

# **DCS & Labeling Worldwide**

## **GT408/412/424e Printer**



# **OPERATOR MANUAL**

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**WARNING**

**THE EQUIPMENT REFERENCED IN THIS DOCUMENT COMPLIES WITH THE REQUIREMENTS IN PART 15 OF FCC RULES FOR A CLASS B COMPUTING DEVICE. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA MAY CAUSE UNACCEPTABLE INTERFERENCE TO RADIO AND TV RECEPTION.**

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# 1

## INTRODUCTION

- **About This Manual**
- **General Description**
- **Control Features**

## ABOUT THIS MANUAL

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This manual is laid out consistent with the product discussed and provides all of the information required for printer maintenance and repair by SATO approved personnel. For the repair technician, this manual is intended to compliment, and to be used as an extension of, owner/operator literature.

This manual also incorporates the use of special information boxes. Examples of these boxes and the type of information provided in each, are below.

**WARNING: PROVIDES INFORMATION THAT, IF UNHEEDED, MAY RESULT IN PRESONAL INJURY.**

**CAUTION: PROVIDES INFORMATION THAT, IF UNHEEDED, MAY RESULT IN EQUIPMENT DAMAGE.**

**NOTE: Provides helpful hints to assist in performing the tasks at hand.**

**LCD DISPLAY: Provides the specific display that should be visible on the LCD at that point.**

A comprehensive Table Of Contents provided at the front of this manual facilitates rapid movement within. The contents identify the different Units, Chapters, and Sections. Each references the page number of their commencement.

The pages of this manual have embedded headers and footers to assist the user in identifying his or her exact position within the manual. The header provides the section number followed by its name. The footer identifies the product on the left, the manual's part number in the center, and the page number to the right side of the page.

Page enumeration is two-part with each separated by a hyphen. The first character set references the Unit and the second identifies the page number. Page numbers begin with the numeral (1) one at the commencement of a new unit and ascends sequentially.

## GENERAL DESCRIPTION

The GT4xxe series printer is a high-performance printer capable of printing all popular bar codes and twelve human-readable fonts; providing an inventory of thousands of styles and sizes. Its heavy metal construction is designed to deliver optimum performance in demanding environments.

