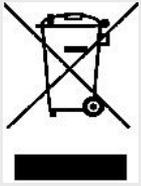


## DPP-255 User Manual



Version	Data	Range	Change description	Author
1.0.0	20.01.2016	All document	First release	Viktor Kochev



This mark is an indication for separate collection of waste electrical and electronic equipment (WEEE).  
It is prohibited the disposal of WEEE containers for mixed waste

*(Pursuant to Ordinance requirements for marketing of electrical and electronic equipment and transportation and disposal of waste electrical and electronic equipment, adopted by Decree 82 of 10.04.2006)*

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**Compatibility**

Made for iPhone, Made for iPod, Made for iPad

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Use shielded cables to connect this device to computers.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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## 1. Introduction

Datetics DPP-250 is a mobile ESC/POS and LABEL thermal printer. It can be used in dynamic working conditions and its abundant built-in features allow it to be widely used for different applications. Printer can quickly and easily print text and/or graphics, depending on customer needs – barcodes, logo, etc.

## 2. Features

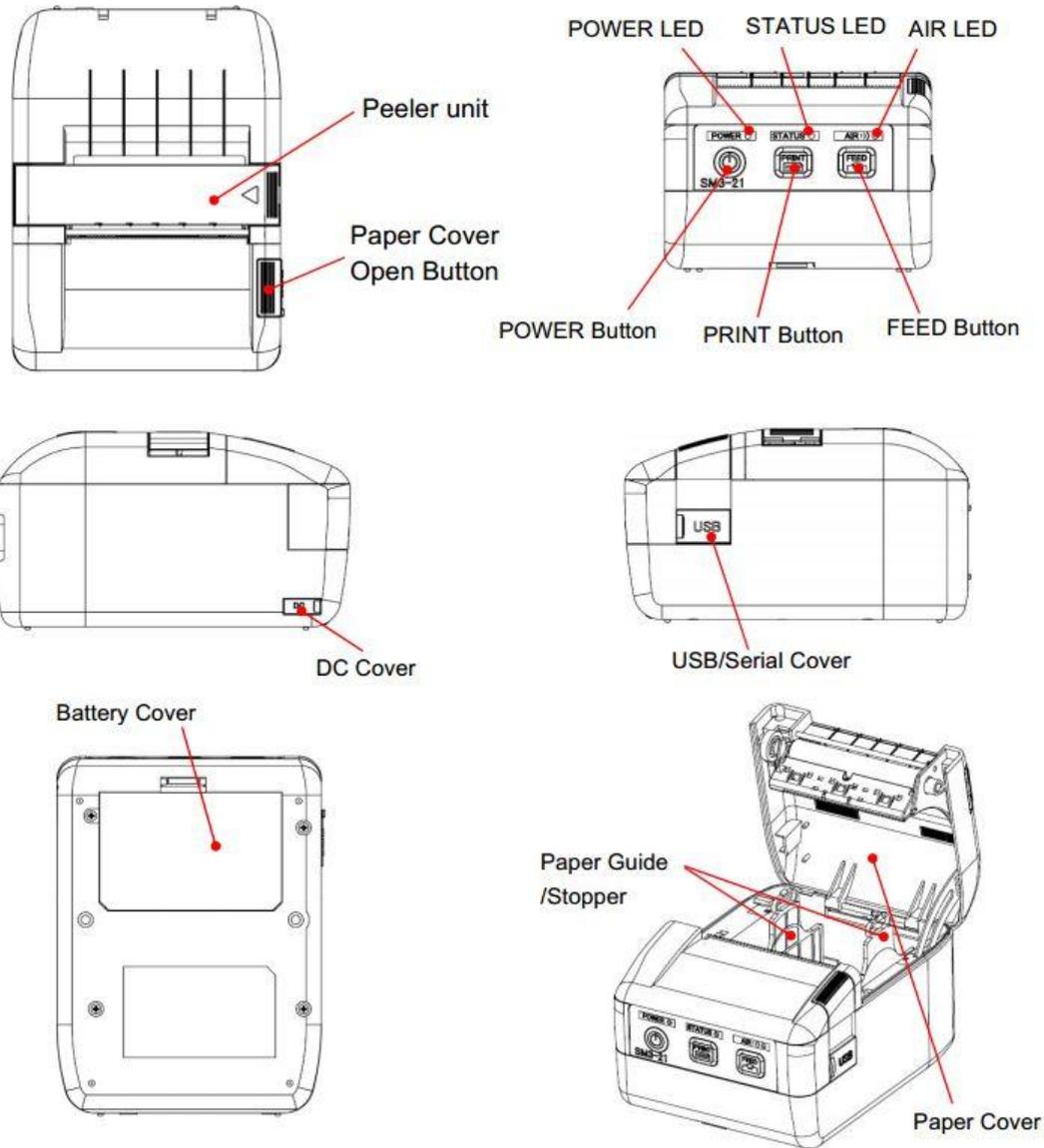
The DPP-255 is a mobile line thermal printer, applicable for different applications as shown below:

- Mobile
- Label Peeler
- Traveling sales
- Retail
- Transportation
- Receipts
- Point of sale
- Distribution

