

DP-641 Series

Operator's Manual



www.dascom.com



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 the 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.

This equipment complies with Canadian and FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Part 15.21 Caution: Changes or modifications not expressly approved by Dascom could void the user's authority to operate the equipment.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

IC warning

- English:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

Canadian Department of Communications Radio Interference Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference; 2) this device must accept any interference, including interference that may cause undesired operation of the device. Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. Maximum power output plus maximum antenna gain of the EUT is: 4.5W/m², Limit is 10W/m².

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante. La puissance de sortie maximale plus gain d'antenne maximal du EUT est : 4.5W/m² Limite est 10W/m²



This device fulfils the European standards requirements by complying with the Directive relating to electromagnetic compatibility and relating to low-voltage electrical equipment. Furthermore, it fulfils the requirements for RoHS and RED if applicable.

Conformity with the above-mentioned Directives is indicated by the CE symbol attached to the device.

Note: Conformity may be affected by:

- using interface cables not complying with the specifications
- non-observance of important instructions in the operator's manual
- installing components not approved for this device by the manufacturer
- unauthorized manipulation



Dieses Gerät erfüllt die Anforderungen der Europäischen Normen durch Einhaltung der Richtlinien bezüglich der Elektromagnetischen Verträglichkeit sowie bezüglich Elektrischer Betriebsmittel mit Niederspannung. Des Weiteren werden die Anforderungen bezüglich RoHS und falls anwendbar RED erfüllt.

Die Konformität zu den oben angeführten Richtlinien ist durch das am Gerät angebrachte CE-Zeichen gekennzeichnet.

Hinweis: Die Konformität kann beeinflusst werden durch:

- Benutzung von nicht spezifizierten Schnittstellen
- Nichtbeachtung wichtiger Hinweise der Bedienungsanleitung
- Ersetzen von Bauteilen, die nicht vom Hersteller für dieses Gerät freigegeben wurden
- Eingriffe durch Unbefugte



This device complies with the requirements of the United Kingdom (UK) legislation of Electrical Safety Regulations, Electromagnetic Compatibility Regulations, if applicable the Radio Regulations and the Restriction of the Hazardous Substances in Electrical and Electronic Equipment Regulations.



(Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.)

Battery Disposal

Only dispose of used batteries according to your local regulations. If you do not know your local regulations, the Rechargeable Battery Recycling Corporation (RBRC) is a non-profit organization created to promote recycling of rechargeable batteries. For more information visit www.rbrc.org.



Acknowledgments:

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Zebra, CPCL and ZPL are registered trademarks of Zebra Technologies

Wi-Fi is a registered trademark of the Wi-Fi Alliance

Windows is a registered trademark of Microsoft Corporation

All other trademarks are the property of their respective owners.



Read all set up and operating instructions before proceeding with operation. Do not operate in an enclosure unless properly ventilated. Do not operate near a heat source.



Lesen Sie vor der Inbetriebnahme die Aufbau- und Bedienungsanleitung. Betreiben Sie den Drucker nicht in einem kleinen, geschlossenen Raum, es sei denn dieser wird ordnungsgemäß belüftet. Nehmen Sie den Drucker nicht in der Nähe einer Wärmequelle in Betrieb.



No user-serviceable parts inside. Refer service or repairs to a qualified service professional. Use of genuine Dascom replacement parts is required to warrant proper, safe operation. Any alteration or modification of this device voids the user warranty and may make the product unsafe to operate. The print head and motors get hot during use. Wait until they cool before touching them. Make certain the printer is disconnected from AC power before removing any covers or performing any required cleaning or maintenance. Connecting this printer to an ungrounded receptacle can result in electrical shock. Never place the printer near inflammable or explosive substances. Do not operate near liquid or spill liquid into the printer at any time.



Enthalten keine Teile, die vom Bediener instandgesetzt werden können. Bitte wenden Sie sich bei Instandsetzung oder Reparatur an qualifiziertes Kundendienstpersonal. Die Verwendung von echten Dascom Ersatzteilen ist notwendig, um ordnungsgemäßen, sicheren Betrieb zu gewährleisten. Änderungen oder Modifikationen dieses Geräts machen die Garantie ungültig und können den sicheren Betrieb des Produkts gefährden. Während des Druckens werden Druckerkopf und Motoren heiß. Warten Sie, bis sich die Teile abgekühlt haben, bevor Sie sie berühren. Vergewissern Sie sich, dass der Drucker nicht mehr an die Stromquelle angeschlossen ist, bevor Sie Abdeckungen abnehmen oder das Gerät reinigen bzw. warten. Schließen Sie diesen Drucker nicht an eine ungeerdete Steckdose an; dies kann zum Elektroschock führen. Setzen Sie den Drucker niemals in die Nähe von feuer- oder explosionsgefährlichen Stoffen. Betreiben Sie den Drucker nicht in der Nähe von Flüssigkeiten und lassen Sie keine Flüssigkeiten in den Drucker gelangen.

Specifications are subject to change without notice.

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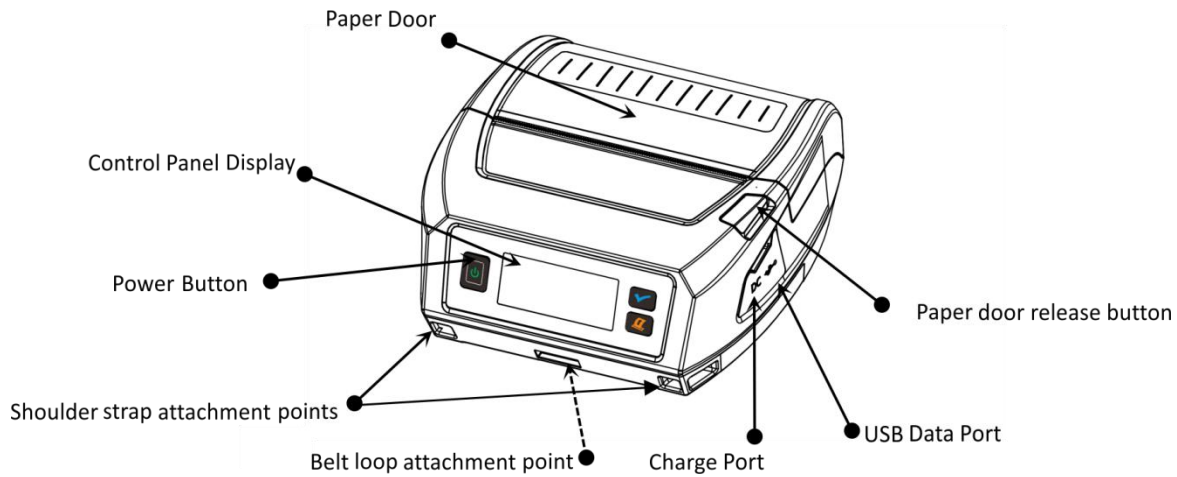
Introduction

Thank you for purchasing the DP-641 Series mobile thermal printer also referred to in this manual as the “DP-641”. The DP-641 series prints on special thermal media supplied in roll form up to 4.1 inches wide. All models are equipped with a USB port which supports cabled communications. All models support an optional internal Bluetooth or Wi-Fi interface. Complete specifications may be found in [Appendix A – DP-641 Printer Specifications](#).

The remainder of this manual focuses on preparing the printer for initial use and performing tasks that will be encountered during daily use.

[Maintenance and Troubleshooting](#) describes how to maintain the printer for optimal performance and has information on how to diagnose any problems that may occur.