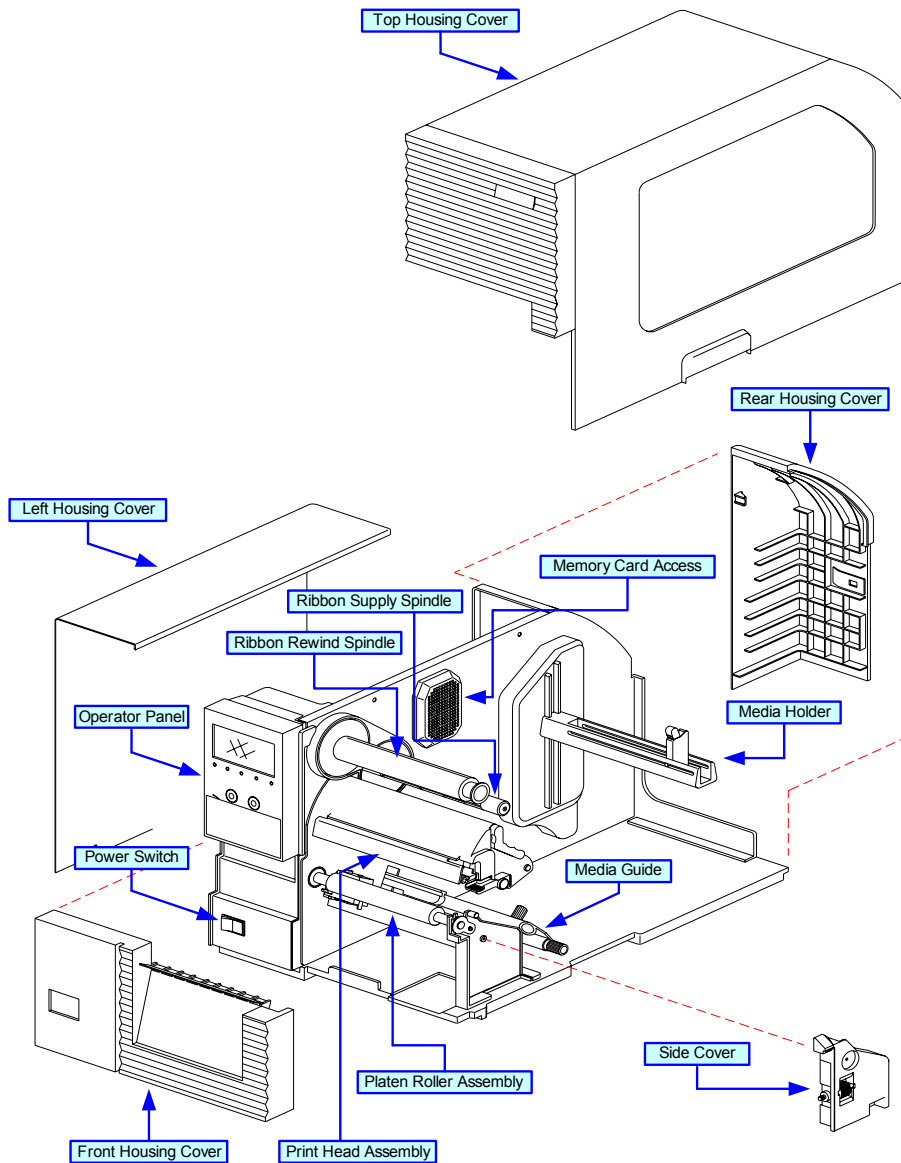


Figure 1-1a, Primary Components

# CONTROL FEATURES

This chapter identifies the interactive control features of the printer. These functions are generally defined here. More specific explanations will be found throughout this manual on how to use them.

