

Ink-Jet Direct

MARK-6

THERMAL INK-JET PRINTER OPERATORS MANUAL



WARNING!

- * DO NOT INSERT OR REMOVE A CARTRIDGE WITH THE POWER ON
- * DO NOT CHANGE SYSTEM/PRINTER SETTINGS WHILE IN PRINT MODE
- * PROTECT THE PRINTER FROM WET ENVIRONMENTS & HIGH HUMIDITY
- * DO NOT USE ABRASIVE MATERIALS OR HARSH CHEMICALS TO CLEAN THE PRINTING SYSTEM OR INK CARTRIDGES
- * USE ONLY THE MANUFACTURER SUPPLIED POWER SUPPLY
- * FULLY CHARGE THE BATTERY BEFORE THE FIRST USE

EMAIL INFO@INK-JETDIRECT.COM WITH QUESTIONS

COMPONENT DESCRIPTION



Installing the Ink Cartridge

Important Notes:

1. Turn off the printer (red push-button) before installing the ink cartridge.
2. Place the ink cartridge into the cartridge clip (for solvent based inks) if the printer will not be used for over 20 minutes. The ink nozzles will dry out if not capped, damaging the cartridge!

Do not press hard when installing the cartridge! Damaging the contact pins will require replacement of the main board!

Installation procedures:

1. Place the cartridge into the slot at a 45 degree angle. The top edge of the cartridge should be roughly 1/4" away from the printer frame.



2. Gently push the cartridge forward from the back so it is not resting on the green lever. The top edge of the cartridge should be roughly 1mm about away from the printer frame.



Top edge of cartridge is about 1mm from printer frame

3. Flip up the green lever to lock the cartridge into the correct position. The face of the cartridge will be slightly recessed from the metal face protectors. You may now power up the printer.



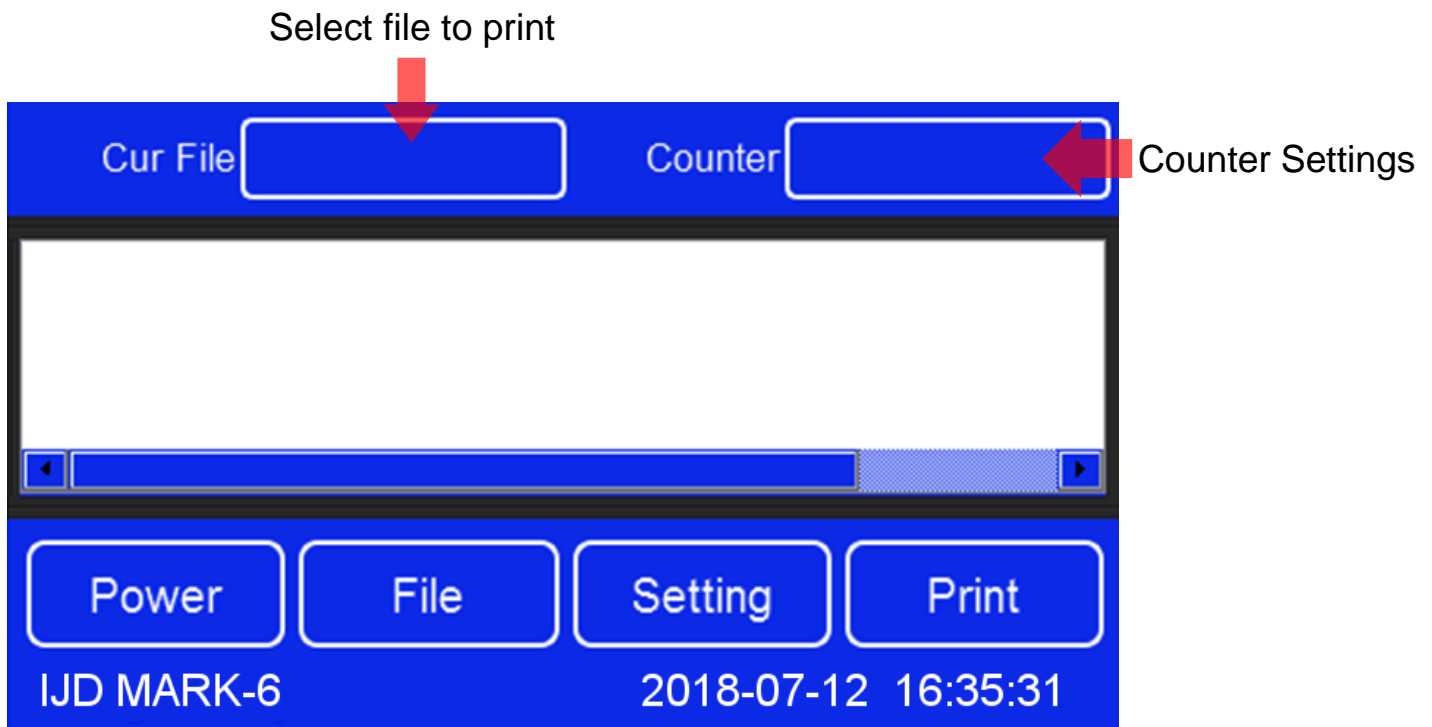
To take out the ink cartridge:

