F-TRON TX800

Thermal Inkjet Printer — Operation & Technical Manual

Doc Ref: MNL-FTX800-EN

Powered by Fast Solution | HP Inkjet Technology

F-TRON TX800 Thermal Inkjet Printer

Figure 1: F-TRON TX800 Advanced High-Resolution Printing System Overview

1. SYSTEM OVERVIEW & TECHNICAL SPECIFICATIONS

The **F-TRON TX800 Thermal Inkjet Printer** is an advanced high-resolution inline coding machine driven by HP Inkjet Technology and built on a powerful **LINUX platform** for rapid customization. Features include a **7-inch color capacitive touch screen** interface, production speeds up to **100 meters per minute**, and ultra-crisp resolution reaching up to **1200 DPI** across porous and non-porous industrial substrates.

PARAMETER	SPECIFICATION
Model	F-TRON TX800
Technology	HP Inkjet Technology (TIJ Inline System)
Operating System	LINUX Platform (Supports rapid customization & dynamic data)
User Interface	7-inch Color Capacitive Touch Screen
Print Resolution	Up to 1200 DPI High-Resolution Printing
Max Line Speed	Up to 100 meters per minute
Print Height	2 mm to 12.7 mm (0.5 inch max per head)
Supported Content	Text, Lot/Batch Numbers, Expiry Dates, Logos, Barcodes, QR Codes, Variable Data
Substrates	Cartons, Plastics, Glass, Bottles, Metals, PVC Pipes, Foils, Coated Paper

2. INSTALLATION & SETUP

2.1 Package Checklist

- F-TRON TX800 Control Console (7-inch Color Capacitive Display Unit)
- Printhead Module & Connecting Data Cable
- Heavy-Duty Mounting Bracket Assembly (Vertical/Horizontal posts, cross clamps, fine-tuning block)
- Photoelectric Sensor Eye & Power Supply Adapter
- External USB Flash Drive

2.2 Mechanical & Sensor Mounting

1. **Bracket Assembly:** Fasten the vertical mounting post securely to the conveyor frame. Extend the horizontal arm directly over or beside the conveyor line.
2. **Printhead Alignment:** Align the printhead perpendicular ($90°$) to the moving products. Maintain a strict standoff distance of **2 mm to 5 mm** from the product surface to avoid spray distortion or overspray.
3. **Photoelectric Sensor:** Mount the optical eye upstream from the printhead to catch the leading edge of moving items cleanly.

3. ELECTRICAL CONNECTIONS & INK CARTRIDGE HANDLING

3.1 Cable Setup

1. Attach the Printhead Cable into the main controller interface port and engage the locking latches.
2. Plug the Photoelectric Sensor connector into the `SENSOR` port.
3. Connect the DC Power Adapter to the controller power input terminal.

> ⚠️ **IMPORTANT OPERATOR SAFETY NOTICE**
> Always turn OFF power or pause system printing before inserting or removing the HP Inkjet Technology cartridge. Failure to do so can cause permanent electrical damage to the gold contact pins.

3.2 Inserting the HP Tech Ink Cartridge

1. Unclip the top latch on the printhead block.
2. Remove the protective rubber nozzle clip from the fast-drying solvent cartridge.
3. Insert the cartridge into the printhead at a $45°$ angle until seated against the contact pins.
4. Press down the top latch clip firmly until it locks into position.

4. TOUCHSCREEN INTERFACE & JOB CREATION

4.1 Creating & Editing Messages

1. **Power On:** Boot the Linux platform via the 7-inch color capacitive touch screen.
2. **Create File:** Tap `File` → `New`.
3. **Text & Dates:** Add dynamic fields for static lot text (e.g., `LOT 534MI31`) or real-time expiration dates (e.g., `BEST BY SEP 2026`).
4. **Barcodes & QR Codes:** Insert high-density 1D barcodes or 2D QR codes mapped to dynamic counters.
5. **Logos:** Import 1-bit monochrome `.bmp` files via USB drive.

4.2 System Tuning

- **Print DPI:** Select target resolution up to 1200 DPI based on speed and clarity requirements.
- **Print Delay:** Calibrate the offset delay (in ms) to precisely position marks on products passing the sensor.

5. DAILY OPERATION WORKFLOW

STEP 1

System Power-Up

Power on the console. Verify clean optical sensor lenses and inspect printhead faceplate.

STEP 2

Load Print File

Select desired job file from the 7-inch touch interface. Confirm date parameters and barcode formatting on-screen.

STEP 3

Start Printing

Tap `Start Print` to switch system status to `READY`.

STEP 4

Test Run

Pass a test product down the line at speeds up to 100 m/min. Adjust software delay if repositioning is needed.

STEP 5

Shutdown & Nozzle Care

Stop printing and shut down system power. **Immediately remove the fast-drying cartridge and re-cap with its protective clip** to prevent nozzle drying.

6. MAINTENANCE & TROUBLESHOOTING

6.1 Nozzle Maintenance

- **Wiping:** Wipe nozzles gently in a single direction using a lint-free cloth dampened with anhydrous isopropyl alcohol (99%). Never rub back and forth.
- **Purge:** Execute a nozzle purge sequence via software to clear minor ink dried spots.

6.2 Troubleshooting Guide

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
No Print Output	Sensor misalignment or dirty cartridge contacts.	Check sensor trigger LED when product passes. Clean gold contact pins gently with alcohol wipe.
Faded / Broken Lines	Clogged nozzles or low ink level.	Perform nozzle wipe with isopropyl alcohol. Run software purge cycle. Replace cartridge if depleted.
Distorted Print / Skew	Conveyor line speed fluctuation or DPI setting mismatch.	Match DPI and speed parameters in the touchscreen configuration, or connect an optical rotary encoder.
Ghosting / Double Printing	Sensor optical reflection off glossy packaging.	Adjust photoelectric sensor angle or sensitivity dial to reduce specular glare.