

# SANJET BPT SERIES USER MANUAL



For BPTSeries101,201,202,401,404

## 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. (
- 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.

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# 1. Diagram



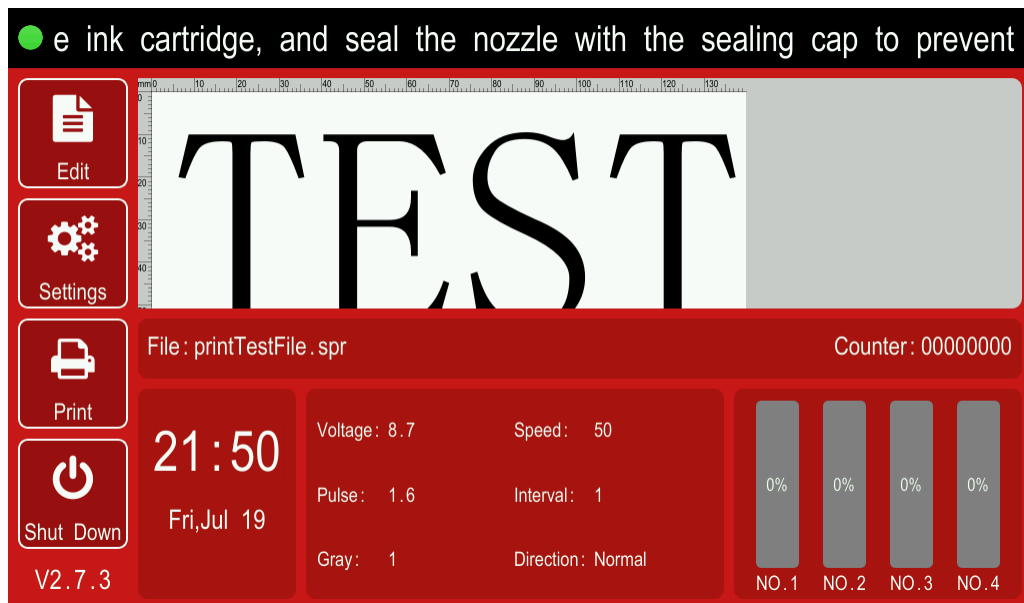
1. Power Button
2. Power adapter Input
3. Encoder Input
4. product detector
5. Print head port
6. USB
7. RS232 Input
8. RS232 Input



## 2. Printer Specifications

Printer	Sanjet BPT Series
Model	BPT
DPI	600 max
Screen size	7 inches
Language	English, Chinese, Arabic, Korean, Italian, Russian, Spanish, Portuguese, Turkish
Shape features	Aluminum alloy
Printing height	25mm, 50mm for BPT-201, 100mm for BPT-401
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
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



**Edit** - Allows the creation and full customization of printed messages. You will also choose the messages you want to print from this menu.

**Settings** - General printer settings.

**Print** - Activate and deactivate “print mode”

**Shut Down** - Starts the printer shut down process.

#### Note:

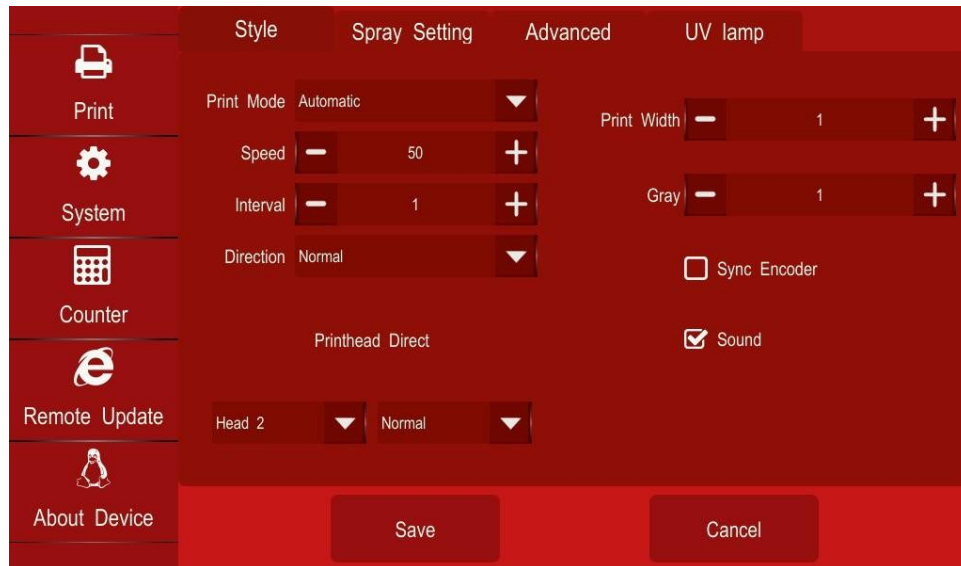
- ① Please use the correct shut down procedure when powering off : select “Shut Down” and follow the directions on the screen.
- ② Please ensure that **print mode** is **deactivated** before making setting changes or removing the ink cartridge.

