

User Guide

SNEED-JET Freedom 21/22 Series Printers



Sneed Coding Solutions, Inc.

22315 Gosling Rd.

Spring, TX 77389

833-926-3464

www.sneedcoding.com

To schedule a call:

<https://info.sneedcoding.com/meetings/richardturner/printer-introduction>



Help desk and support videos:

<https://help.sneedcoding.com/>



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 :

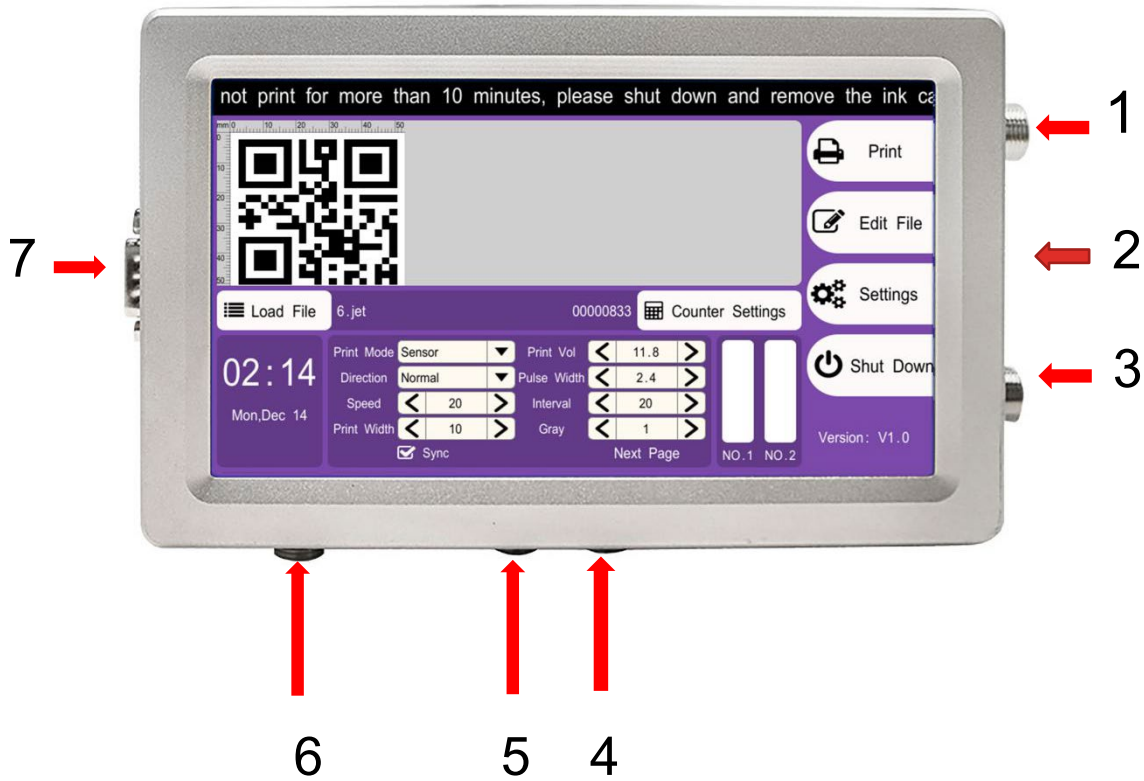
- DO NOT remove the Ink cartridge or make any setting changes when the printer is in “print mode” or printing.
- ENSURE that all cables are secure before operation.
- Always remove the ink cartridge when not in use and cap it with the provided plastic clip to ensure cartridge longevity.
(<https://www.youtube.com/watch?v=cwe6e7RaP2Q>)
- It is necessary to deactivate “Print mode” when making any setting change or message edit.
- Please ensure that you use the “SHUT DOWN” button and follow the instructions on the screen when powering off the printer.
- DO NOT use any liquids or chemicals to clean your printer or cartridge without consulting technical services first.

Support@sneedcoding.com

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1.Diagram



- 1.Power adapter Input
- 2. Power button
- 3.Prudct Sensor input
- 4. Print head #1 port
- 5.Print head #2 port
- 6.Encoder input



