

# Chapter 1:

## Introduction and Tools

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## FCC Compliance

**Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## Notes before servicing

This manual covers service information for the Gerber CAT UV ink jet printer.

Only qualified technical personnel with the correct tools should perform service and repair actions. Before performing any service, keep in mind the following points.

- ◆ Read all directions completely BEFORE performing any service procedures.
- ◆ Read and comply with all safety instructions before performing service.
- ◆ Note all cable markings and connector/cable orientation BEFORE disconnecting any wiring.
- ◆ Observe preliminary steps for any service actions. Many components are located under panels. Some disassembly is required to access parts and mounting hardware.
- ◆ When reassembling, observe all torque and tension requirements. Use properly calibrated tools to perform actions that specify values for torque, tension, and force.
- ◆ Some service actions require additional adjustment, calibration, or alignment AFTER a part is replaced.
- ◆ If you experience any difficulties in performing service actions, or if you find an error in a procedure, contact Gerber Field Service.

## Conventions and symbols

The following conventions are used in this service manual:



**WARNING:** A warning statement contains information which, if not followed, could result in electrical shock hazard.



**CAUTION:** A caution statement contains information which, if not followed, could result in personal injury or equipment damage.



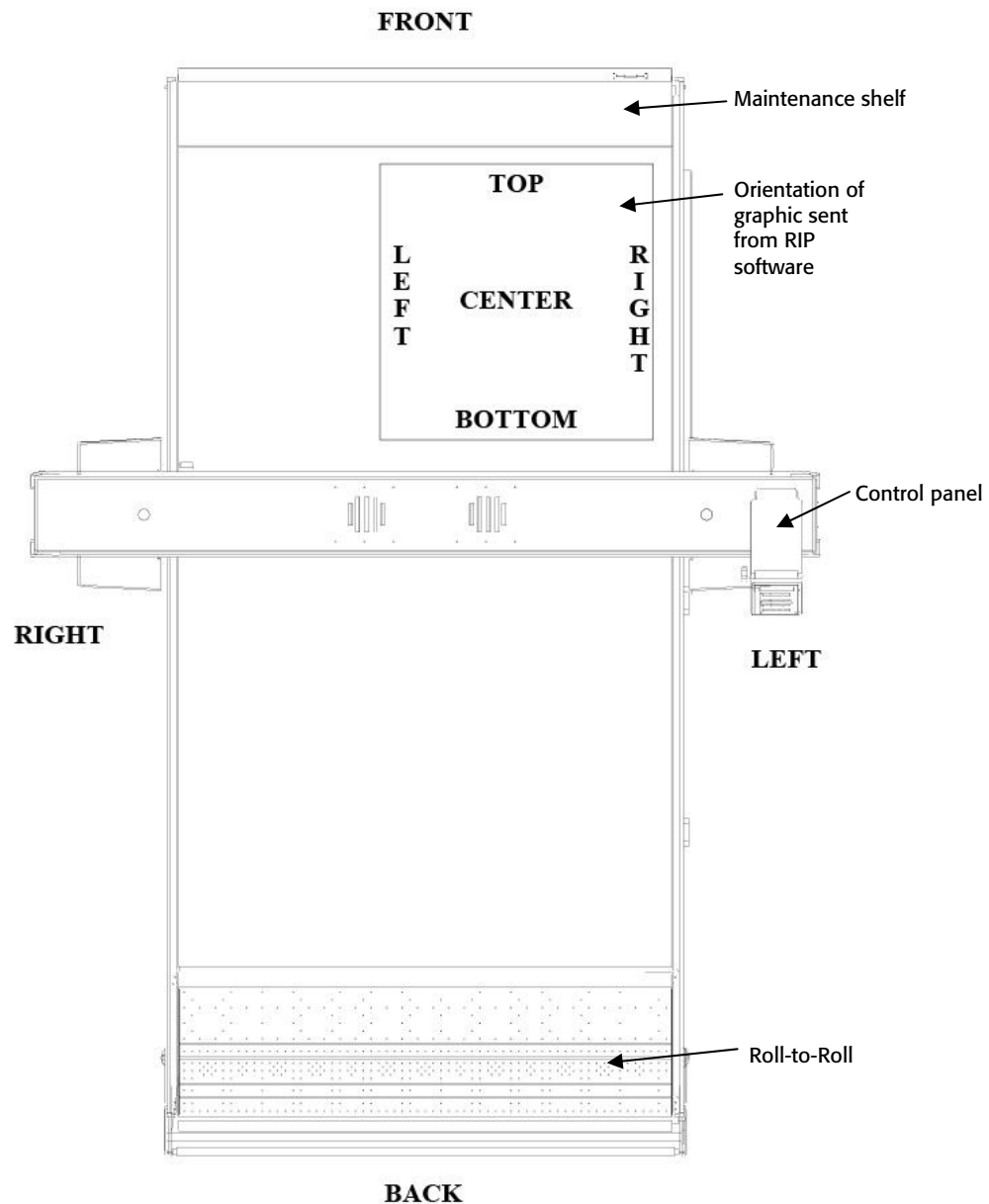
**NOTE:** A note contains important information that affects the successful completion of a task.