## 4. The Settings Menu

In this section of the user guide, we will discuss the individual functions in the printer's settings menu to better help you set up your printer.

**TIP:** Remember to deactivate “print mode” before making any adjustments to the settings in this menu

### 4.1. The Style Tab



- a. **Print Mode:** 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. **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.
- c. **Interval (Print Delay):** The Interval value allows you 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,
- d. **Direction:** allows you to reverse or mirror the print over the X and Y axis
- e. **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 Encoder”

- f. **Gray:** Greyscale value (do not increase gray past 3 without consulting technical services. This will cause higher than average wear on your cartridge nozzles)

## Using “Speed” and “Interval” to Position your Print

In this section we will give you some personal insights to adjusting your speed and delay from the author.

If you have ever used a thermal inkjet coder before then you know that outside of your ink parameters, your speed and delay values are the most important and regularly adjusted settings on your printer. In this case we will swap the word “delay” for “interval”. To ensure you have to adjust these settings as little as possible make sure that you have installed all parts of your printer level and securely. The installation of your photo eye will have the largest effect in this case, make sure it is secure.

### **Your printhead vs. your photo eye**

- The distance between your photo eye and print head will be a large factor in adjusting your Interval value the closer they are to each other the less trial and error is involved. If you can, try and position the photo eye directly in line with your print cartridge. (This is not always possible or necessary).

### **Setting your speed value**

- On the SNEED-JET Titan the smaller the speed value the faster the printer ejects ink. for example, 10 would be considered a fast print speed and 300 would be very slow.
- Adjusting the speed is straight forward. It will affect the overall length of your printed code. If you notice that your prints appear condensed together or squished, then increasing the speed value will slow the printer down and stretch the code out. The same works for a code that is stretched to far, by decreasing the speed value. Keep in mind that an increment change of 1 would have an almost negligible effect in most situations.
- Your DPI value will play a large role in setting the speed value. If you find that you need to lower or raise DPI at any point you will need to adjust Speed. You will need to lower or raise the speed value by approximately half for every level of DPI you move.
  - o The printer will allow you to choose 150,200,300, and 600 DPI. If you decided that you wanted to change your DPI from 600 to 300 and your “speed” was set at 60 you would need to lower to 30 to produce the same



size prints you were at 600 DPI. This principle also applies to the encoder and the print width setting.

### Setting the Interval

- The Interval Value is a delay between the print trigger and the physical printing.  
The Interval value will allow you to move your print to the left or the right in relation to the product you are printing on.
  - o Increasing the Interval value will move the print to the right with every adjustment.
  - o I recommend starting with large incremental changes at first to get a feel for the print movement and then slowly adjust down the increment of change until you achieve the desired position.
  - o Just as with the Speed setting, a small change like from 10 – 20 often yields negligible results

- Remember that the relationship between your print head and photo eye have a drastic effect on Interval. If your photo eye is ever re-positioned, you will have to adjust the interval to account for the change.
- The same applies for changes in line speed and the print speed setting. You can avoid this by using an encoder wheel

## 4.2. Spray Settings

The screenshot shows the 'Spray Setting' tab of a printer's configuration menu. On the left is a vertical sidebar with icons and labels for 'Print', 'System', 'Counter', 'Remote Update', and 'About Device'. The main area has tabs for 'Style', 'Spray Setting', 'Advanced', and 'UV lamp'. Under 'Spray Setting', there are three sections: 'Nozzle Line' with a dropdown menu showing 'Left' and four radio buttons for DPI values (150, 200, 300, 600, with 600 selected); 'Ink Type' with an 'Auto Selected' checkbox and two numeric input fields for 'Voltage' (8.7) and 'Pulse Width' (1.6); and 'Print head choice' with a 'Splice' checkbox and four radio buttons (1, 2, 3, 4, with 4 selected). At the bottom are 'Save' and 'Cancel' buttons.