Flip the green lever down, and pull the cartridge up from the back with your thumb. Place the cartridge clip back onto the cartridge.



Main Screen Interface

Press the red power button on the back of the printer to turn the printer on. After the initial boot sequence completes, the main screen below will appear:



Power : Closes screen or shuts down machine.

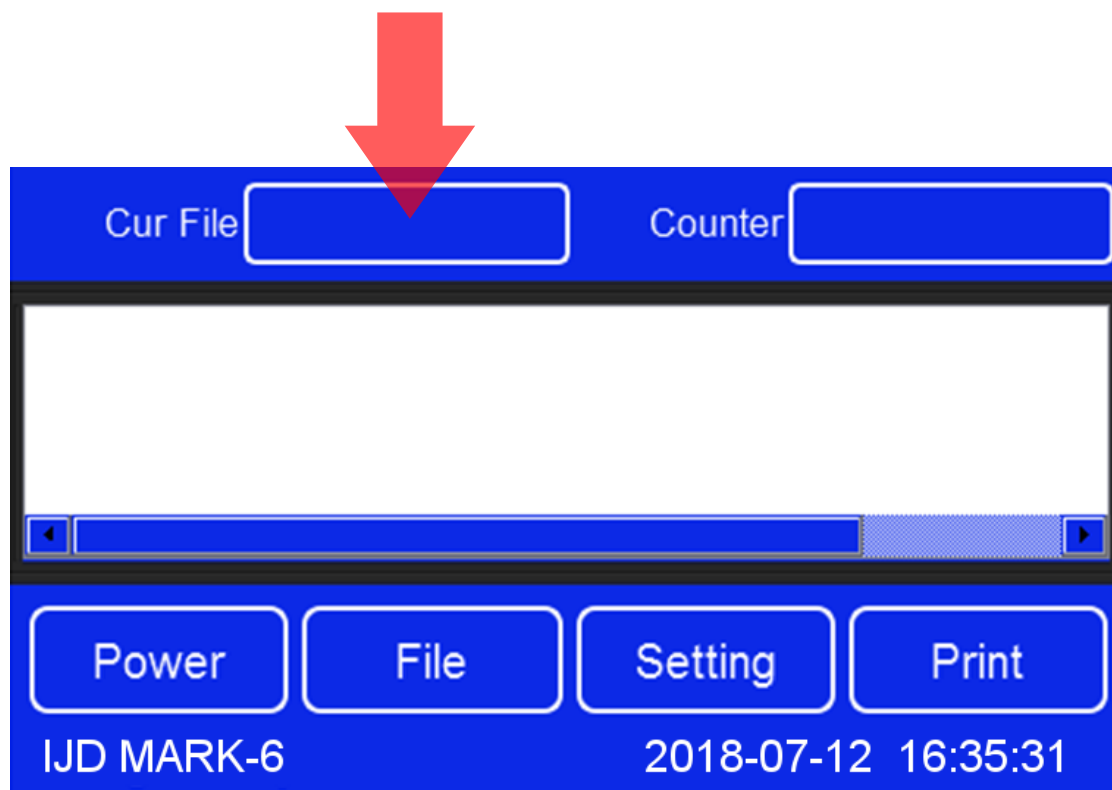
File : Edit a single file, edit a group file, or edit an image