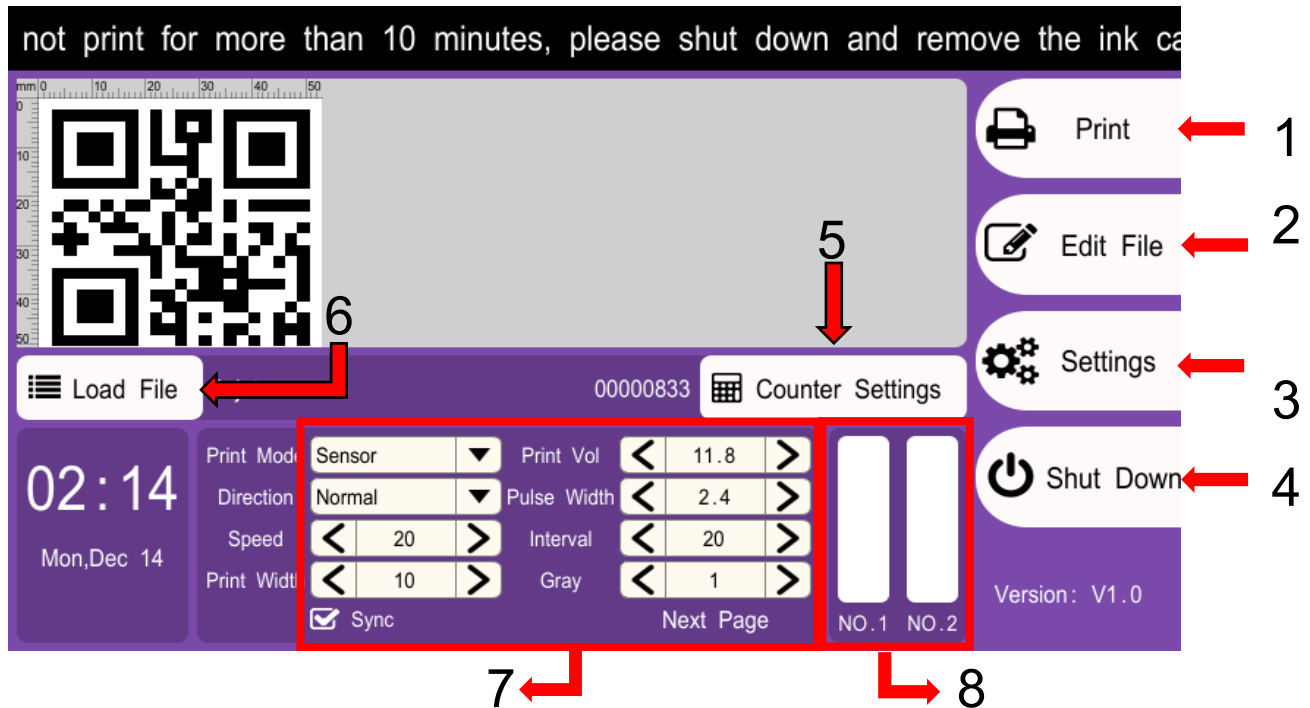
7.RS232 input

2. Printer Specifications

| | |
|-------------------|--|
| Printer | Freedom Series Thermal Inkjet |
| Model | 21 & 22 |
| Nozzle | TIJ 2.5 Thermal Inkjet nozzle |
| Operating system | Linux |
| CPU | Quad core 1.4Hz |
| DPI | 300 maximum |
| Screen size | 7 inch |
| Language | English, Chinese, Arabic, Korean, Italian, Russian, Spanish, Portuguese, Turkish |
| Shape features | Aluminum alloy |
| Dimension | Controller: 186 * 116 * 42mm, Print nozzle: 138*96*103 mm |
| Net weight | Controller: 0.58 KG, Print nozzle:0.5KG |
| Printing height | 50.8mm |
| Printing distance | 2-5mm |
| Print content | Text, time and date, batch number, serial number, logo, QR code, barcode |
| Storage | more than 1000 messages |

| | |
|---------------------|---|
| Printing length | 2000 characters for each message with no limitation to physical length |
| Printing speed | 70m/min |
| Power consumption | 24 W |
| Voltage | 220V±20% AC input, 30V/10A DC output |
| Working environment | Temperature:0 - 45°C (best 20-30°C) Humidity: 40% - 60% Rh |
| Printing material | paper, cardboard, wood, concrete, fabrics, fiber glass plastic (PET, HDPE, PVC, LDPE, other), glass, aluminum, stainless, carbon steel, and many others |

3.Main Menu



1. **Print** – Activate and disable print mode.
2. **Edit File** – The “Edit File” menu allows for the creation and full customization of printed messages.
3. **Settings** - General printer settings.
4. **Shut Down** – starts the printer shut down process.
5. **Counter settings** – allows for the customization of sequential counters.
6. **Load File** – Load and delete previously saved messages.
7. **Print Parameters** – detailed print settings
8. **Ink Cartridge levels** – 1 -100%

Note:

- ① Please use the correct shut down procedure when powering off : select “Shut Down” and follow the directions on the screen.
- ② Please ensure that **print mode** is **deactivated** before making setting changes or removing the ink cartridge.

