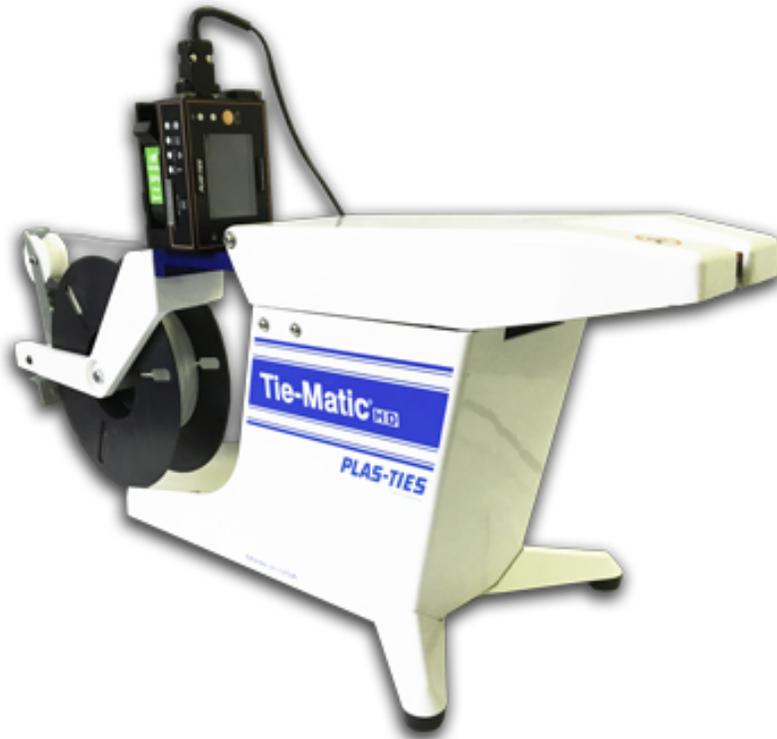




Ink Jet Printer Manual

for

Tie-Matic HD Series



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ver 11.15.2016

Proprietary Information of Plas-Ties, Co.

TABLE OF CONTENTS

GENERAL INFORMATION	2
SAFETY INSTRUCTIONS	3
WARRANTY	4
SPECIFICATIONS	5
INKJET PRINTER INTRODUCTION	6
IR REMOTE KEYPAD	7
SD CARD	8
FUNCTION	9
Configuration	9
PRINTING SETUP	10
TOOLS	12
Find Message.....	12
Copy Message.....	12
Rename Message	12
Ink Report	12
Production Counter	12
TROUBLESHOOTING	13
Print is Cut Off.....	13
Print is Scrunched.....	13
Print has Streaks:	13
TROUBLESHOOTING	14
Incorrect conveyor speed setting.....	14
Incorrect Encoder DPI setting	14
Incorrect printing direction.....	14
Build up on the nozzle	14
TROUBLESHOOTING	15
Flowchart for missing lines when printing:	15
Software Upgrade	16
Appendix A	17

GENERAL INFORMATION

Thank you for purchasing the InkJet Printer from Plas-Ties, manufacturers of high quality twist-tying equipment.

Please familiarize yourself and/or any person operating this machine with all functions by carefully reading this manual.

The Plas-Ties InkJet Printer is an accessory to our twist-tying machines. The text is printed directly onto the twist tie before the product is tied.

Supplies and Service:

Must use genuine Plas-Ties ink cartridges for optimal performance. If alternate cartridges are used, the error: WARNING: INVALID CARTRIDGE -8 will appear on the screen.

PLAS-TIES twist-tie material and service should be ordered from:

PLAS-TIES

14272 Chambers Road

Tustin, CA 92780

Telephone: (714) 542-4487

(800) 854-0137

Fax: (714) 972-2978

Email: info@plasties.com

www.plasties.com

When ordering, please provide the following:

1. Part Number or description
2. Model Number and Serial Number (use Name Plate)
3. Tie Material in use

SAFETY INSTRUCTIONS

CAUTION:

DO NOT ATTEMPT TO OPERATE YOUR *InkJet Printer* BEFORE READING THE OPERATING INSTRUCTIONS

The operating procedures outlined in this manual are prepared to facilitate the *InkJet Printer*.

