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C168 Label Printer User's Manual 1st edition Dec. 2006

Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for the Postek C168 Label Printer at the time of this manual's printing. However, succeeding printers and manuals are subject to change without notice. Postek assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the printer and this manual.

Although this manual describes and details many issues, which could possibly occur, the manufacturer cannot warrant against unpredictable conditions during the printing process. For problems such as the printer not working, lost or unclear print content, etc., the manufacturer and resellers are responsible for correcting these issues (according to Postek Printer Warranty Clauses). In no event shall the manufacturer or the resellers involved be liable for any damages whatsoever (including without limitation; damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising from the use of, the results of use or inability to use this product, even if the manufacturer has been advised of the possibility of such damages.

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Important Safety Instructions

- Only qualified and trained service technicians should attempt to repair the printer.
- Do not place the printer on or near a heat source.
- Be sure that the output of the power adapter is 24VDC and your power source matches the rating listed on the power adapter. Be certain your power source is grounded.
- To avoid getting an electric shock, do not use a worn or damaged power cord. If the power cord becomes damaged or frayed, replace it immediately.
- Do not insert anything into the ventilation slots or openings on the printer.
- The printer and power adapter should never be operated in a location where either one can get wet. Personal injury may result.
- The printhead becomes hot while printing. To protect from damaging the printhead and risk of personal injury, avoid touching the printhead.
- To get increased printhead longevity and higher quality printouts, always use approved labels, tags and thermal transfer ribbons. Approved supplies can be ordered from your dealer.
- Static electricity that accumulates on the surface of the human body or other surfaces can damage or destroy the printhead or electronic components in this device. DO NOT touch the printhead or the electronic components with bare hands.
- Place the printer on a flat, firm, solid surface.

Possible Corrective Action

• Never jam or block the air vents, or operate in a high temperature environment.

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- Turn off the power when not in use for extended periods.
- Follow all recommendations and setup instructions included in this manual.

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Preface

Welcome to POSTEK's C168 label printer.

This manual explains how to set up and begin using your C168 printer. It also provides detailed information on configuring your printer, basic operations, care and troubleshooting.

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Please read this manual carefully before using the C168 printer.

Chapter 1 Introduction

Specifications

Specifications for Printer

Model	C168
Printing method	Direct thermal & Thermal transfer
Printing resolution	203dpi (8dots/mm)
Max printing speed	3ips /s (76.2mm)
Max printing width	4.09"(104mm)
Max printing length	20" (508mm)
Memory	2MB FLASH ROM, 2MB SDRAM
Media	Roll-feed, die-cut, continuous, fan-fold, tags, tickets in plain paper or thermal paper Width: 110mm max., 27mm min. Supply roll: OD 4"(102mm) max., ID 1"(25.4mm) min. Thickness: 0.003"~0.012" (0.06~0.15mm), including liner
Ribbon	Wax, Wax/Resin, Resin Ribbon roll: OD 3"(76.2mm) max., ID 1"(25.4mm) core Max width: 110mm; Max length: 360M
Fonts	Windows True Type Fonts (when using Windows drivers); Built-in ASCII font and a 24×24 dot matrix Chinese font.
Bar Code Types**	1D Barcode : Code 39, Code 93, Code 128/subset A,B,C, Codabar, Interleave 2 of 5, UPC A/E 2 and 5 add-on, EAN-13/8/128, UCC-128, Postnet, Plessey, HBIC, Telepen, FIM, etc. 2D Barcode : MaxiCode, PDF417, Data matrix, etc.
Media sensor	Reflective (Adjustable)
Interfaces	RS-232 serial, USB
Power rating***	24 VDC, 2.0A

Weight	2.8kgs
Dimensions	W236 x D291 x H199mm
Operation environment	Temperature: 40°F–100°F (0°C – 40°C) Relative humidity: 5% - 85% non condensing
Optional items	Cutter kit, Peeler kit, Internal 100/10M Ethernet Interface card

** Theoretically, the printer can print any type of barcode, as determined by the

software you are using.

*** Power for the C168 barcode label printer is provided via an external power adaptor.

Specifications for Power Adapter

Input	AC 100~240V, 47~63HZ
Output	DC 24V, 2.0 A
Environment	$0^{\circ}C \sim 40^{\circ}C$

Unpacking and Inspection

Inspect the shipping carton(s) for possible shipping damage, if damage is discovered, notify the shipping company to report the nature and extent of the damage.