4. Print Parameters

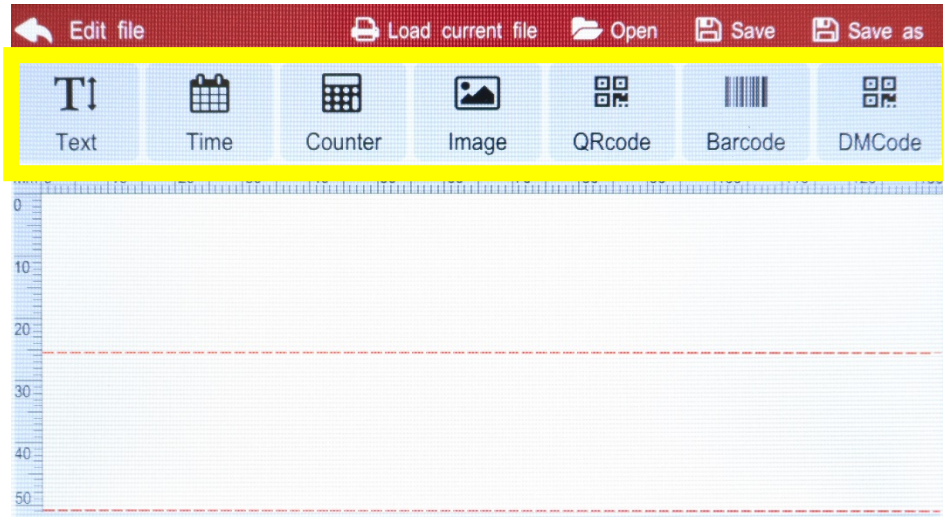
| | | | | | | | |
|--|--------|----|-------------|-----------|------|----|---|
| Print Mode | Sensor | ▼ | Print Vol | < | 11.8 | > | |
| Direction | Normal | ▼ | Pulse Width | < | 2.4 | > | |
| Speed | < | 20 | > | Interval | < | 20 | > |
| Print Width | < | 10 | > | Gray | < | 1 | > |
| <input checked="" type="checkbox"/> Sync | | | | Next Page | | | |

- The menu above represents your basic print settings. It is from here that you will make 90% of your physical print adjustments and ink settings

- a. **Print Mode:** this option allows you to choose from multiple print trigger options. For example, you can choose to use the external product sensor or set the printer to print in automatic mode. (Auto mode uses the printer delay or “Interval” to trigger prints every set value).
- b. **Direction:** allows you to reverse or mirror the print over the X and Y axis
- c. **Speed:** this setting is one of your most important and allows you to set the speed at which the printer ejects ink to match the speed of your conveyor. This can require some trial and error.
- d. **Print Width:** Print width is a setting only relevant when using an encoder wheel. It is equivalent to the speed setting.
 - Your encoder wheel is activated or disabled from the check box labeled “Sync”
- e. **Print Vol (Voltage):** use this to set cartridge specific voltage settings. The proper voltage settings for you are listed on the side of the cartridge.
- f. **Pulse width** is also an ink cartridge specific setting that you will find listed on the side of your cartridge.
- g. **Interval (Print Delay):** The Interval value allows you to set when the print begins following the print trigger. This allows you to move the print to the left or right on the product you are printing to precisely position the message. You will also use the Interval value to determine the distance between prints when using automatic print mode,
- h. **Gray:** Greyscale value (do not increase gray past 3 without consulting technical services. This will cause higher than average wear on your cartridge nozzles)
- i. **DPI:** dots per inch

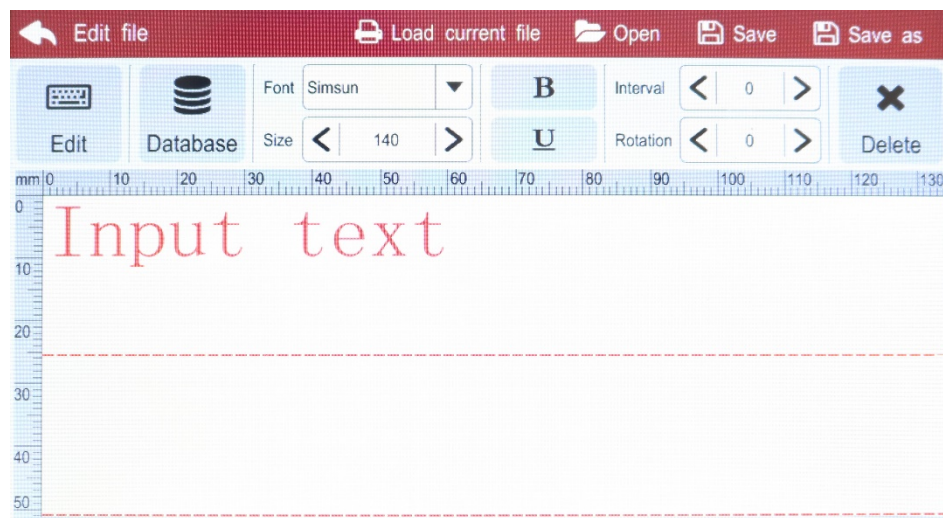
5. Using the Message Editor

- a. Upon opening the message editor, you will be presented with the menu in the image below. The **seven large icon buttons** are used to select the field you would like to insert into your message