1. **KEEP ALL SAFETY DEVICES IN PLACE** and in working order.
2. **KEEP WORK AREA CLEAN.** Cluttered areas invite accidents.
3. **DO NOT USE IN DANGEROUS ENVIRONMENT.** Do not use machines in a damp or wet location, or where any flammable or noxious fumes may exist. Keep work area well lighted.
4. **KEEP UNAUTHORIZED PEOPLE AWAY.** All unauthorized people should be kept out of work area and away from machine.
5. **DO NOT FORCE MACHINE.** It will do the job better and safer at the rate for which it was designed.
6. **USE THE RIGHT MACHINE.** Do not force machine to do a job it is not designed to do.
7. **DO NOT USE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.**
8. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry, which may get caught in moving parts. Wear protective hair covering to contain long hair.
9. **MAINTAIN MACHINE WITH CARE.** Keep machine clean for best and safest performance. Follow instructions for lubricating and keeping machine free of lint.
10. **DISCONNECT MACHINE BEFORE SERVICING AND WHEN CHANGING SPOOL.**
11. **CHECK DAMAGED PARTS.** Before further use of the machine, any part that is damaged should be carefully checked to determine that it would operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A part that is damaged should be properly repaired or replaced.
12. **NEVER LEAVE MACHINE RUNNING UNATTENDED.** Turn the power off, and do not leave machine until it comes to a complete stop.
13. **NEVER ALLOW UNTRAINED USERS TO RUN THIS MACHINE.**
14. **IF YOU ARE UNSURE OF THE INTENDED OPERATION, STOP USING THE MACHINE.**

Notes and Warnings:



NOTE: Indicating important information for maximum use of printer



WARNING: Indicating either potential damage to hardware or loss of data and telling you how to avoid the problem.

WARRANTY

Purchaser acknowledges that there are no warranties, expressed or implied, made by **PLAS-TIES**, its distributors or sales representatives related to the *InkJet Printer* except the manufacturer's warranty against defective materials and workmanship as follows:

PLAS-TIES warrants the *InkJet Printer* to be free from defects in materials and workmanship at time of delivery. Liability under this warranty is limited to the repair or exchange of any defective part or parts of the unit providing the same is returned to **PLAS-TIES**, transportation prepaid, within 365 days or 300,000 cycles (whichever comes first based on machine counter). **THE WARRANTY BEGINS FROM THE DATE OF INSTALLATION AT CUSTOMER SITE AND NOT DATE OF PURCHASE. IN ORDER TO ACTIVATE THE WARRANTY, THE NAME, CITY/STATE, AND SERIAL NUMBER MUST BE REGISTERED ON-LINE AT WWW.PLASTIES.COM. FAILURE TO DO SO WILL RESULT IN LIMITATION OF THE FULL WARRANTY. THIS IS TO INSURE TOTAL QUALITY ASSURANCE AND 800 TOLL FREE TECHNICAL SUPPORT.**

The warranty is void on any *InkJet Printer* that has been subject to negligence, accident, misuse, failure to use the equipment as instructed in the manual, or that has been modified from standard format.

This warranty is void if the *InkJet Printer* is used with anything other than specified genuine **PLAS-TIES** twist-tie material or ink cartridge.

IMPORTANT: If your *InkJet Printer* does not operate properly, please bring it to the attention of **PLAS-TIES**, or the dealer or distributor from whom it was purchased. If repairs are needed, the dealer, distributor or other representative of **PLAS-TIES** will arrange to repair or replace parts within the terms of the warranty.

Warranty coverage is limited to the Continental US, Alaska, Hawaii, Puerto Rico, and Canada.

The Product Warranty for INK JET printer, provided by the manufacturer, applies to the two major components:



One-Year Warranty for INKJET printer.



One-Year Warranty for INK JET printer bracket. **(See below for details.)**

Please retain these warranties, along with the shipping documents, for future reference. Anti-shock mechanism, remote controller are **excluded** from warranty.

