SNEED·JET

FREEDOM SERIES PRINTER OPERATION MANUAL

www.sneedcoding.com | 22315 Gosling Rd. Spring, TX 77389 | (833) 926-3464

best by: SNEED Coding Solutions, Inc.

To schedule a call:

Click to schedule a call

Help desk and support videos:

Click to visit our support desk

OUR MISSION:

Sneed Coding Solutions was founded with the belief that coding and marking should be simple. Our team of experts is focused on making the complex coding and marking process easy so that you can focus on the things important to you. We are here and available to speak with you whenever the need arises.

WARNINGS :

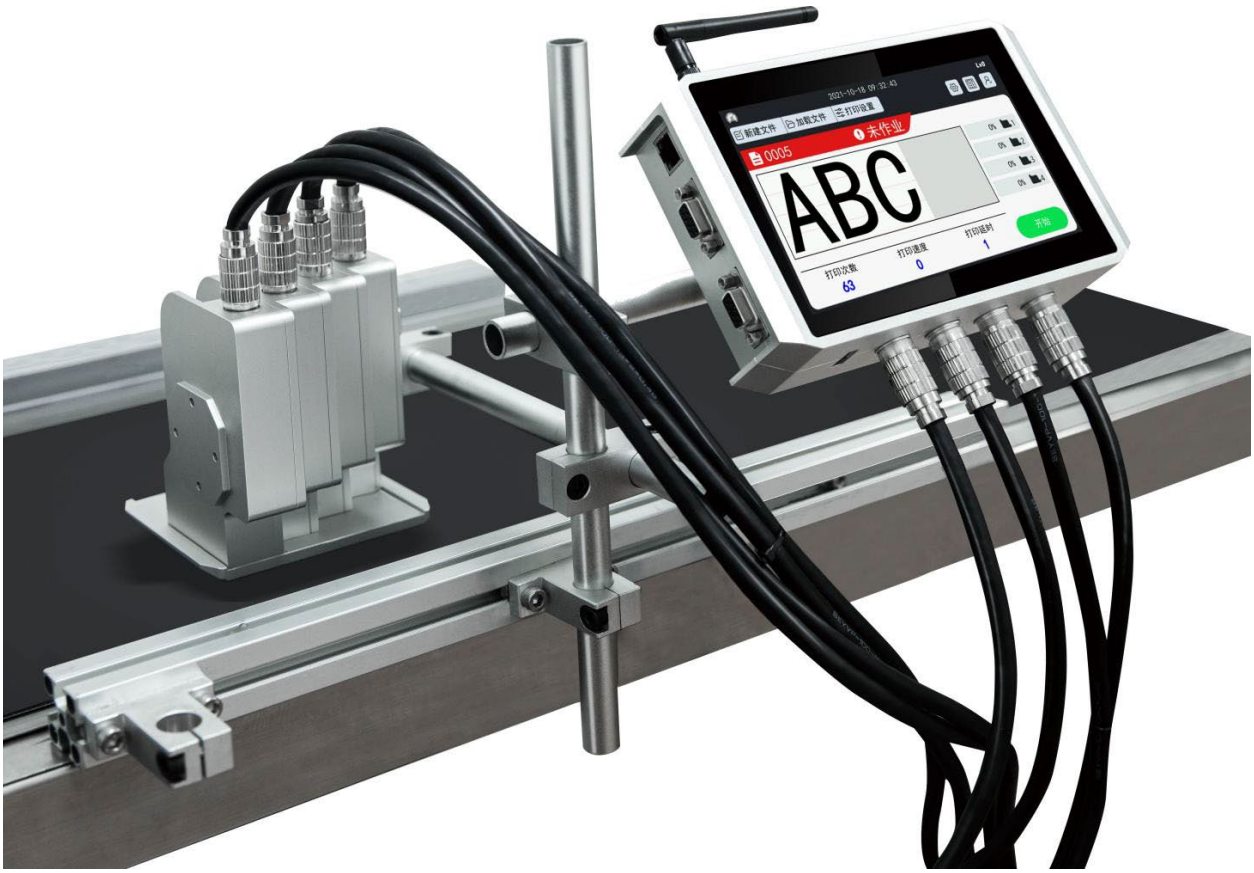
- Only use the power adapter provided. Unapproved power adaptors could damage your equipment.
- Do not attempt to repair your printer or open the case as It could void your warranty.
- Do not install or remove any cables or accessories while the printer is turned on.
- Do not expose the printer to water or store in high-humidity environments.
- Only use SNEED-JET approved/branded ink cartridges. Other ink cartridges are not designed to work with the Freedom printer and will cause an error state.
- Do not remove an Ink cartridge while in use. Doing so can damage the printer and ink cartridge.
- DO NOT remove the Ink cartridge or make any setting changes when the printer is in “print mode” or printing.
- Always remove the ink cartridge when not in use and cap it with the provided plastic clip to ensure cartridge longevity. (https://www.youtube.com/watch?v=cwe6e7RaP2Q)
- DO NOT use any liquids or chemicals to clean your printer or cartridge without consulting technical services first. Support@sneedcoding.com

Contents

Printer Specifications 5
The Freedom Series Print Head(s) 6
The Controller 7
Controller Port Pin-out Diagrams 8
Maintaining Your Ink Cartridge 10
Cleaning Your Cartridge 10
Inserting The Cartridge 11
The Main Menu 12
Quick Startup 14
Navigating The Edit Screen 15
General & Advanced Tabs 17
Creating A Message / Code 18
Programming Text 18
Manufacturing & Expiration Dates 18
Counter 20
Counter Settings 20
Importing An Image / Logo 21
Programming a Barcode, QR, and Data Matrix 22
Shift Codes 23
External Data Manager 24
Printing From a Document: 24
External Communication Protocols 26
RS232 26
Protocol Format 26
Protocol Content 26
Example of Sending a Data Frame 27
Control Device Print Switch 28
Saving and Recalling Messages 30
Navigating the Settings Menus 31
Print Settings 31
Parameters 31
Print Head 32

Print Mode 33
Advanced 34
System Settings 35
Configure 35
Password 36
Custom Date 37
Language 38
Adding and Removing Fonts 38
Serial Port 39
Network 39
Stitching Your Print Heads 41
Preparation 41
Stitching 42

Printer Specifications



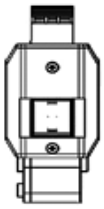
- **Models:** Freedom, Freedom 21 & 22,
- **Prints on:** Paper, Stone, Pipe, Cable, Wire, Metal, Plastic, Wood
- **Printing:** Text, Images, Barcodes, Serial number, Box / Batch, Shift Code, Date, Time, Expiration Date,

DIMENSIONS:	Controller: 7 x 5 x 1.7in Print Head: 8.5 x 12.2 x 4.2cm
POWER ADAPTER:	12V @ 4A
LANGUAGE:	Arabic, Chinese, English, French, German, Greek, Italian, Korean, Persian, Portuguese, Russian, Spanish, Thai, Turkish.
OPERATING ENVIRONMENT:	32°F - 115°f (0°C - 45°C)
INK COLORS:	Black, White, Red, Yellow, Green, Blue, Invisible
PRINT DISTANCE:	2-5mm
PRINT HEIGHT:	Freedom: ½ inch Freedom 21: 1 inch
MAX RESOLUTION:	600 DPI
MAX PRINT SPEED:	95 m/min

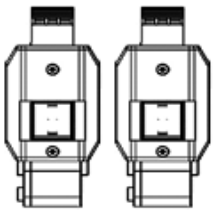
The Freedom Series Print Head(s)

The SNEED-JET Freedom series printers are offered in several different variations.

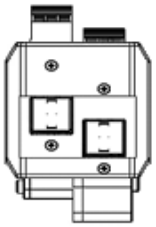
SNEED-JET Freedom



SNEED-JET Freedom 20 Series



Freedom 22



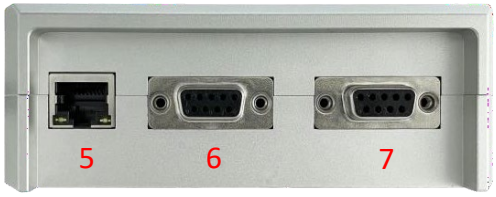
Freedom 21

The Controller

Freedom 40 series controller

Features:

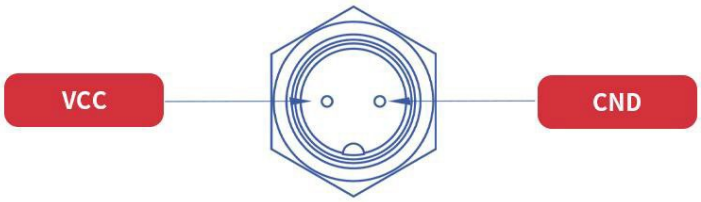
- 7-inch touch screen
- 2x DB9 serial ports
- GX12 inputs for power, encoder, and product sensors



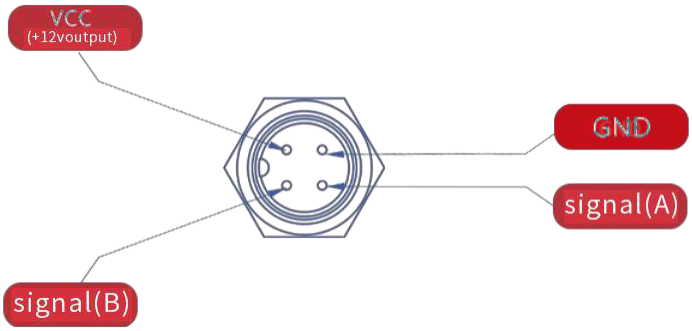
#	Interface	Use
1	Power button	On / Off
2	3-pin GX12 connector	Product Sensor Input (NPN)
3	4-pin GX12 connector	Encoder Input
4	2-pin GX12 connector	Power Input
5	Ethernet	
6	Multifunctional DB9 port	External Alarm light, UV Light
7	Reserve DB9 port	External Data

Controller Port Pin-out Diagrams

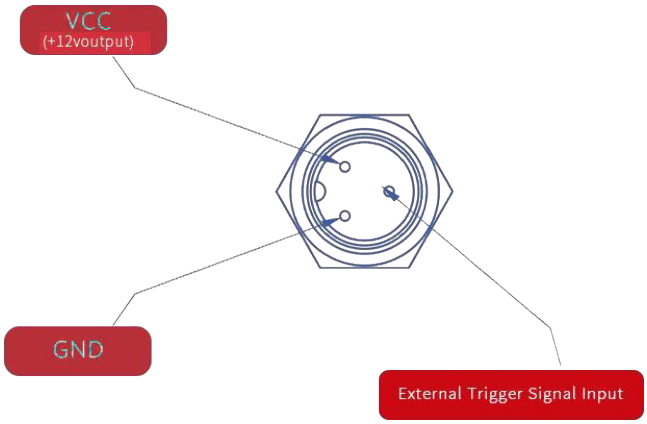
1. 2-pin GX12 (Power)



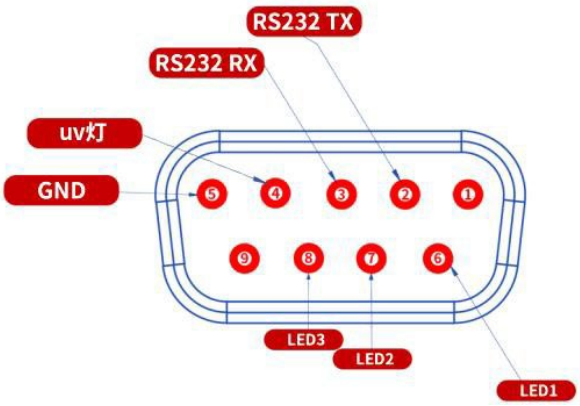
2. 4-pin GX12 (Encoder)