Setting : Access print settings, system settings, & about device

Print: Enables/Disables printing (Turns red when print mode is active)

Current File

Select the Current File box from the main screen to access the database:



Highlight the desired file, and select the OK button to load.

You will be returned to the main screen, and the preview window will be updated with the data from the file you selected.

Selecting the print button will put the printer into Print Mode, and print the data contained in the selected file.

Counter Settings

Select the counter box from the main screen to access counter settings:

The image shows a 'Counter Settings' screen with a blue background and white text. At the top, there are three tabs: 'Counter1', 'Counter2', and 'Print Cnt'. Below the tabs, there are five adjustable fields, each with a minus button, a numeric display, and a plus button. The fields are: 'Cur Val' (0), 'Init Val' (0), 'Rep Cnt' (1), 'Step Val' (1), and 'Max Val' (99999999). At the bottom, there is a numeric keypad with digits 0-9 and a left arrow button, and two buttons labeled 'OK' and 'Cancel'.

Field	Value
Cur Val	0
Init Val	0
Rep Cnt	1
Step Val	1
Max Val	99999999

There are two programmable counters available when creating/editing messages, and the settings/values can be adjusted here.

The Print Cnt button is used to edit/reset the main counter on the home screen

Cur Val: Current Value

Init Val : Initial Value

Step Val : Step Value

Rep Cnt : Repeat Count

Max Val : Maximum Value

Editor Interface

To create/edit files, you must access the editor interface. To do so, select the **File** button from the main screen, and select **Edit Single File**. The following screen will be displayed.



Delete : Deletes highlighted information

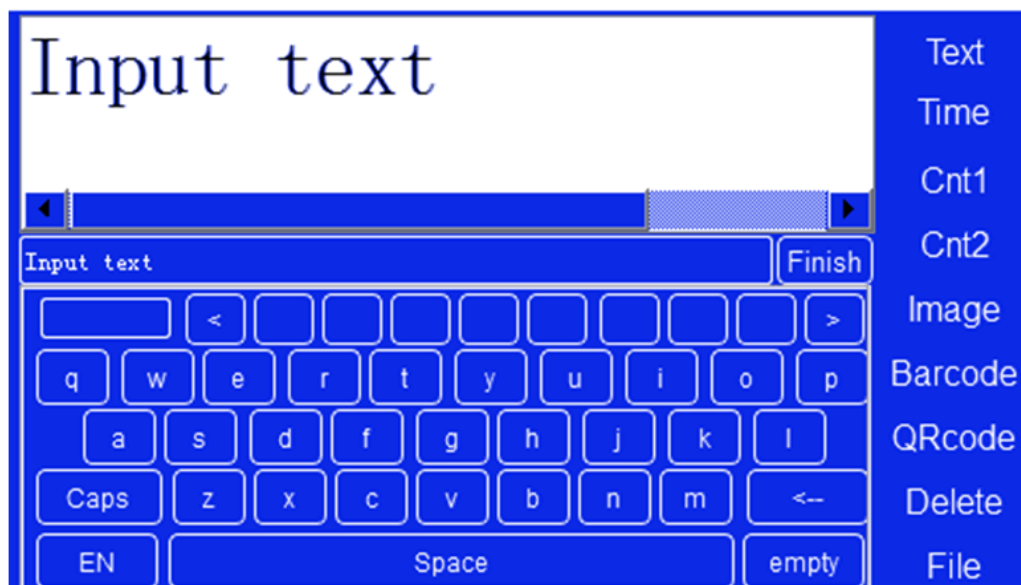
File : New, open, save, save as, delete files, or exit the editor.

