
LARGE CHARACTERS INKJET PRINTER
H16
user manual

Product Specifications

Software Functions:	Real-time date and time clock, batch printing, counting, shifts, font flipping (upside-down), left-right mirroring
Printing Graphics:	Capable of printing trademark graphics, symbols, etc.
Date Codes:	Supports century, year, month, day, hour, minute, second
Printing Speed:	Manually controlled
Printing Distance:	Fixed at 8mm from the surface of the printed object
Screen Display:	Displays all printing parameters clearly for easy, one-touch settings adjustment
Triggering Methods:	Photoelectric triggering, encoder triggering
Printing Direction:	360-degree printing capability
Printing Materials:	Suitable for both permeable and non-permeable materials.
Ink Types:	Water-based ink (for permeable surfaces) or oil-based ink (for non-permeable surfaces).
Ink Colors:	Available in black, red, blue, yellow, white, and other colors.
Ink Supply:	Built-in air pump pressurization.
Air Source Pressure:	Adjustable from 0.01 to 0.06 MPa.
Charging Time:	Less than 4 hours.
Operating Environment:	Temperature range from 5°C to 45°C.
Machine Weight:	Approximately 1.5 kg.
Machine Appearance:	Integrated injection-molded body, wear-resistant and durable.

■ Important Notice:
■ Prior to operating the large character inkjet printer, please carefully review this manual to prevent operational errors.

Chapter 1: Product Overview

Introducing a new generation of portable, handheld large character inkjet printers featuring an advanced touchscreen control system. Designed to meet the high-volume printing needs of industrial products with flexibility and convenience, it can efficiently print on surfaces including cardboard, wood, plastics, films, metals, and glass. Available ink colors include black, white, red, blue, green, yellow, and invisible red, offering users versatile, cost-effective, and durable coding solutions.

This product supports editing and storage of up to 100 printing messages and 100 user-defined graphics.

The system's interface is available in both Chinese and English.

Chinese character input is supported via pinyin.

Users can select from various nozzle specifications: 32-dot matrix (up to 124mm character height) and 16-dot matrix (up to 60mm character height), catering to diverse production requirements.

Portable handheld inkjet printers are not confined to production lines, enabling users to utilize them anytime and anywhere.

Chapter 2: User Instructions

Power Supply:

1. Charging Input: AC100V-240V, 50/60Hz. Output: 16.8V, 1A.
2. Power Consumption: Less than 72W.

Environmental Requirements:

1. Operating Temperature: 5-45°C.
2. Operating Humidity: 10%-70% (non-condensing).
3. Avoid environments with dust.
4. Keep away from strong electromagnetic interference sources, such as electric motors.

Safety Guidelines:

1. The inkjet printer uses consumables including ink and cleaning agents that are flammable. Keep a dry powder fire extinguisher within 10 meters of the printer.
2. Ink is harmful if it comes into contact with the body. Wear protective glasses when handling the ink system to prevent splashes into the eyes. In case of contact with eyes or ingestion, rinse with water immediately and seek medical attention promptly.
3. Use plastic or rubber gloves when interacting with the ink system and nozzles.
4. Do not direct the nozzle outlet towards humans to avoid accidents caused by misoperation.

Equipment Maintenance:

1. Only the manufacturer's service engineers or personnel trained and authorized by the manufacturer may repair the electrical components of this system.
2. Use original consumables. The inks and related chemicals used are finely crafted products developed through special research and extensive testing. Substitutes may cause equipment malfunctions, compromise safety, and result in irreparable damage.

Device Charging:

This device features an integrated high-quality lithium-ion battery. To ensure prolonged and stable operation of the inkjet printer, follow these recommended charging steps:

1. Remove the battery (secured with a snap fastener) and connect the charging connector to the charging port.
2. Plug the charger into a power source (use the provided original charger).
3. During charging, the charger indicator will show red, indicating normal charging; it will turn green when fully charged.

Note: Charging takes less than 4 hours and typically allows for over 3 hours of continuous operation, depending on usage frequency and printing conditions.