The Warranty Does NOT Apply if:

1. There is use of any non-original parts, ink and/or clean paper.
2. The product is not currently in the possession and control of the original purchaser.
3. The product has been altered or modified, or has been used for a purpose not approved by PLAS-TIES.
4. The damage arises from a failure to maintain the INKJET printer in accordance with PLAS-TIES maintenance instructions.
5. The PrintHead damage arises from improper installation, including but not limited to not installing the guide bar.
6. The damage arises from an accident, falling objects, exposure to harmful chemicals, fumes or other substances, either foreign or natural, or results from "Acts of God," including but not limited to hail, flooding, ice, snow, or wind.
7. The printer is not grounded properly or using instable power supply.
8. The damage arises from a failure to shut down the INK JET printer in accordance with PLAS-TIES maintenance instructions.
9. The damage arises from a failure to replace the INK JET cartridge in accordance with PLAS-TIES maintenance instructions.
10. The damage arises from a failure to apply UPS(Uninterrupted Power Supply) in accordance with PLAS-TIES maintenance instructions.

****Must use genuine Plas-Ties' ink cartridges for optimal performance.**

SPECIFICATIONS

InkJet Printer Specification Sheet for Tie-Matic HD38-P and HD58-P

PRODUCT

Model Series A401870 – InkJet Printer for HD38-P and HD58-P Twist Tie Machine

OVERVIEW

The InkJet Printer is a versatile twist tie printer with precise placement and a compact size. Easily installed onto the Tie-Matic HD38 or HD58, this complete package will allow you to close your bag and label your product in just one second. The Tie-Matic quickly twist ties your product and the Inkjet printer precisely prints on the tie.



APPLICATIONS

- Product Name or SKU
- Sequential Numbering
- Best Before or Expiration Date
- Company Message

FEATURES

- 4-in-1 compact design (controller, screen, printhead & cartridge)
- Close & label your product in 1 quick process
- Precise twist tie printing
- Remote keypad for user-friendly operation
- Built-in SD card slot for custom print edits & data backup
- 2.8" color LCD display
- 5 Indicators: alarm, low ink, print, run, remote ON/OFF
- High capacity ink cartridge
- 1 year warranty

SPECIFICATIONS

Maximum Characters	14 characters per tie (2.77mm tall)			
Recommended Spools	312 & 313 (Light Colors: white, yellow, orange, tan, grey, pink, violet)			
Power Supply	AC 100V – 240V, 50/60Hz, 1.6A, maximum power consumption: 60 Watts			
Physical Specifications (InkJet Printer only)	Depth	Width	Height	Weight
	2.4 in	3 in	4.5 in	1.08 lb
Physical Specifications (Tie-Matic with InkJet Printer)	Depth	Width	Height	Weight
	28 in	9.5 in (foot to foot)	17 in	22 lb