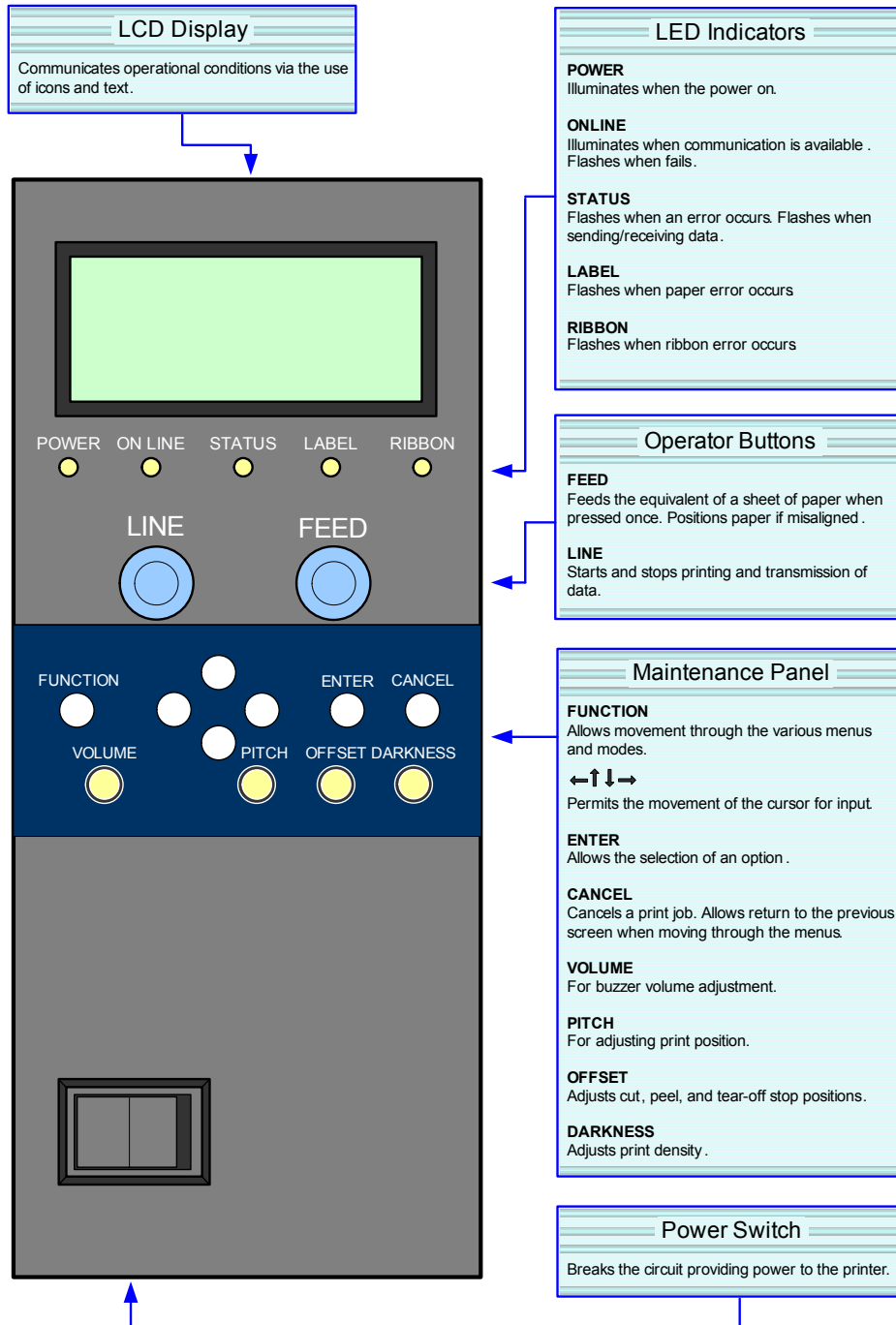


Figure 1-2, Operator Panel

# 2

## TECHNICAL DATA

- **Physical Characteristics**
- **Power**
- **Enviromental**
- **Processing**
- **Print**
- **Media**
- **Ribbon**
- **Sensing**
- **Interface Modules**
- **Character Font Capabilities**
- **Barcode Capabilities**
- **Regulatory Approvals**

<b>PHYSICAL CHARACTERISTICS</b>	
Width	10.67 Inches (271 mm)
Height	12.00 Inches (305 mm)
Depth	17.90 Inches (455 mm)
Weight	33.07 Pounds (15.0 Kg) standard

<b>POWER</b>	
Input Voltage	100-240 Volts AC +/- 10%, 50/60 Hertz +/-5%
Power Consumption	200 Volts/150 Watts Operating, 89 Volts/40 Watts Idle

<b>ENVIRONMENTAL</b>	
Operating Temperature	32° to 104°F (0° to 40°C)
Storage Temperature	23° to 140°F (-5° to 60°C)
Storage Humidity	30 to 90% RH Non-Condensing
Operating Humidity	30 to 80% RH Non-Condensing

<b>PROCESSING</b>	
CPU	32 Bit RISC
Flash ROM	2 Megabytes
SDRAM	4 Megabytes
Receive Buffer	2.95 Megabytes
Extended Memory	Flash Memory Board (8 Megabytes)

<b>COMMAND</b>	
Standard	SATO Barcode Printer Language (SBPL) Intelligent Command
Optional	SATO Embedded Basic Language (SEMBL)

<b>INTERFACE MODULES</b>	
Enhanced Parallel Port	IEEE1284 (ECP Compatible)
Centronics Parallel Port	Centronics
Serial Port	RS232C (9600 to 57,600 bps) Standard RS422/485 (9600 to 57600 bps) Optional
Universal Serial Bus	USB Adapter (12 Mbps)
LAN	10BASE-T/100BASE-TX Automatic Switching
Ethernet (Wireless LAN)	10/100 Base T, 802.11B Wireless Wi-Fi
Mini LAN	10BASE-T/100BASE-TX Automatic Switching