- a. **Nozzle Line**- Allows you to change the nozzle line on your cartridge.
- b. **DPI**- Dots per inch
- c. **Ink Type**- settings are cartridge specific and listed on the cartridge label. We recommend using the auto selected feature unless advised by technical support to manually adjust. With “auto selected” activated the printer reads the cartridge and sets the parameters automatically.
- d. **Print head choice**- assign the total number of print heads in use
  - **Splice** – select if you are stitching print heads.

## 4.3. The Advanced Tab

The screenshot shows the 'Advanced' tab of the printer's configuration menu. The sidebar and tabs are the same as in the previous image. Under the 'Advanced' tab, there are three rows for '1-2 offset', '2-3 offset', and '3-4 offset', each with a numeric input field set to '2100' and '+'/'-' buttons. Below these is a section for 'Repeat printing' with a checkbox (unchecked) and the text '(Will be automatically set to external sensor)'. This section includes 'Repeat Count' (set to 1) and 'Repeat Interval' (set to 2), each with '+'/'-' buttons. 'Save' and 'Cancel' buttons are at the bottom.

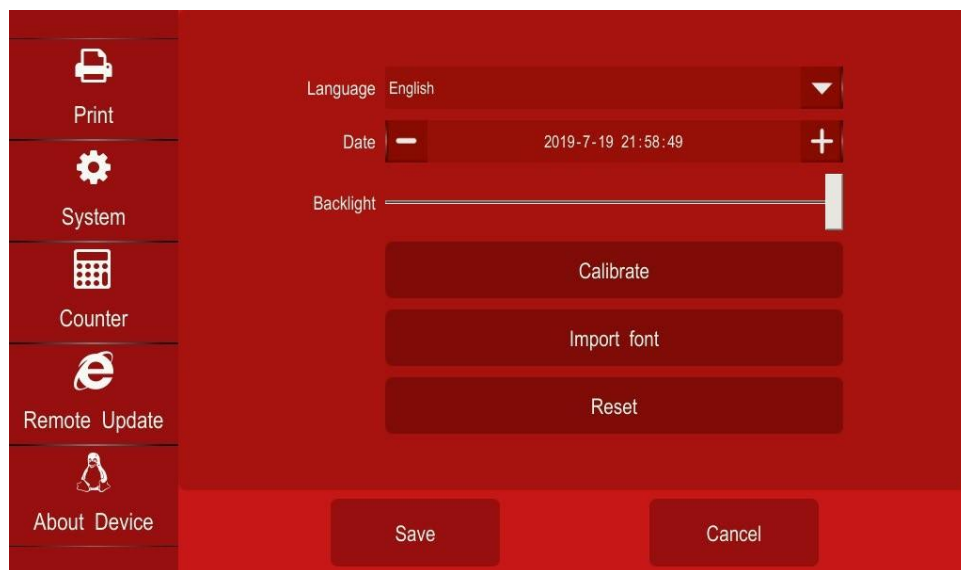
- a. **Offset**- the Interval value between printheads. This setting is only relevant for multi head print systems
- b. **Repeat printing**- check this box if you wish to print the same message multiple time using a single print trigger.

- **Repeat count**- the total number of times you wish to repeat the print.
- **Repeat Interval**- the distance between each repeated print. This functions identically to the interval setting covered in the previous sections.

## 4.4. UV Lamp

- Though the printer can operate a UV lamp we do not currently offer a UV curable ink for the SNEED\_JET Titan

## 4.5. System settings



The system menu will allow you to adjust basic printer settings like Language, time and date, and brightness.

- Calibrate**- allows for the fine tuning of the printer touch screen, select, and follow the instructions on the screen if you notice poor touch accuracy.
- Import font**- load new fonts for use in message creation.
- Reset** – factory reset function, technical support required.

## 4.6.



## Counter Settings

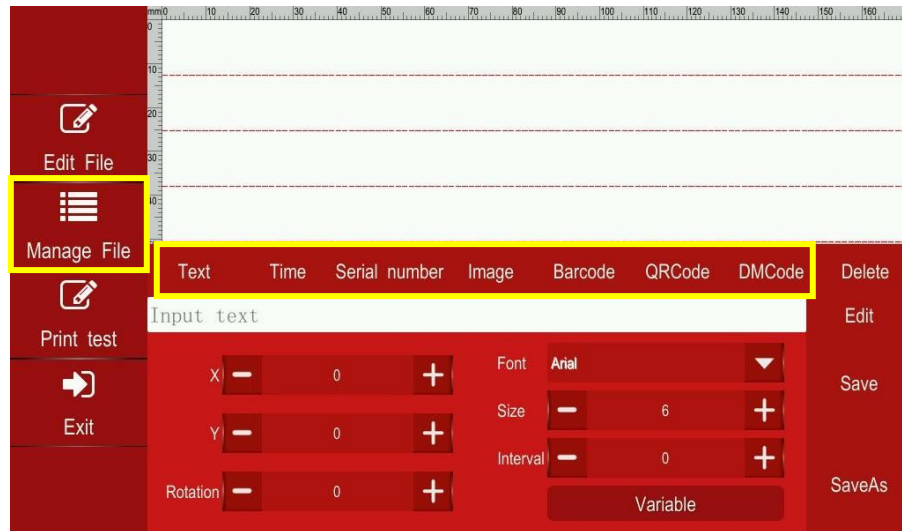
Counter1	Counter2	Print Count
Current Value: 0	Current Value: 0	Print Count: 0
Initial Value: 0	Initial Value: 0	
Repeat Count: 1	Repeat Count: 1	
Step Value: 1	Step Value: 1	
Max Value: 99999999	Max Value: 99999999	