Printer Features



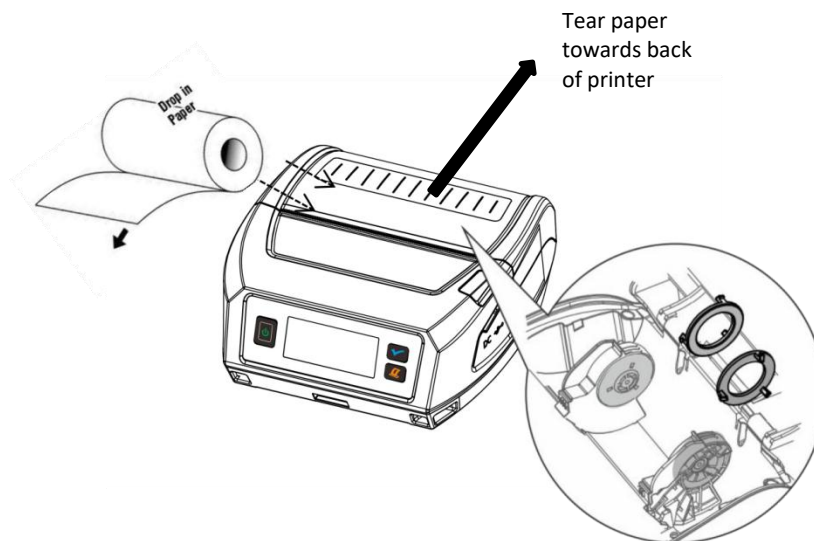
Your DP-641 features:

- Easy-to-read control panel and simple centered paper holding.
- Quickly prints a wide variety of tickets, and receipts.
- IP54 rated for water and dust resistance and IEC 68-2 certified for repeated 6-foot drops to concrete.
- Print speeds up to 6 ips.
- Extensive fonts, character sets, bar codes and graphic capabilities
- Printer configuration is quick and easy with a web-based interface and on board LCD display.
- The latest in battery technology provides for full-shift printing in all modes.
- Compatible with Windows, Windows Mobile, Apple iOS, and Android.
- Emulations that allow the printer to be a drop-in replacement for nearly any mobile printer.
- Fast 2 hour charging via USB C charge port.

For detailed specifications reference [Appendix A – DP-641 Printer Specifications](#).

Quick Start Instructions

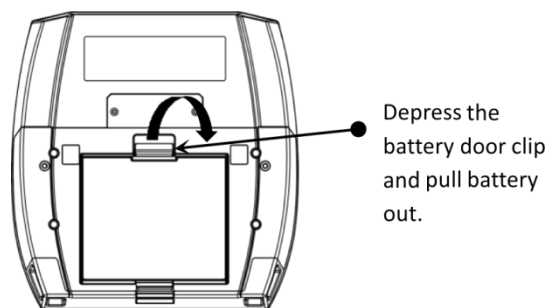
A. Paper Load



Press Paper door release button to open the paper compartment door. Insert roll into paper holding lining up the media roll core with the core holder. Pull small leader of paper out and close paper door.

“Clicks” when properly closed. Dual serrated tear edges allow you to tear towards front or back.

B. Battery Installation



The battery icon on the display will indicate the battery level.

Disposal

Please dispose the batteries separately and free of cost at your sales agency or the designated local collecting points. Therefore, please consider the national recycling standards! Disassembly and removal of the batteries are described in the User Guide.



C. Charge Battery





Uncover the printer ports and plug in your AC power adapter to the Power port (must be a Dascom-supplied accessory). The yellow LED will show solid ON while the printer battery is charging.




D. Power On

Depress and hold the Power button for 3 seconds on the control panel. The display will turn on. The Power LED will turn green (about 20 seconds) after the printer has passed its internal testing and is ready to print.

E. Control Panel

POWER & PAPER FEED	FUNCTION	HOW TO:
 Power Button	Power up & Power down	Press & hold for ~ 3 seconds
	Access Web page *	Press 2 times to enter Press 2 times to exit
 Paper feed button	Advance paper	Press and hold
	Self-test print	Press 2 times rapidly

DISPLAY NAVIGATION:	FUNCTION	HOW TO:
 Menu button	Menu set up	Press 1 time
 Paper feed button	Scroll down	Press to scroll down
 Menu button	Select category	Press 1 time
	Scroll up	Press 1 time.
 Power button	Save setting	Press 1 time
	Go back	Press 2 times
	Return to main menu	Press 3 times

Power & Status (Green) 	Power & Status (Yellow) 	Power & Status (Red) 	Indication
On	Off	Off	Power supplied by battery
On	Off	Off	Power supplied by adapter
Off	On	Off	Charging battery
Off	Off	On	Booting up
Off	Off	On	Power on/off
Off	Off	On	Battery failure
Flashing (If no battery is charged)	Flashing (If battery is being charged)		Config mode

F. Performing a Printer Self-Test




With power on, press the paper feed button twice quickly. This will print a configuration page from the printer

Configuration


Configuration of the DP641 printer is done through a built-in web page or via on board LCD display.


A. LCD Based Configuration

Push the Check button  to enter the Configuration menu.

Push the Paper Feed button  to scroll through the menu selections.

Push the Check button  to enter the menu.

Push the Paper Feed button  to change the value.

Push the Power button  to return to the previous screen.

B. Control Panel Setting Descriptions (* = default setting)

System Config		
LCD Contrast	Adjust LCD brightness	1*,2,3,4,5
Menu Login	Turns menu login on or off	ON / OFF*
MENU login PW	Set login password	0000* Check Mark button to select. Paper Feed button to change value. ON/OFF button to save changes.

Image Config		
Emulation	Allows for use of different types of print jobs to be sent to the printer	ESCPOS*, ZPL, AUTOIMAGE, PDF, POSTSCRIPT, IMAGE, PRINTEK, CPCL
<i>The following settings are dependent on the emulation selected</i>		
Encoding	Selects different text encoding	GB18030*, UNICODE, UTF-8
Font Type	Selects different font sets	Font A*(12*24), Font B(9*17), Customize
Letter Shape		Art Style*, SimSun, Mono
Digit Shape		Normal*, Bank Style, OKI Digit
Chinese Font Type		Font A*(12*24), Font B(9*17), Customize

Character Type	Selects character type	Chinese Character Set*. many options available
Line Spacing	Sets spacing between lines	30 Unit:point* (user adjustable)

Device Config		
Login Password(web page only)	Sets web page login	0000*, user selectable. Length must be less than or equal to 8
<i>Form -</i>		
Units	Selects English or metric measurement	Inch*, mm
Max paper speed	Selects print speed	1ips, 1.5ips, 2.0ips, 2.5ips, 3.0ips, 3.5ips, 4.0ips, 4.5ips, 5.0ips, 5.5ips, 6.0ips*
Mark seek	Selects type of paper	Rollpaper*, front, rear, gap
Paper Sensor Threshold	Adjusts black mark sensor	0 - 100%. 50%*
Backup Distance Before Printing	Retracts the paper/label before printing	0* – 0.47 inches
Feed Distance After Printing	Advances paper after printing	0 inches*
Display Sleep	Light sleep – turns off display information	30 seconds, 60 seconds*, 120 seconds, 300 seconds, 600 seconds, Disabled
Left Margin	Moves the print on the page	-2.0 – 2.0 inches. 0 inches default
Contrast	Sets darkness of print	1-32. 16*
PaperSize	Selects paper size used	2-4 inches. 4 inch*
<i>Sleep Config -</i>		
Display Sleep	Set time display will dim after last print job	30 seconds, 60 seconds*, 120 seconds, 300 seconds, 600 seconds, Disable
Power Off	Sets time printer will power off after last print job	30 minutes, 60 minutes*, 90 minutes, Disabled

BT Config		
On/off	Turn Bluetooth on or off	On, off
BT Address	Displays Bluetooth MAC address	Information only. Cannot be changed by end user
BT Pin	Display/change BT Pin	0000* Check Mark button to select. Paper Feed button to change value. ON/OFF button to save changes.