Please check the items according to the Packing List. If there are any items missing, notify your authorized reseller.

Packing List (Figure 1) :

1. Printer	1 pcs
2. Power Adapter	1 pcs
3. Ribbon Spindle	2 pcs
4. Media Spindle	1 pcs
5. Core Adapter	2 pcs
6. Media Roll Guide	2 pcs
7. Ribbon	1 pcs
8. Sample Media	1 pcs
9. CD Rom	1 pcs





Chapter 2 Getting Started

Setting up

Before setting up the printer you should consider the following:

- 1. Make sure there is adequate space around the printer for loading consumables and proper ventilation.
- 2. Make sure the printer is close to the host so the interface cable is easily accessible at either end.

Main Parts and Features



Figure 2

1. READY Indicator	2. MEDIA Indicator	3. RIBBON Indicator
4. PAUSE Button	5. FEED Button	6. CANCEL Button
7. Media Exit	8. Cover Handle	9. Top Cover



Figure 3

- 1. Printhead Module 4. Media Sensor
- 2. Printhead Bracket
- 7. Media Guide
- 5. Platen Roller
- 10. Media Compartment
- 8. Ribbon Loading Knob
- 9. Ribbon Supply Spindle 11.Guide Wheel

3. Printhead

6. TPH Release Lever



Figure 4

1. RS232 Serial Port	2. DIP Switches	3. USB Port
4. DC IN Port	5. Power Switch	

Note: The above figure illustrates all possible interface ports on a C168 printer, but some ports may not be available for your printer. Please check your requirements when purchasing the printer.

Connecting the Printer

Power Connection

Caution:(1) Use of the wrong adapter could damage your printer. Postek assumes no liability for any damage in such case. The rating for the printer is 24VDC.

- (2) Do not use the printer near liquids or corrosive chemicals.
- 1. Make sure the printer is switched OFF.
- 2. Connect the power cord to the Power Adapter.
- 3. Connect the Power Adapter's DC output plug to the DC IN port on the back of the printer.
- 4. Plug the power cord into a live wall outlet.

Interface Connection

CAUTION: Make sure the printer is switched OFF before connecting the interface cable.

The interface between the printer and the host will use either a serial or USB (or parallel) cable. Contact your reseller for Ethernet connection options.

- 1. The printer identifies the communication port automatically.
- 2. The default values of printer port can be obtained from the self-test report. (See Chapter 2 Operation Basics System Mode Self Test)
- 3. Cable configurations for serial (RS-232C) interfaces is shown in Appendix A of this guide.

- 4. Please take the following measures to reduce cable noise.
 - a. Reduce the length of the interface cable (keep the cable length under 1.83 meters / 6 feet) if required.
 - b. Keep the communication cable separate from power cords.

Loading the Ribbon

- Caution: (1) Make sure the ink side of your ribbon faces outwards. Always make sure the ink side of the ribbon faces the media and NOT the printhead.
 - (2) The maximum width of the ribbon is 110mm. When using a ribbon roll with a width less than 110m, please place the ribbon roll in the middle of the Ribbon Spindle corresponding to the symmetry symbol (→|←).
 - (3) This section is not applicable to direct thermal printing.
- 1. Lift the top cover (Figure 5-1).
- 2. Push the TPH release lever to release the Printhead Module.
- 3. Lift the Printhead Module to expose the ribbon supply spindle (Figure 5-2).
- 4. Unwrap the ribbon roll pack and separate the ribbon roll and the core (Figure 5-3).
- 5. Slide the roll of Ribbon onto one of the Ribbon Spindles and the core onto the other spindle (Figure 5-3).
- 6. Load the Ribbon Spindle into the printer and route the ribbon through the Printhead Module as shown in Figure 5-4.
- 7. Wrap the end of the ribbon around the core (Figure 5-5).
- 8. Load the core into the Ribbon rewinder (Figure 5-6).
- 9. Turn the guide wheel on the left of the core to take up the loose ribbon and tighten the ribbon.
- 10. Close the Printhead Module and press down until it locks into place.



Figure 5-1



Figure 5-2



Figure 5-3



Figure 5-4



Figure 5-5



Figure 5-6

Loading the Media

C168 printers can be operated in three different modes: Standard mode, Peel-off mode, or Cutting mode.

- -- In Standard mode, each printed label remains on the backing liner.
- -- In Peel-off mode, each printed label is peeled away from the backing liner automatically.
- -- In Cutting mode, the printer automatically cuts the label after it is printed.