3. 3-Pin GX12 (Sensor)

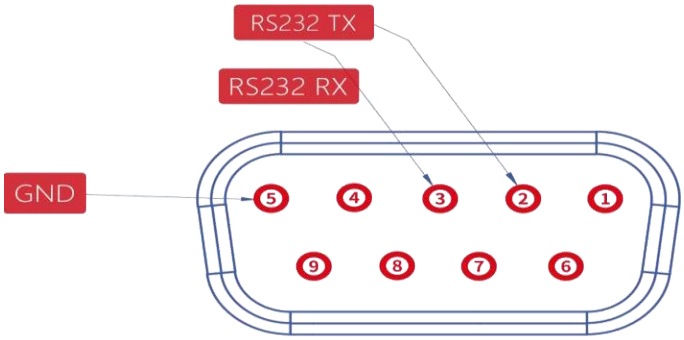


4. Multifunctional DB9 Serial Port



Serial port pins	Function	Description
6-LED1	**Stop Status**	The printer will stop printing for the following reasons: 1. No cartridge or invalid cartridge is installed. 2. Empty cartridge 3. Print speed / rate of print is too high (delayed data / lost data).
7-LED2	**Alarm Status**	Low Ink Light
8-LED3	**Print Status**	Users click on the Start button on the screen. The inkjet printer is operating normally in the print state.
4-UV Light	**UV Light**	Sneed Coding Solutions does not currently offer any

5. Reserve DB9 Serial Port

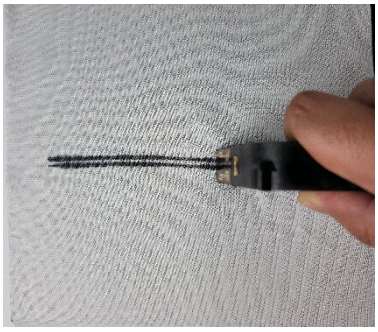


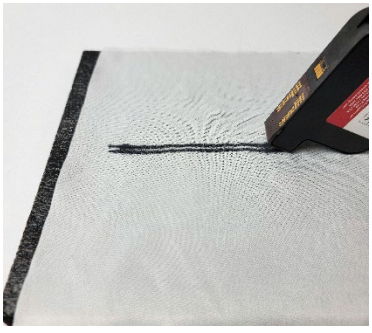
Maintaining Your Ink Cartridge

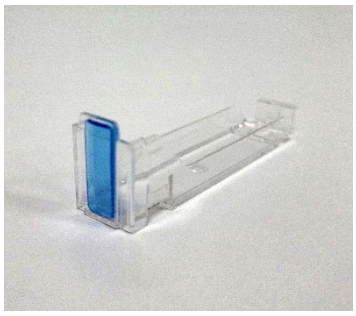
Proper maintenance of your SNEED-JET ink cartridge is the single most important step you can take to ensure that your printing is uninterrupted. Every SNEED-JET ink cartridge comes with a 99% lint free cleaning cloth, this is the only suitable cloth for cleaning your cartridge. Cleaning your ink cartridge should be performed every day before use, follow the instructions below. You will need the provided cloth and a piece of high-density foam. (If you do not have foam, you can open the printer case and use the foam inside)

Cleaning Your Cartridge

1. Place the cloth on top of the foam piece.
2. With one hand hold the cloth in place
3. Gently push the cartridge into the cloth and pull it towards you.
4. You should yield two solid black lines of ink as seen in the image below. Thin or dotted lines indicate a possible issue with debris or dried ink clogging the nozzles.
5. Your ink cartridge should be cleaned before every use.







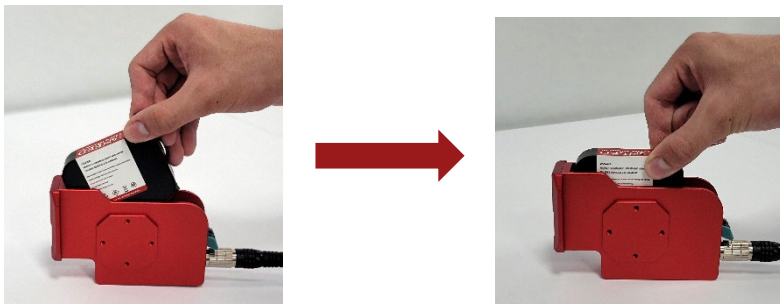
- Every cartridge comes with a clear plastic cartridge clip which should be placed onto the cartridge when it isn't in use.
- Do not leave your cartridge in the printer for extended periods of non-use. Most cartridges should be capped if not in use for 15 minutes or more.

*Points 6 & 7 do not apply to the ST-100 ink cartridge.

Inserting The Cartridge

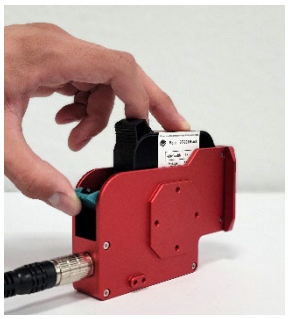
Properly seating the cartridge is one of the most common points of error for first time users of thermal ink jet printers. Follow these steps to ensure that your cartridge is inserted and seated correctly.

1. Set the cartridge into the print head at a 45-degree angle and pivot the back end down until it contacts the cartridge stall.

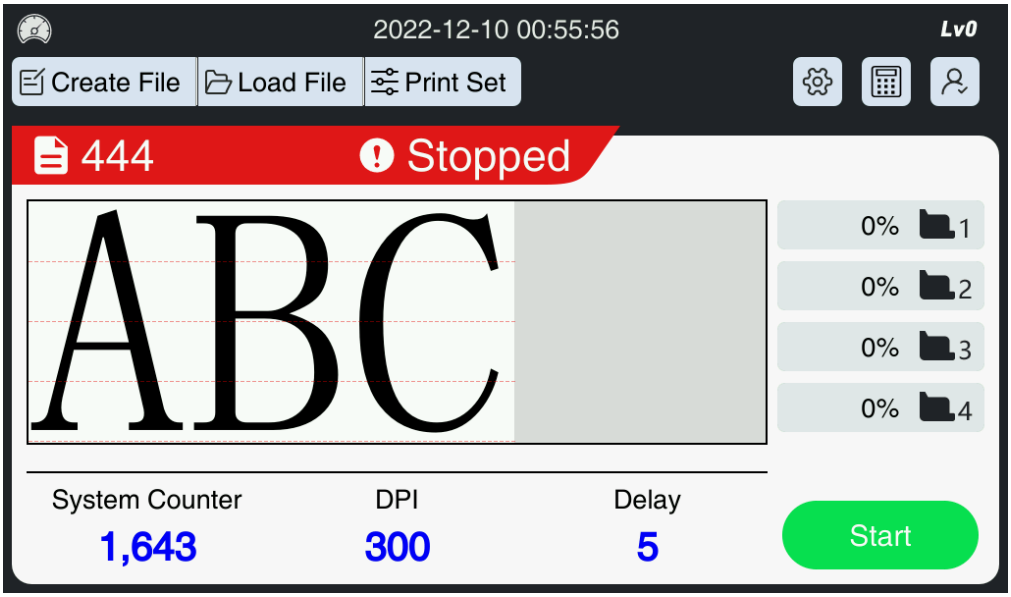


2. Before latching the cartridge in place ensure that it is pushed all the way forward and is flush with the print head face.

3. Use your middle, and index fingers to hold the cartridge in place and close the latch with your thumb.



The Main Menu



Create File - Allows for the creation and full customization of printed messages.

Load File - Select previously programmed messages for printing.

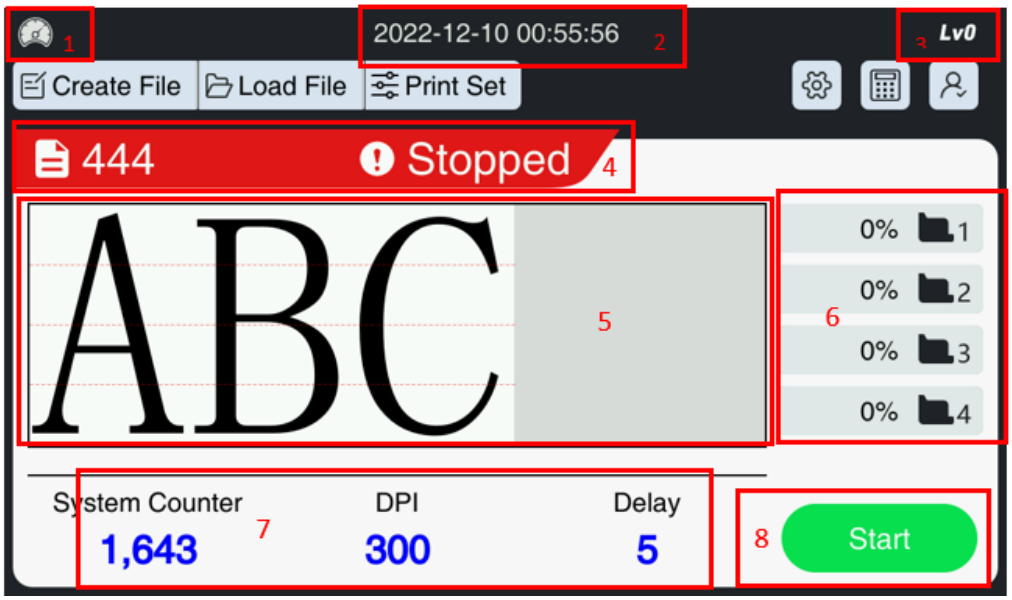
Print Set - Global print settings (ex. “Print speed” and “Print delay”)

System settings - (ex. Time & date, network settings,)

Counter settings - program product counters

Password entry - User level password entry

Note: Please ensure that **print mode** is **deactivated** before removing the ink cartridge or making any changes to the settings.

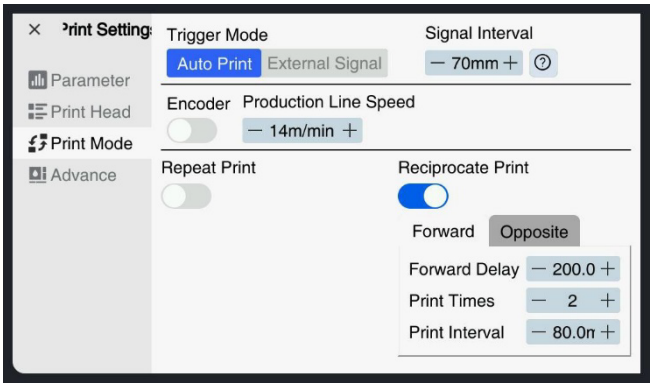


Number	Name	Description
1	**Speed Indicator Light**	The indicator light is white under normal conditions. If it turns red during printing, it means that the production line speed is too fast and the current printing parameters cannot meet the requirements.
2	**System Time**	Displays the current date and time. Tap to set
3	**User Level**	Displays the current user level.
4	**Status Bar**	The status bar displays the current message name as well as indicating by color the current printer status. 1. Red = Idle 2. Green = Printing 3. Orange = Low Ink
5	**Print Preview**	Displays the current printed message
6	**Ink Level Display**	Displays the remaining ink
7	**Quick glance information**	Shows print count, DPI, and delay (mm) value
8	Start Stop	1. Activate Print mode 2. Stop printing

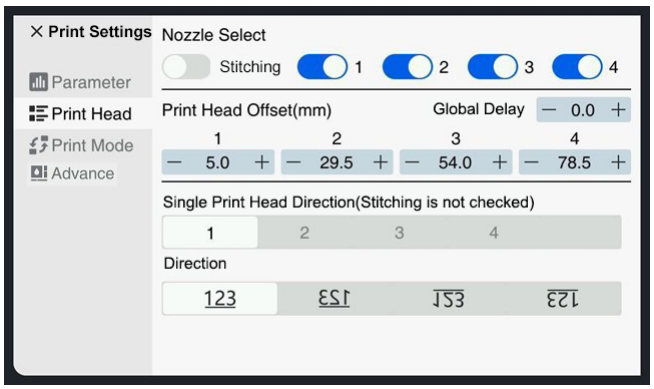
Quick Startup

- This section of the manual is designed to help you get the printer dialed in and printing the pre-loaded test message right away.
- Start by confirming that the print voltage and pulse width are set to correspond with your ink cartridge.
    1. Select the Gear Icon from the top right corner of the screen.
    2. Set the voltage and pulse width to match those printed on the cartridge label.