- From the counter menu you will be able to adjust the counter behaviors.
  - a. **Current Value**- the current count
  - b. **Initial Value**- the starting value
  - c. **Repeat count**- use this setting if you wish to print the same counter value more than once before moving on to the next increment.
  - d. **Step value**- allows you to set the incremental increase of your counter. A step value of two will cause you to print only even numbers if your counter started at 0.
  
- **These are the same counters referred to in section 5.3 (pg.18)**

## 5. Using the Message Editor

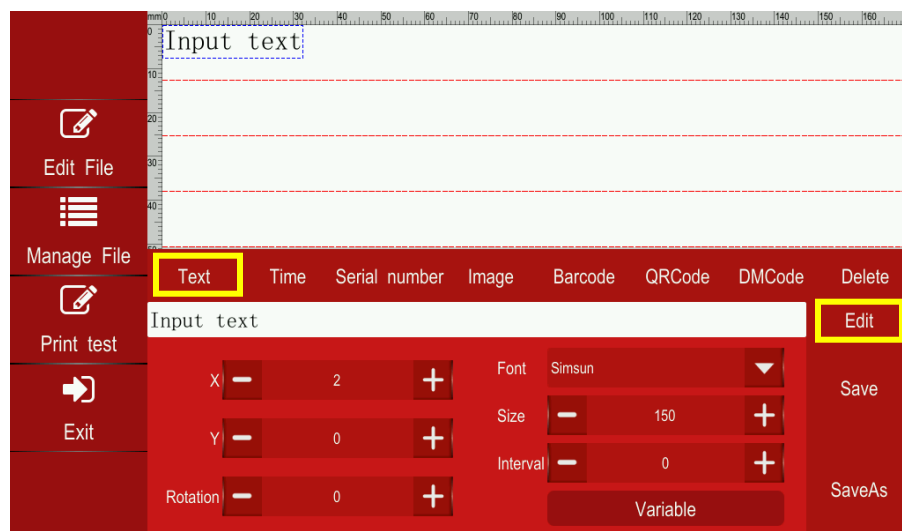
- From the main menu Select “Edit”
- You will use the “Manage File” button to load any messages you want to print as well as those you want to edit.
- Use the seven text Icons below the print preview window to select an object to program

**TIP:** Objects can be clicked and dragged into position in addition to using the **X** and **Y** coordinates

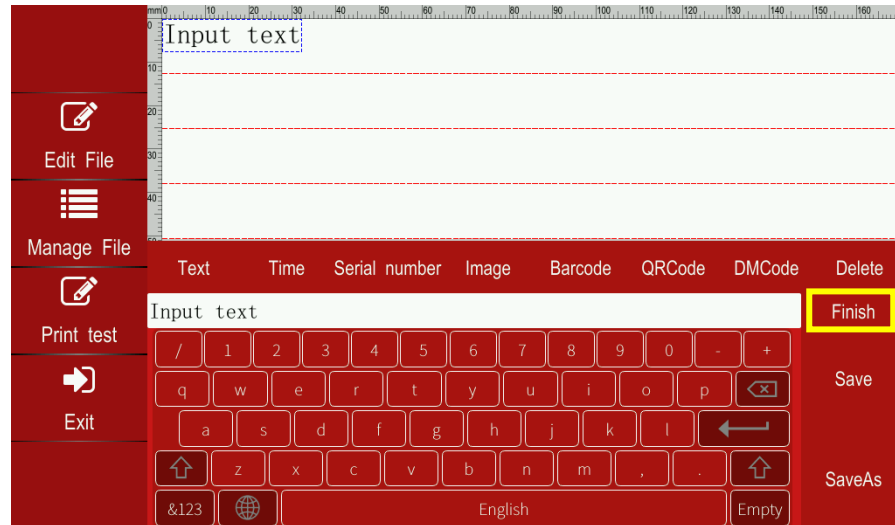


### 5.1. Programming Text into Your Message

- Select “Text” from the message editor.