BT Name	Display BT name	Information only. Name can be changed through web configuration page.
BT Paired Mode	Display BT Paired Mode	Paired*, Unpaired
BT Discover	Set for printer to be seen by other Bluetooth devices	ON*,OFF

Wireless Config		
ON/OFF	Turn WI-FI interface on or off	ON*,OFF
Wireless method	Select Wi-Fi mode	Access point*, Static, DHCP
IP ADDRESS	Display IP ADDRESS	Information only. Can be changed in web configuration page. Static mode only.
NETMASK	Display NETMASK	Information only. Can be changed in web configuration page. Static mode only.
Gateway		Information only. Can be changed in web configuration page. Static mode only.
SSID	Display SSID	Information only. Can be changed in web configuration page.
WIFI PORT	Display WIFI PORT	Information only. Can be changed in web configuration page.
WIFI MAC	Display WIFI MAC	Information only. Cannot be changed by end user

About		
Model	Display printer model	Information only. Cannot be changed by end user
SN	Display printer SN	Information only. Cannot be changed by end user
Vkernel	Display printer vkernel	Information only. Cannot be changed by end user
Vpsw	Display printer vpsw	Information only. Cannot be changed by end user
Vcsw	Display printer vcsw	Information only. Cannot be changed by end user
Vfpga	Display printer vfpga	Information only. Cannot be changed by end user

Reset printer		
Do not reset	Will not reset any printer settings	Push POWER button
Reset all settings	Resets all settings to factory default	Push POWER button
Reset image cfg	Resets Image Config menu items to factory defaults	Push POWER button
Reset device cfg	Resets Device Config menu items defaults	Push POWER button
Reset bt cfg	Resets Bluetooth Config menu items defaults	Push POWER button
Reset wifi cfg	Resets Wireless Config menu items defaults	Push POWER button

BAT INFO		
CAP	Display remaining battery capacity	Information only
TEMP	Display battery temperature	Information only
STAT	Display battery status	Discharging, charging, FULL, unknown

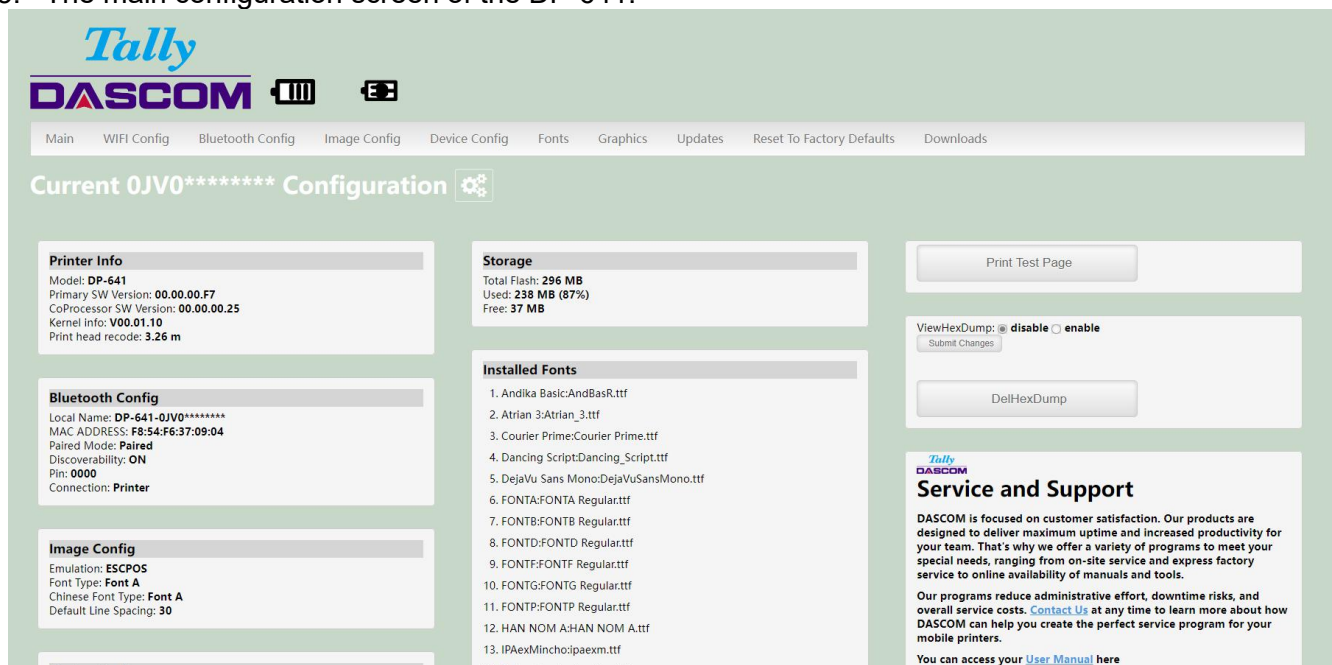
C. Web Based Configuration

1. Turn the printer ON.
2. Connect a USB cable between the printer and a PC.
3. To access the DP641 web page, push the Power button twice rapidly. This will put the printer into Configuration mode.
4. When the printer is in Configuration mode the POWER LED will flash.
 - a. Open browser on your PC and type **169.254.200.1** into the address bar of the browser and hit Enter - A login box should appear:



b. Type “0000” and hit Enter- you should now be at the home page for DP-641 Configuration.

5. The main configuration screen of the DP-641:



This is an overview of the printer configuration.

To return the printer to normal operating mode, double-click the Power button. The POWER LED will be returned to a solid light.

At the top of the Main Page are selections to access the sub-menus.

D. Connectivity Parameters

This page allows you to set up the connection to your printer. In the detailed descriptions, an asterisk (*) indicates the factory default value.

Wireless (WI-FI) Configuration


This will display the current Wi-Fi configuration. The default setting for Wireless connection is Access Point mode. The default pass phrase is DASCOM123.

WIFISat ON* OFF –

Allows wireless connection(WI-FI) to be turned on or off

Access Point* –The printer will broadcast itself as a network connection. The default SSID will be the serial number of the printer. When connecting to the printer, the default passphrase is DASCOM123.

Main	WIFI Config	Bluetooth Config	Image Config	Device Config	Fonts	Graphics	Updates	Reset To Factory Defaults	Downloads
------	-------------	------------------	--------------	---------------	-------	----------	---------	---------------------------	-----------

Wireless Configuration 	
WIFISat	<input checked="" type="radio"/> ON <input type="radio"/> OFF
IP Address	<input type="text" value="169"/> <input type="text" value="254"/> <input type="text" value="200"/> <input type="text" value="1"/>
SubnetMask	<input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="0"/> <input type="text" value="0"/>
Gateway	<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>
SSID	<input type="text" value="DP-641-0JV0*****"/>
passphrase	<input type="text" value="DASCOM123"/>
Address Method	<input type="radio"/> Static <input type="radio"/> DHCP <input checked="" type="radio"/> Access Point
Printer Name	<input type="text" value="DASCOM"/>
Wifi Port	<input type="text" value="8023"/>
<input type="button" value="Submit Changes"/> <input type="button" value="Discard Changes"/>	

Static – printer will always connect to the network using the IP address defined.

Wireless Configuration

WIFIStat

☒ ON ☐ OFF

Address Method

☐ Static
☒ DHCP
☐ Access Point

Printer Name

DASCOM

Wifi Port

8023

Submit Changes

Discard Changes

Current Connection

bssid	ssid	id	mode	pairwise_cipher	group_cipher	key_mgmt	wpa_state	ip_address
a0:f3:c1:ab:de:a2	Testing	0	station	NONE	NONE	NONE	COMPLETED	192.168.10.4

show details

hide details

Previously Connected Networks


Network ID	SSID	BSSID	Status	Connect/Disconnect	Remove
0	Testing	any	[CURRENT]	<div>Disconnect</div>	<div>Remove</div>

Available Networks


BSSID	Frequency	Signal Level	Flags	SSID	Add/Connect
c8:9e:43:5c:fa:9b	2452	-27	[WPA2-PSK-CCMP][WPS][ESS]	Printek1	<div>Add/Connect</div>
c8:9e:43:5c:fa:9a	5220	-40	[WPA2-PSK-CCMP][WPS][ESS]	Printek1-5G	<div>Add/Connect</div>
d4:5d:df:98:1c:c8	2412	-65	[WPA2-PSK-CCMP][WPS][ESS]	CBCI-C512-2.4	<div>Add/Connect</div>

DHCP – printer will acquire an IP address from your network DHCP server.