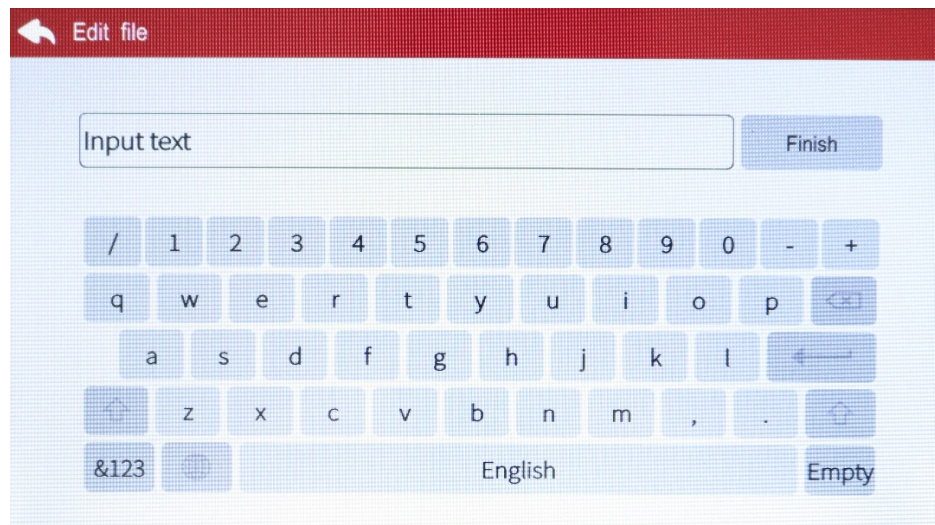


5.1. Programming Text Into Your Message

- a. Select "Text" from the menu in figure 4, you will be presented with the menu below.



- b. From this menu you can set the parameters of your text.
 - a. Font
 - b. Size
 - c. Interval = space between characters
 - d. Rotation = 360*
- c. To input text, select the “edit” button
- d. The Keyboard will fill the screen. Select “finish” when you have programmed your text.

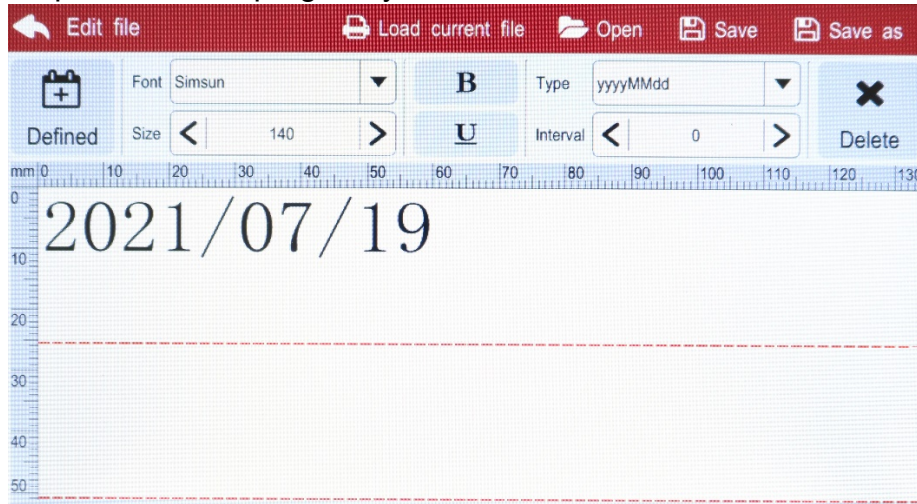


TIP: the “Empty” button will clear any text in the preview pane.

5.2. Programming Date Fields

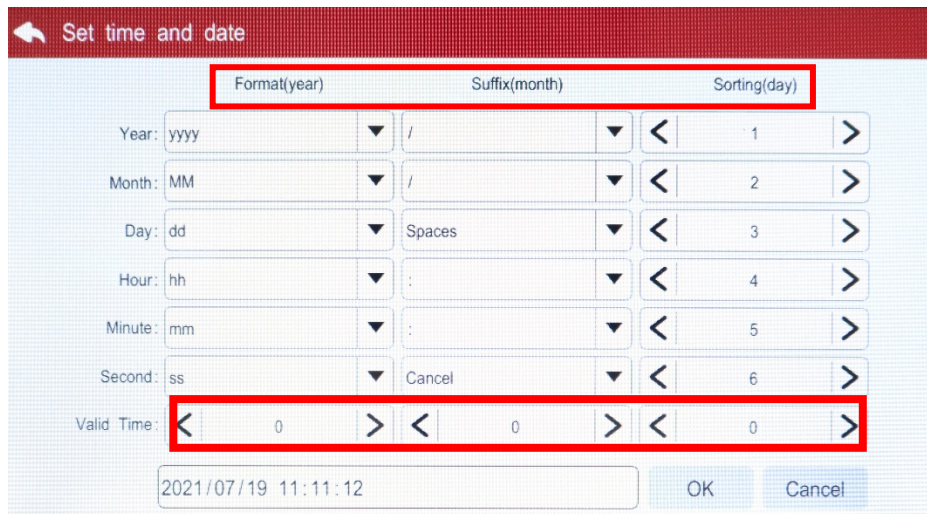
- a. Select “Time”
- b. From this menu you can choose a pre-defined date format from the drop-down list or program your own

Tip: Any date codes chosen from the drop-down list will only display the current days date



- c. To create a rolling expiration date, select the “Defined” button.
- d. Here you will be presented with a menu that will allow you to customize the date format and set the date for a pre-defined number of days from the current date.