BENEFITS

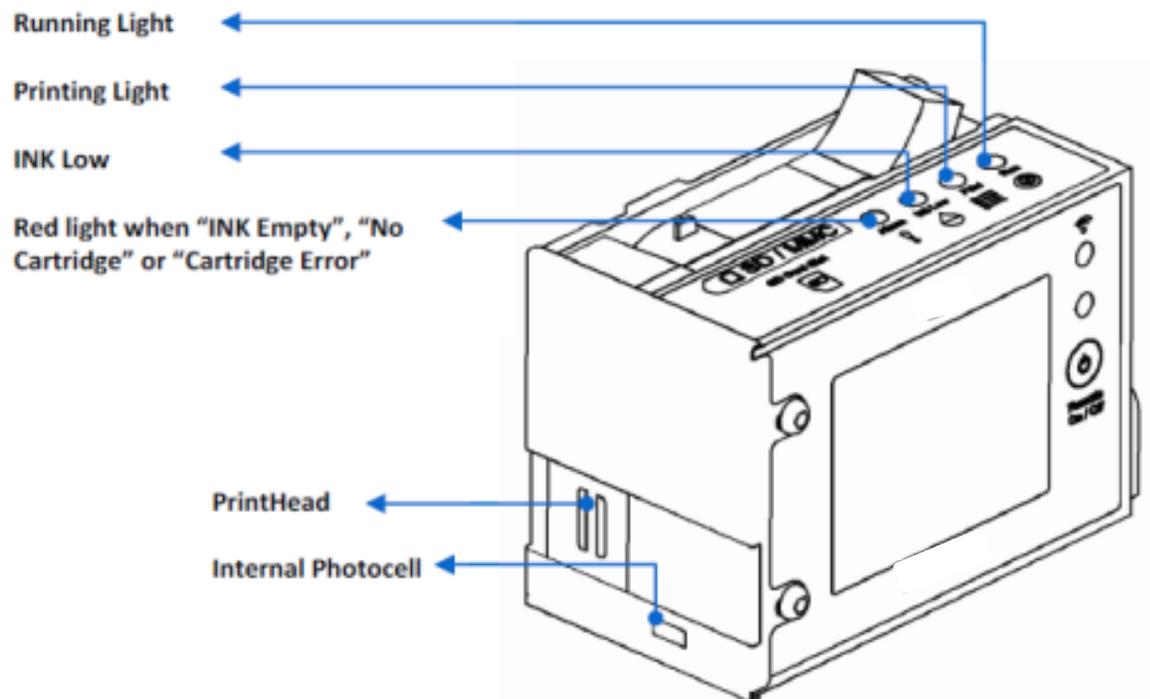
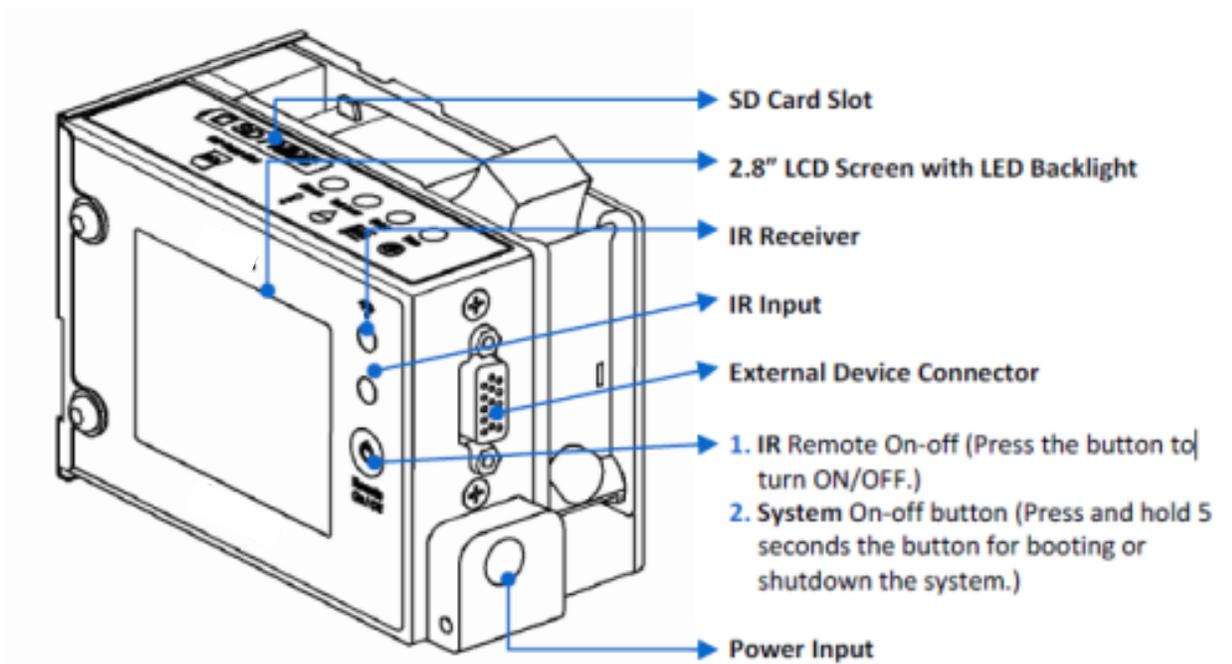
Labor Saving - Speeds up finishing process and saves on repetitive employee hand motion

Advanced Design - Engineered for ease of use and broad base of applications

Custom Programmable – MessagePRO software (downloadable) allows you to customize your printed message

InkJet Printer Spec for TM_10.18.2016

INKJET PRINTER INTRODUCTION



IR REMOTE KEYPAD

Print On: Start Printing

Print Off: Stop Printing

Input variable objects in a message:
 F1. Select fonts
 F2. Select time and date format
 F3. Select expiration date format
 F4. Input the Counter Code
 F5. Input the Shift Code
 F6. Input Logo
 F7. Input the Barcode
 F8. Input the String

Fast Move Keys:
 ◀/▶, ◀◀/▶▶: Adjust the cursor

Basic operation and most frequent used keys:
 § **FUNCTION**: Managing various settings.
 § **TOOLS**: Managing various handy options.
 § **ENTER**: To confirm, modify or advance to next screen.
 § **ESC**: Back to previous screen or quit action.
 § ◀/▶/▼/▲ Navigation and selection Keys
 § **Tabl→A**: Adjust the distance of printing or location on the tie

Enter alphabets and numbers:
 § **0~9**: Input alphabetic letters or numeric number.
 § **•(Symbols)**: Input symbols.
 § **←(BS)**: Delete the preceding character and shift back the cursor one position.
 § **x(Delete)**: Discard the character ahead of cursor's position.
 § **ABC...**: Switch between capital and numeric number.