If Static or DHCP are selected, the printer will display available access points:

Wireless Configuration 


WiFiStat	<input checked="" type="radio"/> ON <input type="radio"/> OFF
Address Method	<input type="radio"/> Static <input checked="" type="radio"/> DHCP <input type="radio"/> Access Point
Printer Name	<input type="text" value="DASCOM"/>
Wifi Port	<input type="text" value="8023"/>

Current Connection 

bssid	ssid	id	mode	pairwise_cipher	group_cipher	key_mgmt	wpa_state	ip_address
a0:f3:c1:ab:de:a2	Testing	0	station	NONE	NONE	NONE	COMPLETED	192.168.10.4

Previously Connected Networks 

Network ID	SSID	BSSID	Status	Connect/Disconnect	Remove
0	Testing	any	[CURRENT]	<input type="button" value="Disconnect"/>	<input type="button" value="Remove"/>

Available Networks 

BSSID	Frequency	Signal Level	Flags	SSID	Add/Connect
e8:9e:43:5c:fa:9b	2452	-27	[WPA2-PSK-CCMP][WPS][ESS]	Printek1	<input type="button" value="Add/Connect"/>
e8:9e:43:5c:fa:9a	5220	-40	[WPA2-PSK-CCMP][WPS][ESS]	Printek1-5G	<input type="button" value="Add/Connect"/>
d4:5d:df:98:1c:e8	2412	-65	[WPA2-PSK-CCMP][WPS][ESS]	CBCI-C512-2.4	<input type="button" value="Add/Connect"/>

IP Address – user defined. If Static Address Method is selected, type in the address the printer will use on the network.

SubNetMask – user defined. If Static Address Method is selected, type in the subnet mark of the network.

GateWay – user defined. If Static Address Method is selected, type in the gateway address of the network.

WiFi Port – user defined. Type in the IP port to be used by the printer. (default value = 8023)

Address Method – user selectable

Available Networks – access points detected by the printer will be displayed. Select Add/Connect to use one of these access points.

Previously Connected Networks – access points detected by the printer or added through Add/Edit Network will be displayed. Select Connect to use one of these access points or Remove to delete it from printer.

Currently Configured Networks – access points added through Add/Edit. They may not have been connected yet. Select Remove to delete access point from printer.

Set Date – Some Enterprise network connections require this setting. Simply enter the current year.

Add/Edit Network

Enter the SSID of a network connection. If authentication is used select the authentication type. Click Next. The following form will change depending on the authentication type:

WPA-PSK

Enter the password for the network connection.

The screenshot shows the 'Add/Edit Network' form with the 'Key Management Protocol' set to 'WPA-PSK'. The 'Network Name' field contains 'Test1'. A 'Next' button is visible. Below these fields is a large 'Password' input field. At the bottom are 'Submit Changes' and 'Discard Changes' buttons.

WPA-EAP or IEEE8021X

These are Enterprise network settings. Consult your server manual for recommended settings.

The screenshot shows the 'Add/Edit Network' form with the 'Key Management Protocol' set to 'IEEE8021X'. The 'Network Name' field contains 'Test2'. A 'Next' button is visible. Below these fields is an 'EAP' section with a 'TTLS' dropdown. This is followed by two columns of fields: 'Phase1' and 'Phase2' (both dropdowns), 'Identity' and 'Anonymous Identity' (text inputs), 'Password' (text input), 'Private Key Password' and 'Private Key2 Password' (text inputs), and a bottom section with 'CA Certificate File', 'Client Certificate File', and 'Private Key' (all dropdowns), followed by 'CA2 Certificate File', 'Client2 Certificate File', and 'Private Key2' (all dropdowns). At the bottom are 'Submit Changes' and 'Discard Changes' buttons.

Upload Digital Certificate

If your enterprise network uses digital certificates as another form of authentication, you can upload the certificates here.

NOTE : Be sure to click the “Submit Changes” button at the bottom of the list to save any settings.

Bluetooth Config:

Main WIFI Config Bluetooth Config Image Config Device Config Fonts

Bluetooth Config

BTStat
☒ ON ☐ OFF

Local Name

MAC ADDRESS: **F8:54:F6:37:09:04**

Paired Mode
☐ UnPaired ☒ Paired

Discoverability
☐ Off ☒ On

Pin

Connection
☒ Printer ☐ Personal Area Network

BTStat: ON* - OFF

Allows Bluetooth interface to be turned on or off

Local Name: DP641-(serial number)

This is the name that is broadcasted when the Bluetooth connection is turned on.

Paired Mode:

Possible values: UnPaired, Paired*

This feature allows Bluetooth pairing to occur between the printer and the connecting device whenever Pairing is required by either device. Pairing requires that the PIN on the printer and the connecting device exactly match each other.

Discoverability:

Possible Values: Off, On*

This feature is used to set whether the printer may be discovered by other Bluetooth devices.

PIN:

Possible Values: 0000*, Up to 16 Numeric Characters.

Note that this feature is only available if Pairing Mode is set to "Paired". The PIN value must exactly match the PIN value set in the Bluetooth manager on the host computer.

Connection:

Possible Values: Printer*, Personal Area Network

This feature selects the role of the printer's interface in the Bluetooth network.

In Printer mode, the printer behaves as a regular Bluetooth device.

In Personal Area Network mode, the printer behaves similar to a Wi-Fi access point.

The Power LED will flash off every two seconds while in this mode.

After pairing with the printer, the host Bluetooth icon will appear different, indicating that an access point is present.



Some hosts require an extra connect step after pairing. After connecting, the printer will issue an IP address to the host and the host can communicate to the printer as if it were a Wi-Fi printer. The printer's address to the host is always **169.254.200.1**.

In the host device's browser (if equipped) this address may be entered in the address bar to access the printer web page.

NOTE : Be sure to click the "Submit Changes" button at the bottom of the list to save any settings.

E. Image Parameters

This page allows you to make selections about the image to be printed.

Image Config	
Encoding	<input checked="" type="radio"/> GB18030 <input type="radio"/> UNICODE <input type="radio"/> UTF-8
Current Emulation	ESCPOS
Font Type	Font A Font A: 12*24 Font B: 9*17
Letter Shape	Art Style
Digit Shape	Normal
Chinese Font Type	Font A Font A: 24*24 Font B: 32*32
Character Type	Chinese Character Set
Default Line Spacing	30 Unit:point

Submit Changes Discard Changes

Current Emulation:

Possible Values: ESCPOS*, PRINTEK, ZPL, CPCL, AUTOIMAGE, PDF, POSTSCRIPT, IMAGE

The DP-641 printer is capable of using several different emulation modes. This feature sets the family of printer commands that may be used by a host application program to control the various capabilities of the printer. The printer will only respond to commands valid for the currently selected emulation. For more information, please refer to the *Integrator's Guide*.

Besides the popular printer languages to choose from, the following selections allow the DP-641 to print many other file formats directly, without the need for a driver.

AUTOIMAGE – selected when mixed PDF and POSTSCRIPT images are sent to the printer. The printer will determine which type of file has been sent. This can increase printer response time.

PDF – When in this mode the printer will directly print Portable Document Files (PDF).

POSTSCRIPT – When in this mode the printer will directly print Postscript formatted files (.ps). You can also use a generic Postscript driver to print when in this mode.