**3. Technical specification**

DPP-255 Specification	
Printing Method	Direct line thermal printer
Total Dots	384 dots / line
Dot Density	8 dots / mm (203 dpi)
Print Speed	100 mm / sec
Print Width	48 mm
Characters per Line	Font A: 48 characters / line Font B: 64 characters / line Font C: 48 characters / line (loadable) Font D: 64 characters / line (loadable)
Roll Max Diameter	58
Interfaces	- RS-232C port (max 115200 bps) - mini USB 2.0 port(device) - Bluetooth 2.0 class 2 (Serial Port Profile) (optional) - Bluetooth 3.0 class 2(Serial Port Profile, iPod Accessory Protocol) (optional) - Wireless LAN 802.11b (optional)
Paper Feed system	Step
Logo Registration	1 Black & White 384 x 248 dots
Emulation	ESC/POS / Eltron ZPL
Resident Barcodes	1 D: EAN 13, EAN 8, UPC A, UPC E, Code 39, Code 93, Code 128, Codabar, 2 of 5 interleaved 2 D:PDF417, QR code
Power Supply	AC 100 to 240 V, 50 to 60 Hz, DC 9V/1A
Battery	Rechargeable Li-Ion battery 7.4V/2000 mA 20 000 lines per fully charged battery
LED indication	- Battery low - Battery charging - Paper end - Cover open - Overheating
Reliability	50 km (Thermal head) 15,000,000 lines( Mechanism MCBF)
Weight, kg	420 grams (with battery)
Dimension (W x D x H), mm	88 x 120 x 64
Environment	Operating: -10 to 50 °C, 30 to 50 % RH Storage: -20 to 60 °C, 10 to 90 % RH
OS Compatibility	iOS, Android OS, Black Berry OS, Windows OS, Win CE, Windows Mobile, Windows Phone 8.x
Accessories	Wearable built-in metal belt hook

**4. General view**



- POWER Button: Turn power on or off
- FEED Button: Feed paper during pressing this button
- PRINT Button: Select button to configure settings
- POWER LED: Indicate status of power and battery
- STATUS LED: Indicate status of printer
- AIR LED: Indicate status of the Bluetooth connection
- USB/Serial Cover: Cover for wired interface.
- Battery Cover: Cover of battery
- DC Cover: Cover for adapter and DC jack
- Paper Cover Open Button: Open paper cover
- Paper Guide: Move guide to fit paper width
- Stopper: Stopper for paper guide
- Peeler unit: Peel label

Because of the continually evolving Driver and SDK to support new mobile devices, Drivers and SDKs are distributed online and is available for download at our [website](#). For details on using the DPP-255 Drivers and SDKs, please refer to the SKD's documentation.

**5. Getting started**

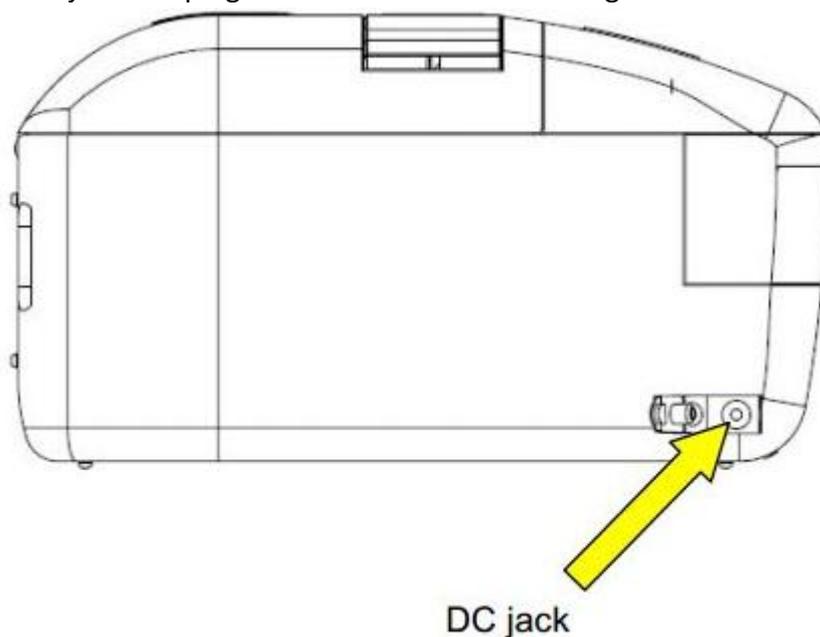
The DPP-255 allows you to print information from your PDA and Smart phone. Before using the DPP-255 thermal printer, the battery should be properly charged. The following Quick Start guide will help to get your DPP-255 ready for use.

Steps	What to do	Purpose	Where to find more information
1	Charge the DPP-255 rechargeable battery pack as recommended in this manual	The Lithium Ion battery pack should be fully charged before use to ensure long battery life	<a href="#">Charge DPP-255</a>
2.1	Load the DPP-255 print media(Thermal paper roll)	DPP-255 requires Thermal paper for printing	<a href="#">Loading paper</a>
2.2	Load the DPP-255 print media(Thermal label paper)	DPP-255 requires Thermal label paper	<a href="#">Fixing peeler</a>
3	Setup Bluetooth Paring	Setup: Bluetooth pairing to allow DPP-255 to communicate with Bluetooth devices	<a href="#">Bluetooth</a>
4	Install DPP-255 Software	To print information from your device, software needs to be installed onto your device	<a href="#">Datecs website</a>

**5.1. Charge DPP-255**

- Charging time is 3 hours from empty to full charge. When the battery is fully charged the device can print 100 m paper roll.

Insert AC adapter to DC jack and plug to consent to start the charge.