Ink Cartridge Replacement and Installation:

Correct installation and replacement of ink cartridges are crucial to prevent malfunctions due to improper operation. Follow these steps when replacing ink cartridges:

1. Ensure the inkjet printer is powered off before replacing the ink cartridge.
2. When replacing the ink cartridge, position the printhead upwards and the ink cartridge downwards. Rotate the cartridge to complete the replacement.
3. To install the ink cartridge, align the arrow on the cartridge and rotate counterclockwise as shown in the diagram below:

Chapter 3: Daily Operation Guide

1. Powering On

Ensure the battery is properly inserted. Press  on the inkjet printer to turn it on and enter the ready state.

2. Entering Information Editing Mode

In the "Ready to Print" state, press the "**Edit**" button once to enter the "**Information Editing**" mode. Alternatively, click the "**Home**" button to access the homepage and begin editing information.

3. Function Key Descriptions

3.1 Click the "**Number**" button, enter the desired number, and click "√" to switch

directly to the content for that number.

3.2 Click the "**Font**" button, enter a function number between 1 and 7, and then click "**En**" to return to the editing page.

1, 2, 5: These codes are for standard 16-dot matrix fonts. Codes "1 and 2" allow for a maximum character height of 24mm (note: only 7-dot numbers, English letters, symbols, and simple Chinese characters can be entered in this mode). Code "5" supports Chinese characters, English letters, and various symbols with a maximum character height of 60mm.

3, 4, 6, 7: These codes are for standard 32-dot matrix fonts. Codes "3 and 4" function similarly to "1 and 2" as described above. Code "6" functions similarly to Code "5", but the difference is that "3, 4, 6" apply to the 17-32 ink channels on 32-dot matrix devices. Code "7" supports a maximum character height of 124mm, allowing for 32-dot matrix Chinese characters, English letters, and various symbols.

3.3 Click "**Variable**" on the editing interface, enter the corresponding variable number code, and click "√" to insert the corresponding variable. Refer to "**Chapter 4: Editing Variables**" for more information.

3.4 Click "**Graphic**" on the editing interface, enter the pre-defined graphic number code, and click "√" to insert the corresponding graphic. Refer to "**Chapter 5: Editing Graphics**" for more information.

3.5 Click "**123**" on the editing interface to enter any number, then click "**En**" to return to the editing interface.

3.6 Click "**ABC**" on the editing interface to toggle between uppercase and lowercase English letters.

3.7 Click "**Shift**" on the editing interface to enter system symbols.

3.8 Click "**En/Cn**" on the editing interface to switch between English and Chinese input methods.

3.9 After completing the content editing, click the "**Return**" button to save the information or select other functions.

4. Retrieving Print Information

In the printing interface, while in the "Ready to Print" state, click "**File**," enter the number corresponding to the information to be printed, and press "**Confirm**" to retrieve it. You can also use the left and right arrow keys to navigate and select the desired information.

5. Editing Print Parameters

In the printing interface, while in the "Ready to Print" state, click "**Parameter Settings**" to enter the parameter editing interface. Click on the parameter you wish to modify. After making the necessary changes, click **"Confirm" or "Exit"** to save the changes and return to the printing interface by clicking "**Return**."

(1) Ink Dot Setting
Adjust the diameter of the ink dots. The adjustable range is 0-20, with a recommended maximum setting of 18 for regular use.

(2) Font Width Setting
Adjust the font width. For handheld devices, the recommended value is 25.

(3) Cleaning Function
Use this function for individual-channel cleaning. Enter the number of the ink channel to be cleaned and click "Confirm" to complete the process.

(4) Delay Parameter
This parameter adjusts the delay time between the photoelectric sensor being triggered and the printhead starting to print the first character. Adjusting this parameter changes the position of the printed information on the surface. The adjustable range is 00000-99999 milliseconds.
When the synchronizer is activated, the delay represents the distance the synchronizer must move from the handle switch being triggered to the start of printing.

(5) Gap Parameter
When the print count parameter is greater than 1, this parameter adjusts the distance between each instance of the same print content.

(6) Offset Parameter
When the "Deflection" function is enabled, adjust this parameter and the printhead angle to change the font height. Refer to the offset correspondence table for details.

(7) Direction
Set the direction parameter to "0" or "1" to change the printing content's forward or reverse sequence.