<b>PRINT</b>	
Method	Direct Thermal / Thermal Transfer
Speed (user selectable)	Thermal Transfer: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 Inches Per Second Direct Thermal: 2, 3, 4, 5, 6 Inches Per Second
Print Module (dot size)	.0049 Inches (.125 mm)
Resolution	203 Dots Per Inch (8 dpmm) 305 Dots Per Inch (12 dpmm) 609 Dots Per Inch (24 dpmm)
Maximum Print Width	4.10 Inches (104 mm)
Maximum Print Length	GT408 Printer: 98.43 Inches (2500 mm) GT412 Printer: 59.06 Inches (1500 mm) GT424 Printer: 15.75 Inches (400 mm)

<b>MEDIA</b>	
Roll Media	Roll Paper: 10.43 Inch (265 mm) maximum diameter. Core Size: 1.5, 3, 4 Inch (38.1, 76.2, 101.6 mm) internal diameter. Wound: Face In / Face Out. Face Out is for linerless only.
Fan-Fold Media	Maximum folded height: 7.87 Inches (200 mm)
Standard Mode	Media Width: 0.87 to 5.04 Inches (22-128 mm) Media Length: 0.24 to 5.04 Inches (6-397 mm)
	Backing Paper Width: 0.98 to 5.16 Inches (25-131 mm) Backing Paper Length: 0.35 to 15.75 Inches (9-400 mm)
Tear-Off	Media Width: 0.87 to 5.04 Inches (22-128 mm) Media Pitch: 0.67 to 5.04 Inches (17-397 mm)
	Backing Paper Width: 0.98 to 5.16 Inches (25-131 mm) Backing Paper Length: 0.79 to 15.75 Inches (20-400 mm)
Thickness	0.002 to 0.010 Inches (0.06 - 0.268 mm)

<b>RIBBON</b>	
Width	Minimum: 1.56 Inches (39.5 mm)
	Maximum: 1.77, 2.32, 2.99, 3.31, 3.62, 4.02, 4.37, 5.04 (45, 59, 76, 84, 92, 102, 111, 128 mm)
Length	492 yards (450 m) roll.
Wound	Face In / Face Out.
Roll Diameter	3.34 Inches (85 mm)

<b>SENSING</b>	
Gap	Adjustable
Reflective Eye-Mark	Adjustable
Label	Adjustable
Continuous Form	Sensor not used.

<b>CHARACTER FONT CAPABILITIES</b>	
<b>MATRIX FONTS</b>	
U	5 dots W x 9 dots H
S	8 dots W x 15 dots H
M	13 dots W x 20 dots H
XU	5 dots W x 9 dots H (Helvetica)
XS	17 dots W x 17 dots H (Univers Condensed Bold)
XM	24 dots W x 24 dots H (Univers Condensed Bold)
OA Font (OCR-A)	
OB Font (OCR-B)	
<b>AUTO SMOOTHING FONTS</b>	
WB	18 dots W x 30 dots H
WL	28 dots W x 52 dots H
XB	48 dots W x 48 dots H (Univers Condensed Bold)
XL	48 dots W x 48 dots H (Sans Serif)
<b>VECTOR FONT</b>	
	Proportional or Fixed Spacing Font Size 50 x 50 dots to 999 x 999 dots Helvetica, 10 Font Variations
<b>AGFA RASTER FONTS</b>	
A Font	CG Times, 8 to 72 pt.
B Font	CG Triumvirate, 8 to 72 pt.
<b>DOWNLOADABLE FONTS</b>	
	Bit Mapped True Type Fonts with Utility Program
<b>CHARACTER CONTROL</b>	
	Expansion up to 12 x in either the X or Y coordinates. Character Pitch Control Line Space Control Journal Print facility 0, 90, 180, and 270 Degree Rotation

<b>BAR CODE CAPABILITIES</b>	
Linear Bar Codes	UPC-A/E CODABAR Code 39 Code 93 Code 128 Interleaved 2 of 5 Matrix 2 of 5 Bookland RSS-14 MSI POSTNET UCC/EAN 128 Customer Barcode
Two Dimensional	QR Code Veri Code Data Matrix Macro BDF Maxi Code PDF417 Micro PDF417 Truncated PDF QR Code NW-7 (Codabar) Composite Symbology
Ratios	1:2, 1:3, 2:5, User definable bar widths
Bar Height	4 to 999 dots, User programmable
Rotation	0, 90, 180, and 270 Degrees
Sequential Numbering	Sequential numbering of both numerics and bar codes
Custom Characters	RAM storage for special characters
Expansion Ratio of Character	Height: 1-12 times, Width: 1-12 times
Graphics	Full dot addressable graphics, SATO Hex/Binary, BMP or PCX formats
Form Overlay	Form overlay for high-speed editing of complex formats