From this screen, you can begin adding fields by selecting the appropriate field listed down the right side of the screen. Selecting the field will automatically place the new field into the preview screen, after the last field that was inserted.

If you wish to edit an existing file, select **File**, then **Open**. Select/highlight the file from the database list that you wish to edit, then press the **OK** button. This will load the file and all fields. Touch the field that you wish to edit/delete, and make the appropriate changes. The selected field will turn from black to red.

Text Fields

Selecting the Text option will insert a text field into the preview screen:



Text fields are used to print static, alpha/numeric data. Any characters that are inserted into a text field will be printed exactly as entered. To edit the text and display the keyboard, you must select the "Edit" button just below the lower right corner of the preview screen. The "Empty" button in the lower right corner of the keyboard will remove all of the default text. Additional characters and symbols can be accessed by selecting the "EN" button in the lower left corner of the keyboard. Select the "Finish" button when all text has been entered.

The keyboard area will be replaced with options for editing the entire field. The "X" & "Y" fields are used to move the field to exact coordinates. The "Rot" field is used to rotate the field. The "Font" field can be used to select various fonts that are loaded into the system. The "Size" field is used to increase or decrease the size of the printed text. The "Interv" field is used to increase or decrease the spacing between the characters in the field.

Use the Preview Area to move the field into the desired print position. Simply touch the field you wish to move (it will turn red) and drag it into position. If you want to delete an entire field, select it, and touch the Delete option on the right side of the screen.

Time Fields

Selecting the Time option will insert a date/time field into the message.

Time fields are "AutoCode" fields, and are used to insert dates & times that will always update automatically. To insert a "Time" field, simply select the field on the right side of the screen. The field options (positioning, rotation, font, size & interval) will be displayed, along with options for the field type, and a button for a "User-Defined" option.

The "Type" option is a drop down menu used to select commonly used date and time configurations. If the configuration that you wish to print is not listed in this menu, the "User-Defined" button can be selected to format the field any way that you wish.

Counter Fields

Selecting the Cnt option will insert a counter field into the message.

Counter fields are "AutoCode" fields, and are used to insert counters that will always update automatically. To insert a "Counter" field, simply select the field on the right side of the screen. The standard field options will be displayed, with additional options the number of place holders and a drop-down menu for "Counter 1" or "Counter 2".

The individual counters are configured from the main screen, covered earlier in this manual. Selecting "Counter 1" from the drop-down menu will insert a counter with parameters previously configured from the counter 1 options, while selecting "Counter 2" from the drop-down will insert a counter with the parameters for counter 2.

The "Type" field under the font option allows you to edit the number of placeholders in the counter field. The minimum number of placeholders is (1), while the maximum number of placeholders is (8). Once the maximum is reached while printing, the counter will roll back to the initial programmed value.

Image Fields

Selecting the Image option will insert an image field into the message.

Images can be selected locally from the internal storage, or from a USB disk. However, it is recommended that images be loaded from the USB to the Local disk to prevent corruption. Only monochrome bitmap images are allowed.

Barcode Fields

Selecting from one of the three barcode options will insert the corresponding barcode format into the message.

"Barcode" inserts a 1D barcode into the message. To edit the barcode data, select the "Edit" button to display the keyboard. When finished, select the "Finish" button. The standard field options are available, along with additional options for the barcode width the barcode type.

"QRCode" inserts a 2D, QR barcode into the message. To edit the barcode data, select the "Edit" button to display the keyboard. When finished, select the "Finish" button. The standard field options are available, along with additional options for the scale, level, and Len (pixel). Variable data can be inserted into the barcode, using the "Variable" Button, and the printed image can be inverted using the "Inver" checkbox.

"DMCode" inserts a 2D, datamatrix barcode into the message. To edit the barcode data, select the "Edit" button to display the keyboard. When finished, select the "Finish" button. The standard field options are available, along with an additional option for the scale.