IMAGE – selected if just image files are being sent to the printer. When in this mode the printer will directly print the following file types: .png, .jpg, .bmp.

Default Font: (depends on emulation selected)

The DP-641 has the ability to use True Type Fonts. All True Type Fonts loaded into printer memory are listed here. When using emulations that do not specify the font for each line of text, select the font you would like to use as the default font. All print jobs will use the default font unless a command is sent to the printer to use another font.

Chars Per Inch and Default Text Line Spacing:(depends on emulation selected)

This determines how large the characters are and how many characters will print in a one inch space. The higher the number, the greater the number of lines per vertical inch of print.

NOTE : Be sure to click the “Submit Changes” button at the bottom of the list to save any settings.

F. Device Config

This page allows you to set certain hardware parameters on the printer.

Main
WIFI Config
Bluetooth Config
Image Config
Device Config
Fonts
Graphics
Updates

Device Config

Login Password

Length must be less than or equal to 8

Form

Units	<input type="text" value="inch"/>
Max Paper Speed	<input type="text" value="5.0"/> inches per sec.
Mark Seek	<input checked="" type="radio"/> RollPaper <input type="radio"/> Front <input type="radio"/> Rear <input type="radio"/> Gap
Paper Sensor Threshold	<input type="text" value="50"/> % range 0-100%
Backup Distance Before Printing	<input type="text" value="0.0"/> inches
Feed Distance After Printing	<input type="text" value="0"/> inches
Left Margin	<input type="text" value="0"/> inches
Contrast	<input type="text" value="16"/> 1 - 32
PaperSize	<input type="text" value="4"/> 2 - 4 inches

Sleep Config

Light Sleep	<input type="text" value="60"/> seconds
Deep Sleep	<input type="text" value="60"/> mins
Deep Sleepmode	<input type="text" value="Auto poweroff"/>

Form:

Units

Select between inches or millimeters. If you change units, do so before entering other settings.

Max Paper Speed

Possible values: 1.0 to 6.0 ips, Default = 5.0

When using labels or heavy paper stock, you may need to decrease the paper speed to prevent paper jams.

Mark Seeking

Possible values: Off*, Front, Rear, Gap.

Set the value when using regular or label media with black alignment marks or label media with gaps between the labels. Depending on the value selected here you may or may not see some of the sensor threshold settings listed below.

NOTE : Before adjusting black mark gap thresholds set the Mark Width to match the width of the black mark or label gap on your media.

Paper Sensor Threshold

When using paper with a black mark on the front adjust this setting to ensure the paper stops at the black mark. Normal value is 50%.

Rear Paper Sensor Threshold

This is set the same as the paper threshold, but using the rear (in lid) paper.

Gap Paper Sensor Threshold

When using labels without a Black Mark, adjust this setting to ensure the label stops at the gap in between labels. Normal value is about 25%.

Backup Distance Before Printing

Used with Mark Seek. User defined. This is the distance the printer will pull in the paper before starting to print.

Stop Distance after Mark

Use with Mark Seeking. User defined. This is the distance the printer will advance the paper after the mark is detected.

Left Margin

Setting this value will tell the printer how far from the left edge of the paper to start the print job.

Contrast

Possible values 1 – 32. Default value is 16.

The lower the value the lighter the print. The higher the value the darker the print.

Sleep Config

Light Sleep

Possible values: Disabled, 30, 60*, 120, 300, 600, seconds.

Set this value to have the display turn off after a specified time of inactivity. The printer will “wake up” when data is received.

Deep Sleep

Set this value to conserve battery power.

Possible Values: Disabled, 30, 60*, 90 minutes

Deep Sleepmode

Possible Values: Auto poweroff*, PowerSleep

Auto poweroff – the printer will turn off after the selected time.

PowerSleep – the printer will power down after the selected time but will wake up when data is received.

NOTE : Be sure to click the “Submit Changes” button at the bottom of the list to save any settings.

G. Fonts

Upload Font File

Truetype Fonts (.ttf, .otf, .ttc and .bdf) can be uploaded here.

Languages like ZPL and CPCL can use the fonts by referring to them by their Font Family Name.

Printek emulation uses the Index value when selecting a font.

Font Aliases

Languages like ZPL and CPCL can use an uploaded Font Alias Table so legacy jobs can have their font names mapped to other uploaded fonts. Contact Dascom Technical Support at 877.434.1377 for more information.

Upload File

Select the graphics file to load into printer memory. Acceptable graphics formats are .jpeg, .pbm, .pcx, .bmp, .png and .svg.

Set Width

Select the width you want to use to display your logo: full width, half width, or small width.

Set index

Depending on the Index value used, you can automatically print the graphics file as a header (prints at the beginning of the print job), footer (prints at the end of a print job) or use the graphics print command to print anywhere on your receipt or label. See *Integrator's Guide* for more information on graphics commands.

When selecting header, the graphics file will automatically print the logo at the beginning of each print job. When selecting footer, the graphics file will automatically print the logo at the end of each print job.

You must set each of these values before selecting Upload Logo or the default values will be associated with your image.

Current Logo Mapping

Once uploaded into the printer memory, your image and settings will be displayed here.

NOTE : Be sure to click the “Submit Changes” button at the bottom of the list to save any settings.

I. Update Printer Firmware, Upload Files to Printer Memory

The screenshot shows the 'Upload Firmware' section of a printer's web interface. At the top, there is a navigation bar with tabs: Main, WIFI Config, Bluetooth Config, Image Config, Device Config, Fonts, Graphics, Updates, Reset To Factory Defaults, and Downloads. The 'Updates' tab is currently selected. Below the navigation bar, the 'Upload Firmware' section is displayed. It includes a sub-header 'Upload Firmware' with a download icon. Below this, a message states 'File must end with .tgz .gz .sw .fw .bin'. There is a 'Choose File' button next to a text box that says 'No file chosen'. Below the text box is an 'Upload' button. At the bottom of the section, a note reads: 'This upload will extract and place applications to correct root directory.'

Printer Application Updates, OEM information and Manuals and more can be uploaded here. Contact Dascom Technical Support at 877.434.1377 for more information.

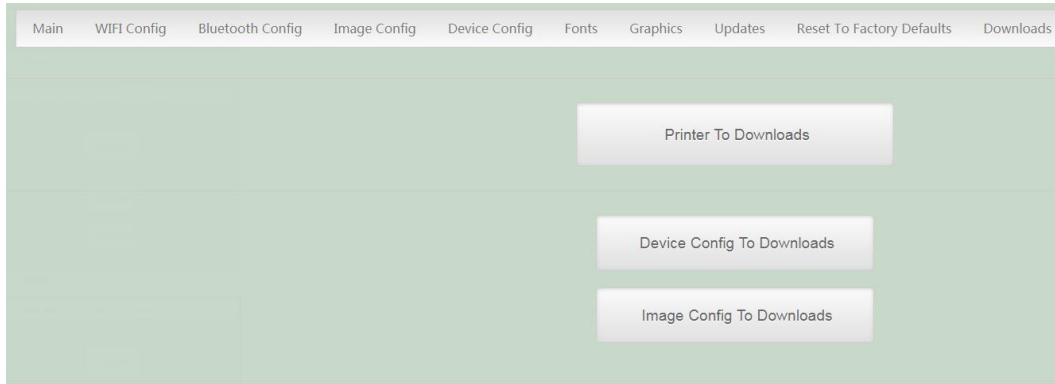
J. Reset Printer Configuration to Factory Defaults (Safe Mode)

The screenshot shows the 'Reset To Factory Defaults' section of a printer's web interface. At the top, there is a navigation bar with tabs: Main, WIFI Config, Bluetooth Config, Image Config, Device Config, Fonts, Graphics, Updates, Reset To Factory Defaults, and Downloads. The 'Reset To Factory Defaults' tab is currently selected. Below the navigation bar, the 'Reset To Factory Defaults' section is displayed. It contains three buttons: 'Printer To Factory Defaults', 'Device Config To Factory Defaults', and 'Image Config To Factory Defaults'.