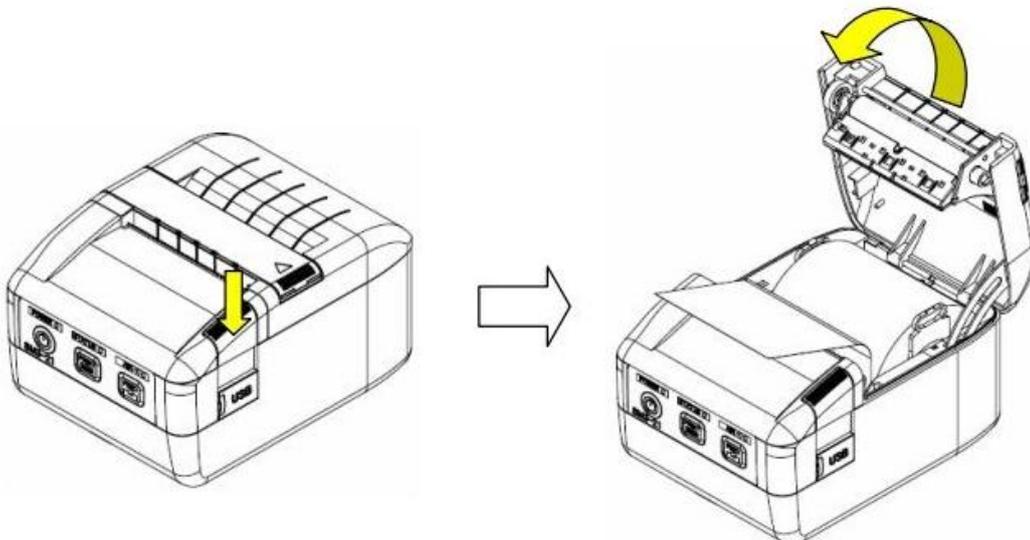
	<p>The DPP-255 uses a Lithium-Ion rechargeable battery pack. To prevent electrical damage to the DPP-255 and/or battery pack, please use approved AC Charger only.</p>
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## 5.2. Diagnostic information

- Holding FEED button while power on for ~ 0.5 sec (STATUS LED lights) – short self test
- Holding FEED button while power on for ~2.5 sec (one beep and POWER LED turns green) – start DUMP mode. All input data are printed hexadecimal and as text.
- Holding FEED button while power on for ~8.5 sec (4 tone sound signal) – enter firmware updating mode
- Holding POWER button while power on for ~2.5 sec (one beep):
- If cable is connected (RS232 communication) – temporary forcing bps serial speed to 9600
- If no cable is connected (Bluetooth communication) – starting a hardware menu for fast Bluetooth pairing info reset.
- Holding POWER button while power on for more than 6 sec(printer prints) – enter hardware menu

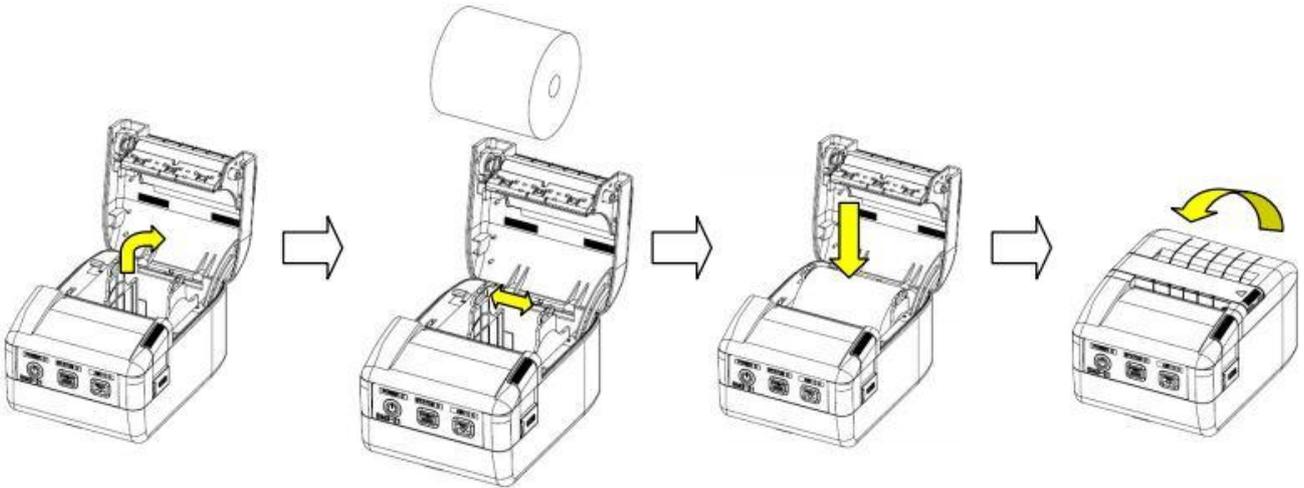
## 5.4. Loading paper

- Press the cover open button to open the paper cover

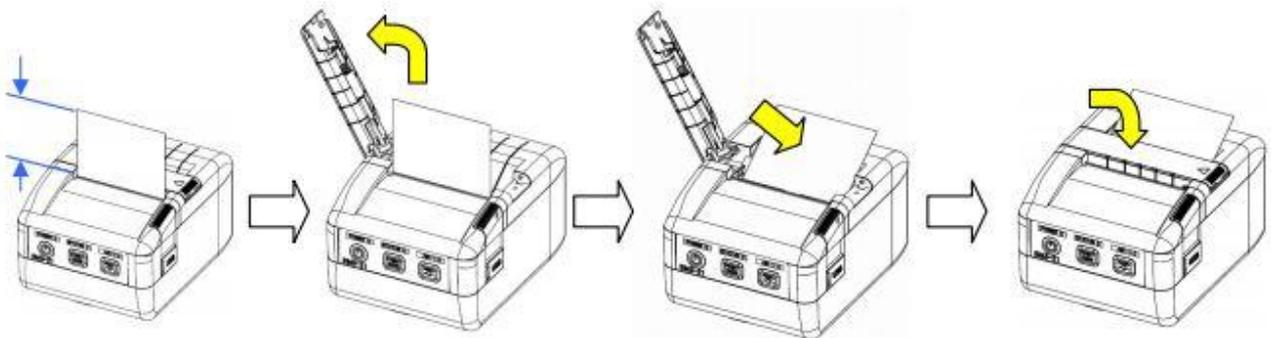


- Handle the paper cutter carefully so as not to injure fingers or hand
- As the thermal head may be very hot immediately after printing, do not touch it to avoid burning your fingers.
- Be sure that the thermal head is cool before replacing a paper