- Next, decide how you will trigger printing and select it under “Trigger mode”.
    1. Select Print settings from the main menu.
    2. Select print mode.
    3. “Auto Print” will trigger prints at the “Signal Interval” and ignore the product sensor. “External Signal” will trigger a print every time the sensor sends a signal. (How to setup your product sensor)



- “Production Line Speed” is the most important setting to consider. If you are not using an encoder, it is important that you have an accurate measurement of your conveyors speed in meters per minute (m/min). If your equipment does not have a digital read out for this, you should obtain and use a handheld tachometer to find out your equipment’s exact speed.
- The last step is to set the print delay. Set the item to be printed on the conveyor in front of the print head approximately at the desired print location and measure the distance from Product sensor to print head.
    1. From the “Print Settings” menu select “Print Head”
    2. Set the Global Delay value in millimeters to the measurement you took.

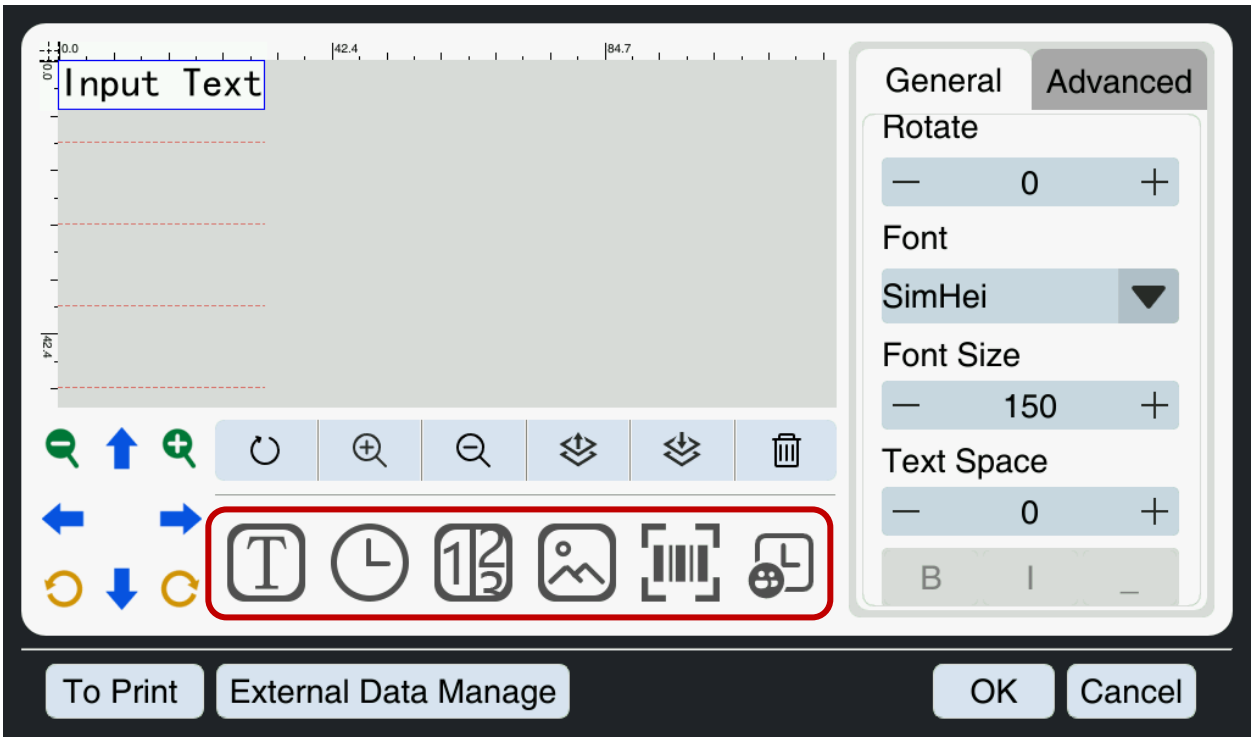


3. Finish dialing in the print position. Testing multiple times between adjustments to confirm consistency of results.

Tip: remember to turn off print mode between adjustments to ensure that your settings are applied correctly.

Navigating The Edit Screen

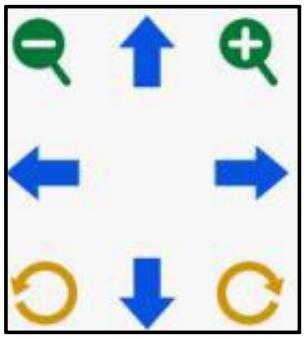
- From the main menu Select



- Each button inside of the red box represents a different item that can be programed.

Text – simple text
Time & Date – manufacturing and expiration dates
Counter – set a sequential counter.
Image – Import Images and logos.
Barcode – choose from 11 different barcodes including QR and DM codes.
Shift code – Set Shift times for printing shift codes

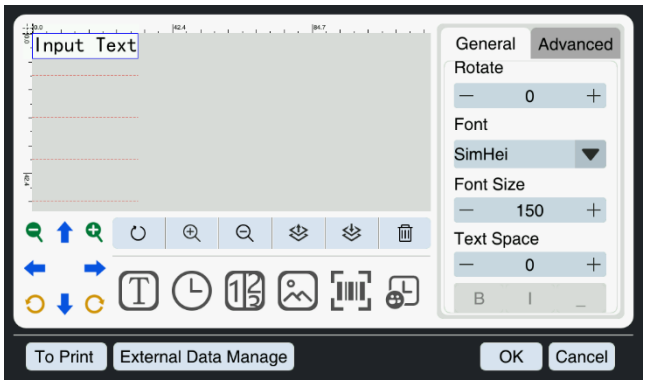
Button	Description
	Undo
	Zoom In
	Zoom Out
	Move to top / layer
	Move to bottom / Layer
	Delete



Button	Description
	Increase or decrease font size
	Move the selected item around the screen
	Rotate the selected item

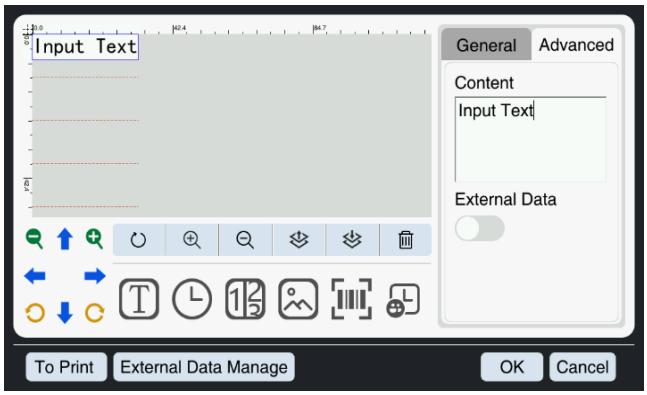
General & Advanced Tabs

Inside the green box are the General and Advanced tabs. You will use them to customize each item you program.



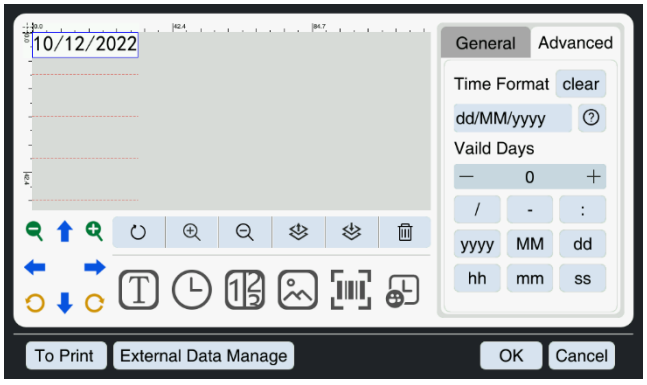
- General Tab features:

1. Set the position of the object (x,y coordinates) the position can also be set by holding dragging the item.
2. Set the font and font size. Choose between normal, bold, Italic, and underlined.
3. Set the distance between characters.



- Advanced Tab:

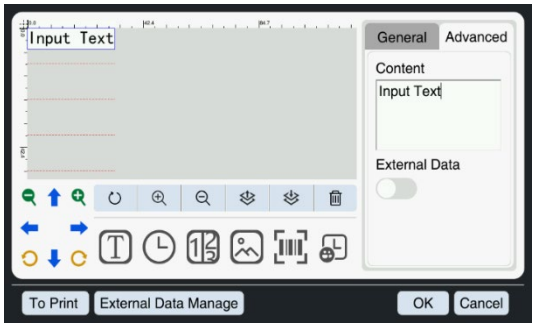
The advanced tab changes depending on the item that is being programmed. When programing a text item, you will be able to enter the desired message into the content box or activate the external data feature. If you are programming a time & date item, the advanced tab will allow you to set the date format and add a time frame for printing an expiration date.

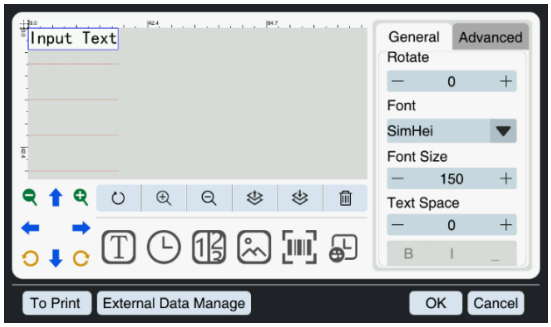


Creating A Message / Code

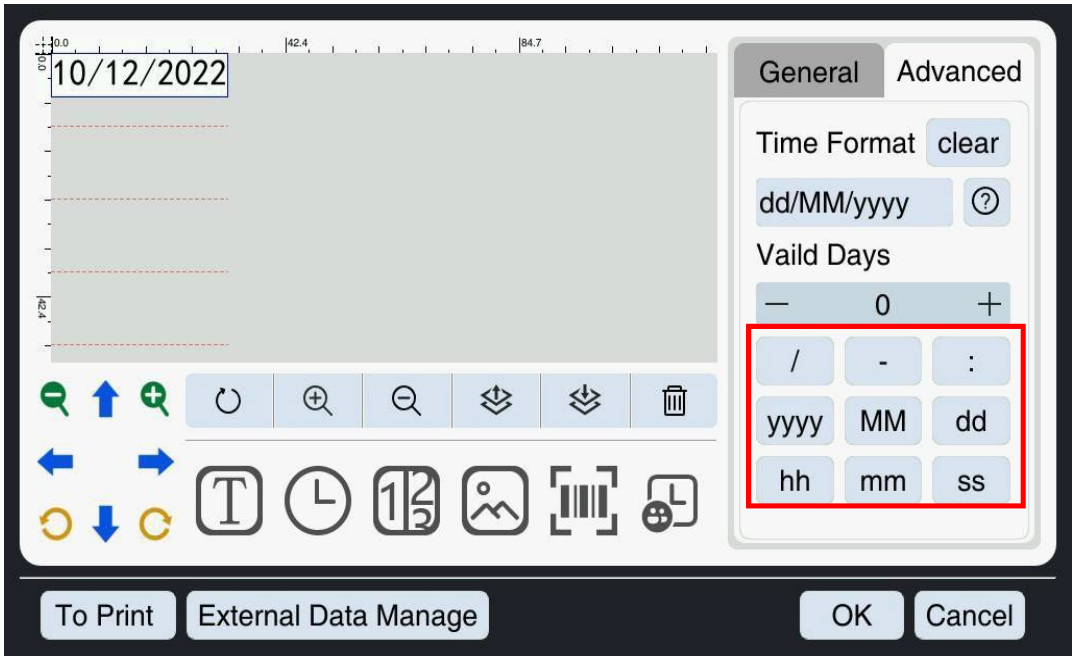
Programming Text

1. Select the “Text” Icon
2. In the advanced tab, enter the text into the “content” box.
3. Set the font and font options from the general Tab.