Printer settings can be restored to factory configurations.

Note that WIFI network configurations will be lost when Network Config to Factory Defaults is checked.

K. Downloads



This will allow you to save the printer configuration to a file that can be sent to another printer through the Updates to configure another printer with the same settings.

Printer to Downloads

Saves all settings within the printer.

Device Config to Downloads

Saves just the Config settings from the printer.

Image Config to Downloads

Saves just the Image config settings from the printer.

Printing Modes

There are two fundamental printing modes with mobile printers.

A. ASCII Based Print Jobs

The host sends the print job as a series of lines of characters, some of which represent the text to be printed, while other portions are command codes which tell the printer which font to use, where to locate the text, what barcodes to use, etc. These text-based files are encoded in a print language specific to the target printer.

The DP-641 understands ASCII based jobs in several different print languages. Refer to the [Appendix](#) or the *Integrator's Guide* for the list of print languages supported.

B. Graphic Based Print Jobs

The host assembles the printed image as a series of lines of dots, and transmits this image as a sequence of data bytes that represent the dot patterns assembled. Often these jobs or files have some control characters on the front end and / or rear end of the dot pattern bytes to define their format, help control pagination, etc.

Windows drivers in particular encode the image as a graphic based print job before it is passed along to the printer.

In addition to accepting graphic jobs from its Windows driver, the DP-641 can accept and print directly many other graphic image file types. This opens up the option to print job images from a variety of devices for which drivers or print utilities don't exist, such as some tablets and smartphones.

Please see the *Integrator's Guide* or your system integrator for more details.

Integrating the Printer into your Business Applications

Step by Step – Creating a Link from Host to Printer

A. Windows Desktop Computers

Print Drivers

The driver is the connection and transformation platform between the printer and the computer operating system to achieve the interactive processing of the information. User can set up relevant settings, get print status and etc. via driver.

The latest Windows printer drivers can be downloaded from our web:

<https://www.dascom.com/downloads.html>

I. USB

- a) Install the printer driver onto your host before connecting the printer. Follow prompts displayed during installation.
- b) Plug the printer into a USB port on your host system using a mini-USB cable.
- c) The printer will appear in the “Unspecified” devices section. Right click on the icon.
- d) In the popup window, select the Hardware tab. Note the USB port number displayed.
- e) Using the “Add Printer” wizard, install the printer using the driver file obtained from Dascom and the USB port number noted above.
- f) After the printer driver installs, the printer will appear as “Dascom 4-inch printer” under the “Printers and Faxes” heading of your Windows “Devices and Printers” screen.

II. Bluetooth – General

- a) Turn on printer. Make sure Bluetooth on your host device is turned ON.
- b) Your host Bluetooth manager may automatically scan for new devices, or you may need to tell it to scan. The discover name of the DP-641 printer will be “DP-641-XXXxxxxx”, where XXXxxxxx = the Printer Serial Number.
- c) For Pairing, the default passkey is “0000”.
- d) The printer should appear in your paired devices list.

Note: Bluetooth host devices pair after discovery, but only connect to Bluetooth printers when the host application has asked it to print.

III. Bluetooth – Windows 7 and above

- a) Turn on printer. Make sure Bluetooth on your host device is turned ON.
- b) Open the “Devices and Printers” folder.
- c) Select “Add a Device”. The printer will display using the discover name listed above.
- d) Select the printer from the list of devices.
- e) Select “Enter the Device’s Pairing Code”. The default pairing code is “0000”.
- f) A window will display informing you the device was successfully added, and the printer name will appear in the devices list. Close this.
- g) Printer now appears under “Printer and Faxes” heading of the “Devices and Printers” screen, as “DP-641-serial #”. The icon may show that it is still configuring.

- h) Right click on the printer name or icon and select Properties. Select “Services” tab and deselect all items except for “SPP”.
- i) Now select “Hardware” tab. A virtual com port number will be listed here – make note of this COM Port number. Use this Com Port number when setting up the printer driver, under the “port settings”.
- j) Install the printer driver. Using the “Add Printer” wizard, install the printer using the driver file obtained from Dascom and the COM port number noted above.
- k) After the printer driver installs, the printer will appear as “DP-641-serial #” under the “Printers and Faxes” heading of your Windows “Devices and Printers” screen.

IV. Wi-Fi

Note: The following instructions are fundamentally the same for an Infrastructure or Wi-Fi Direct (peer to peer) setup. They also assume that you have already configured your Wi-Fi interface via the DP-641 printer web page (see the section on Configuration).

- a) Perform a configuration printout to verify the printer Wi-Fi setup and to record the IP address assigned and the Port number.
- b) Install the printer as a local printer using the USB instructions above.
- c) In the “Devices and Printers” screen, right click the printer icon representing your mobile printer.
- d) Under Printer Properties, select the Ports tab, then select “Add a Port”
- e) In the new dialog box which appears, select “Standard TCP/IP ports”; this will open the Standard TCP/IP Printer Port wizard.
- f) Follow the on-screen prompts in this wizard. You’ll use the IP address recorded above to set up the port. In the same screen you can also name the port something familiar and relevant, and this will appear as the name of the printer to the user.
- g) After the port is detected, it will be displayed as a “generic network card” – accept this by clicking Next / Finish.
- h) After you are finished adding the port, Windows will report it as a “Standard TCP/IP port”; click OK to accept this.
- i) Close the Printer Port window.
- j) Now in the Printer Properties dialog box your IP address (or the familiar name you assigned above) will appear in the list of ports available. Select it to configure the port.
- k) Windows defaults standard TCP/IP ports to port number 9100. The DP-641 Wi-Fi port number is internally set to 8023. Change the port number to 8023 in the Windows screen and click OK.
- l) Click “Apply” in the Printer Properties box.
- m) Your DP-641 printer driver should now be properly coupled to the Wi-Fi parameters you have chosen.

B. Android Tablets & Smart phones

DASCOM offers an Android Print app that can be downloaded from our web site.

I. Bluetooth

- a) Turn on printer. Make sure Bluetooth on your host device is turned ON.

- b) Open your Bluetooth settings and scan for devices. The default discover name of the DP-641 printer is "DP-641-#####", where ##### is the Printer Serial Number.
- c) For Pairing, the default passkey is "0000".
- d) The printer should appear in your paired devices list.
- e) Your app may need further configuration to print to the paired printer.

Note: Android devices pair after discovery, but only **connect** to Bluetooth printers when the host application sends a print job.

II. Wi-Fi

The printer has two different WI-FI modes, Access Point and Infrastructure mode. Access Point mode does not require a router and allows you to directly connect to the printer. Infrastructure mode requires an access point connect to your network.

- 1) Access Point Mode-
 - a. Open the WI-FI connections on your Android device
 - b. Scan for available WI-FI devices
 - c. The printer should appear as DP-641 xxxxxxxxxx (xxxxxxxxxxx is the printer's serial number).
 - d. The default password is DASCOM123.
 - e. The Android device should show a successful connection.
- 2) Infrastructure Mode –
 - a. Setup the printer to connect to your network using the printer's built-in web configuration page.
 - b. Your app may need further configuration to print to the printer.

C. Apple™ Tablets & Smartphones

Dascom offers an Apple Print app that can be downloaded from our web site.

I. Bluetooth

- a) Turn on printer. Make sure Bluetooth on your host device is turned ON.
- b) Click the add device button on the home page of the App to enter the search page and perform a Bluetooth search. The default Bluetooth name is DP-641-##### , where ##### # is the serial number of the machine, click on the selected Bluetooth device to connect.
- c) If successful, App will prompt and go to the print page.