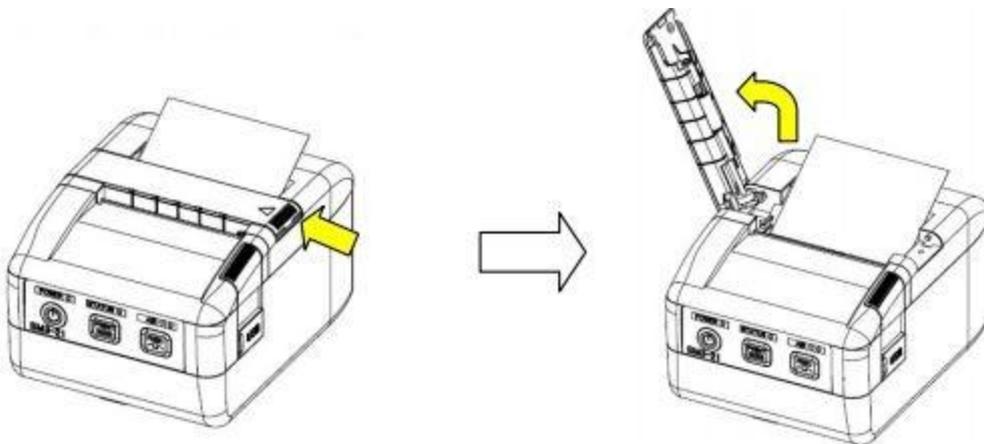
- Load the paper roll. Move paper guide to fit paper width



- Fixing peeler unit (if loading a thermal label roll)

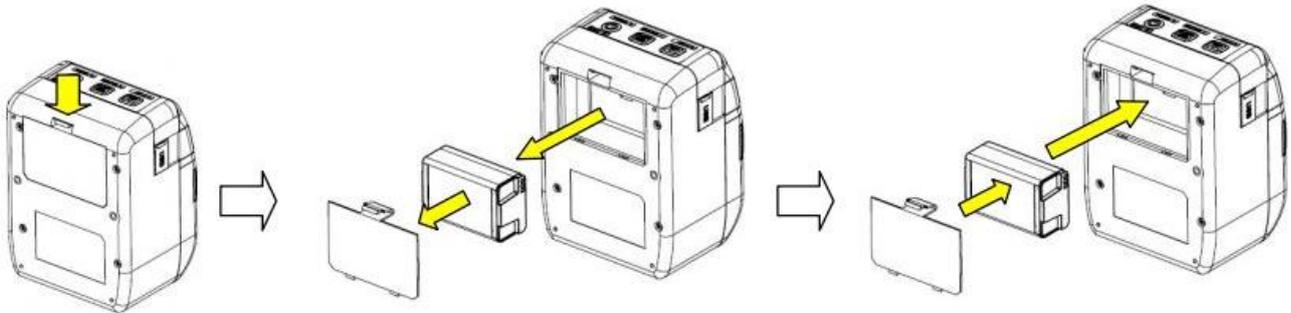


- Removing peeler unit



### 5.5 Replace battery

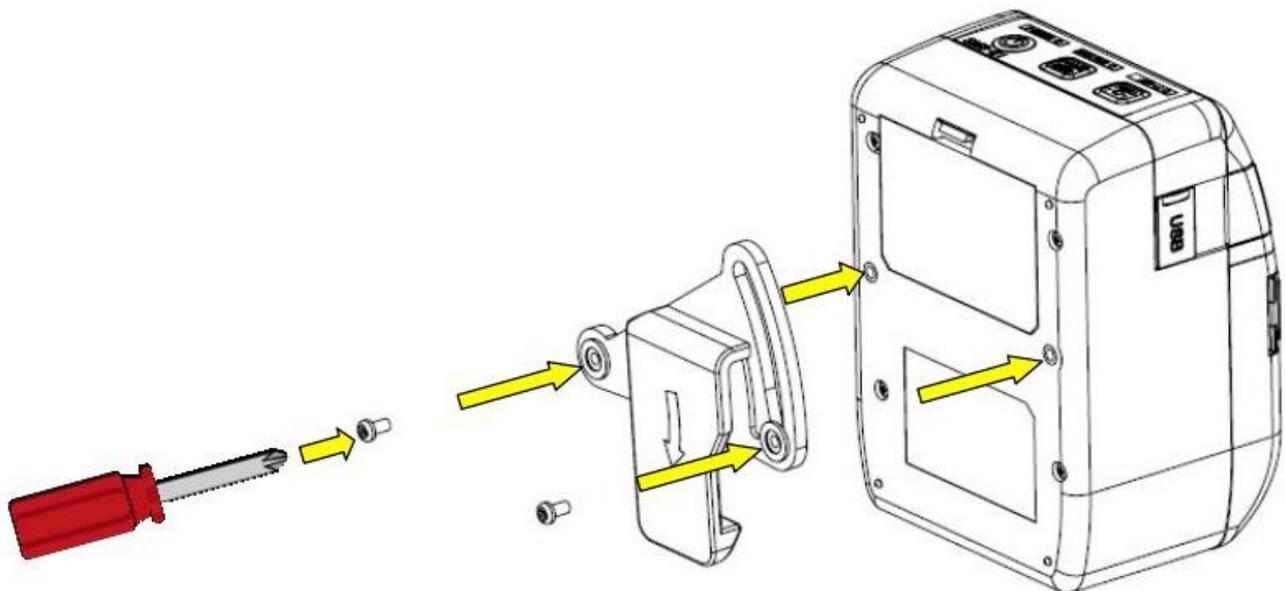
- Open battery cover.
- Eject battery.
- Put new battery pack in battery holder and close battery cover.