Manufacturing & Expiration Dates



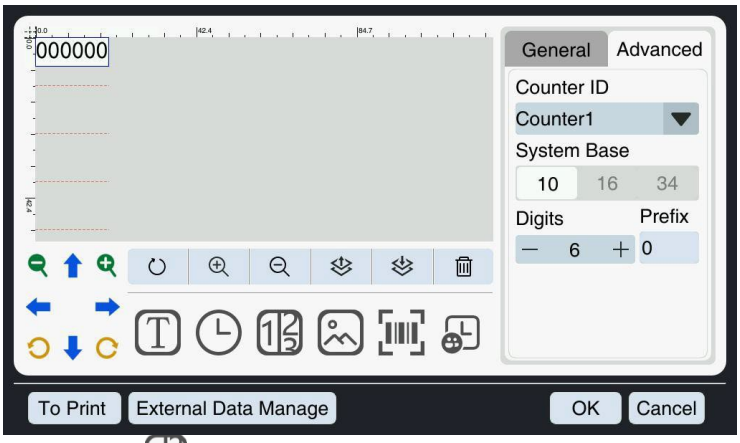
1. Select the “time” icon
2. To set a manufacturing date you only need to decide the date format you would like to use and set it using the buttons in the “Advanced’ tab or use the chart below and enter it manually into the format window.

Abbreviation	Result
d	Date number without leading zero (1 to 31)
dd	Date number with leading zero (01 to 31)
ddd	Abbreviated week name (e.g. "Mon" to "Sun")
dddd	Full week name (e.g. "Monday" to "Sunday")
M	Month number without leading zero (1-12)
MM	Month number with leading zero (01-12)
MMM	Abbreviated month name (e.g. "Jan" to "Dec")
MMMM	Full month name (e.g. ""January" to "December")
yy	Two-digit year (00-99)
yyyy	Four-digit year
h	Hour without leading zero (0 to 23, displayed as 1 to 12 if with AM/PM)
hh	Hour with leading zero (00 to 23, displayed as 01 to 12 if with AM/PM)
m	Minute without leading zero (0 to 59)
mm	Minute with leading zero (00 to 59)
s	Whole second without leading zero (0 to 59)
ss	Whole second with leading zero (00 to 59) when it is applicable
AP/ap or A/a	AM/PM time, the AP will be "AM" or "PM".
JD	Julian day
JW	Julian week

3. To set an expiration date, repeat steps one and two.
4. Determine the total number of days from printing that the product is set to expire and enter it into the “Valid days” box. This date will always stay ahead of the current date by a total number of days equal to the “Valid Days” box.

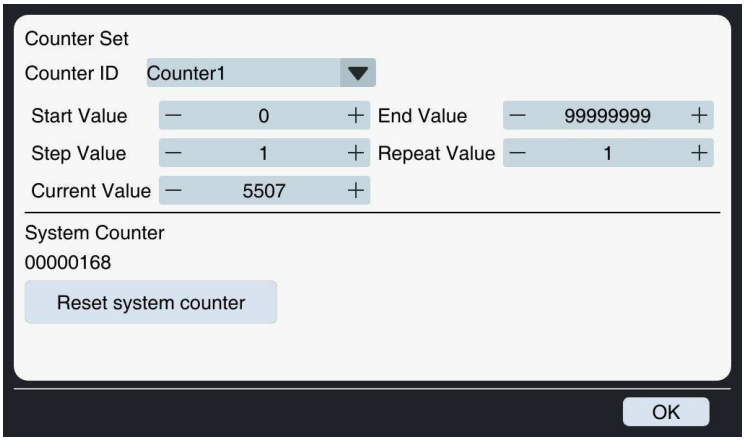
Counter

- The counter feature will allow you to insert a sequential counter into the printed message.



1. Select the "Counter" icon
2. The drop-down menu labeled "Counter ID" will allow you to choose from 4 different programmable counters.
3. Select the numbering system (Base 10 for most users) and the total number of digits up to 8.
4. Select font and font size from the general tab.

Counter Settings



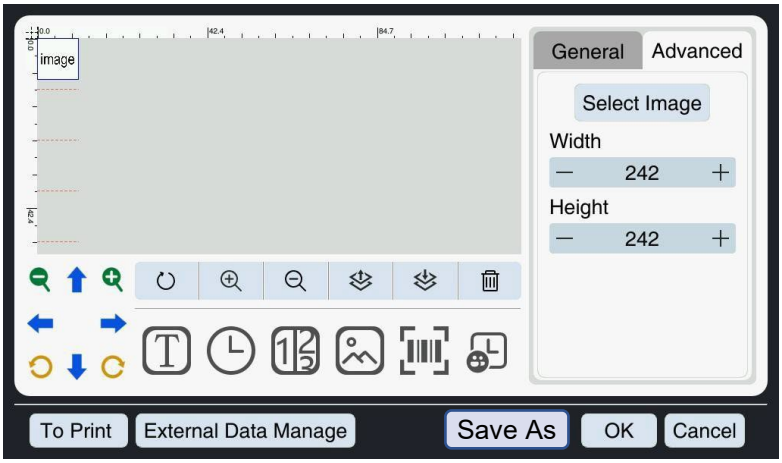
The counter's detailed settings are accessed from the main menu. Select the counter settings icon .
To set up your counter:

1. Select the counter ID from the drop-down list.
2. The Start and end Values define the counters range.
3. The step value is the incremental increase of each print.
4. Repeat value – Specify the desired repetition count for each value to be printed, indicating the total number of times it should be replicated.

Importing An Image / Logo

To import an Image:

1. Save the file to a USB drive, The file name cannot contain any spaces or special characters.
   - The file must be saved on to the main directory of the USB drive. Do not save it into a folder.
2. Insert the USB drive.
3. Select the 'Image" Icon
4. In the advanced tab, choose "Select Image."

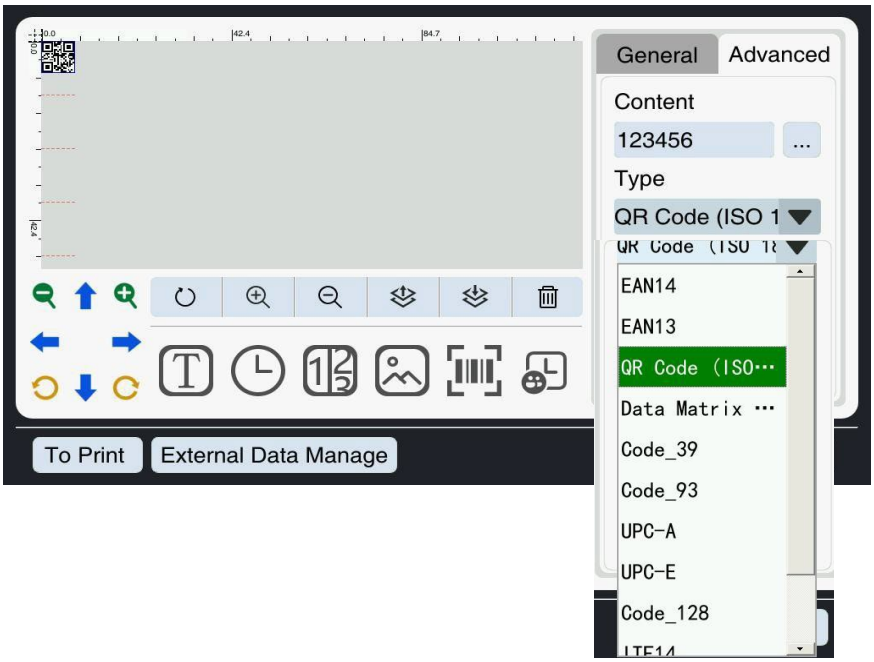


5. The file explorer will load.

6. Select the file you would like to use and press "Copy to local"
7. Press "OK" to load the file into the current message.

Programming a Barcode, QR, and Data Matrix

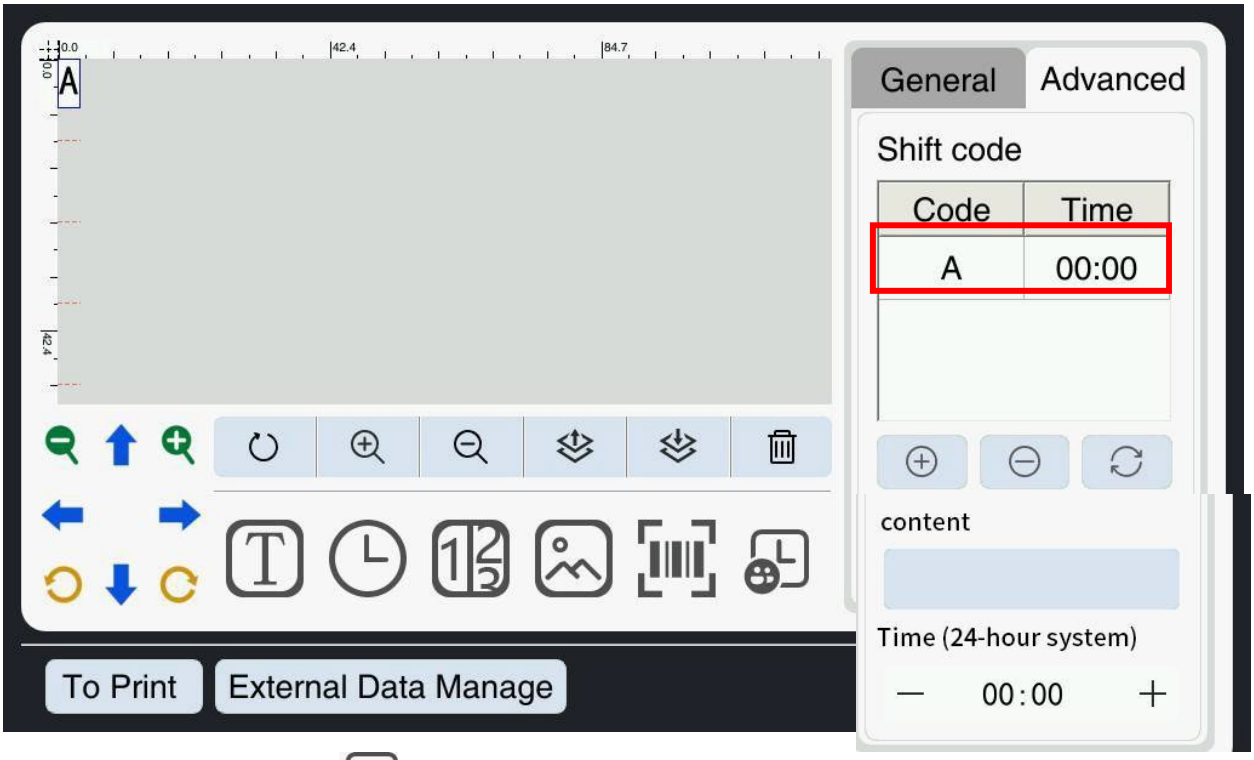
1. Select the barcode icon



2. From the drop-down menu labeled “Type” select the code you would like to use. – it is important to note that each barcode type has different requirements. To avoid confusion, make sure that you know which code you need before you start.
3. Enter the code or information into the “Content” box. This could be a string of numbers in the case of most barcodes or a website URL in the case of a QR or DM code.