File Option

The "File" option is used to create new messages, open previously saved messages, save messages, and exit the editor.

Select the "New" option to start with a blank template.

Select the "Open" option to open an existing message for editing.

Select the "Save" option to save the current message

Select the "Save As" option to save the message with a new name.

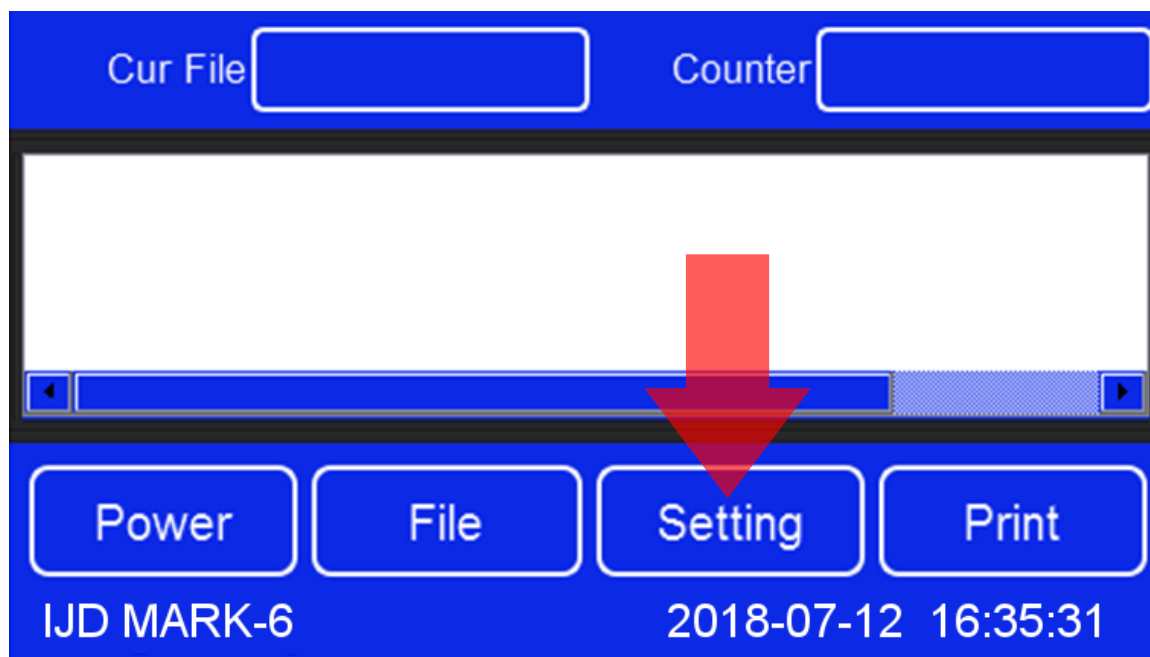
Select the "Exit" option to leave the editor and return to the main screen.

Select the "Delete" option to open the database and delete existing messages.

Printer Settings

WARNING! MODIFYING THE SYSTEM SETTINGS INCORRECTLY CAN CAUSE POOR PRINT QUALITY OR DAMAGE TO THE PRINTER & INK-CARTRIDGES.