Battery pack no longer required mustn't be waste but be brought it to nearest electric store to recycle

### 5.6. Mount belt clip

Put screws through the holes of belt clip and fix it by screwdriver.



**6. Functions**

**6.1. Self test**

The DPP-255 has a built-in test pattern that shows the printer's current configuration as well as the various resident printer fonts. The self-test can also be used as a troubleshooting tool to determinate problems or battery level.

- Holding FEED button while power on for ~ 0.5 sec (STATUS LED lights)

```

DATECS Portable Printer
=====
MODEL DPP-255 Ver. 2.55
Interfaces: RS232/USB/BT
RS Baud rate: 115200 bps
Flow control: Hardware
BT Address: 68AAD202AEB0
BT Type: ABT
BT FW Ver: 2.10
USB mode: Device
USB class: Printer
Buffer size: 128 KB
Country: USA
Code page: Western (1252)
Black mark: Disabled
Protocol mode: Disabled
Intensity: 160 %
Auto off: 10 min
Temperature: 26°C
Date & time: Not set
Battery: 7.9V  85%
Switches:  ON/OFF
    
```

## 6.2. Page mode

In page mode the result of incoming commands is forwarded to a reserved memory area (page). The page place and size is defined using commands ESC W. Command GS T selects the print direction in this page. At the end the collected information is printed using one of the commands, provided for this. Commands ESC FF and GS FF print only the currently defined page, but command ESC Z prints the area between the first and last line containing at least one black point.

All commands except GS L and GS W work in page mode. The centering and right alignment (command ESC a) is working in the currently defined page width.

## 6.3 Ruled lines

The printer has two line buffers with size the maximum printing width (paper width in standard mode or the selected page width in page mode). When ruled lines are active, then every horizontal line of the text line is combined with the selected ruled line buffer. Bit '1' in the ruled line buffer is a black dot in OR mode and inverts the color of the dot in XOR mode. Two commands allow the ruled line buffers to be printed without combining with a text line.

When pressing the FEED button, no ruled lines buffer is applied.

All ruled lines commands start with symbol DC3 (ASCII code 13h). Please see command DC2 =, too

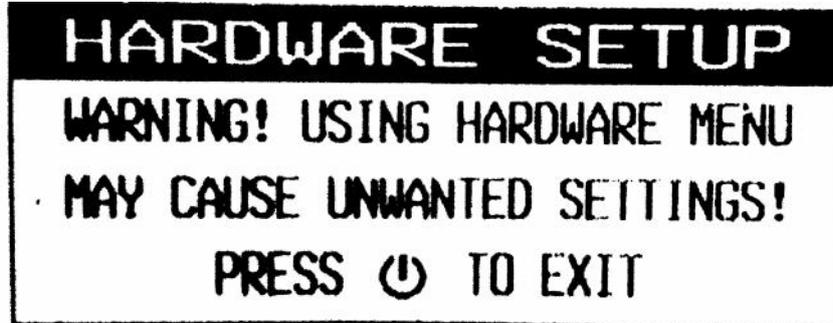
## 6.4. Protocol mode

The purpose of this mode is to give stronger real time access to the printer. All input data are sent in packets. The printer returns an answer to the packet immediately.

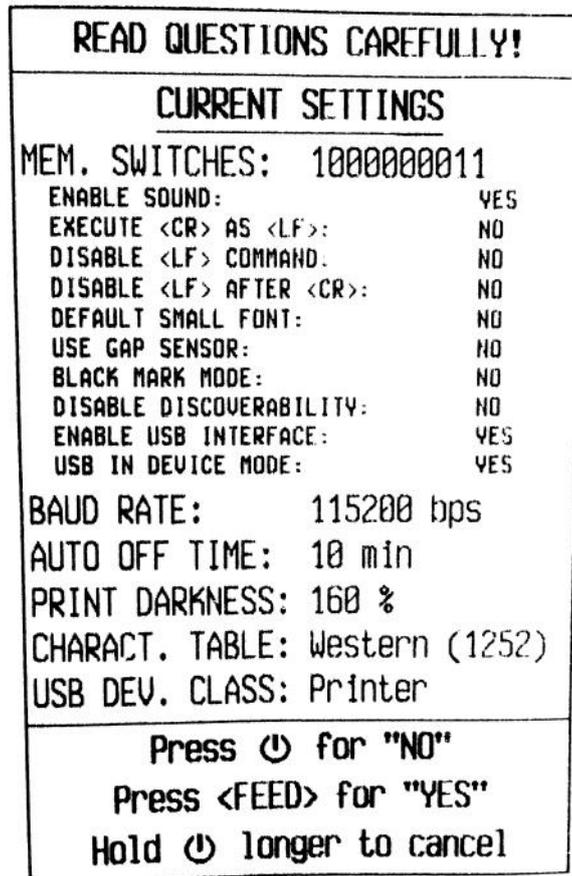
**6.5. Hardware setup**

Hardware setup allows you to switch register functions in the memory manually. Function are called up by the POWER and FEED buttons and the printer prints registered functions.