Shift Codes

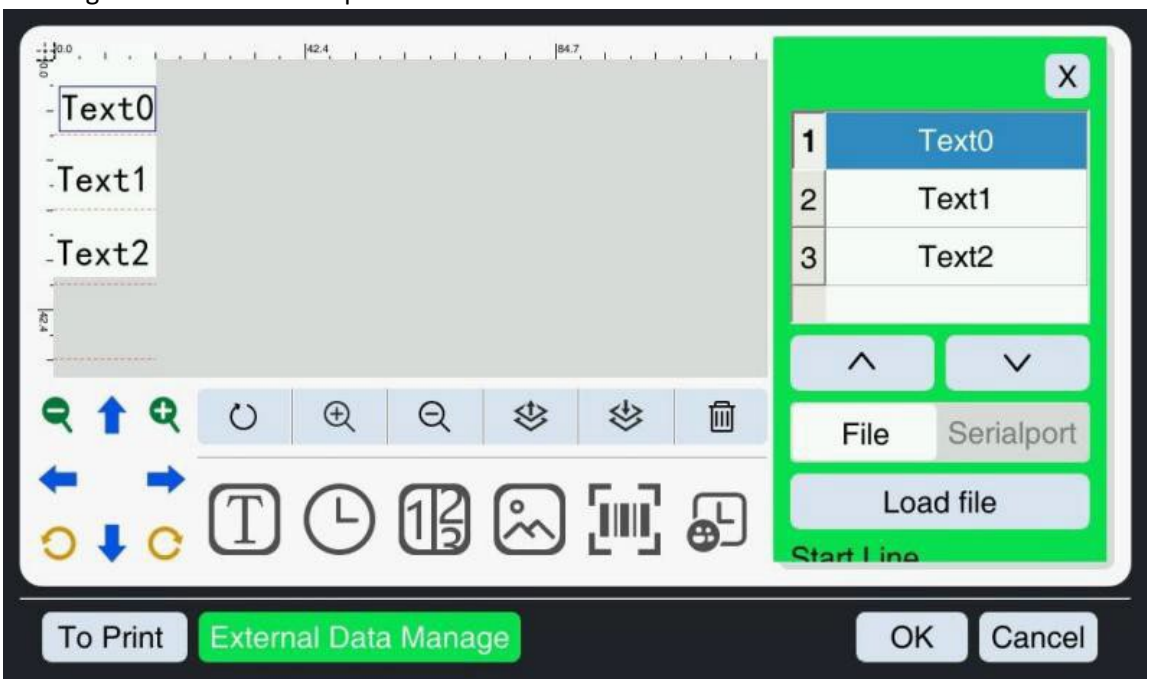
- To program a shift code:



1. Select the shift icon
2. The default shift code will load as the letter A and be set to midnight on a 24-hour clock. To change the shift code, highlight it.
3. Change the shift name inside of the “content” box.
4. Set the shift start time with the + and – buttons in the “Time” window.
5. Press the Refresh button.
6. To add another shift, press the + icon and repeat steps 1-5.
7. The code will switch from one shift to another when it reaches the next shifts start time.

External Data Manager

When printing text or QR codes you have the option to use the external data feature. The source of the data can be in the forms of a .txt, and Excel (.xlsx) documents imported from a USB drive, or as real time data through the reserve RS232 port.



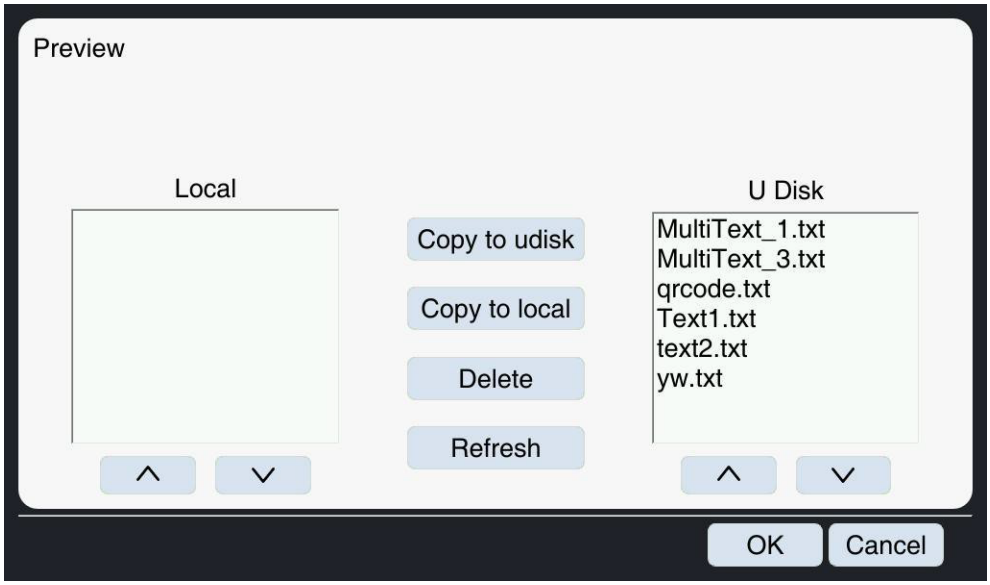
Printing From a Document:

1. First prepare your document using Microsoft Excel or some other spreadsheet generator.
   - Each text object represents a separate column in your file. Be sure to add a text object for every column.
   - In the examples hereText0,1and 2, represent Columns A, B, and C respectively.
2. In the case you are using a .txt document you will need to create a separate file with only a single column for each text object.
3. Once your file is prepared and you have set all your text objects to “external data” using the slider in the advanced tab. Press the “External Data Manager” button.
4. The green menu in the image above will load.

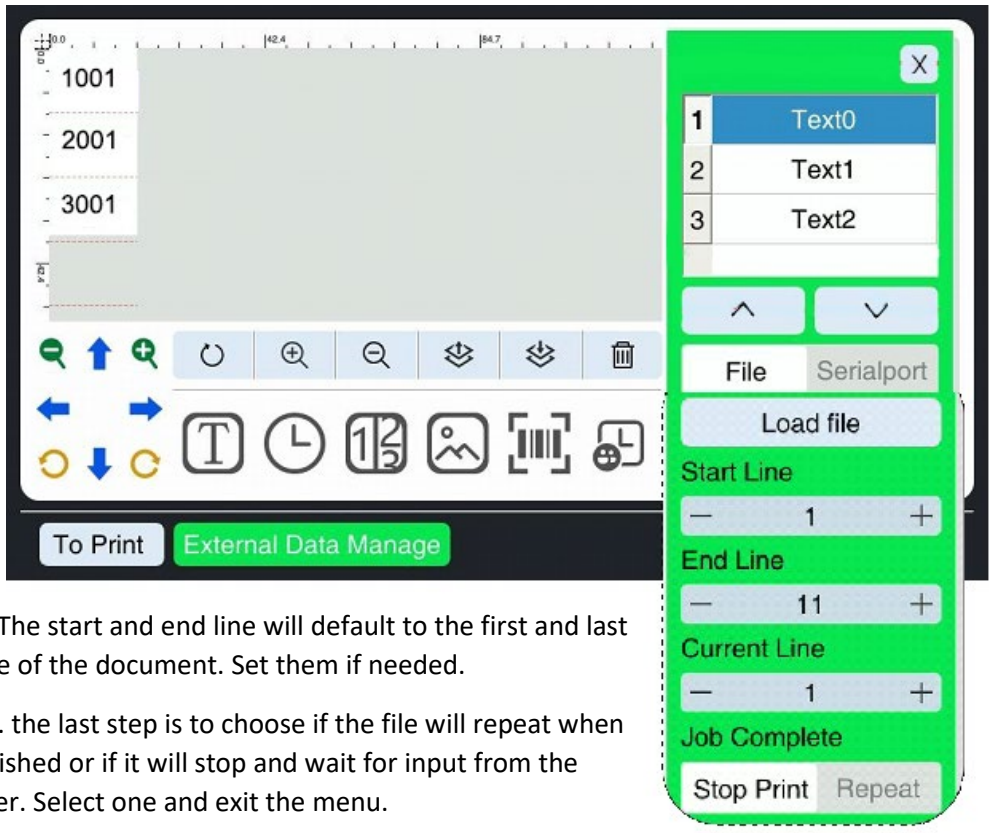
	A	B	C	D	E
1	1001	2001	3001		
2	1002	2002	3002		
3	1003	2003	3003		
4	1004	2004	3004		
5	1005	2005	3005		
6	1006	2006	3006		
7	1007	2007	3007		
8	1008	2008	3008		
9	1009	2009	3009		
10	1010	2010	3010		
11	1011	2011	3011		
12	1012	2012	3012		
13	1013	2013	3013		
14	1014	2014	3014		
15	1015	2015	3015		
16	1016	2016	3016		
17	1017	2017	3017		
18	1018	2018	3018		
19	1019	2019	3019		
20	1020	2020	3020		
21	1021	2021	3021		

TestBook1

5. Select “File”
6. Select “Load File”



7. From the file browser select the file that you wish to print from and press “copy to local”.This saves the file to the printer
8. Press “OK”



9. The start and end line will default to the first and last line of the document. Set them if needed.

10. the last step is to choose if the file will repeat when finished or if it will stop and wait for input from the user. Select one and exit the menu.

External Communication Protocols

RS232

RS232 configure (Baud rate can be modified, the default is 115200)

Baud rate	Data Bits	Parity	Stop Bits	Flow Type
115200	8	None	1	None

Protocol Format

The data transmitted to the printer via the external serial port adheres to a single frame format.

Frame Header	Data Length	Function Bits	Data Information
0x02	2Bytes(H->L)	1 Byte	n Bytes

The definition of each field is as follows:

	Name	Length	Description
1	Frame Header	1	The fixed frame header of this protocol
2	Data Length	2	Include Function Bits and Data Information
3	Function Bits	1	The function bits indicates the main function of this data
4	Data Information	0...N	Data content of the function

Note: All data is expressed in hexadecimal.

Protocol Content

Sending Variable Information

The variable information protocol for printing is as follows:

Frame Header	Data Length	Function Bits	Data Information
0x02	2Bytes(H->L)	0x50	n Bytes

Data information can be divided into **single variable data information** and **multiple variable data information**.

Single Variable Data

Variable number of information	Variable information ID	Variable information Length	Variable information Content
0x01	0x70	1 Byte	1~255 Bytes

Multiple Variable Data

Variable number of information	Variable information 1 ID	Variable information 1 Length	Variable information 1 Content	Variable information 2 ID	Variable information 2 Length	Variable information 2 Content	...
n	0x70	1 Byte	1~255Bytes	0x71	1 Byte	1~255Bytes	...

Notice:

1. The "Variable Information Content" field is encoded using the UTF-8 hexadecimal format. For instance, if the information being sent is "ABCD", the corresponding "Variable Information Content" field should be "41 42 43 44".
- It's worth noting that all the aforementioned fields are represented in hexadecimal format.
2. Starting with a variable information ID of 0x70, sequential accumulation is performed for each subsequent ID, such as 0x71, 0x72, and so on.