SD CARD

The SD card is the ultimate source of transferring any editing message or setting for INK JET printer.



- **CARD LOST:** You can purchase any standard 2GB SD card as a replacement.
- **SWITCH PRINTER:** To use your SD card for a different INK JET printer without losing previous saved messages or data, insert the card into the INK JET printer; ignore an **INVALID SD CARD** pop-up message, and reset to default. (See [RESET TO DEFAULT](#))

👉 The INK JET printer has ability to memorize the last previous working message. However, without the SD card, you can edit only one message, but you can save it. After you re-insert the SD card, the working message #001 will be substituted to the default test message.

FUNCTION

Configuration

Under the Message Browser, press **FUNCTION** > **CONFIGURATION**.

Shut down

Press  **1** **1** to shut down the INK JET system.

Language

1. Press  **1** **2** to choose a system language.
2. Press   to select different languages.

 The system offers eight different languages. (English, Chinese, Japanese, German, Italian, French, Spanish and Korean)

Measurement

1. Press  **1** **3** to choose the unit measurement.
2. Press   to select **BRITISH<INCH>** or **METRIC<MM>**.

System Clock

Press  **1** **4** to set system clock.

PRINTING SETUP

Under the Message Browser, press **FUNCTION** > **PRINTING SETUP**.

PrintHead

Press  **5** **1** to setup.

Move to the row you need and press   to adjust the option.

- Channel: Switch SINGLE or DUAL
 - Dual Channels: Double the vertical resolution to 600dpi to optimize the printing darkness
- Direction: Switch the direction of printing.
 - >ABC: Prints from "A" to "C"
 - ABCK-: Prints from "C" to "A"
 - >CBY: Prints from "C" to "A" and rotates 180°
 - CBYK-: Prints from "A" to "C" and rotates 180°.
- Nozzle: Switch left (Default) or right.
- Resolution: user can adjust resolution from 50-600dpi, when the encoder is **OFF**.

 Default resolution: 300x400, the first number represents the vertical dpi, which will auto-adjust to 600 when Dual Channel is ON. The second number represents the horizontal resolution, and it can be adjusted manually. Be aware that adjustments affect printing & quality (Higher dpi = slower printing speed) and distortion of printing images when horizontal dpi is adjusted.

Pre-purge

Always keep Pre-purge function in Disabled (OFF) Mode.

Enabling Pre-purge function will force Printer to output ink dots periodically, preventing the ink from solidifying on the nozzle in a dry environment or long gap in printing time.

 Pre-Purge is an important attribute to the print quality, especially with different semi-porous and none-porous ink, it is critical to adjust calibration for different environments due to the unique ink character and decap time.

1. Press  **5** **2** to setup.

2. Press   to select **ON** or **OFF**.

3. Input the value of calibration (Calibrated range from **1** to **5**).

 Calibrate 1 = the wettest environment, where minimum pre-purge output might apply.
Calibrate 5 = the driest environment, where maximum pre-purge output might apply.

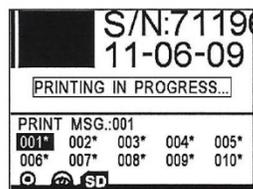
Clean PrintHead

1. Press **Function** **5** **7** to setup

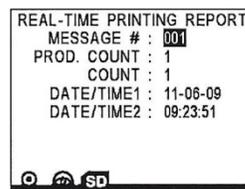
 When this function is enabled, you are able to print a black square for the purpose of cleaning the PrintHead under dual channel mode.

Printing Display Mode

1. Press **Function** **5** **8** to setup
2. Press **-** **NO** **+** **YES** to select printing **PREVIEW / REPORT**



Preview



Report

Setting Up Print Delay

Print Delay **Tabl→A** allows you adjusting the distance of printing right after photocell is triggered.