- Hold POWER button while power on for more than 6 sec(printer prints)



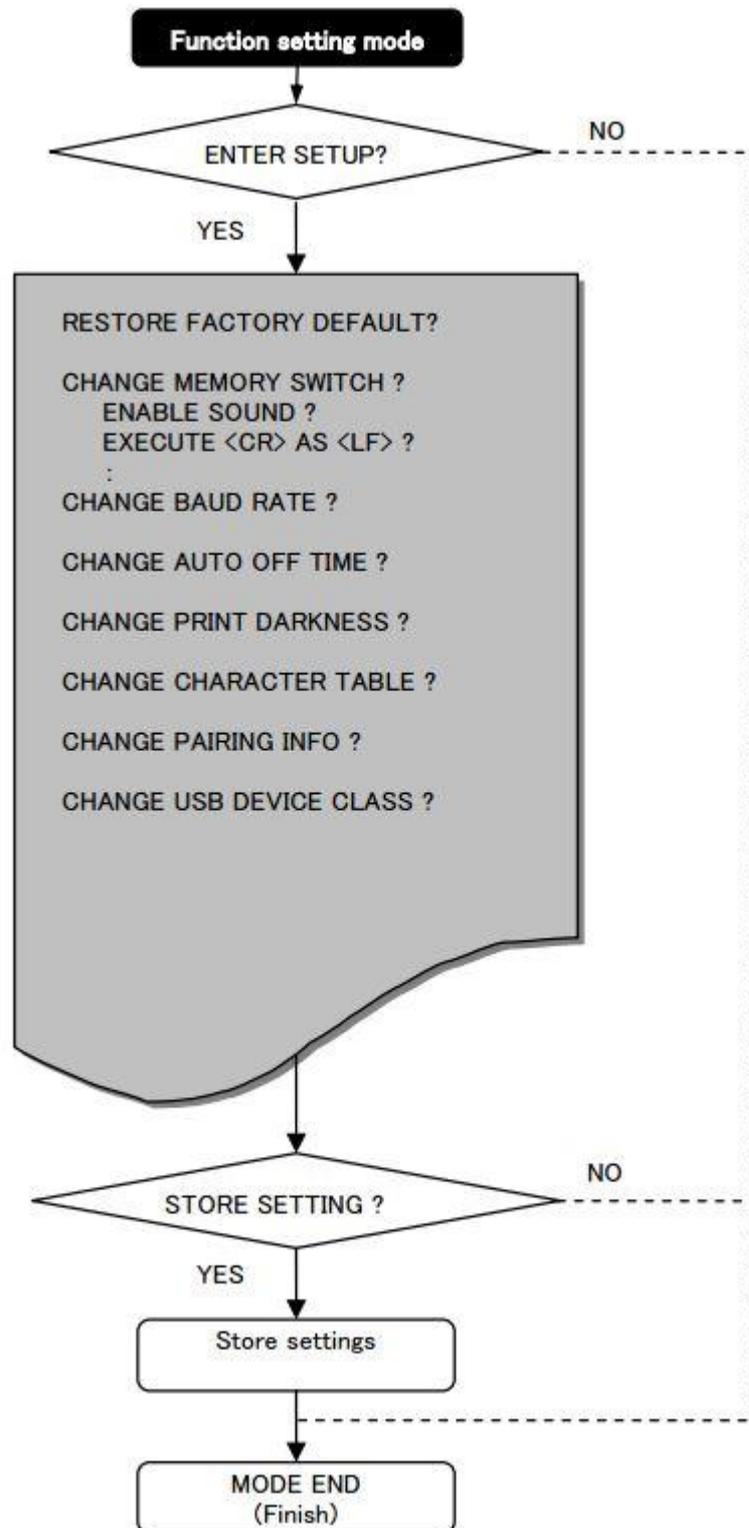
Content of memory switch is printed by pressing FEED button



**RESTORE FACTORY DEFAULTS?**

	<ul style="list-style-type: none"> <li>• YES: FEED button → Decide</li> <li>• NO: POWER button → Move to next</li> </ul>
--	--

Follow the flow chart to change the parameter. As the setting parameter is printed, choose the right parameter by manipulating the FEED and POWER buttons.  
After completing the parameters set up, data are stored and the printer turn off.



Setting Memory switches (Default settings)

- RESTORE FACTORY DEFAULTS?  
 Select reset memory switches as factory default.  
 YES: Returns to the default memory  
 NO: No action

- CHANGE MEMORY SWITCHES?

SWITCH NO	NO (Value: 0)	YES (Value: 1)
ENABLE SOUND	Buzzer OFF	Buzzer ON
EXECUTE <CR> AS <LF>	Disable CR	Enable CR
DISABLE <LF> COMMAND	Enable LF	Disable LF
DISABLE <LF> AFTER <CR>	Enable LF after CR (Only the SWITCH NO 3 = 0)	Disable LF after CR
DEFAULT SMALL FONT	FONT A(24 x 12)	FONT B (16 x 9)
USE GAP SENSOR	BM sensor	GAP sensor
BLACK MARK MODE	Disable black mark detection	Enable black mark detection
DISABLE DISCOVERABILITY	Bluetooth discovery mode	NOT Bluetooth discovery mode
ENABLE USB INTERFACE	Disable USB function	Enable USB function
USB IN DEVICE MODE	Inhibit setting	Use as a USB device

- CHANGE BAUD RATE?  
 Select baud rate  
 Value: 1200bps, 2400 bps, 4800bps, 9600bps, 38400bps, 57600bps, 115200bps

- CHANGE AUTO OFF TIME?  
 Select auto off time from stand by.  
 Value: 2min, 5min, 10min, 15min, 20min, 30min, 45min, 60min, never(disable)

- CHANGE PRINT DARKNESS?  
 Specifies the printing density.  
 Value: 60%, 75%, 90%, 100%, 120%, 140%, 160%