Standard Mode

- 1. Lift up the top cover to expose the media compartment (Figure 6-1).
- 2. Load a roll of media (labels facing up) on the Media Spindle, then slide the two Media Roll Guides with their smooth sides toward the media onto the Media Spindle from each end until snug against the media. If you are placing a roll of media with a 3" ID core, please slide the two Core Adapters onto the Media Spindle first (Figure 6-2).
- 3. Insert them into the printer.
- 4. Corresponding to the scale on the Media Spindle, position the media roll in the middle of the Spindle.
- 5. Release and lift the Printhead Module.
- 6. Route the media as shown in Figure 6-3.
- 7. Slide the Media Guide to the edge of the media.
- 8. Close the Printhead Module and press down until it locks into place (Figure 6-4).
- 9. Close the cover and press the 'Feed' button to feed the media and ensure proper tracking. If the printer does not correctly sense the top of each label it may be necessary to perform the Calibration Procedure in the Operation Basics section.



Peel-off Mode: The loading guide will be provided with the peeler kit. **Cutting Mode:** The loading guide will be provided with the cutter kit.

Figure 6-1







Figure 6-2



Figure 6-3



Figure 6-4

Adjusting the Position of Media Sensor

- 1. Lift the top cover.
- 2. Push the TPH release lever to release the Printhead Module.
- 3. Lift the Printhead Module to expose the media sensor cover (Figure 7-1).
- 4. Remove the media sensor cover and slide the media sensor to the appropriate position (refer to Figure 7-3, Figure 7-4 and Figure 7-5).
- 5. Replace the media sensor cover.



Figure 7-1



Figure 7-2



Figure 7-3



Figure 7-4



Figure 7-5

Operation Basics

Power Switch

The power switch is on the back panel of the printer. The symbols on the switch are defined as follows:

— — ON O — OFF



The Front Panel

The Front Panel of the printer consists of:

- Three Indicator Lamps: MEDIA, READY and RIBBON
- Three multi function buttons: PAUSE, FEED and CANCEL

Indicator Lamps

The three lamps indicate the status of the printer (please refer to Chapter 4 for error indications) Г

READY	- Solid: Indicates the printer is in the normal state.
MEDIA	- Solid: Indicates the printer is in the normal state; Blinking simultaneously with PEADV : Punning out
	of media;Blinking: Indicates the printer is in the 'PAUSE' state.
RIBBON	 Solid: Indicates thermal transfer printing; Off: Direct thermal printing (no ribbon installed);
	- Blinking simultaneously with READY: Running out of ribbon.

Buttons

The three buttons perform different functions based on the mode the printer is in. The printer operates in one of the following modes: Normal Mode: Normal printer functions (i.e. Pause, Feed, and Cancel). See the following table.

System Mode: Allows the printer to perform Reset, Media Sensor

Mode	Normal Mode	System Mode
FEED	Feed one label	Media Sensor Calibration
PAUSE	 Press once to pause current print job Press a second time to resume printing 	Self-test: The Printer performs a self-test and prints out a configuration report
CANCEL	 Cancel current batch of labels Forces the printer to continue working after an error has been corrected 	Reset: Resets the printer to Factory Default Settings

Calibration and Self-testing. See the following table at section 'System Mode'.

System Mode

In the System Mode the printer's buttons allows for the performance of Reset, Media Sensor Calibration and Self-testing. The printer cannot receive commands from the host when in the System Mode. - Entering: Press and hold the CANCEL button for 4 seconds, the three blinking lamps indicate the printer is in System Mode.

- Exiting: The printer will exit the System Mode automatically if no operations are performed within 4 seconds of entering into the System Mode.

Reset - Reset the Printer to the Factory Default Settings

Following the steps listed below allows you to reset the printer to the factory default settings.

- 1. After entering System Mode, press the CANCEL button.
- 2. The three indicators stop blinking and remain lit. The printer is now in its normal state.

The following parameters have automatically been reset:

- Label
- Print darkness
- Speed
- Others

Note: The printed label count and printed length may not be reset.

Media Sensor Calibration

It is necessary to accomplish Media Sensor Calibration after a new roll of media has been loaded.

- 1. After entering System Mode, press the FEED button.
- 2. The three indicators continue blinking.
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3. The printer will feed approximately 200mm of media, and then the three indicators will stop blinking and remain lit. The printer is back to a normal state.