1. Under Message Browser, and press **Tabl→A**.
2. Input the value.

For example: If you set the delay to be 1 Inch, after the photocell is triggered, the PrintHead will wait conveyor to roll 1 Inch before the next print. (Each message can be set with print delays individually)

Printing Message

Under Message Browser, select a message and start **Print On** or stop printing **Print Off**.

 Normally at the **PRINT ON** stage, most actions are not available until you press **Print Off**. However, if you remove the cartridge, the system switches to **PRINT OFF** automatically.

TOOLS

Find Message

Search message by its name or number.

 Search by name only available when the **MESSAGE NAME** is activated. When **MESSAGE NAME** is **OFF**, you can only find the message by its number.

Under Tools, highlight **FIND MESSAGE**.

1. Type the first few letters of the message name.
2. Press  to find the message. (Might take a few minutes to search the files)

Copy Message

Copy the message content to a different message location.

1. Select a message, then press .
2. Highlight to **COPY MESSAGE** and press .
3. Input the Message No. you want to copy to.

Rename Message

Rename the message.

1. Select a message, then press .
2. Highlight to **RENAME MESSAGE** and press .
3. Input the new name desired.

Ink Report

System automatically calculates ink consumption based on the content of selected message.

Under Message Tools, highlight to **INK REPORT**, press , the system shows the residual ink content and automatically calculates the number of times left to use the print of the current message.

Production Counter

Statistically calculates the total print counts of production (maximum up to 99999999).

 **ALARM** available when **COUNTER ALARM** is **ON**.

Under Tools, highlight **PRODUCTION COUNTER** and press  to setup

TROUBLESHOOTING

Print is Cut Off

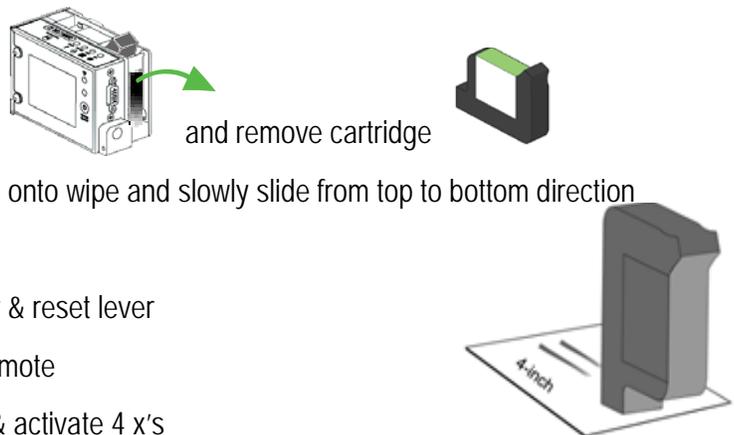
1. Press **Tabl→A** on the remote
2. Input Standard values **1.0 – 1.2 inch** (HD38) or **1.6 – 1.8 inch** (HD58). Value Range varies with application diameter, message size and quantity of digits.
3. Press **ESC** 3x's on the remote
4. Press **Print On** on the remote & activate 4 x's

Print is Scrunched

1. Press **Function** on the remote
2. Press **5** Printing Setup
3. Press **4** Encoder & Conveyor
4. Input **65 Feet/MIN** (HD38) or **60 Feet/MIN** (HD58)
5. Press **ESC** 3x's on the remote
6. Press **Print On** on the remote & activate 4 x's

Print has Streaks:

1. Wipe Ink Cartridge
 - a. Release ink cartridge lever and remove cartridge
 - b. Place printhead upside down onto wipe and slowly slide from top to bottom direction
 - c. Replace cartridge into printer & reset lever
 - d. Press **ESC** 3x's on the remote
 - e. Press **Print On** on the remote & activate 4 x's
2. Check Remaining Ink [Press **Print Off** first]
 - a. On Remote, Press **Function**, **7** ABOUT U2, then **2** INK INFO
 - b. Press **ESC** 3x's on the remote
 - c. Press **Print On** on the remote & activate 4 x's



TROUBLESHOOTING

The first step for perfect printing is to make sure that the substrate is always in the same position relative to the printer. The best way to guarantee proper position is to set a guide bar on the conveyor.