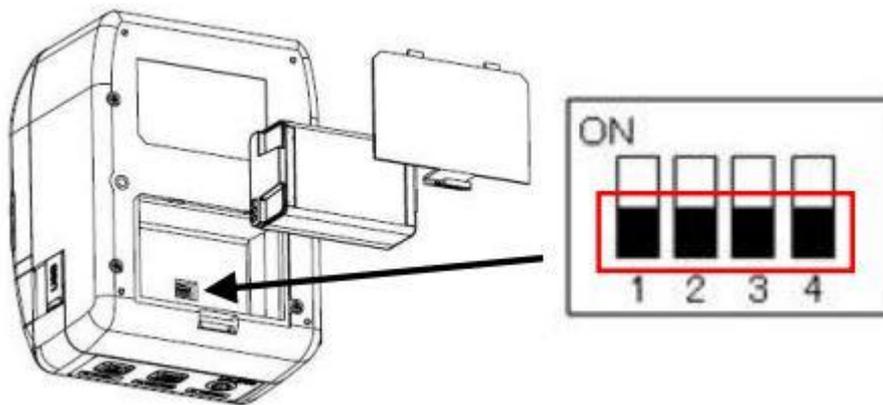
- CHANGE CHARACTER TABLE?  
 Select the ASCII character table.  
 Value: English(437), Latin 1(850), Portuguese(860), Lithuanian, Latin 2(852), Polish, Turkish(857), Baltic(775), Bulgarian(856), Russian(866), Latvian, Greek, Hebrew(862), Western(1252), CE(1250), Turkish(1254), Baltic(1257), Cyrillic(1251), Greek(1253), Hebrew(1255), Katakana, Arabic, Arabic(1256), Arabic(1256A), Arabic(1256F), Thai(874), VISCI, Azeri(1254), UTF-8, UTF-8(BiDi >>), UTF-8(BiDi <<)

- DISABLE AUTHENTICATION?  
 Select disable or enable of Bluetooth authentication.  
 YES: Disable authentication.  
 NO: Enable authentication

- **CHANGE PAIRING INFO?**  
 Select the setting for Bluetooth Pairing key  
 After selected "YES" key, goes to the settings items "SAVE PAIRING INFO".  
*There is a possible to set up this item when "DISABLE AUTHENTICATION" is set "NO".*  
**SAVE PAIRING INFO?**  
 Select whether the pairing info key is saved or not.  
 YES: Save pairing key.  
 NO: Not save pairing key.
  
- **CHANGE USB DEVICE CLAS?**  
 SELECTS device operation USB mode.  
 Value: Printer, Serial
  
- **STORE SETTIGNS?**  
 Confirm settings and selct.  
 YES: Save and exit  
 NO: Discard and exit

**6.6. DIP switches**

To use DIP-switches, it can be set to default information with hardware.  
 When the power supply turns ON, the printer reflects the default data to standby mode.



Number	Function	OFF	ON
1	DISABLE BLUETOOTH	Enable Bluetooth function	Disable Bluetooth function
2	PEELER MODE	Standard mode	Peeler mode
3	Xon/Xoff	Disable	Enable
4	PROTOCOL MODE	Disable	Enable

**6.7. LED display**

- No error signal is detected
  - Standby – It is possible to print and the printer waits for printing data
  - Initialization – Initialize printer memories. The printer goes OFFLINE during initialization. After completing initialization, the printer goes standby.
  - Status of waiting error cancellation – Printer status move to this status when some error factors like paper end etc. is removed. OFFLINE status and STATUS LED remain its status. Printer becomes standby when FEED button is pressed.
  
- Status of detecting errors
  - Temperature – The print head temperature is increased when heavy-duty printing is continuous. If the print head temperature exceeds 70 degrees °C, operation of the print head is automatically stopped to prevent overheating. The printer goes OFFLINE.
  - Paper empty – Detect the paper empty through paper end sensor. Paper runs out and the printer detects paper empty, the status LED turns On and the printer goes OFFLINE
  - Paper cover open – When the Paper cover open, the status LED turns ON ant the printer goes OFFLINE

• Status Display

LED: "GREEN" – Turn On green/ "RED" – Turn on red/ ● – Turn OFF

- No error signal is detected

STATUS	LED	
	POWER LED	STATUS LED
Standby	●	GREEN
Initializing	GREEN	RED
Waiting error cancellation	●	RED

- Error signal is detected

STATUS	LED	
	POWER LED	STATUS LED
Temperature Error (70 °C or more)	GREEN /●	RED
Battery low	●	● or GREEN (Standby) or RED (Paper empty)
Paper empty	●	RED
Paper Cover Open	●	RED

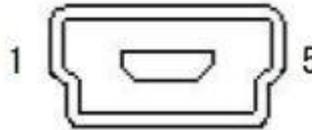
- Charge

STATUS	LED	
	POWER LED	STATUS LED
Charging	GREEN / GREEN /●	● or GREEN (Standby) or RED (Paper empty)
Initializing	GREEN	● or GREEN (Standby) or RED (Paper empty)

## 7. Interfaces

### 7.1. USB

The DPP-255 is equipped with USB version 2.0 for high speed data transfer. The device class is "Printing Device Class"



Pin	Signal	Direction	Function
1	VBUS	-	Detect connect/disconnect of USB
2	D-	I/O	USB data (-)
3	D+	I/O	USB (+)
4	N/A		
5	GND	-	GND

### 7.2. Serial

Connector: Mini-B type 10-PIN

Cable: Use specified serial cable

Pin	Signal	Function
RxD	Input	Serial data input
TxD	Output	Serial data output
GND		GND

Baud rate: 1200 to 115200bps  
 Parity: None  
 Bit length: 8 bit  
 Busy control: Software control(XON/XOFF)/None

### 7.3. Bluetooth

The DPP-255 printer is equipped with Bluetooth module obtained MFi license which can be communicated with the device of iOS including iPhone, iPod, and iPad. Besides iOS devices, Android and PC terminals can be communicated through SPP profile and the printer is widely used for electronic equipment.