Tip: The bar at the bottom of this screen is the preview bar and will allow you to view your custom date format as you create it

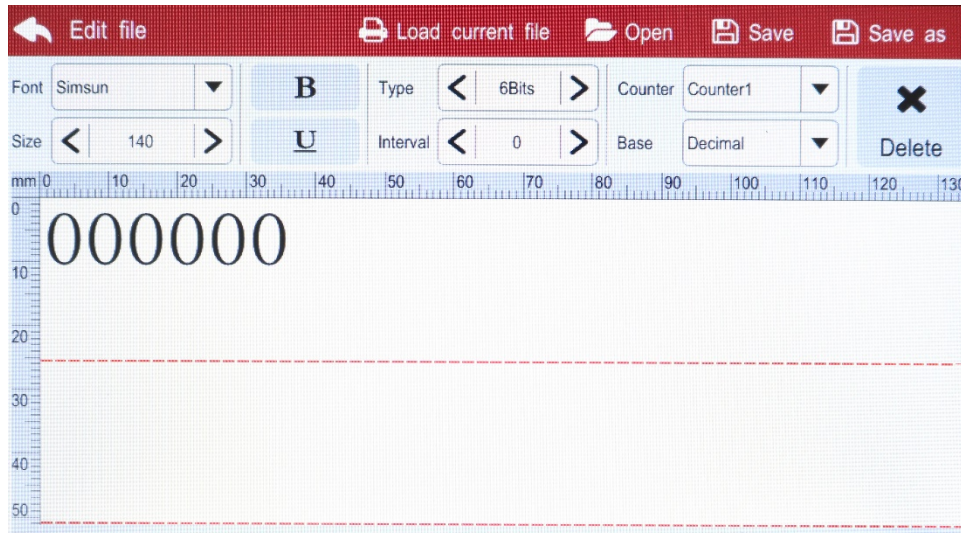


- e. Each drop-down in the first two columns present you with options to remove entirely or alter the format of each individual field.
- f. The third column will allow you to dictate the order of each field (see the preview window)
- g. The last row represents the number of days, months, or years you would like to offset your expiration date from the current date

5.3. Inserting a Counter Into Your Message

- a. This menu will allow you to customize your counter
 - Type = number of digits in total
 - Interval = spacing between digits
 - Counter = choice between two programmable counters

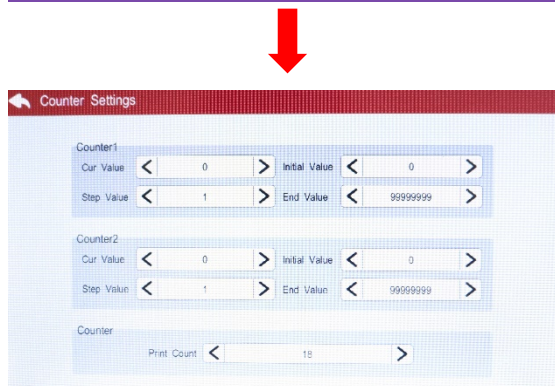
Remember:
your counter behaviors are programmed from the main menu (fig:3)



- b. The programming of both programmable counters is done from the main menu. Select "Counter Settings"



- c. after you have selected "Counter Settings" the following menu will load. From here you can program the counter behaviors.

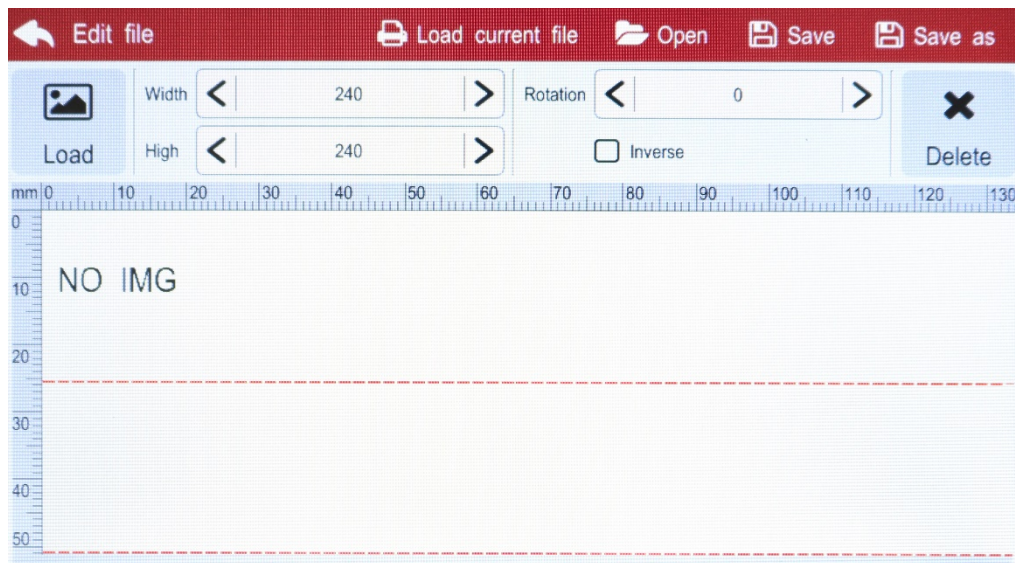


- d. The counter settings screen allows you to see the current value of each counter, set their start and stop values, and set the step value.