123456789

The following examples are possible printing problems due to improper settings.

Incorrect conveyor speed setting

The conveyor speed must be stable in order to produce perfect printing; otherwise, an encoder may need to be installed.

- a. Conveyor Speed setting is too fast

12456789

- b. Conveyor Speed setting is too slow

1224566678899

Solution: Press "FUNCTION → 5" to set up correct speed.

Incorrect Encoder DPI setting

If the DPI setting is different with actual DPI, there will be offset printing even if an encoder has been installed.

123456789

Solution: Press "FUNCTION → 5" to set up correct "Pulse/Cycle" and "Diameter" based on the Encoder.

Incorrect printing direction

You'll get below printing image in case you've set incorrect printing direction:

9887665544332211

Solution: Press "FUNCTION → 5" to choose correct printing direction.

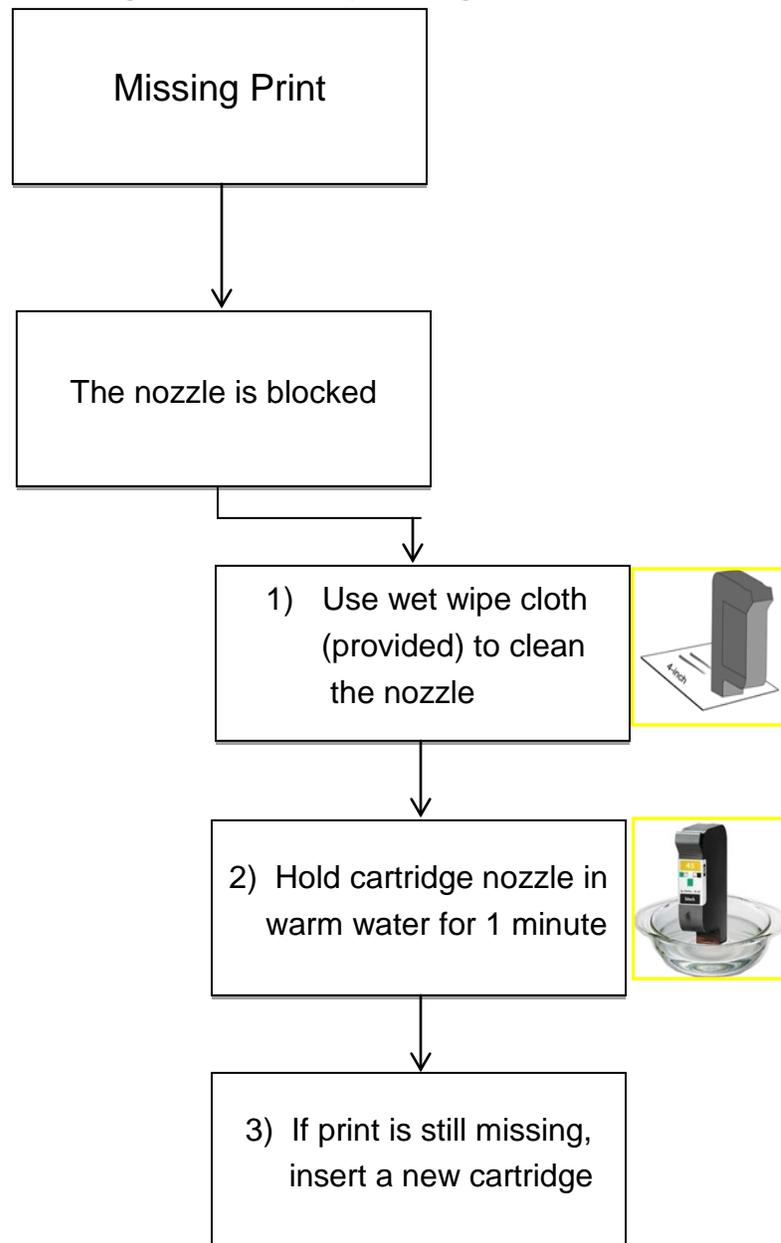
Build up on the nozzle

- Solution:**
- a) Use lint-free soft cloth to clean the cartridge nozzle;
 - b) Change a new cartridge

123456789

TROUBLESHOOTING

Flowchart for missing lines when printing:



Software Upgrade

1) Program Version Upgrading

a. SD Card Synchronization

1. Install Message Pro (U2 MessagePRO_x.x.xxx.xxx.exe) on PC.
2. Run the Message Pro software and insert the SD Card Reader with an SD Card into the USB Port of PC.
3. The system will synchronize the corresponding files into the SD Card.