**TIP:** A tip contains a suggestion to make your task easier or to remind you of something that may appear elsewhere in the booklet.

## Printer orientation

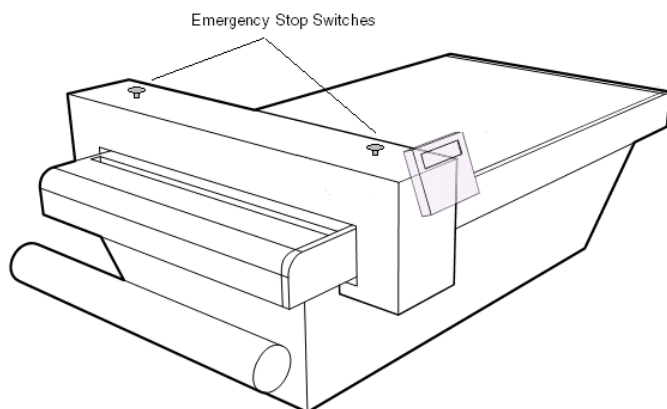
Make note of the orientation of the printer. The flatbed table end with the maintenance shelf is considered the front of the printer and the control panel end of the gantry is the left side. Also note that the right and left sides of the graphic file sent from the RIP software are reversed.



## Safety information

### Emergency Stop

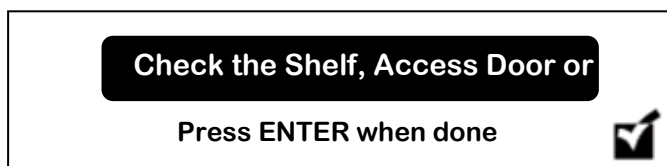
There are two emergency stop buttons located on either end of the gantry. Press either button to immediately shut down the UV lamps and abort printing.



The screen flashes the following Emergency Stop message.



Opening the maintenance shelf or the head access door will also cancel a job which is printing or paused. Use care when accessing either of these areas. When any of these actions causes an emergency stop, a message displays asking the operator to **Check the Shelf, Access Door or E-Stops**.



Once the operator has corrected the condition and pressed ENTER, the motors of the printer perform a homing sequence.



*Note: If the power is restored or the condition corrected before the **Check Shelf, Access Door, or E-Stop** message displays, the printer displays a **Motor Power Cycled!** message.*

## Electrical



**WARNING:** Observe these safety precautions to avoid possible electrical shock hazard when using the Gerber CAT UV.

- ◆ Use the correct power cord; do not use a damaged power cord.
- ◆ Use an outlet with a ground terminal or electric shock can occur.
- ◆ Turn printer off and unplug it from the power source before servicing.
- ◆ Unplug any communications cables before servicing.
- ◆ Never open covers affixed by screws unless directed by Gerber service personnel. Doing so may result in electric shock or damage to the printer.
- ◆ Remove any electrostatic charge from your clothing or body by touching a metal part of the printer before servicing. Electronic components (such as memory) may malfunction if exposed to electrostatic charge.
- ◆ Industrial rubber mats are required under and around the printer if it is installed on carpeting.

## Ink handling and disposal



**CAUTION:** Observe these general safety precautions when operating the Gerber CAT UV Ink Jet Printer.

- ◆ Do not use inks other than GerberCAT inks. Using other inks will void the warranty and will damage the printer.
- ◆ Consult the Gerber CAT ink MSDS for proper handling, disposal, and safety recommendations. Also consult local laws and regulations.
- ◆ Do not open ink pouches. Ink could get on your skin or in your eyes.
- ◆ When handling ink pouches and waste ink, be careful that the ink does not get on your skin. If it does, wash your skin with soap and water. Seek medical attention if irritation persists.
- ◆ If your clothing comes in contact with uncured ink, remove any contaminated clothing and wash them separately with soap and water.
- ◆ If ink gets in your eyes, immediately rinse your eyes with copious amounts of water for at least 15 minutes and seek medical attention immediately.
- ◆ Dispose empty ink pouches, waste ink, lint-free wipes, and used swabs according to local laws and regulations.