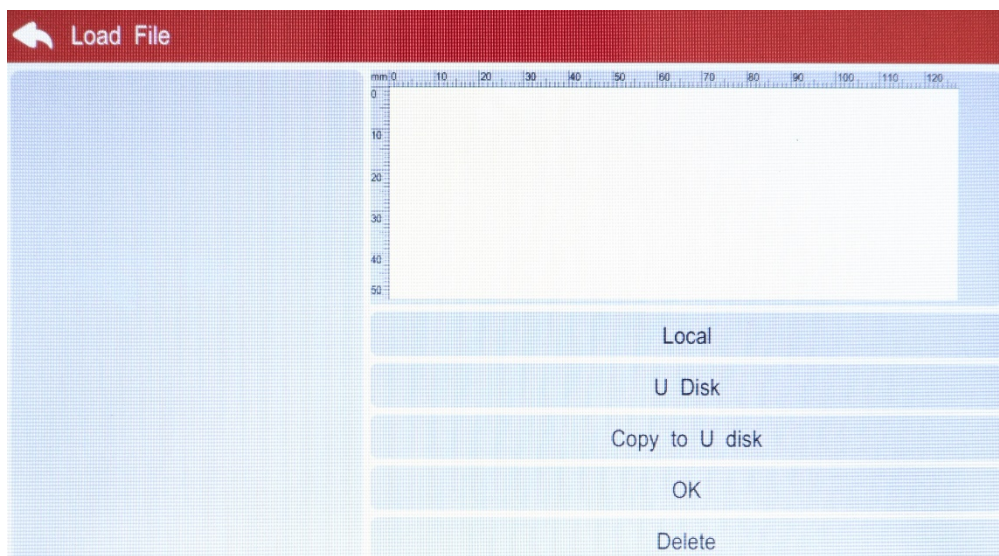
- Step value is the increment you would like the counter to increase with each print trigger.

5.4. Importing Your Logos and Images

- a. Any logos or images that you would like to load into the message editor must be converted to monochrome bitmap file (.bmp)
- b. Once you have prepared your files move them to a USB stick drive. Make sure not to save them into any folders, instead save them to the drives main directory.
- c. From the message editor screen select “Image” and the following menu will load
 - Select “Load” to view or import any images into the editor



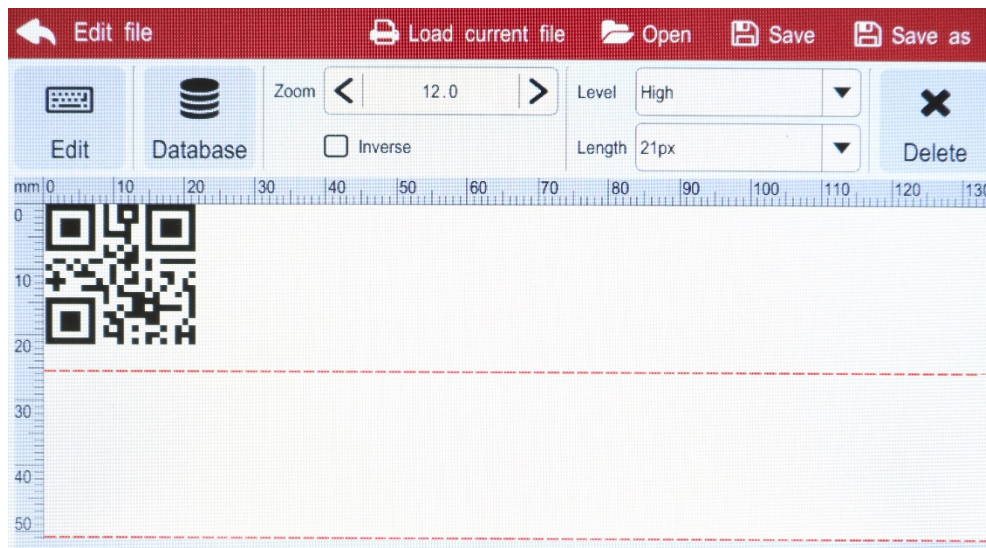
- d. The following menu will load, here you can view any images already saved to the printer as well as move them to and from your USB storage device



- e. To move images from the USB drive to the printer
 - Select “Udisk”
 - From the list of image files, highlight one and select “To Local”
 - This will move the file to the printer’s internal memory.
 - Once you have moved the image to the local drive you will be able to select it and use it in any image from the previous menu.

5.5. QR Codes

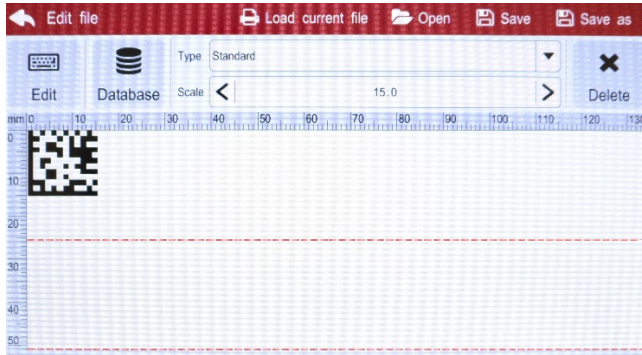
- a. To program a QR code
 - Select “edit” and enter the information you would like to display with the touch screen keyboard
 - Select “finish” when done. The QR code may change in size depending on the amount of information you entered.
- b. Use the “zoom” button to scale the QR on the x and y axis simultaneously



TIP: It is important that a QR code is square on all sides to scan reliably. If you find that your QR code is out of square you can use the “Length” setting to make an adjustment.