- Select “Edit” to load the keyboard.



- c. Select “Finish” when you are done.
- d. You can adjust the font, character size, interval, and rotation of print from the menu below the preview window. Notice that this menu changes depending on the message field you have selected
  - Interval = space between characters
  - Rotation = 360\*



## 5.2. Programming Date Fields

- Select "Time"
- From here you can choose a pre-defined date format from the drop-

**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

down list or program your own

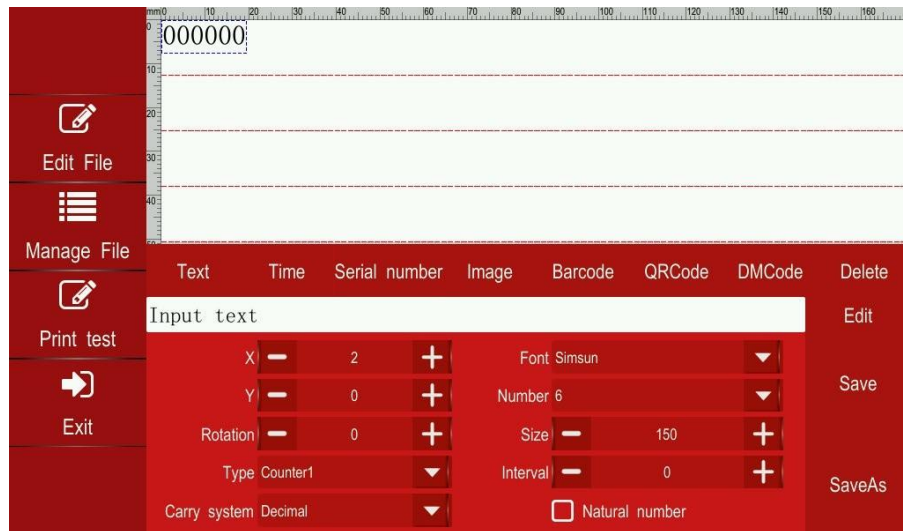
- To create a rolling expiration date, select the "User-defined" button.
- You will be presented with a menu that will allow you to customize the date format and set the date for a pre-defined number of days from the current date.

**Tip:** Any date codes chosen from the drop-down list will only display the current days date. To program an expiration date, use the "user Define" option.

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

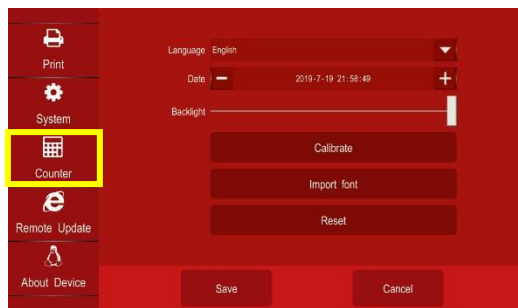
## 5.3 Inserting a Counter into Your Message

- Select “Serial number”
- You will use the drop down labeled “type” to choose one of two counters.

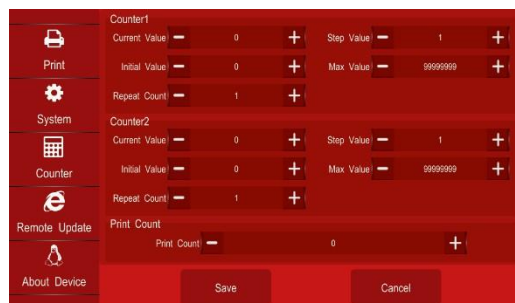


### 5.3.1 Programming Your Counter

- To program your counters, you will need to navigate back to the main menu and select settings



- Select “counter” to navigate to the next menu



- 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.