PIN code: **0000**

	<p>1) If 1Mbytes or larger data are sent to the printer during BT communications, the printer buffer becomes over loaded and it causes the printer not to print properly.</p> <p>2) It is recommended to change the default PIN code of the printer.</p> <p>3) In case of interference occurred at the circumstance, turn off the power of interrupted devices or move the place where is not influences.</p>
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**7.4. Wi-Fi**

	Contents	Items
Hardware	Wi-Fi standard	IEEE 802.11b
	Speed rate	Max. 11Mbps
	Chanel	CH 1 to 13
	Security	64/128 WEP, WPA-PSK, WPA2-PSK
Software	Wi-Fi protocol	TCP, IP, SOCKET, ARP, RAPP
	Port	1 to 9999(default 9100)
	Mode	Infrastructure, Adhoc
	SSID	Alphanumeric character, SP, -, _, Max 32 columns of character string
	IP address setting	Fixed IP or DHCP
	IP address	0.0.0.0 to 255.255.255.255
	Subnet Mask	0.0.0.0 to 255.255.255.255
	Gateway	0.0.0.0 to 255.255.255.255

	<p>1) If 270 Kbytes or larger data are sent to the printer during Wi-Fi communications at once, the printer buffer becomes over loaded and it may not be printed properly.</p> <p>2) For secure the system, set up WPA2 or other setting for security.</p> <p>3) Refer to the setting guide for communication and security</p> <p>4) In case of interference occurred at the circumstance, turn off the power of interrupted devices or move the place where is not influences.</p>
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## 8. Maintains

Periodically clean the printer to maintain the printing quality and avoid failures.

Roll Paper: It is recommended to maintain the printer every 6 months or 1 million lines of printing.

Label Paper: It is recommended to clean up the printer head and roller everyday or every five rolls.

➤ Thermal head

When cleaning the thermal dot line on the print head, use a cotton swab with alcohol (ethanol, methanol or Isopropyl alcohol) and wipe off stains and dust.

➤ Paper feed roller

When cleaning the paper feed roller and peeler roller, use a cotton swab with alcohol (ethanol, methanol or Isopropyl alcohol) and wipe off stains and dust while rolling the roller. Isopropyl alcohol is available to wipe deposited dirt.

➤ Sensor and peripherals

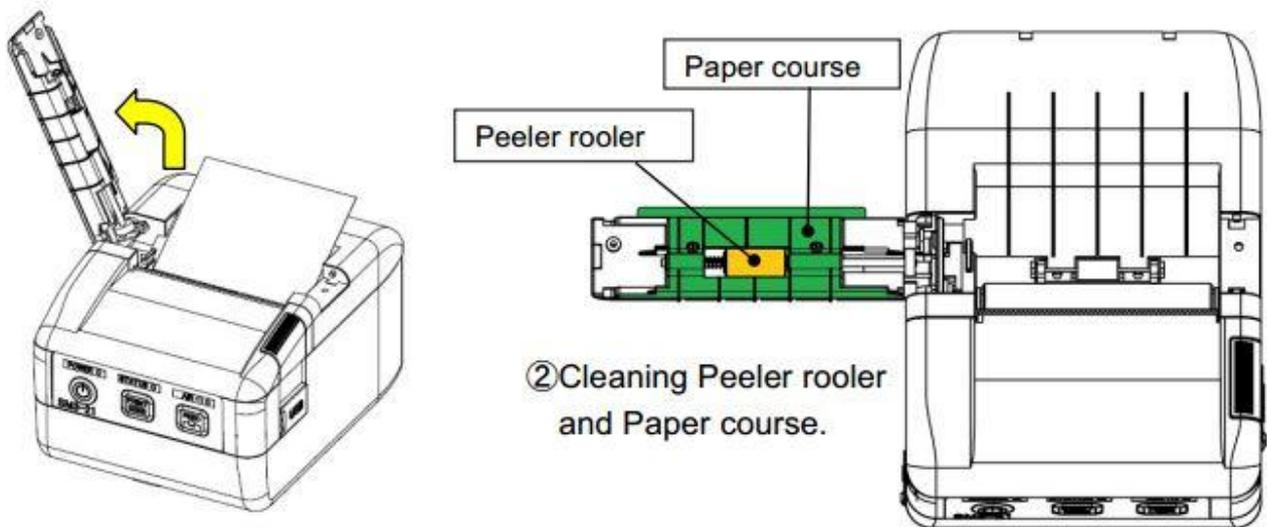
Clean the stain, dust and paper powder on the paper empty sensor and paper cover sensor.

➤ Peeler Unit

It's necessary for using continuously and smoothly to clean accumulated residue of paste from peeler unit as shown below, or the unit won't work because of the residue.

If the sign appeared, please clean up peeler unit.

Indication of regular cleaning is once per five rolls.



① Open the peeler Unit



- Prior to maintenance work, be sure to turn OFF the printer.
- Avoid cleaning the print head immediately because the print head is hot. Start maintenance work after the thermal head becomes cool.
- Do not touch the print head with fingers directly. It may cause damage by electrostatic discharge and contamination.
- Do not touch the thermal head dot line with bare hands or metal objects.
- Do not use volatile chemical agents, such as thinner and benzene.
- Do not get moisture or spill liquids inside of the printer.
- Turn ON printer only after alcohol is completely dried.

For maintenance and service, please contact you Datecs local distributor.