<b>REGULATORY</b>	
Safety	EN 55022 (Class B), UL (CUL), TUV
Radiant Noise	VCCI (Class B)
AC Line Noise	Over 1000V p-p
Static Electricity	IEC (Level 3)



# 3

## INSTALLATION

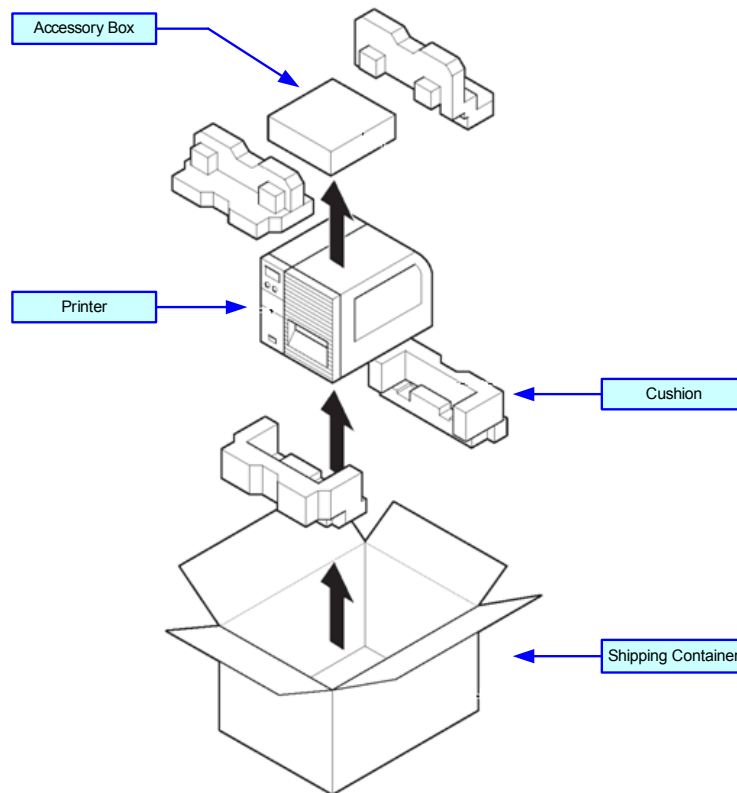
- **Unpacking**
- **Parts Identification**
- **Printer Installation**
- **Interface Selection**
- **Accessories Installation**

## UNPACKING & PARTS IDENTIFICATION

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Unpack the printer as directed in the following procedure.

- 1 Place the shipping container (box) upright on a solid, flat surface.
- 2 Open the box, remove any loose items and the first layer of packing material.
- 3 Carefully lift the printer and accessories from the box and place them on a solid flat surface.
- 4 Remove the plastic covers from the packed items and visually inspect for physical damage.
- 5 Ensure all components are present as dictated on the Packing List.
- 6 Report damaged property.



**Figure 3-1, Unpacking**

## PRINTER INSTALLATION

This chapter provides guidance on how to station, connect, and load the printer once unpacked. Following printer setup, proceed to the next chapter for information on interface selection.

### SITE LOCATION

- Stationed on a solid flat surface.
- Stationed away from hazardous materials.
- Stationed within operational distance of the host based on interface specifications.

### CABLE CONNECTION

The procedure below provides instruction on typical cable connection. The same procedure will apply to others that are not mentioned, but their connectors are also located behind the rear housing cover.

- 1 Press the rear housing cover catch and remove laterally (Figure 3-2a).
- 2 Locate and identify the required connectors (Figure 3-2b).
- 3 Connect the power supply and interface cables to their respective connectors (Figure 3-2c).
- 4 Replace rear housing cover (Figure 3-2d).