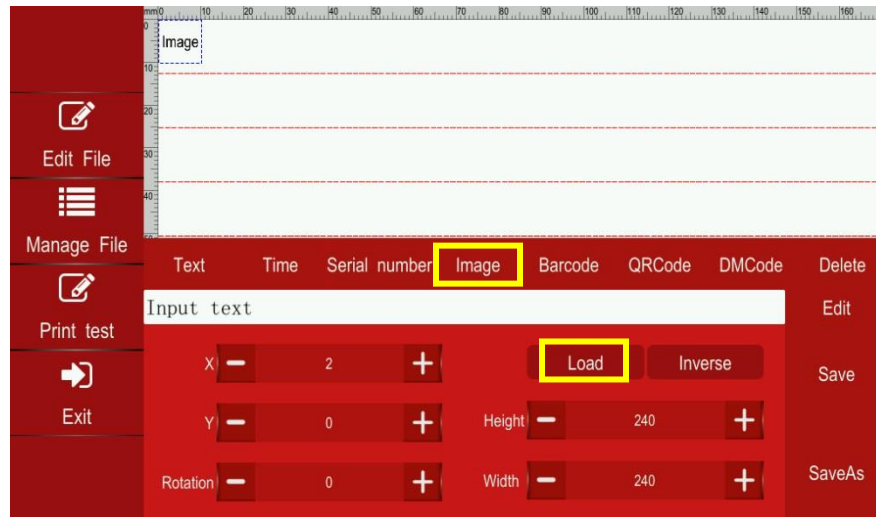
- see section 4.6 pg.13

**Remember:**  
your counter  
per are  
programmed  
from the  
settings  
menu.

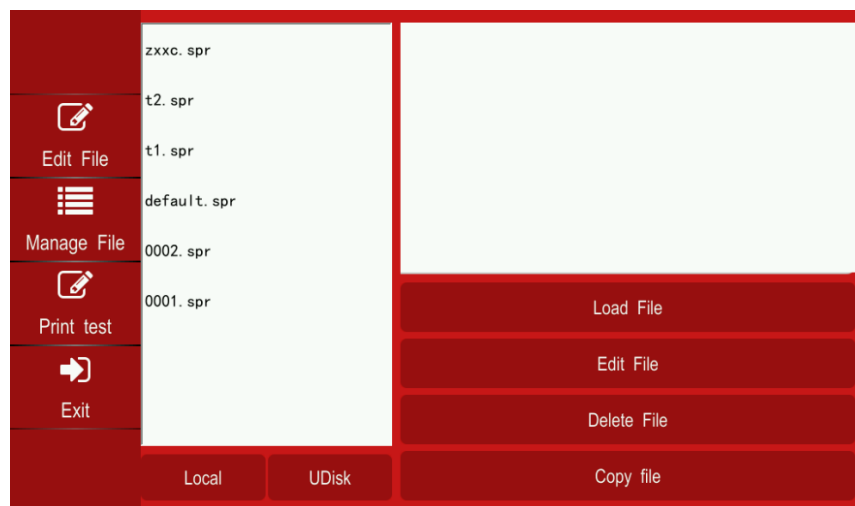


## 5.4. Importing Your Logos and Images

- Any logos or images that you would like to load must be converted to a monochrome bitmap file (.bmp)
- 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.
- From the message editor screen select “Image”
  - Select “Load” to view or import any images into the editor



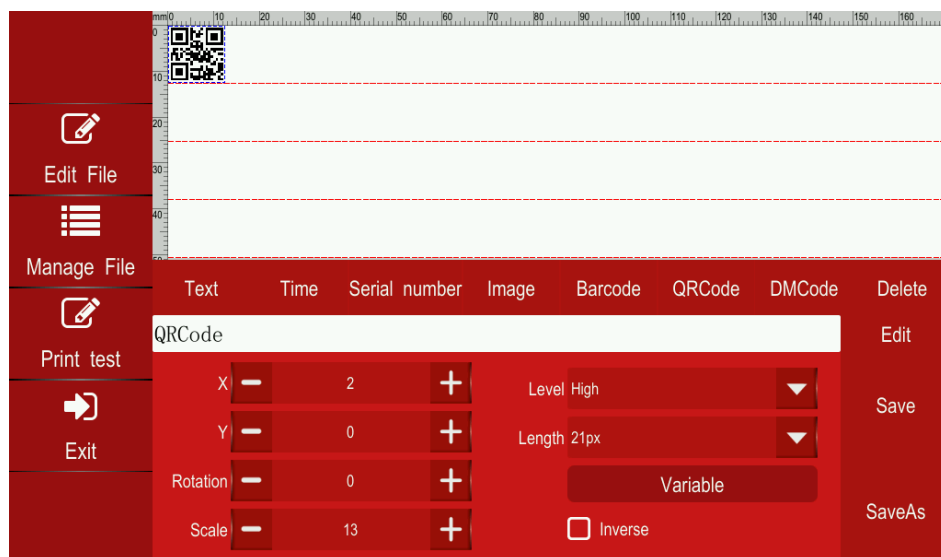
- The following menu will load, here you can view any images already saved to the printer as well as move them to and from your USB storage device