(8) Alignment
Adjust the alignment by setting "0" or "1" depending on whether the printhead is aligned to the right or left.

(9) Print Count
Set the number of times the same information is printed per photoelectric trigger. The

range is 1-99.

(10) Inversion
Enable this function to invert the printing order, changing the first point to the 16th point. "0" is off, "1" is on.

(11) Deflection
Adjust the deflection switch status. "0" is off, "1" is on.

(12) Photoelectric Sensor
Adjust the photoelectric sensor switch status. "0" is off, "1" is on.

(13) Synchronization
Adjust the encoder switch status. "0" is off, "1" is on.

(14) Pressure
Adjust the pressure pump switch status. "0" is off, "1" is on.

Chapter 4: Editing Variables

The large character system supports 15 types of variable formats, defined as follows:

01	Century	(Static Format)
02	Year	(Static Format)
03	Month	(Static Format)
04	Day	(Static Format)
05	Hour	(Static Format)
06	Minute	(Static Format)
07	Second	(Static Format)
08	Century	(Offset Format)
09	Year	(Offset Format)
10	Month	(Offset Format)
11	Day	(Offset Format)
12	Shift	(0-9 or A-Z)
13	Counter	(8-digit counter, static format, set within the counter)
14	Batch	(Counter digits, static format, set within the counter)
15	Offset	(Editable by day, maximum value of 9999)

Only variables 12, 13, 14, and 15 are editable.

Instructions for Variable 12:

For example:

Time	T1	T2	T3	T4
	06:00	09:00	12:00	15:00
Shift	A	B	C	D

If the current time is 9:00, setting variable 12 will print "B".
If the current time is 15:00, setting variable 12 will print "D".
(Shifts can be edited to be 0-9 or A-Z)

1. Enter Variable Editing Mode

In the "Ready to Print" state, click "**Main Menu**" or "**Return**" to enter the main interface. Select "**Settings**" and then "**Variable Settings**."

2. Select the Variable to Edit

Enter the number of the variable you wish to edit (12, 13, 14, or 15), and click the "**Confirm**" button to access the corresponding variable settings interface.

Chapter 5: Graphic Editing

From the main menu, click "**Information**" to enter the information interface. Select "**Graphic Editing**" to access the editing interface. Enter the file number of the graphic you wish to edit, then set the height and width. Click the block editing area to complete the graphic editing.
(For 32-dot matrix graphics, the typical height is 32 and the width is 0032; For 16-dot matrix graphics, the typical height is 16 and the width is 0016; For 7-dot matrix graphics, the typical height is 8 and the width is 0008.)
After completing the graphic editing, click "**Return**" to save your changes and go back to the initial interface.

Chapter 6: Main Unit Settings

In the main menu interface, click "**Settings**" to adjust settings for "Variables," "Printing Mode," and "Language Switching."

1. Clock Settings

From the main menu, click "**Settings**" → "**Clock Settings**," then click the corresponding

value to make changes.

2. Variable Counter Settings

Steps:

In the Ready to Print interface, go to Home → Settings → Variable Settings → Variable 13

Counter Upper Limit: Indicates the upper limit of the counter value in the system.

Counter Lower Limit: Indicates the default lower limit of the counter value in the system.

Counter Value: Indicates the current actual printing count.

Counter Step: Indicates the increment value.

Counter Length: Indicates the number of digits for the current counter value (can be set from 1 to 8).

3. Parameter Settings

Print Mode

0000: Single information printing, parameters for each piece of information are the same.

0001: Single information printing, parameters for each piece of information are independent.

0002: Continuous printing, parameters for each piece of information are the same.

0003: Continuous printing, parameters for each piece of information are independent.

Continuous Printing Quantity: Set the number of prints in continuous mode.

Bold Font: 0001 indicates the font is doubled horizontally, and so on.

4. Language Settings

Switch between Chinese and English interfaces.

Chapter 7: Device Testing

The "Device Testing" mode is used to verify the operational status of the system's sensors and synchronizers to ensure they are functioning correctly.

1. Photocell Sensor Testing

In the "Device Testing" mode, under State 1, select "Photocell Sensor." This allows you to check the sensor's operational status. Each activation of the sensor increments the count by one.