Example of Sending a Data Frame

Note: In order to properly test variable data, it is recommended to first edit and load a file containing the variable data. Within the 'External Data Management' section, the buffer number should be set to 1. At this point, variable data can be transmitted from the upper computer. Once the device receives the variable data accurately, the corresponding information will be updated on the main screen. Subsequently, clicking the 'Print' button on the main screen will initiate normal printing. It's important to note that when the buffer is set to 1, repeated transmissions of variable data will overwrite the current information. Upon completion of the printing process, the device will provide printing completion information.

1. Printing variable information with the content '2169' will result from the transmission of the following data frame."

Frame Header	Information Length	Function Bits	Variable number of information	Variable information 1 ID	Variable information 1 Length	Variable information 1 content
02	00 08	50	01	70	04	32 31 36 39

2. Printing 1 piece of variable information, the content is "Serial port Chinese test", then the data frame sent is:

Frame Header	Information Length	Function Bits	Variable number of information	Variable information 1 ID	Variable information 1 Length	Variable information 1 content
02	00 16	50	01	70	12	e4 b8 b2 e5 8f a3 e4 b8 ad e6 96 87 e6 b5 8b e8 af 95

3. Printing 2 pieces of variable information: the content is "123", "ABCDE", then the data frame sent is:

Frame Header	Information Length	Function Bits	Variable number of information	Variable Information 1D	Variable information 1 Length	Variable information 1 content	Variable information 2 ID	Variable information 2 Length	Variable information 2 content
02	00 0e	50	02	70	03	31 32 33	71	05	41 42 43 44 45

Control Device Print Switch

Frame Header	Data Length	Function Bits		Data Information
0x02	2Bytes(H->L)	0x30		1 Byte，00 Stop print，01 Start Print

Actual Sending： 02 00 02 30 01 Print is On

After the machine enters the Printing state correctly, return the command intact.

Actual Sending： 02 00 02 30 00 Print is Off

After the machine enters the Stop printing state correctly, return the command intact.

Switch Print Files

Frame Header	Data Length	Function Bits	Data Information
0x02	2Bytes(H->L)	0x31	File Name （n Bytes <255）

Note: The file extension must be.spr.

The following command is utilized to locally switch the current print file on the device. For instance, to print the file named '888', the complete filename would be '888.spr', and its contents would be displayed in UTF8 format.:

38 38 38 2e 73 70 72

Full Content is show as

02 00 08 31 38 38 38 2e 73 70 72

After the machine switches the file successfully, return the command intact.

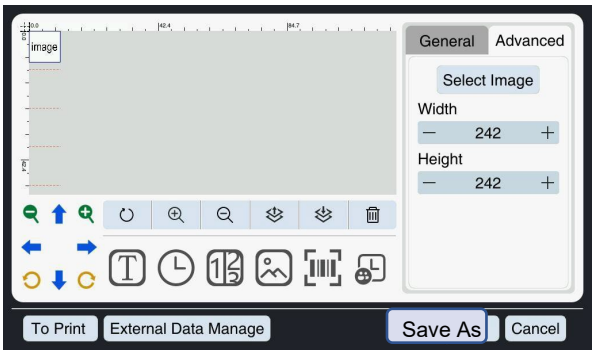
02 00 08 31 38 38 38 2e 73 70 72

Print Completion Return

Frame Header	Data Length	Function Bits	Data Information
0x02	2Bytes(H->L)	0x06	Current numbers of Buffer （n Bytes <255）

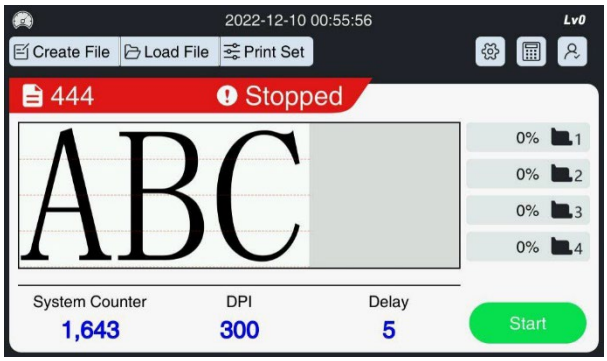
Generally, when using external data, the buffer is set to 1. At this time, the current buffer will be deleted after each print, and then return： 02 00 02 06 00

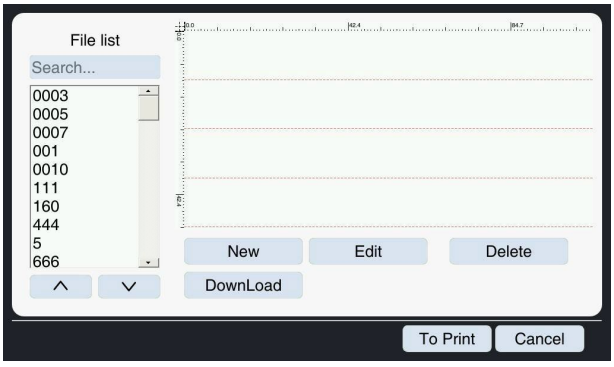
Saving and Recalling Messages



1. When you have created the code or message that you wish to print you can select “Save As’ or “OK”. Then select “To Print “to load the new message.

2. To load a previously saved file or to open if for editing select “Load File” from the main menu.





3. To print the message. Select it from the file menu and press “To Print.”
4. To open the message in the message editor, press the “Edit” button.

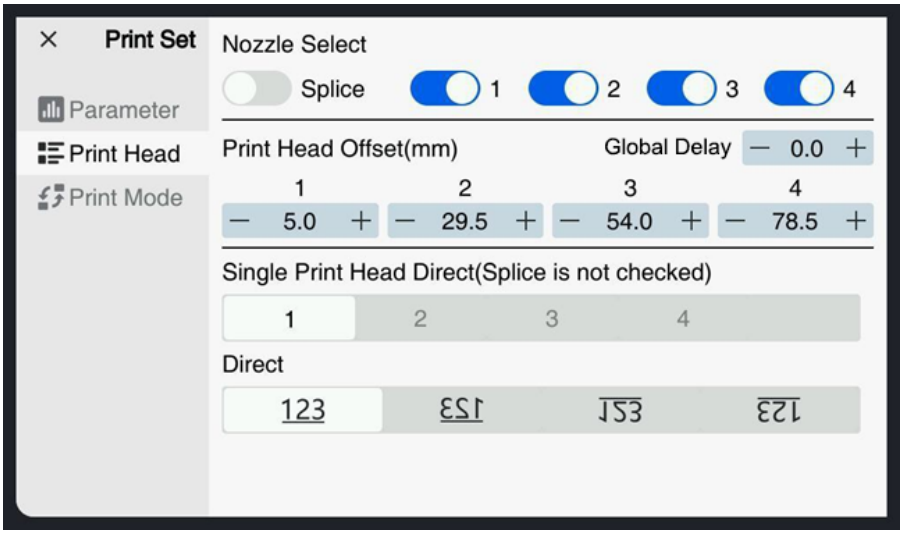
Navigating the Settings Menus

Print Settings

Parameters

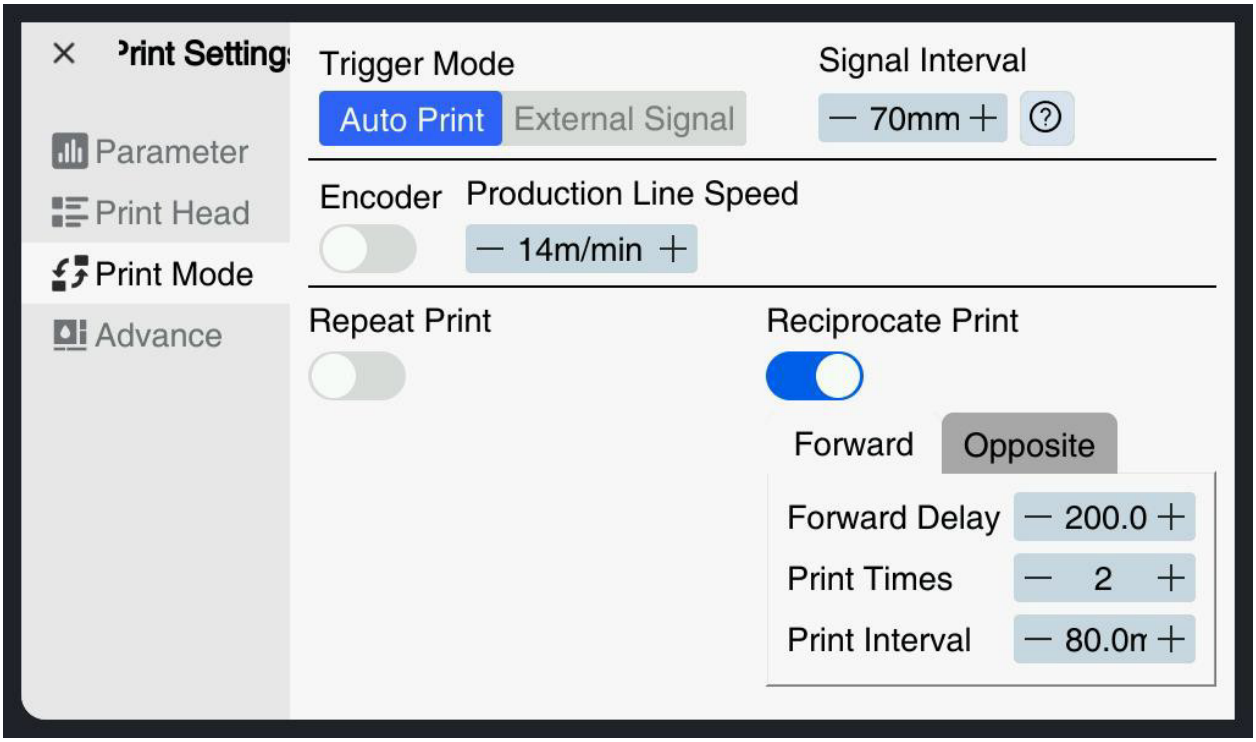
Menu Option	Description
Spray Type	1. Left & Right - Every HP 45 cartridge features two rows of nozzles. During a typical printing project, the printer is set to use one of the two nozzles. The left and right options allow you to choose which. 2. High Quality - activates both nozzles simultaneously to achieve darker prints. This will decrease the top speed of the printer significantly. 3. High Speed – uses both nozzles but lowers the DPI significantly. 4. Alternation – Alternates nozzles every print. This is the best way to achieve the fastest printing possible and maintain the longevity of the cartridge.
Double Spray interval	This is the distance between each row of nozzles. The default setting is 4.2. when using both nozzle rows it may be necessary to make small adjustment s to ensure both nozzles line up and print on top of each other.
DPI	Dots per inch, The higher the value the darker your prints become.