- e. To move images from the USB drive to the printer
  - Select “Udisk”
  - From the list of image files, highlight one and select “copy file”
  - 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

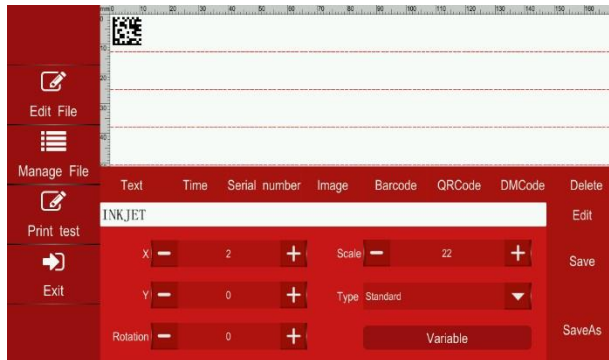
- a. To program a QR code
  - Select “edit” and enter the information you would like to display with the touch screen keyboard
  - Select “finish” when done. The QR code may change in size depending on the amount of information you entered.
- b. Use the “Scale” button to adjust the QR code on the x and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

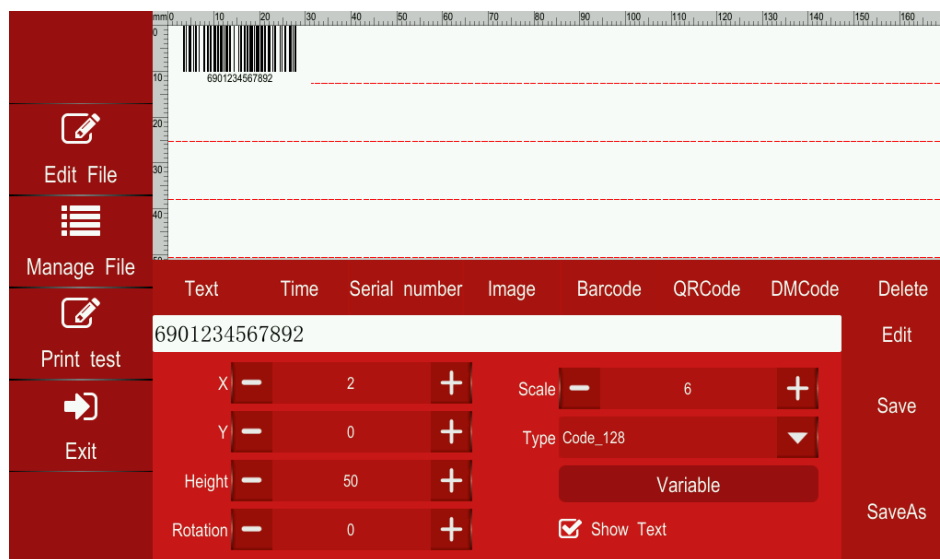
## 5.5.1 Data Matrix



- 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

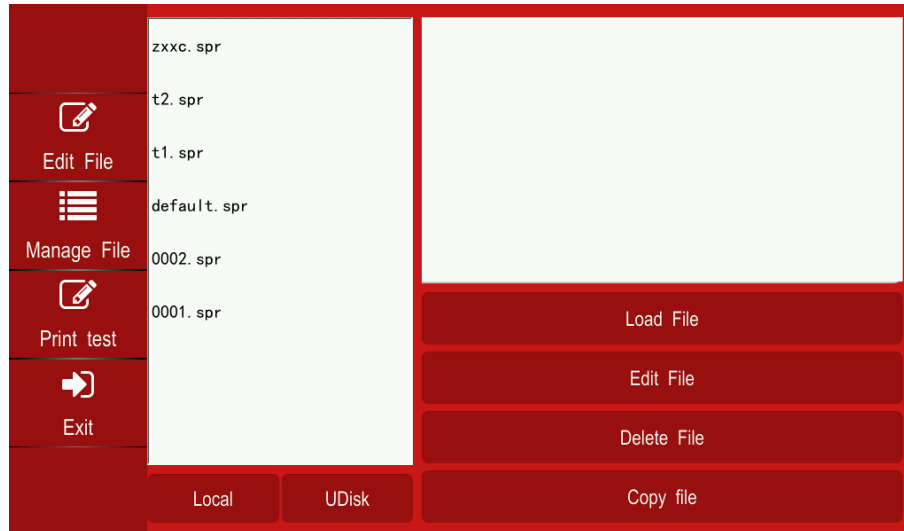
- To begin programming your barcode choose one of the 9 options from the drop-down menu labeled “Type”
- Once you have made your format choice select “Edit” to program the barcode information.
- You can use the “Scale” button to scale the barcode on both axes and “height” to make adjustment on the Y axis
- The “Show 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 message editor menu select “Manage file” and the following menu will load



- b. Highlight the message you would like to print from the list and select “Load File”

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 Sanjet BPT 202 and 204

\* Stitching is not possible on the Sanjet BPT 201 and 401 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.