Self Test

- 1. After entering System Mode, press the PAUSE button.
- 2. The printer will print out a configuration report and the three indicators will stop blinking and remain lit. The printer is back to a normal state.
- 3. The following information will be printed on the self-test report:
 - Font list
 - Hardware configuration and status
 - DIP switch settings
 - Label parameters
 - Firmware version

DIP Switch at the Back Panel



Note: Please turn off the printer before setting the DIP switches.

DIP Bit	Functions	Remarks
1	ON: Direct thermal print	Printing type settings
1	OFF: Thermal transfer print	Default: OFF
2	ON: Enable Back feed	Back feed settings
2	OFF: Disable Back feed	Default: OFF
2	ON: Cutter is installed	Cutter settings
3	OFF: Cutter is not installed	Default: OFF

4	ON: Peeler is installed OFF: Peeler is not installed	Peeler settings Default: OFF
5	Reserved and not available	/
6	ON: Enable IP setting OFF: Disable IP setting	IP address setup Default: OFF
7	$ \underline{8} \underline{7} \\ 0 \mid 0 - 9600, n, 8, 1 \\ 0 \mid 1 19200, n, 8, 1 $	RS232 Serial Port baud rate setting
8	1 - 19200, n, 8, 1 $1 - 38400, n, 8, 1$ $1 - 57600, n, 8, 1$	0: OFF, 1: ON Default: 00

Windows Driver and PosLabel Software

The printer driver supports Windows 2003/XP/2000/NT/ME/98/95 operating systems. Each C168 printer comes with powerful bar code software PosLabel and operating instructions. Both the Windows driver and PosLabel are available on the manufacturer's CD-ROM shipped with the product. If you do not have the manufacturer's CD-ROM or wish to upgrade your current software it is available for download from: www.postek.com.cn.

Note: If you need to update the driver, please remove any old versions of the driver before continuing.

Chapter 3 Maintenance

Warning:

- **1.** Make sure the printer is turned OFF before performing any maintenance operations.
- 2. The printhead becomes hot while printing, be careful when performing maintenance on the printhead.
- 3. Use only the cleaning agents indicated. Postek Electronics Co., Ltd. will not be responsible for damage caused by any other cleaning materials used on the printer.
- 4. Anhydrous isopropyl alcohol is a solvent containing no more than one percent water. Isopropyl alcohol is a flammable solvent; always take the proper precautions when using this solvent.

Cleaning the Printhead

The printhead is easily damaged due to its precision construction. A printhead damaged by misuse is not covered under the terms of the warranty. To ensure longevity of the printhead, please note the following:

- 1. Always use proper cleaning materials and techniques to clean the printhead. Never use hard materials for scraping the printhead.
- Always use high-quality consumables. When the TPH module is closed, pressure is placed directly on the TPH; dirt such as paper scraps, sand, dust and glue can scrape or damage the printhead. The TPH is also easily damaged by static electricity, which may be

generated by poor quality ribbons.

- 3. After every roll of ribbon or every three rolls of media, the printhead should be cleaned with anhydrous isopropyl alcohol.
 - a. Turn off the printer and open the cover.
 - b. Release and lift the Printhead Module.
 - c. Remove the ribbon (if applicable).
 - d. Using a Cotton Swab dipped in anhydrous isopropyl alcohol, rub the Swab along the printhead.

Cleaning the Platen Roller

Debris or dirt accumulated on the platen roller should be cleaned after every three rolls of media.

- a. Turn off the printer and open the cover.
- b. Release and lift the Printhead Module.
- c. Rotate the platen roller and clean it thoroughly with anhydrous isopropyl alcohol and a cotton swab.

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Cleaning the Printer Interior

With a brush or a vacuum cleaner, as needed.

Chapter 4 Troubleshooting

Occasionally situations occur that require some troubleshooting. Possible issues and potential solutions are listed in this section. While not every situation is addressed, you may find some of these tips useful.

Error Indications

Typically, when the printer is not functioning, one or two of the three indicator lamps will begin blinking. The possible situations addressed by the status of the three indicator lamps are listed below.