Print Head



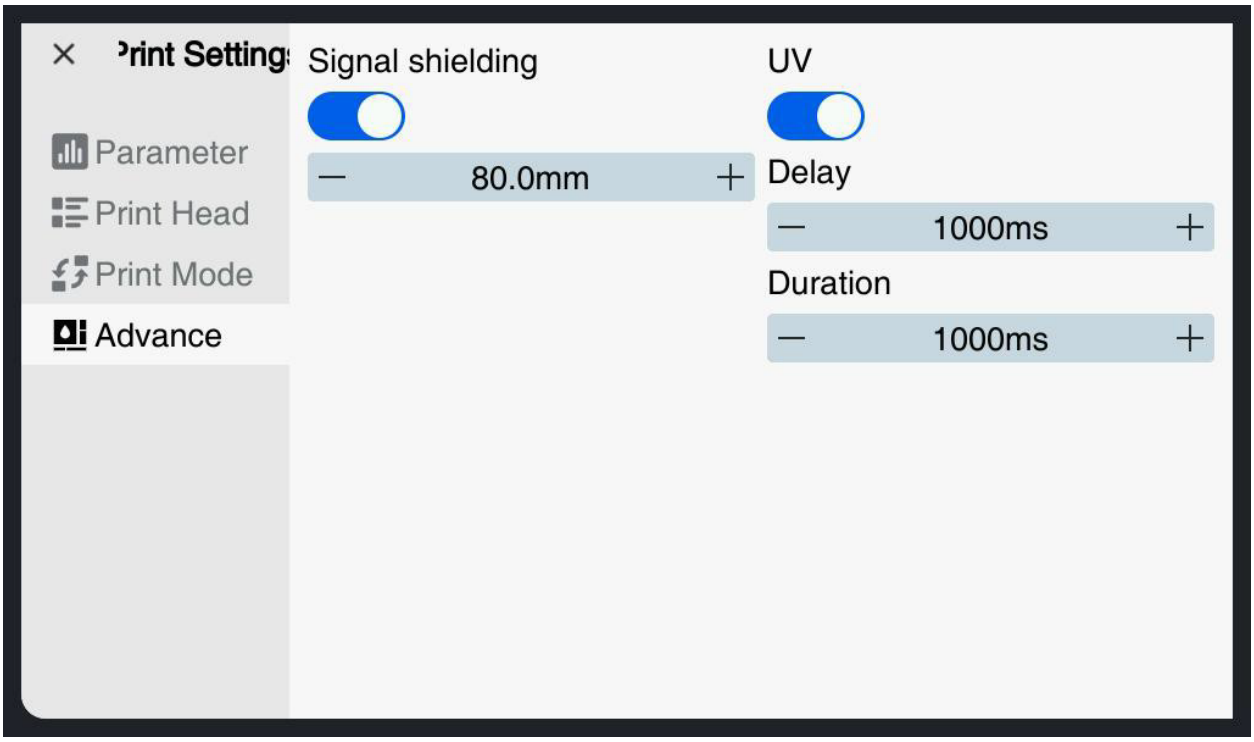
Menu Option	Description
Nozzle Select	Dependent on the model, you can select the number of print heads that you would like to be in use. - The Splice slider forces all print heads to print the same direction
Global Delay	The Global Delay is a value (mm) representative of the space allotted after the print signal to the beginning of the print.
Print Head Offset	The print head offset is the distance or delay between each print head. (Only for multi head systems like the Freedom 21)
Single Head Direction	Change the direction of individual print heads (The splice setting will override this)
Direct(ion)	Change the direction of printing

Print Mode



Menu Option	Description
Trigger Mode	Choose the print signal input. - External Signal lets the printer take the input from a photo eye or product sensor. - Auto print will begin printing after you press the start button and repeat a print every Signal Interval
Signal Interval	The distance between prints when “Auto print” is in use
Encoder	Use the slider to allow the printer to receive the encoder signal
Production line speed	Set the production line speed. (m/min) - This is the single most important global setting for users not using an encoder. Ensure that it is as accurate as possible. - We recommend using a tachometer if your equipment does not offer a speed readout
Repeat Print	Set the printer to print multiple times on a single trigger signal
Reciprocate Print	This setting allows for the reversal of print direction over other print. - For example, the first print will read from right to left and the second from left to right. The pattern will repeat until the setting has been deactivated.

Advanced

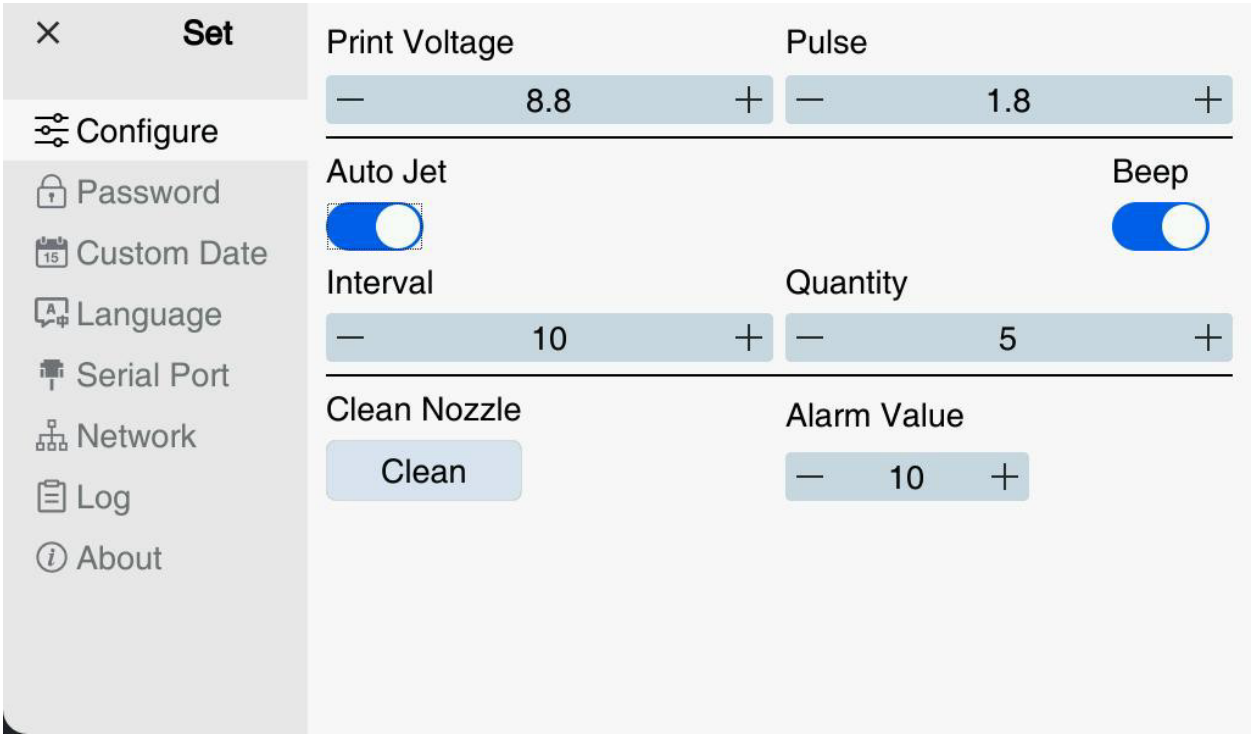


- Signal Shielding – setting a value here will cause the printer to ignore any trigger signal that it receives for the set distance after the initial signal. An inaccurate production line speed will cause inaccurate results.
- UV – Set the duration and delay of a UV curing light.
    - Sneed Coding Solutions does not currently offer a UV curable Ink cartridge.

System Settings

The system settings are accessed using the gear Icon on the main menu.

Configure

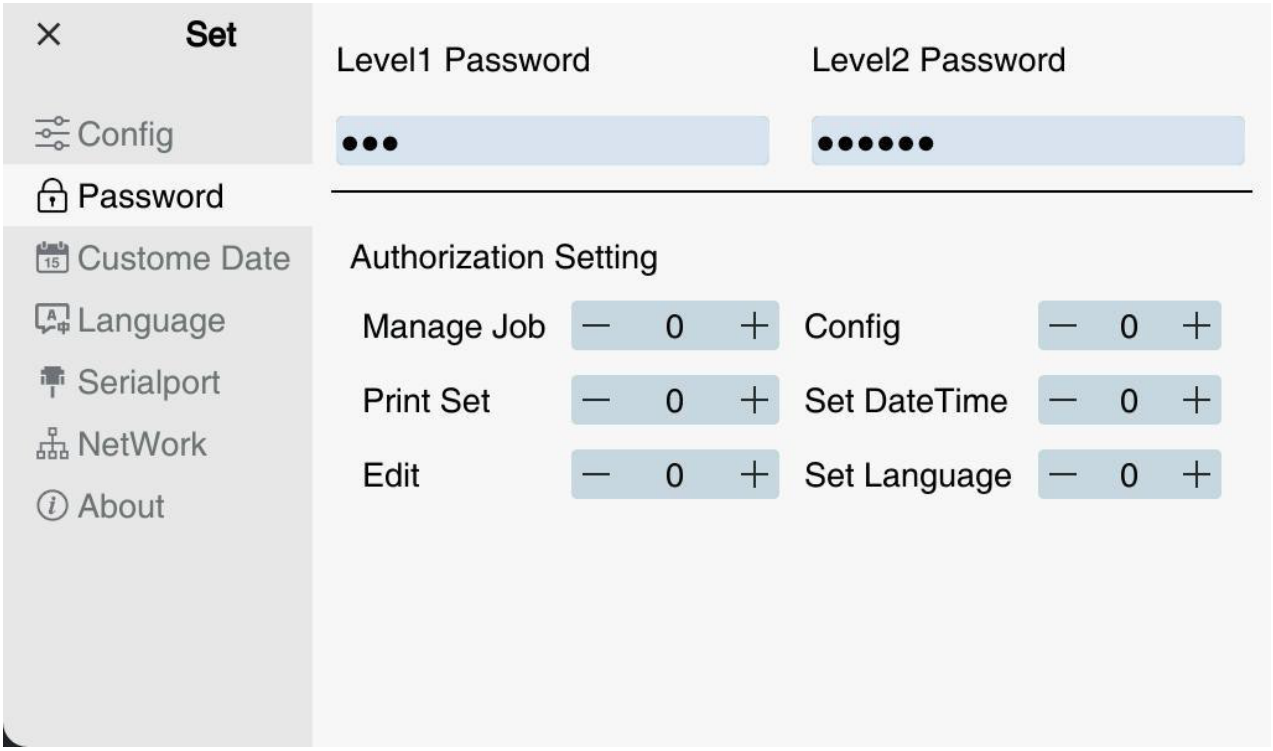


Menu Option	Description
Print Voltage & Pulse	This is the amount of voltage being delivered to the cartridge and the amount of time it is being delivered. Be sure that your Voltage and Pulse settings match those on the cartridge label.
Auto Jet	When enabled, the auto Jet feature ejects a specific amount of ink for a pre-determined amount of time. This feature helps to ensure that your ink cartridges don't dry up when not in use. This feature is most useful in low volume applications. - The "Interval" represents the time between ejections in seconds. - The "Quantity" is the total number of droplets ejected
Beep	The sound that the printer makes after a print
Clean Nozzle	Force a large amount of ink through the nozzles to clear any obstruction
Alarm Value	The percentage of ink remaining in a cartridge to trigger the Low ink warning.

Password

At boot up the printer is set by default to user level 0 and has no restrictions. To change or set restrictions, or to set a new password you must first be logged in as a level 2 user.

1. Return to the main menu and select the user login icon.
2. The default passwords:
    - Level 2: 123456
    - Level 1: 123
3. Enter the level 2 password and press confirm.
4. Navigate back to the settings menu > password.



5. In this menu you can set new passwords and restrictions for each level
    - To set restrictions, increase or decrease the number in each category to indicate the highest user level that you would like to have access to that feature.
    - For example, if you would like for only user level two employees to have access to a feature than put 2 in that category
    - If you put a one in a category than every user level 1 and above will be able to access it.