TIP: the speed or print width settings can also be used to accomplish this if you are not printing any other text with your QR code.

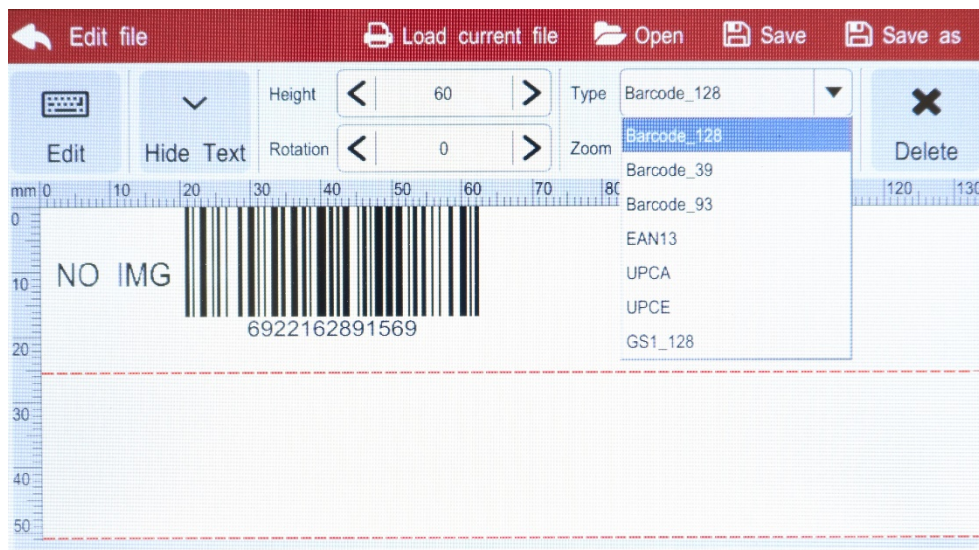
5.5.1 Data Matrix



- Data matrix codes are available to print in two variants, Standard, and GS1. Programming them is identical to programming a QR code

5.6. Programming Barcodes

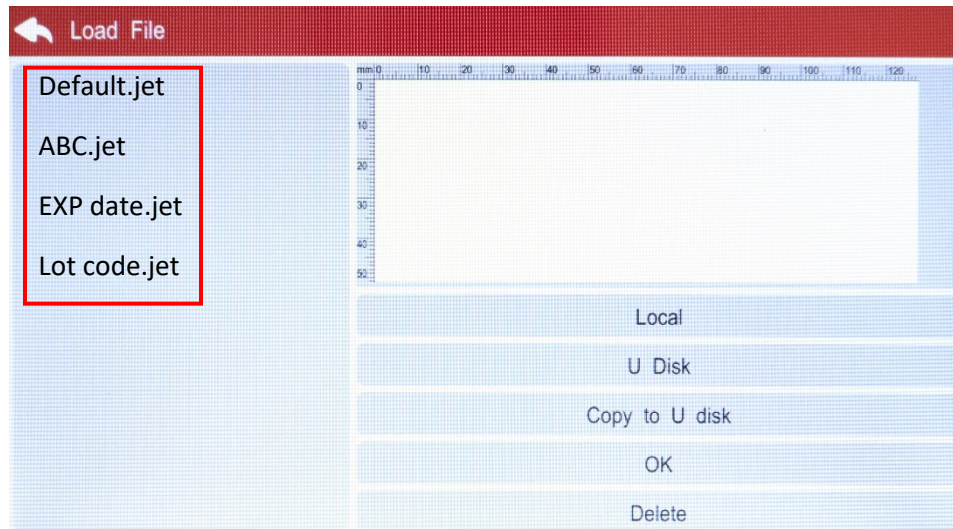
- To begin programming your barcode choose one of the 7 options from the drop-down menu labeled “Type”
- Once you have made your format choice select “Edit” to program the barcode information.
- You can use the “zoom” button to scale the barcode on both axis or “height” to make adjustment on the Y axis
- The “hide Text” button is used to remove or add the human readable text below the barcode



TIP: When printing any type of barcode, QR, or DM codes it is almost always necessary to use an encoder wheel to ensure proper prints. Please consult your sales rep for more information.

5.7 Loading your File to Print

- a. From the main menu select “Load file” and the following menu will load



- b. Highlight the message you would like to print from the list and select OK

Remember, every time you edit a message you will need to reload the current message for those changes to take effect.