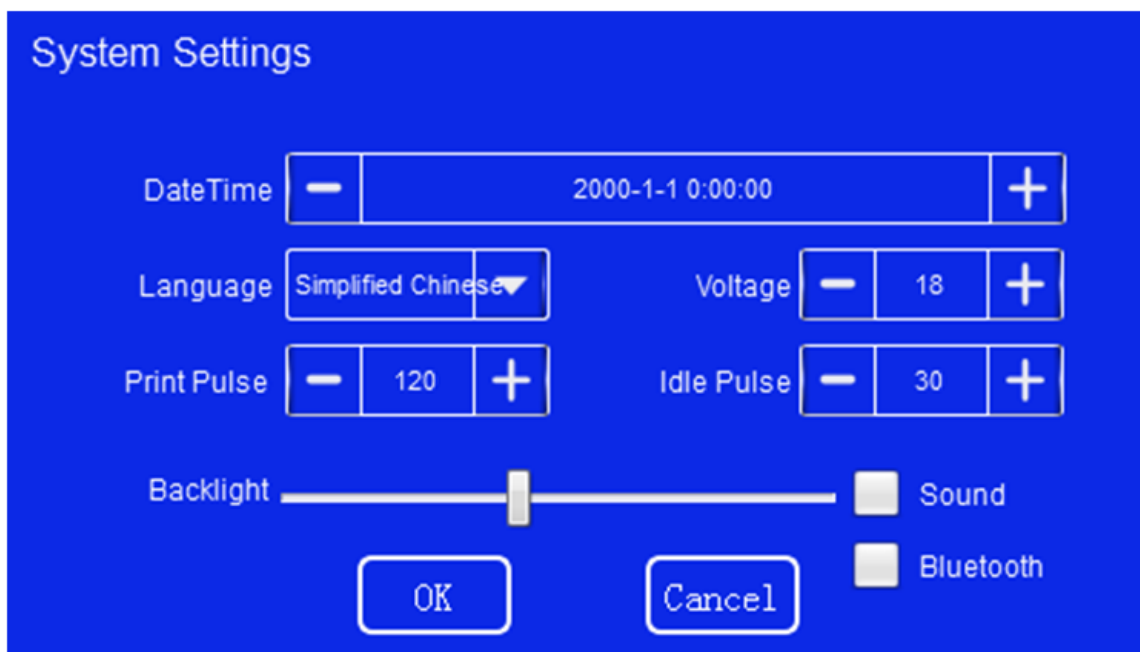
PLEASE USE CAUTION IF MODIFYING THE SYSTEM & PRINT SETTINGS!



Select the "Setting" button on the main screen to access printer settings, and choose from System Settings, Print Settings, or About Device.

System Settings

Selecting the "System Settings" option will bring you to the following screen:



Use the drop-down menus to select the preferred language and current date/time. The Voltage, Print Pulse, and Idle Pulse settings are used to match the recommended settings for the ink being used. Please refer to the ink cartridge or accompanied paperwork with each cartridge to set these settings correctly and achieve the ideal print quality.

A slider for the screen brightness is available, and the sounds can be enabled/disabled.

There is a calibrate button in the lower right corner of the screen that can be used to calibrate the touch screen if the resistive touch is not functioning correctly. To calibrate the screen, the printer must be turned off and a mouse with USB must be inserted into the USB slot located on the top of the printer. Navigate to the screen calibration button with the mouse, and follow the on-screen prompts to re-calibrate the touch screen.

Select the "OK" button to save the changes that you've made to the system settings, or select the "Cancel" button to ignore the changes and revert to the main screen.

Print Settings

Selecting the "Print Settings" option will bring you to the following screen:

The screenshot shows the 'Print Settings' interface. It features a blue background with white text and controls. At the top, there are two tabs: 'Style' (selected) and 'DPI'. Below the tabs, there are several settings: 'Trig Mode' (a dropdown menu), 'Speed' (a numeric field with minus and plus buttons, set to 0), 'Delay' (a numeric field with minus and plus buttons, set to 5), 'Direct' (a dropdown menu set to 'Normal'), 'Spray Mode' (a dropdown menu), 'Sync Freq' (a numeric field with minus and plus buttons, set to 3), 'Gray' (a numeric field with minus and plus buttons, set to 1), and a 'Use Sync wheel' checkbox which is checked. At the bottom, there is a numeric keypad with buttons for digits 0-9 and a left arrow, and two large buttons labeled 'OK' and 'Cancel'.

The Style tab allows you to modify the printing parameters.

The Trig Mode drop-down box is used to select either the trigger on the pistol grip as the triggering option, internal eye as the trigger option (located on the face of the printer), external eye (external eye must be plugged into the RJ45 connector on the system, below the power button), or Auto Spray which will continuously print without any trigger.