## Printer ventilation



**CAUTION:** Observe these general safety precautions when operating the Gerber CAT UV Ink Jet Printer.

- ◆ Do not obstruct printer exhaust fans.
- ◆ Printer should run with all covers attached to insure proper air flow inside the machine.

## Personal precautions



**CAUTION:** Observe these general safety precautions when operating the Gerber CAT UV Ink Jet Printer.

- ◆ There are two emergency stop switches located on either end of the gantry. Press either switch to immediately shut down the UV lamps and abort printing.
- ◆ Be careful when reaching into the printer to open the maintenance shelf, or swab the print head. The UV lamp assemblies and interior surfaces of the printer may be hot.
- ◆ Be careful not to pinch fingers in drawers, pinch wheels, and material feed system.
- ◆ Use caution when lifting heavy rolls or pieces of material.

## UV lamp precautions



### UV WARNING



Exposure to UV light can be dangerous to eyes and skin and should be avoided.  
Never operate the Gerber CAT UV with any of the covers removed.  
Never operate the printer with the rubber light shields (flaps) missing or damaged.  
Contact Gerber if any of the rubber light shields (flaps) need to be replaced.



## Technical Support

If you have questions regarding using, maintaining, or troubleshooting the Gerber CAT UV please contact Gerber Field Service.



phone: 800-828-5406 / 860-644-1551 ext. 8602  
fax: 860-871-3862



e-mail: [gspservice@gspinc.com](mailto:gspservice@gspinc.com)



[www.gspinc.com](http://www.gspinc.com)

◆ **FastFacts™**

Gerber FastFacts™ provide answers to technical and service questions. FastFacts are available on the Gerber web site under "Support."

◆ **GERBERnet**

Online resource for the latest documentation, service notes and firmware downloads. A password is required for access to service level items. Follow the link on the Gerber web site under "Support."



### **How to use GERBERnet**

- 1** Got to the Gerber Scientific Products website, [www.gspinc.com](http://www.gspinc.com).
- 2** At the bottom of the website, click GERBERnet to open the Gerber Scientific Products login page.
- 3** Customer user name and password are on the top right side of the page.

## Tools and supplies



**CAUTION:** Do not service the Gerber CAT UV without the correct tools. Service also requires a high skill level in mechanical and electromechanical assembly. Incorrect assembly or adjustment can seriously reduce printer output quality.

### General tools

General hand tools are used to remove, adjust, and reinstall a variety of Gerber CAT UV parts, including covers, circuit boards, and mechanical components.

- ◆ Long handled T-wrench hex drivers  
(5mm, 4mm, 3mm, 2.5mm, 2mm, 1.5mm)
- ◆ Long handled ball-end hex drivers  
(5mm, 4mm, 3mm, 2.5mm, 2mm, 1.5mm)
- ◆ Long/short handled Allen wrenches  
(3mm, 2.5mm, 2mm, 1.5mm)
- ◆ Screwdrivers  
(Assorted Phillips head and flat head)
- ◆ Adjustable wrench
- ◆ Needle-nose pliers
- ◆ Wire cutters
- ◆ Hook tool (Dental hook/pick)
- ◆ Electric Multi-meter
- ◆ Electric grounding strap
- ◆ 10x magnifier or loupe (to use for calibration) and a blue light to align yellow
- ◆ Razor blade or non-metallic abrasive pad

## **Special Tools**

The following tools are required to install, calibrate and perform certain repairs on the Gerber CAT UV.

♦ P82195A Gantry Installation Cones	1 Set
♦ P82196A Gantry Installation Shafts	1 Set
♦ P82470A Way Support tool	1 Set
♦ T82201A Roll-to-Roll Hub Gap Spacer	1
♦ T82202A X-axis Belt Tensioning Gauge	1
♦ T82997A Steel Belt X-axis Tensioning Gauge & Gimbal	1
♦ T82203A Carriage Maintenance Stand	1
♦ T82208A Head Height Block (2.8mm)	1
♦ T82209A Head Height Block (31.75mm)	1
♦ P82560A Y Encoder tool Kit	1
♦ T82573A Y-Axis Belt Height	1
♦ T82183A Variable Temperature Heat Gun (120 Volts)	1
♦ P82493A Nozzle Kit - Heat Gun	1
♦ P83067A Side Plate Park Gap Jacks	1 Set
♦ T82573A Carriage Shield Gap Go-NoGo	1
♦ T82830A Data Logger Temp/Humidity	1
♦ T82828A CSK 3 Flute ¼" Bit	1
♦ T82829A Deburring Tool	1
♦ T82832A Drill Bit 3/16"	1