II. Wi-Fi

The printer has one WI-FI mode: Access Point mode. Access Point mode does not require a router and allows you to directly connect to the printer.

- 1) Access Point Mode-
 - a) Open the WI-FI connections on your Android device
 - b) Scan for available WI-FI devices
 - c) The printer should appear as DP-641 xxxxxxxxxx (xxxxxxxxxxx is the printer's serial number).
 - d) The default password is DASCOM123.
 - e) Go back to App, enter IP and port, confirm and connect, IP default 169.254.200.1, port default 8023.

Media

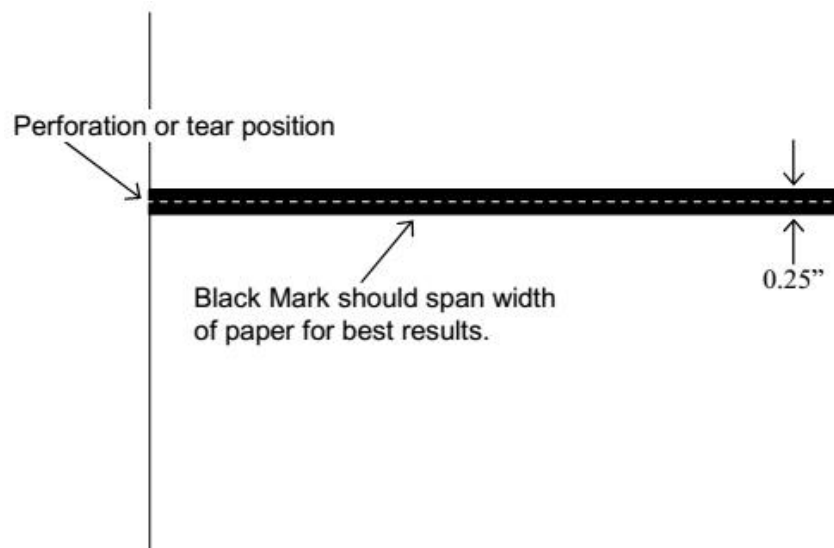
A. Standard Media

Dascom offers a variety of media types. You may contact your Dascom sales representative for a complete and up to date description of our consumables and accessory products.

B. Black Mark Media Position

For automatic ticket printing, the Black Mark should be positioned as shown in the figure below. When using Mark Sensing mode (see [Configuration](#), earlier in this document), Dascom Portable Printers will automatically position the output for tear-off and printing following a Form Feed command or by pressing the Paper Feed button.

For non-automatic paper positioning, refer to the *Integrator's Guide* for sensing and positioning commands.



Optimum Black Mark Position

Maintenance and Troubleshooting

A. Cleaning

In normal environments, the printer should be cleaned after printing a few rolls of paper or if there are voids in the printout. For optimum performance and life, you should clean the Print Head and Platen Roller whenever you load new paper.

To clean the printer areas as described below, use a Thermal Head Cleaning Pen or you may use cotton swabs moistened with isopropyl alcohol.

- Turn the printer off. Open the Paper Door and remove the paper.
- Using a Thermal Head Cleaning Pen, clean the white ceramic surface on the Print Head.
Caution: Do not use sharp objects to clean the print head. This may damage the printer and require service. Such damage is not covered under warranty.
- Clean the Black Mark Sensor below the print head.
- Clean the Tear Bar.
- Clean the Platen Roller. Turn the Platen Roller with your finger to clean the entire surface.

You may also experience a buildup of paper dust in the printer. This may be removed using a can of compressed air or by vacuuming.

To clean the exterior of the printer, turn the printer off and use a soft cloth moistened with a mild detergent.

B. Battery Care

I. Getting the Maximum Battery Life

New batteries are shipped in an “uncharged” state and must be charged for at least 4 hours prior to the first use. Maximum battery capacity is not reached until after completing a minimum of three complete charge and discharge cycles.

II. Charging the Battery

- Plug the power adapter into a power source appropriate for the adapter being used.
- Plug the power adapter into the power connector on the side of the printer. The printer’s battery charging circuitry will analyze the condition of the battery and begin charging it if necessary.
- If the battery is not fully charged, charging will begin and the Battery Indicator will illuminate.
- When the battery is fully charged, the Battery Indicator will turn off. Charging may take up to 8 hours (4 hours with external desktop charger accessory) depending on the condition of the battery.
- The printer may be used while the battery is charging, but this will extend the time required to fully charge the battery.
- The power adapter may remain connected to the printer to keep the battery fully charged and will not cause damage to the printer or battery.

III. Additional Battery and Safety Information

- The DP- 641 series printers use an 10.8 volt 4400 mAH Lithium-Ion smart battery pack.

Caution: Risk of explosion if battery is replaced by incorrect type. Dispose of used batteries according to the instructions.

- The recommended ambient temperature for charging is 68-77° Fahrenheit (20-25° Centigrade).
- Take the battery out of the printer when storing the printer for long periods of time. The battery storage temperature is 40-104° Fahrenheit (4-40° Centigrade). Do not store a fully charged battery at temperatures above this range for long periods of time or the battery may permanently lose charge capacity.
- Do not disassemble, short circuit, heat above 80°C, or incinerate the battery. The battery may explode.
- Only dispose of used batteries according to your local regulations. If you do not know your local regulations, the Rechargeable Battery Recycling Corporation (RBRC) is a non-profit organization created to promote recycling of rechargeable batteries. For more information visit www.rbrc.org.



IV. Testing the Power Adapter and Battery

To verify that the printer's internal battery charger is functioning properly, perform the following steps.

- Test the power adapter (100-240VAC/50-60Hz, 12/24VDC adapter) with a voltmeter to verify that its output voltage is 24 VDC.
- Connect the power adapter to a power source and then connect it to the printer.
- Verify that the printer's Battery Indicator is illuminated. If illuminated, the charging circuit is functioning properly.
- After the battery has been charged for five minutes, disconnect the power adapter.
- Perform a printer Self-Test.
- If the printer successfully prints the Self-Test, the battery is functional. If the Self-Test does not complete and the printer turns off, repeat this test with a known good battery.
- Once this test has completed successfully, allow the battery to fully charge. The LCD display had an indicator showing the relative charge of the battery.

If the printer and battery do not appear to successfully pass these tests, refer to the [Troubleshooting](#) section for possible causes and solutions.

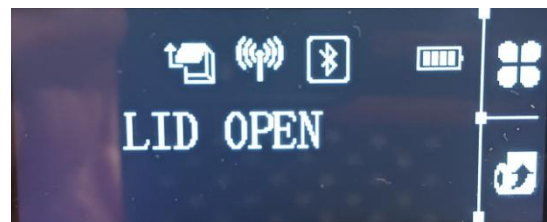
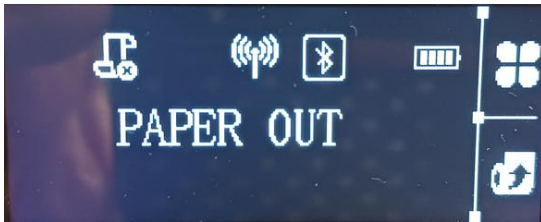
Note: This test only verifies that the power adapter, the internal charging circuit, and the battery are functioning properly. This test does not provide a valid indication how long it may hold a charge.

C. Troubleshooting

When encountering problems, the cause may be the printer or may sometimes be due to other problems with your system. Please review the following tables to solve common problems you may encounter with your printer.

I. General Error Conditions

The DP-641 has an LDC display that will indicate various error conditions such as Paper Out or Lid Open.