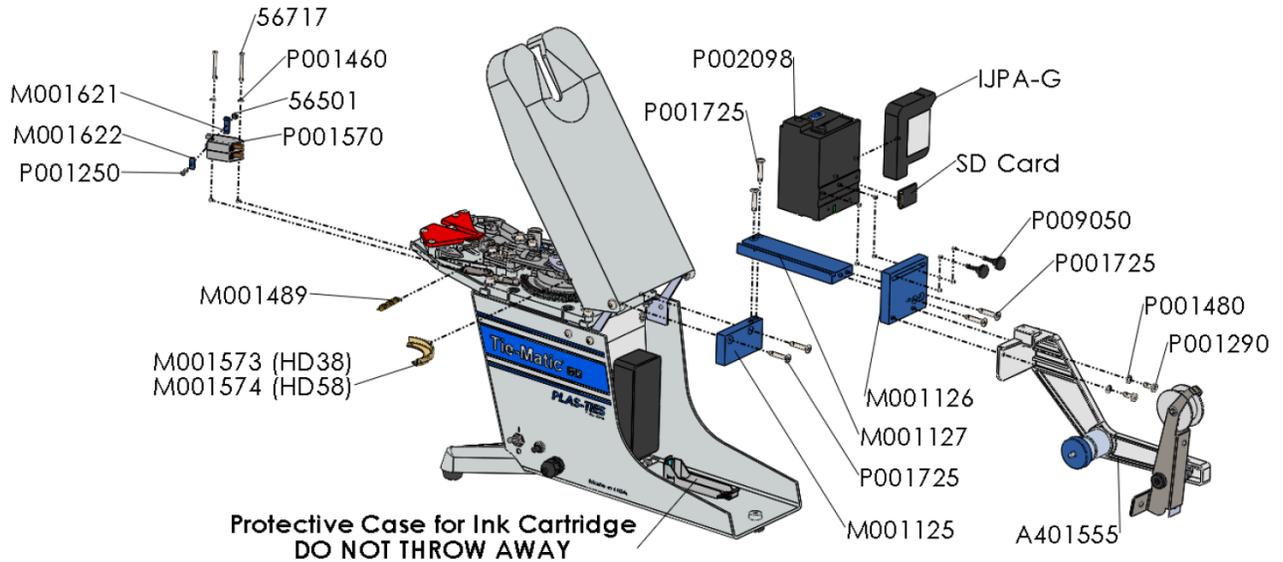
b. Upgrading Procedure

1. Insert the SD Card into the slot of U2 Controller.
2. Keep pressing the Remote ON/OFF button and power ON the U2 Controller
3. Press "Enter" to select the corresponding files for upgrading
4. Go to "U2ALL" to upgrade xxxxxx. TPU file.
5. After finishing the upgrade, please restart the U2 Controller to access the U2 Main Interface.

2) Boot Version Upgrading

1. Power on the U2 Printer and access the message browser mode
2. Press "Function-0000123456" to access boot upgrading mode
3. Select xxxxxx. TPP file to upgrading.

Appendix A



Part #	Description	Qty
56501	4-40 Hex Nut {X125}	1
A401555	HD Brake Assembly (not included in A401870)	1
A401865	Ink Jet Printer Actuation Switch Harness (not shown)	1
IJPA-G	InkJet Printer Ink Cartridge	1
M001125	HD Printer Frame Mounting Bracket	1
M001126	HD Printer Brake Mount Bracket	1
M001127	HD Printer Brake Beam Bracket	1
M001501	Switch Insulator	1
M001573	HD38 Printer Drum	1
M001574	HD58 Printer Drum	1
M001621	Arm Union Bracket 1- Micro Switch	1
M001622	Arm Union Bracket 2 - Micro Switch	1
P001250	4-40 x 1/4 Phillips Pan Head Screw	1
P001725	10-32 X 1" Flat Socket Cap Screw	6
P002098	Plas-Ties InkJet Printer with Software	1
P003002	Cleaning Wipes for Ink Cartridge (not shown)	1
P009050	Printer Bracket Thumb Screw	2