2. Synchronizer Testing

Within the "Device Testing" mode, with State ON, select "Synchronizer Encoder." This mode enables testing of the synchronizer's operational status by sliding the synchronizing wheel.

3. Pressure Sensor Testing

In the "Device Testing" mode, with State ON, select "Pressure Sensor." This mode allows you to check the pressure values and set the upper and lower pressure limits (upper limit 2500, typically lower limit 10).

4. Pressure Settings

Steps: Ready to Print interface → Return → Settings → Device Testing → Pressure Sensor

Black Ink	Upper Limit：800 (reference value) Lower Limit: 600	White Ink	Upper Limit：2000 (reference value) Lower Limit: 1500

Chapter 8: Management

Factory Reset:	Restores all system parameters to their original factory settings.
Data Formatting:	Erases all stored information within the system.
Password Setup:	Implements a user password for this device.

This system includes a user password feature to prevent unauthorized access.

Chapter 9: Maintenance Services

The manufacturer offers comprehensive and efficient service options for users.

To facilitate device maintenance and minimize travel costs, users may utilize postal services for the following purposes, adhering strictly to packaging guidelines to prevent potential damage:

1. When users lack skilled personnel and a suitable dust-free environment, it is advisable to return the device to the manufacturer for service:

   a. Nozzle Maintenance:
   If there are print quality issues requiring nozzle servicing by the manufacturer, please include samples printed with the affected nozzle and provide a detailed description of the maintenance process to aid in troubleshooting.
   Follow the nozzle maintenance guidelines to flush the internal ink with a cleaning solution. (Damage caused by ink drying inside the nozzle is not covered under warranty.)

   b. Controller Maintenance:
   Only service engineers authorized and trained by the manufacturer can repair the controller part of this device. In case of controller malfunctions, it is recommended to return the controller to the manufacturer for service. Include samples printed using the affected controller and provide a comprehensive description of the issue to facilitate diagnosis.

2. Packaging for Mailing the Device:

   The packaging should provide adequate support and shock absorption. Use a cardboard box or postal container that matches the device's dimensions. Ensure there is a minimum of 2 cm of space between the device and the box walls, filled with flexible padding material.

Chapter 10: Troubleshooting Assistance

This chapter outlines potential issues, their causes, and solutions. Users can refer to relevant sections or contact the technical support department for assistance.

Symptoms	Possible Causes	Troubleshooting Steps
Controller Malfunction	1. Occasional interference at the site.	Turn off the controller power and wait for 30 seconds before restarting.

		2. Controller damage.	Contact your local dealer or return it to the factory for repair.
Information and Settings Stored in the Controller Are Lost		1. Information and settings were not saved according to the prompted steps after completing editing. If only certain settings or edited information are missing while others remain intact, it often falls under this category.	Refer to the relevant sections in the User Manual or follow the prompts on the screen to save settings.
		2. Controller affected by static electricity or electromagnetic interference, and disturbances in the power supply system. Note: Some interferences are induced by extremely rare factors and are difficult to detect.	Minimize sources of interference near the controller as much as possible, and avoid sharing the same power source with large electrical equipment. Reconfigure the relevant settings. Note: Some interferences are induced by extremely rare factors and are difficult to detect.
		3. Damage to relevant parts of the controller. In this case, shutting down the system results in the loss of all settings.	Return the equipment to the manufacturer for repair.
Missing Printing Dots	Few dots missing	Foreign objects (dust, fibers, ink clots, etc.) on the front surface of the nozzle.	Use cleaning solution to moisten filter paper or non-fibrous cloth to clean the surface of the printhead, or flush it with water.
		Ink deposits or foreign objects obstructing the nozzle.	Clean the printhead nozzles.
	No dots printed at all	Extended periods of inactivity causing ink inside the printhead to dry, increasing resistance to ink flow.	Return to the manufacturer for repair.

Attachment: Offset Adjustment Correspondence Table

Angle	Font Height (mm)	Alignment	Offset Value
40	50	1	1200
45	45	1	1500
53	40	1	1700
56	35	1	1800
63	30	1	1900
69	25	1	2000