6. Stitching Your Print Heads

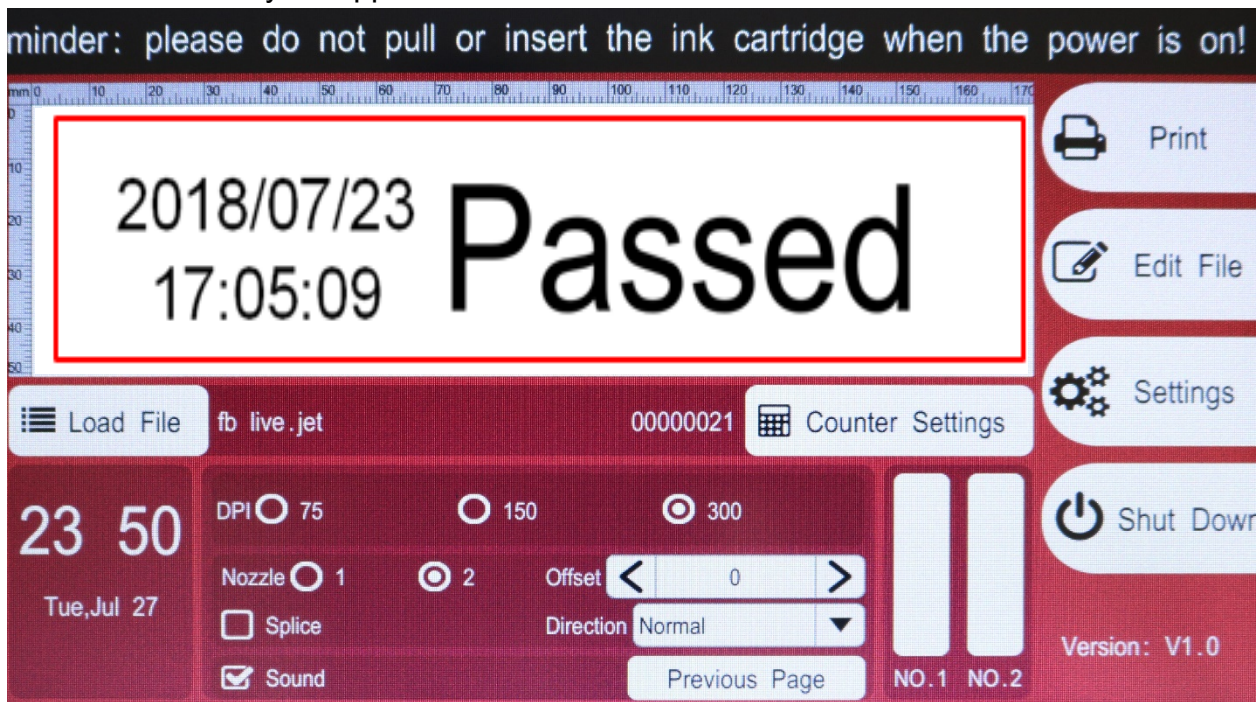
* This section is only relevant to the Freedom series model 21 & 22

* Stitching is not possible when using the Freedom 22 but the settings in this section are still relevant to your printer.

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. In this case, printing a single two-inch print from two one-inch print heads.

Tips: The most important thing to consider when stitching print heads is to make sure that your print head is level on all axes. It will be impossible to achieve a good stitch if your printhead is not square in relation to your product

- When stitching printheads the encoder wheel attachment is almost always necessary. If you do not have an encoder, please reach out to technical support to find out if your application will need one.



- a. Once you have installed your freedom 21 printhead and made sure it is level you can begin fine tuning your print heads.
- b. Begin by setting your interval value so that print head #1 is printing in the desired start position.
- c. As you are setting your interval value you will notice that your prints look like the one in this image. This is the definition of “stitching” and the goal is to position the “offset” value of print head #2 so that it lines up with print head #1 and forms a solid print.



- d. To adjust the offset value, select “next page” from the bottom of the main menu. It is from here that you will be able to adjust the position and print direction of print head #2
- e. Begin by selecting “splice” and making sure that print head #2 is printing in the same direction as print head #1.
- f. From this point it is a matter of trial and error. Using the image above we will assume that our offset value is set to a default of +-300.
- g. Increasing or decreasing the offset value will move the bottom print head (#2) left and right respectively.
- Changing the direction from normal to reverse will change this relationship and the movement will be reversed.
- h. To get a feel for this movement we recommend making initial changes to “offset” in large increments (100 -200) to see just how much movement you can expect when making changes. A small increment change of 10 can be barely noticeable when your print heads offset is very far apart.
- i. If the “Offset” in the picture above is set to 300 then we will make an initial adjustment to 200 then 100 running sample prints between each change to view the change.

- j. with an “Offset” value of 200 the print heads are much closer to lining up but at 100 I have gone too far. We have narrowed it down to an offset value between 100 and 200 and can now begin to make smaller incremental changes to get it right.



If you have stitched your print heads and they are lining up from left to right, but you have a gap between the two print heads, it is because your print head is not level. It will need to be adjusted



Stitching print heads can be challenging if your installation is not done correctly. If you have any questions or need guidance please reach out to our technical services line at (833-926-3464 x2)