The Speed option is used to select how quickly the printer will print when an external encoder is not used.

Typically this will only be used when the printer is mounted as an in-line printing option, and the speed is set to match the conveyor speed.

The Delay option is used to delay the actual print from the time that the system is triggered. Use this option to consistently print on the desired area of your substrate.

The Direct option is used to select how you want the message to be printed (i.e. normal, inverted, etc.).

The Spray Mode is used to select the right or left row of nozzles for printing. If you experience poor print quality with a specific cartridge, change the spray mode to see if the print quality improves.

"Sync freq" and "Gray" are set by the factory for the attached encoder. Do not modify these settings.

The "Use Sync Wheel" check box is used to enable or disable use of the attached encoder.

Select the "OK" button to save the changes that you've made to the system settings, or select the "Cancel" button to ignore the changes and revert to the main screen.

The DPI tab allows you to modify the DPI parameter settings.

These settings typically only require modification when attempting to print onto a non-porous substrate with a solvent based ink. Please note that adjusting the dpi settings will affect the printed width of your message.

About Device

Selecting the "About Device" option will bring up the printer, software, and ink cartridge information. These settings cannot be modified.

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PLEASE USE CAUTION IF MODIFYING THE SYSTEM & PRINT SETTINGS!**

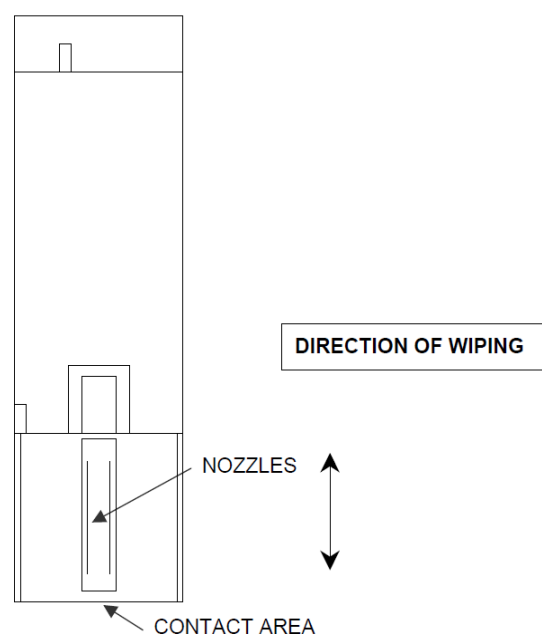
Troubleshooting

Important Notes:

1. Do not insert or remove a cartridge with the power on. Doing so may cause damage to the cartridge or printing system.
2. Do not change the system/printer parameters while in print mode. Doing so may corrupt the message or cause damage to the printing system.
3. Do not expose the printing system to wet environments or excessive humidity. Printer damage may occur if doing so.
4. Do not use harsh chemicals to clean the system. Isopropyl alcohol on a lint free cloth or swab may be used to clean the system if necessary. Only use a lint free cloth to clean an ink cartridge, wiping straight up or down on the face of the cartridge. Two distinct lines of ink should be observed when wiping a cartridge. If not, continue wiping until two lines are present. Do not use any abrasive material, which will cause damage to the print nozzles.
5. The cartridge clip must be used on all solvent based inks when not in use for over 20 minutes. Nozzles that dry out or become clogged may not be recoverable for use.
6. Use only the power supply included with the printer.
7. Fully charge the battery before the first use.

Common Printing Issues - Print is Not Clear

1. Check to see if cartridge is clogged/needs to be wiped.
2. Check to see if cartridge has ink remaining.
3. Replace cartridge and test print.
4. Reload the print file.
5. Check battery charge.
6. Check the Print Pulse setting.
7. Check other print parameters.



Common Printing Issues - No Printing is Observed

1. Ensure the printer is in Print Mode.
2. Clean the Cartridge / replace if necessary
3. See if the counter on the main screen is incrementing. If not, check your trigger settings, delay settings, and encoder settings.