II. Fault Description and Resolution

Problem	Possible Cause	Solution
Printer will not turn on.	Battery not installed properly	Remove and reinstall battery making sure the battery is seated with door closed.
	Discharged battery	Recharge battery.
Printer turns itself off.	Battery discharged	Replace or recharge battery.
	Electrostatic discharge	May occur in extreme low humidity conditions. Turn printer back on with power button.
Battery Indicator flashing.	Battery is low on power	Connect charger to printer or replace with charged battery.
	Faulty power adapter	Check output of power adapter with voltmeter. Should be 24 VDC.
Battery not charging.	Faulty power adapter or battery	Try new power adapter or replace battery.
Poor print quality.	Low battery	Check and recharge battery.
	Print head dirty	Clean print head. Refer to “Maintenance” section of this document.
	Poor quality or “old” paper	Verify paper from approved source. Try new roll of paper.
Paper not feeding.	Obstruction in paper path, or paper improperly installed	Check paper path and reinstall paper (see “Quick Start Instructions”).
	Poor quality paper	Verify paper from approved source.
	Paper Door not fully closed	Verify door is closed.
Paper does not advance to black mark reliably.	Dirty Black Mark/Paper Sensor	Clean Sensor as described in “Maintenance” section of this document.
	Black Mark density/contrast	Adjust Mark Sensitivity as described in Device Settings Menu.
Paper not feeding reliably, or print is compressed vertically	Poor quality paper	Verify paper from approved source.
	Heavy or thick forms; specialty paper with slick finish	Lower the Max Paper Speed as described in Device Config Menu.
	Paper Door not fully closed	Verify door is closed.

Print Garbled.	Low Battery	Check and recharge battery.
	Paper Door not fully closed	Verify door is closed.
	Low Battery	Check and recharge battery.
Printer will not print.	Paper not loaded correctly	Check paper path and reinstall paper (see “Quick Start Instructions”).
	Improper Interface configuration	Verify printer and host settings match. Print a self-test to verify printer settings and to verify printer is functioning properly.

D. Obtaining Service

If service is required for your printer, please contact the company where you purchased your printer.

APPENDIX

A. Appendix A – DP-641 Printer Specifications

Printing Specifications

Printing Method: Direct thermal.

Printing Resolution: 203 dpi (8 dots per mm).

Printing Speed: Up to 6 ips.

Printing Width: Up to 4.25 inches (108 mm).

Emulations: Emulates many popular printer brands and languages including: Zebra CPCL and ZPL, Printek and ESC POS. Firmware can be upgraded as new emulations become available. Supports printing of Postscript, PDF, JPG, PNG, BMP files.

Operator Controls and Indicators

Light up buttons for power, paper feed, and menu navigation. Sensors for paper out, black mark detection, and door open. Full menu for printer settings via LCD display.

Fonts/Characters/Bar Codes

Fonts: Virtually all TrueType fonts, from 6 cpi to 34 cpi depending on emulation chosen, plus scaling.

International Characters: All common sets available via UTF-8 encoding.

Unicode support.

Bar Codes: Virtually all 1D and 2D codes supported, depending on emulation chosen.

Downloadable firmware, fonts, graphics, and logos.

Print Media

Paper Type: Direct Thermal Roll. Adjustable roll holder. "Clamshell" design for easy media loading. Dual serrated tear bar.

Roll Capacity

Roll Size: Maximum roll diameter 2.28" (58 mm), creating 150 labels (100mm/4" length), roll widths up to 4.45" (113 mm).

Core Size: 0.5" for receipt, 0.75 for label printers.

Power Management

Battery: Rechargeable 3 cell Lithium Ion, (11.2 V, 4400 mAh, 49.28 Wh).

AC Adapter.

Endurance:

Standby: 16hours

Standby(Sleeping mode): 36hours

Power Option: 100-240 VAC wall adapter or 12-24 VDC in-vehicle adapter. When plugged in, the printer can be used while recharging the battery or can be run without the battery.

Physical Specifications

W x D x H: 6.02" x 6.25" x 2.68" (153 x 158.7 x 68mm).

Weight: 21 ounces (0.59 kg) without battery,

28 ounces (0.79 kg) with battery

Environmental Specifications

Operating Temp: 0° to 122°F (-18° to 50°C).

Storage Temp: -4° to 140°F (-20° to 60°C).

Humidity: 10% to 90% RH (non-condensing).

Rated IP54 per IEC 529

Memory Capacity

FLASH 4GB, LPDDR2 512MB. Standard memory supports large and graphic-intensive print jobs.

Durability and Reliability

Survives multiple 6-foot drops to concrete (each face) per IEC 68-2.

MTBF: 10,000 hours in normal use.

Regulatory Approvals

FCC Class B, CE/RED, UKCA, RoHS

Warranty

2-year printer warranty on the entire printer—case and print head included. 1-year warranty on the battery.

Options and Accessories

- AC Wall Adapter, 100 to 240 VAC
- In-Vehicle Power Adapter, 12 to 24 VDC
- Shoulder Strap
- Data Cables, USB-C
- Spare Batteries in Multi-Packs
- Media in Case Quantities
- Popular Mounting Systems
 - In-Vehicle Systems
 - Cart Mounting Systems
 - Fixed Mounting Systems

Connectivity

Standard (All Units): USB 2.0 PNP. USB-C input connector.

Wireless Options:

Bluetooth

Fully qualified Bluetooth BT4.2 and support Bluetooth 5. Bluetooth pairing with NFC enabled devices.

Baseband and radio BDR and EDR packet types

Enhanced Data Rate (EDR) compliant for both 2Mbps and 3Mbps supported.

Wi-Fi 802.11 a/b/g/n/ac compatible

Software

Drivers and Utilities: Drivers for WIN 7, WIN 8, WIN 10 / 11.

Compatible with Windows, Android, and iOS. Print utilities and SDK's for all platforms.

Printer Setup via an internal web page and onboard LCD panel. Access with browser from any host (tablets and smartphones included).

Glossary of Terms

802.11	Wireless networking communication standards created by IEEE.
authentication	The process a Wi-Fi station uses to identify itself to another station.
baud rate	The rate at which characters are transmitted over a serial interface. This is also often referred to as bits per second.
Bluetooth	A definition for short range radio frequency communications.
client	Any node on a network that requests services from another node (server).
character pitch	The horizontal spacing of characters. Measured in cpi.
cpi	Characters per inch.
default	Value or configuration assumed when the printer is powered on or reset.
DHCP	Dynamic Host Configuration Protocol. A method used to centrally control the assignment of IP addresses on a network.
dpi	Dots per inch. Generally used to refer to graphics density or resolution.
font	A group of characters of a given shape or style.
infrastructure	A Wi-Fi network consisting of stations connecting to a wired network or other stations via an access point.
interface	The connection between the printer and the host computer.
IP	Internet Protocol. A specification for packets, or datagrams, of data and an addressing method to allow the exchange of data with another system. Must be combined with another protocol such as TCP to create a complete connection with the other system.
LAN	Local Area Network.
LED	Light emitting diode.
lpi	Lines per inch.
margin	An area along any edge of a form where data may not be printed.
Peer-to-Peer	A network consisting of only stations (no access point or central server). Same as Ad-Hoc.

reset	Initialization of various operating features of the printer to the value or state assumed when the printer is powered on.
server	Any node on a network that provides services to another node (client).
SSID	Service Set Identifier. An identifier attached to packets on a Wi-Fi network that identify the particular network the packets are intended for.
TCP	Transmission Control Protocol. A specification that controls the connection between systems on a network.
top of form	The vertical position where the first line is printed on the paper. Also, the position the paper is advanced to when a form feed (FF) character is received from the host or the Form Feed button is pressed on the printer's control panel.
USB	Universal Serial Bus.
WAN	Wide Area Network. Refers to connections that allow one LAN to communicate with another LAN(s).
WEP	Wired Equivalent Privacy. A security protocol for wireless LANs designed to provide data security similar to a wired LAN.
Wi-Fi	Refers to any of the IEEE 802.11 standards.
WLAN	Wireless Local Area Network. A LAN made up of wireless nodes.

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