Custom Date

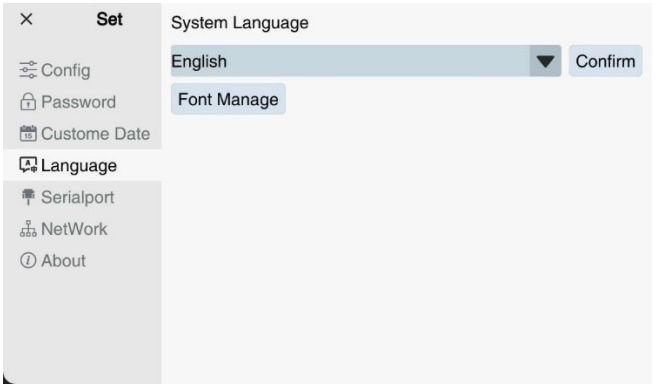
The custom date menu allows you to define how each day of the week, or each month is displayed in the print message.

1. To use this feature first enter the message editor and press the time & date icon.
2. In the format window you can use **NR** for a custom month and **ND** for a custom day
    - For example, if you entered the format as MM/dd/yyyy your date would appear as 03/14/2023
    - Instead, if you format as NR/dd/yyyy your date will appear as Mar/14/2023.
    - NN can be used to display the day of the week in a numerical value 01, 02, 03, …
    - NO can be used to display the day of the week as a letter A, B, C, …

Language

In the “Language” menu you will be able to choose one of 14 different languages.

- English
- Spanish
- Chinese
- Arabic
- French
- German
- Greek
- Italian
- Korean
- Persian
- Portuguese
- Russian
- Thai
- Turkish

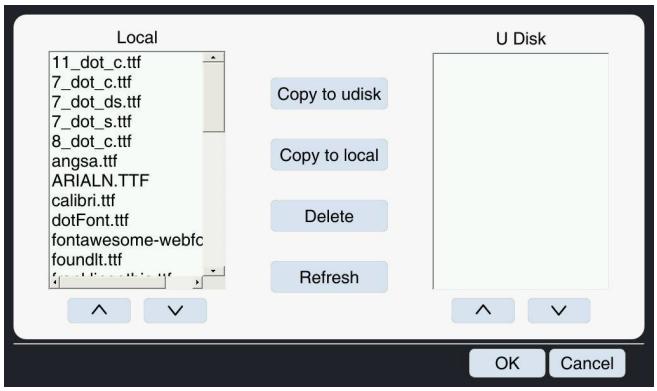


Adding and Removing Fonts

Before attempting to add a font, the file must be a true type font (.ttf) and saved on the main directory of a USB drive.

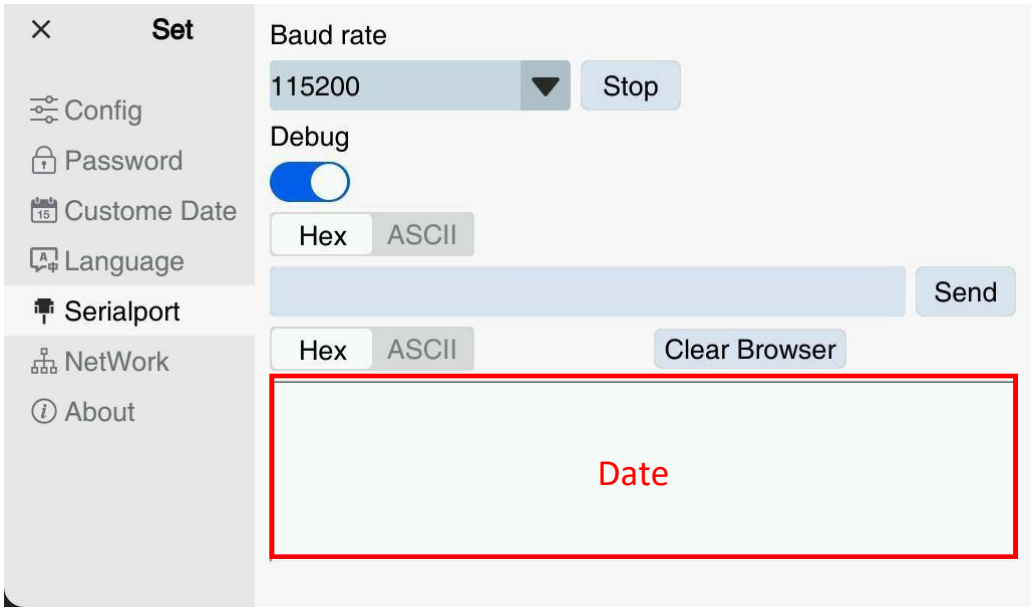
- Be sure not to include any spaces or special characters in the file name.

1. In the language menu, press “Font manager”
2. The font that you have prepared will be on the right side of the screen under Udisk
3. Select it and press “To Local” to save it to the printer.
4. To remove a font, select it and press “Delete”



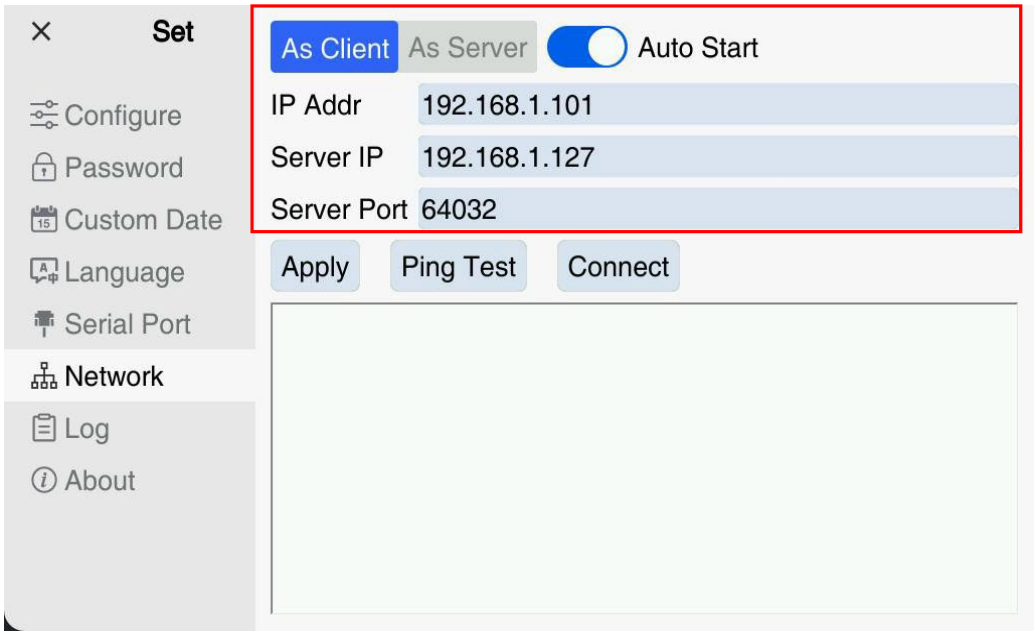
Serial Port

The serial Port settings menu is used to set the Baud Rate and run a connectivity test to the external device.



Network

The Freedom series printer allows for a network connection to send information to multiple devices simultaneously. This feature is intended top be used with the “Network Integrated Control Software” (PC). Call Technical support at (833)926-3464 If you do not have the software.



- There are two methods of connection to your printer.
  1. As a client
     - With this method you will need to apply a static IP address to the printer
     - Manually enter the Device IP, Server IP, and port
  2. As a server
     - This method allows you to use the printer as the server and daisy chain several units together using a network switch.

Stitching Your Print Heads

* This section of the manual is only relevant to the Freedom 21

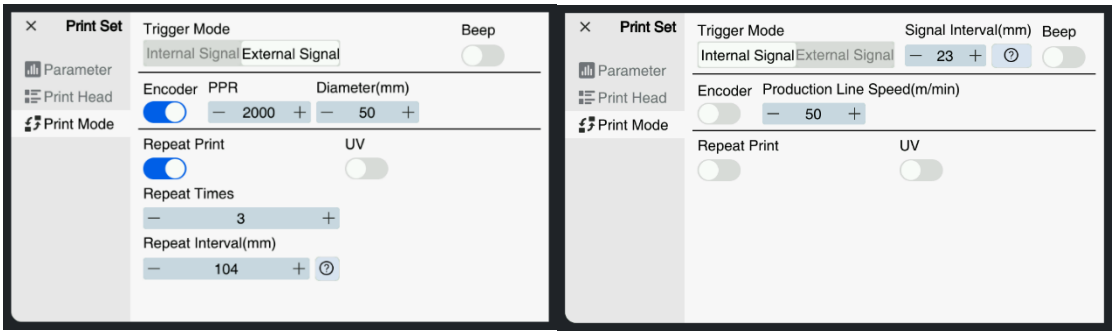
We recommend that anyone stitching prints purchase an encoder kit to ensure consistent and accurate results.

Definition: to stitch print means to combine more than one print head to form a single larger print otherwise not achievable by a single print head.

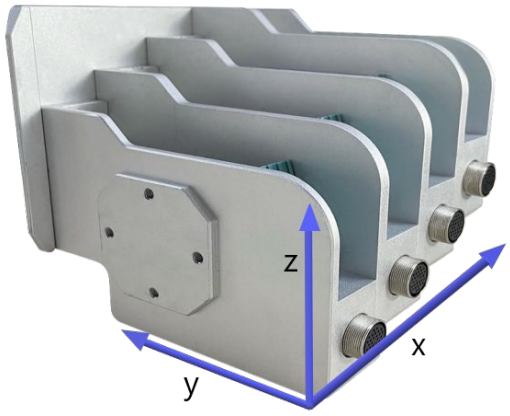
Tip: Make sure that your print head is level on all axes (x, y, z). It will be impossible to achieve a good stitch if your printhead is not square in relation to your product.

Preparation

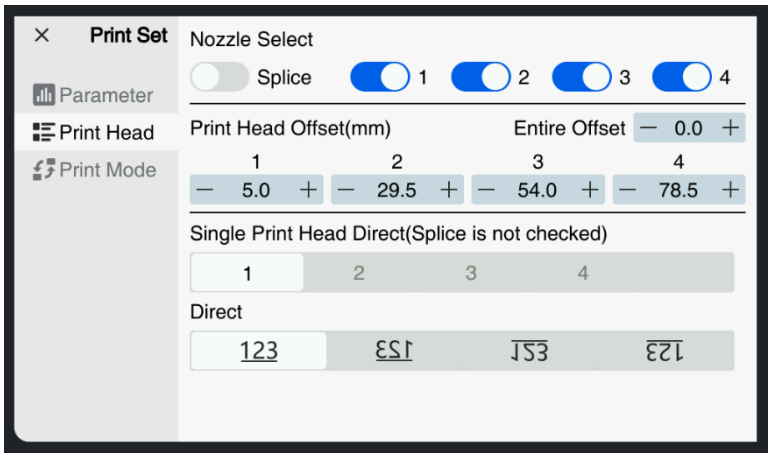
1. Begin by making sure that you have enabled your encoder and set the Pulse per revolution (PPR) to 2500. If you did not purchase an encoder wheel it will be necessary to ensure that you have an accurate measurement of your conveyor speed. If your equipment doesn't offer a digital readout of the speed, you can use a simple tachometer to get an accurate measurement. Once you have determined the speed, enter it into the "Production Line Speed" box.



2. Ensure that your print head is level on all axes before attempting to stitch.



Stitching

1. Begin by setting the “Global Delay” value so that print head one begins printing in the desired location.
2. Now that you have the desired starting print position you need to run a few test prints to ensure that the results are consistent.
3. It is likely that the first prints that you attempt will look like the image below, this is normal, and you will need to set the “Print Head Offset” to line them up.

4. To set your offset first measure the distance between the start of printhead 1 and the start of head 2. Enter the results in millimeters (mm) into “print head offset” #2