**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.

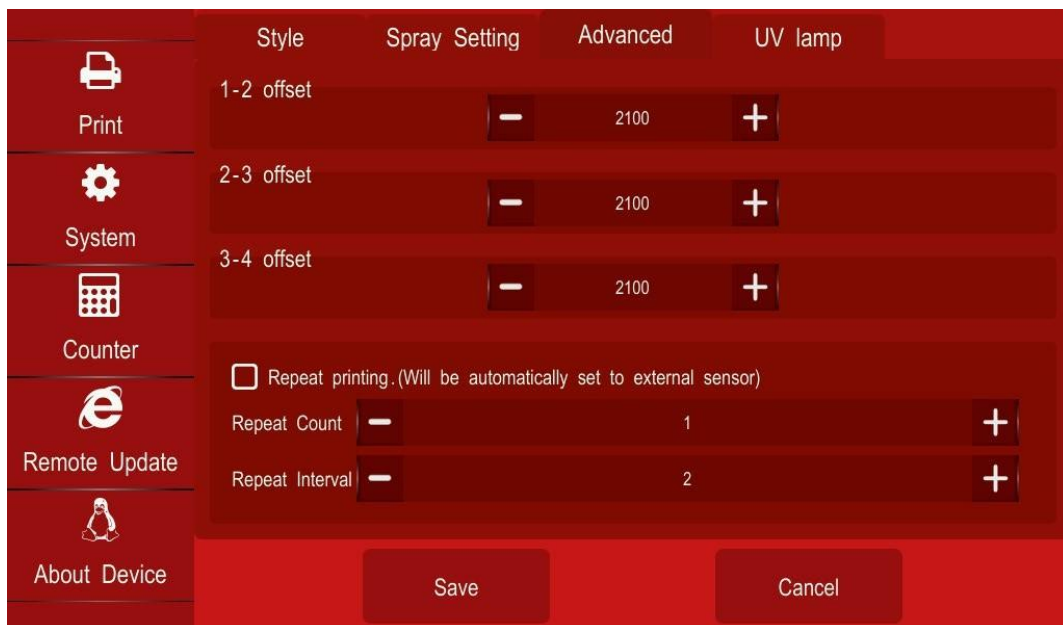
The screenshot displays the Sanjet printer's control interface, which is a red-themed touch screen. On the left side, there is a vertical menu with five icons and their corresponding labels: 'Print' (printer icon), 'System' (gear icon), 'Counter' (calculator icon), 'Remote Update' (e icon), and 'About Device' (penguin icon). The main area of the screen is divided into several sections under the 'Style' tab. The 'Nozzle Line' section shows a dropdown menu currently set to 'Left'. The 'DPI' section features four radio buttons for 150, 200, 300, and 600, with 600 being the selected option. The 'Ink Type' section includes a checkbox for 'Auto Selected' (which is unchecked), a 'Voltage' field with a minus button, the value '8.7', and a plus button, followed by a 'Pulse Width' field with a minus button, the value '1.6', and a plus button. The 'Print head choice' section has a checkbox for 'Splice' (unchecked) and four radio buttons numbered 1, 2, 3, and 4, with 4 being the selected option. At the bottom of the screen, there are two large buttons: 'Save' and 'Cancel'.

Tab	Section	Option	Value / Selection
Style	Nozzle Line	Left	Selected
		DPI	600
	Ink Type	Auto Selected	Unchecked
		Voltage	8.7
	Pulse Width	1.6	
		Print head choice	Splice
	1		Unchecked
	2		Unchecked
	3		Unchecked
	4	Selected	

- a. Once you have installed your Titan series 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 heads #2, #3, and #4 so that They line up with each other and form a solid print.



- d. Begin by selecting “splice” and the number of print heads you are using from the “spray settings” menu
- e. To adjust the offset value, navigate to “Advanced settings”. From here you will be able to adjust the position of each additional print head
- f. From this point it is a matter of trial and error.



- g. Increasing or decreasing the offset value will move the selected print head 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 was set to 300 then make an initial adjustment to 200 and 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 on target.



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 (786-361-2002)