Set right-side character spacing
11	ESC !	Select print mode(s)
12	ESC \$	Set absolute print position
13	ESC %	Select/cancel user-defined character set
14	ESC &	Define user-defined characters
15	ESC *	Set bit-image mode
16	ESC -	Turn underline mode on/off
17	ESC 2	Select default line spacing
18	ESC 3	Set line spacing
19	ESC =	Select peripheral device
20	ESC ?	Cancel user-defined characters
21	ESC @	Initialize printer
22	ESC D	Set horizontal tab positions
23	ESC E	Turn emphasized mode on/off
24	ESC G	Turn double-strike mode on/off
25	ESC J	Print and feed paper using minimum units
26	ESC L	Select page mode
27	ESC M	Select character font
28	ESC R	Select an international character set

29	ESC S	Select standard mode
30	ESC T	Select print direction in page mode
31	ESC V	Turn 90° clockwise rotation mode on/off
32	ESC W	Set printing area in page mode
33	ESC \	Set relative print position
34	ESC a	Select justification
35	ESC c 3	Select paper sensor(s) to output paper-end signals
36	ESC c 4	Select paper sensor(s) to stop printing
37	ESC c 5	Enable/disable panel buttons
38	ESC d	Print and feed paper <i>n</i> lines
39	ESC p	General pulse
40	ESC t	Select character code table
41	ESC {	Turn upside-down printing mode on/off
42	ESC p	Print NV bit image
43	ESC q	Define NV bit image
44	GS !	Select character size
45	GS \$	Set absolute vertical print position in page mode
46	GS *	Define downloaded bit image
47	GS /	Print downloaded bit image
48	GS B	Turn white/black reverse printing mode on/off
49	GS H	Select printing position of HRI characters
50	GS I	Transmit printer ID
51	GS L	Set left margin
52	GS P	Set horizontal and vertical motion units
53	GS V	Select cut mode and cut paper
54	GS W	Set printing area width
55	GS \	Set relative vertical print position in page mode
56	GS a	Enable/disable Automatic Status Back(ASB)
57	GS f	Select font for HRI characters
58	GS h	Set bar code height

59	GS k	Print bar code
60	GS r	Transmit status
61	GS v 0	Print raster bit image
62	GS w	Set bar code width
	<Add>	
1	ESC i	Full cut
2	ESC m	Partial cut
3	FS !	Set print mode(s) for Kanji characters
4	FS &	Select Kanji character mode
5	FS -	Turn underline mode on/off for Kanji character
6	FS .	Cancel Kanji character mode
7	FS 2 c1 d1...dk	Define user-defined Kanji characters
8	FS C	Select Kanji character code system
9	FS S 1 2	Set Kanji character spacing
10	FS W	Turn quadruple-size mode on/off for Kanji character

## MEMO



# CLK-T41 AC

Receipt Printer



CAS BLDG., # 440-1, SUNGNAE DONG,  
GANGDONG GU, SEOUL, KOREA

TEL\_ 82 2 2225 3500

FAX\_ 82 2 475 4668

[www.globalcas.com](http://www.globalcas.com)