READY and MEDIA	Lamps blink	simultaneo	usly

Possible Cause	Recommended Solutions	Remarks
Cannot detect the media gap or black line	 a. Check the media path b. Check the position of the media sensor c. Perform media sensor calibration 	If you are using continuous media, be sure you have the correct settings in your software
Media run out	Load a roll of media	
Media jam	Clear the jam	
The Media Roll Guides are not firmly positioned against the media	Adjust the Media Roll Guides to firmly press against the media	
Media sensor error	Service media sensor	

READY and RIBBON Lamps blink simultaneously

Possible Cause	Recommend Solutions	Remarks
Run out of ribbon	Load a roll ribbon	
Ribbon jam	Clear the jam	
Ribbon Sensor	Service Ribbon Sensor	To be serviced only
error		by qualified
		personnel

Only READY Lamp blinks

Possible Cause	Recommend Solutions	Remarks
Serial I/O error	Check DIP switches for	
	the band rate settings	
Memory overflow	a. Restart the printer	
	b. Perform Reset	

Miscellaneous

Vertical blank lines

Continuous vertical blank lines in printout indicate a dirty or faulty printhead as shown below:



If the problem cannot be solved by cleaning the printhead, replace the printhead.

The host shows 'Printer Timeout'

1. Check if the interface cable is connected.

2. Check if the printer is turned on.

If the situation remains unsolved, please contact your reseller or our

customer service engineer.

The data has been sent, but not printing

- 1. Verify you have chosen the correct Windows printer.
- 2. Reset the printer.

If the situation remains unsolved, please contact your reseller or our customer service engineer.

Print quality problems

- 1. Adjust Print Darkness setting.
- 2. Adjust Print Speed setting.
- 3. Clean the printhead and platen roller.
- 4. Make sure the correct media/ribbon is loaded.
- 5. Use only high-quality Media, replace if necessary.

Recovery

After the corrective action is taken press the CANCEL button to clear the alarm, the printer will get back to work automatically.

Others

Contact a qualified Service Engineer from your reseller or Postek for troubles that persist or are not covered in this section.



Appendix A: Interface Specifications

RS232 Serial

The RS232 connector on the printer is a DB9F:

Pin	Direction	Definition
1	/	/
2	Out	TX
3	In	RX
4	In	CTS
5	-	Ground
6	Out	RTS
7	In	DSR
8	Out	DTR
9	/	/

Connection with host:

Host 25S	Printer 9P	Host 9S	Printer 9P
TX 2	 3 RX	RX 2	 2 TX
RX 3	 2 TX	TX 3	 3 RX
DSR 6	 8 DTR	DTR 4	 7 DSR
DTR 20	 7 DSR	DSR 6	 8 DTR
RTS 4	 4 CTS	RTS 7	 4 CTS
CTS 5	 6 RTS	CTS 8	 6 RTS
GND 7	 5 GND	GND 5	 5 GND

Alternately you can just connect the 3 wires as follows:

Host 25S	Printer 9P	Host 9S		Printer 9P
TX 2	 3 RX	RX 2		2 TX
RX 3	 2 TX	TX 3		3 RX
GND 7	 5 GND	GND 5		5 GND
pin 4		pin 4		
pin 5		pin 6]	
pin 6		pin 7		
pin 20		pin 8		

Baud rate : 9600, 19200, 38400,57600 (Baud Rate set by DIP switches 7–8)

Data format: always 8 data bits, 1 start bit and 1 stop bit.

Parity : always non parity.

Flow control: RTS/CTS (Hardware flow control).

If you are using software or drivers under the Windows environment, the flow control must be set to "hardware"

Any communications port can transmit data from the host (RS232, Ethernet, and USB). Preliminary communications settings are not required since the printer will automatically detect which port is active.

Note: Never send data from 2 ports at the same time. Data cannot be sent to more than one port simultaneously or data corruption and print errors may occur.

Appendix B: ASCII Table

	0	1	2	3	4	5	6	7
0	NUL			0	a	Р	`	р
1	SOH	XON	!	1	А	Q	а	q
2	STX		"	2	В	R	b	r
3		XOFF	#	3	С	S	с	S
4			\$	4	D	Т	d	t
5		NAK	%	5	Е	U	e	u
6	ACK		&	6	F	V	f	v
7	BEL		4	7	G	W	g	w
8	BS		(8	Н	Х	h	х
9)	9	Ι	Y	i	у
Α	LF		*	•••	J	Ζ	j	Z
B		ESC	+	;	Κ	[k	{
С	FF		,	<	L	\	1	
D	CR		I	II	М]	m	}
Е	SO	RS	•	>	N	^	n	2
F	SI	US	/	?	0	_	0	DEL

Remark: The \in sign is included in the embedded table at DEC128 (HEX 80).

