

Gemini

Thermal / Thermal Transfer Windows Label Printer

Operator's Manual





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Gemini

Thermal Transfer Printer Operator's Manual



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Table of contents

- 1. Introduction 6**
 - Introducing the Gemini Windows Barcode Printer 6
 - Agency Compliance and Approvals 7
 - Technical Specifications 8
- 2. General Safety Regulations 11**
- 3. Unpacking and Delivery Contents 12**
- 4. Printer Component Location 13**
- 5. Connecting the Printer..... 17**
 - Connection to a Computer..... 17
 - Connection to Power Supply 17
- 6. Media loading 18**
 - Processing Mode 18
 - Loading Labels..... 19
 - Ribbon Loading 22
- 7. Adjustments Concerning the Labels 23**
 - Adjustment of the Printhead Support..... 23
 - Adjustement of the Transfer Ribbon Feed 24
- 8. Installing and Using the Software 25**
 - Introduction 25
 - Installation information 25
 - Updates 25
 - The Gemini Control Panel Application 26
 - Gemini Test Print..... 27
 - Printer Setup 28
 - Printing from Windows Applications 32

9. Error Messages	33
10. Maintenance / Cleaning	34
General Cleaning	34
Cleaning the Media Feed Roller	34
Cleaning the Thermal Printhead	35
Removing Labels from the Dispenser Roller.....	36
11. Printhead Horizontal Alignment	37
12. Troubleshooting	39
EC-Conformity Declaration	40

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1. Introduction

Introducing the Gemini Windows Barcode Printer

The **Gemini** is an innovative printer designed to work only in a Windows™ environment. Instead of buttons on a printer's front panel, printer configuration and control is provided by the Gemini Control Panel Application running under Windows. The **Gemini** driver allows printing from almost any Windows application, such as MS Word™, Write, WordPad, Access® and Visual Basic™, as well as Lotus® Approach®, Paradox® and dBASE® among others. Bar code labels can be created with existing Windows applications using the special barcode fonts built into the driver, eliminating the need for special labeling software.

Gemini uses the true type fonts available with your Windows applications, and accepts all graphic types supported by Windows, resulting in exceptional flexibility in font and graphic choices. Fonts and graphics are downloaded as needed with the high-speed bi-directional Centronics interface, providing an exceptionally quick time to first label printing.

The **Gemini** is built to work only with Windows, and takes full advantage of Windows features. Its simple design requires a minimum of effort and expertise for loading and maintaining the printer. From configuration and setup to ongoing operation, use of the online Gemini Control Panel Application simplifies the operator's job. Extensive Online Help is provided covering all features and functions available within the Control Panel Application and Printer Setup. In addition, help topics covering 'Printing from Windows Applications' and 'Barcode and Symbology information' are included.

The Gemini Thermal Transfer Printer is offered in two versions:

Gemini T : The device is equipped with a tear-off edge to aid the removal of the labels or continuous material by hand after printing.

Gemini TD : This device has an additional dispensing feature for labels. Directly after printing the label is removed from the liner and placed in a dispense position ready for further use. The presence of a label in the dispense position is recognized by a sensor which interrupts the printing until the label is removed.

Both versions are available as 230 Volt or 115 Volt devices.

Agency Compliance and Approvals

Gemini complies with the following safety regulations:

CE : The printer complies with the following safety requirements

- EC Low Voltage Directive (73/23/EEC)
- EC Machinery Directive (98/37/EEC)
- EC Electromagnetic Compatibility Directive (89/336/EEC)

FCC : **Gemini** complies with Part 15 of FCC rules.

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 instructions in this manual, it 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 his own expense.

WARNING !

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Technical Specifications

Printing

Type :	Direct thermal / Thermal transfer printer
Printhead:	Resolution 203 dpi = 8 dots / mm
Print Speed :	2, 2.8 ips (50, 70 mm/s)
Label Backfeed :	Label is automatically pulled back into the printer after a tear-off or peel-off operation to allow for printing on the entire label
Maximum Print Width :	4.1" (104 mm)
Maximum Print Length :	11.8" (300 mm)

Printed Images :

Character Sets :	All character sets supported by Microsoft Windows
Font Expansion:	Dependent on font selected, as supported by Microsoft Windows.
Bar Code Symbolologies:	Barcode symbolologies along with a variety of check character options are provided as fonts in the Gemini Driver. These include: Codabar, Code 128, Code 39, Code 39-Mod 43, EAN13, EAN8, Interleaved 2 of 5, Interleaved 2 of 5-Mod 10, MSI+10, PDF417, POSTNET, UCC, UPC/EAN 2 digit Add On, UPC/EAN 5 digit AddOn, UPC-A, UPC-E0, UPC-E1
Bar Code Density:	Fixed choices are available which further define the font being selected. Depending on the symbology, ratios including 2:1, 3:1 and 5:2 may be selected. Also dependent on the symbology, the bar width multipliers range from 1 to 8.
Graphics:	All monochrome graphic types supported in Windows.
Label Rotation:	Portrait and Landscape, Reverse Portrait and Reverse Landscape with Flip Format option.

Media

Label Width:	1" - 4.5"(25 - 116mm)
Label Length:	.3" - 11.8" (6 - 300mm)
Label Type:	Roll-fed, die-cut or continuous labels, tags or tickets; most direct thermal or thermal transfer materials.
Supply Roll:	Up to 6" (150mm) diameter on 1.6" - 3" (40 - 75mm) cores. Labels may be wound face-in or face-out on the roll.
Label Material:	Standard labels and Cardboard / Tags Thickness: 0.0024" to 0.0098" (0.06mm to 0.25mm) Direct Thermal, Thermal Transfer and various Synthetics including: thermal transfer plaincoated papers, vinyl, Mylar, metalized paper, non-woven fabric, fine woven fabric, thermal visible light scannable paper, infrared scannable paper, thermal ticket/tag stock, thermally sensitive plastic stock.
Transfer Ribbon:	Width up to 4.5" (114mm); Length 1182' (360m); Rolls up to 3" (75mm) diameter on 1" (25mm) cores.

Printer

Memory:	Internal memory 256KB
Interface:	High-speed bi-directional Centronics Parallel (max 70 KB/s)
Indicators/Switches:	Power-on LED above Power Switch

Physical

Dimensions:	Height: 8.9" (226mm)
	Width: 9.4" (239mm)
	Depth: 12.8" (326mm)
Weight:	17.6 lbs (10Kg)

Electrical

Operating Voltage: 115V / 60 Hz or 230V / 50 Hz
Voltage cannot be altered on the machine

Circuit Protection: 115VAC / 60Hz use 1.6 AT fuses;
230VAC / 50Hz use 800 mAAT fuses;

Environmental

Operating Temperature: 50°F to 95°F (10°C to 35°C)

Humidity: 30% to 85%.

Other Features

Status Indication: LED on front panel uses slow blink to indicate pause and rapid blink to indicate error.

Status provided through the on-screen Gemini Control
Panel application includes:

- Number of labels left in printer
- Out of labels / Out of ribbon
- Printer state - paused or not paused
- Demand Mode indication
- Miscellaneous error messages

Sensors: "See-through" media photosensor at 0.7" (17.5 mm) from the paper edge
Demand sensor (Gemini TD only)
Ribbon-out sensor

Software : Gemini Windows Printer Driver
and Control Panel Application

2. General Safety Regulations

- The **Gemini** is built exclusively to print die-cut labels, continuous media, and similar materials as listed in the Technical Specifications.
- Connect the printer only to an outlet with the proper voltage. The **Gemini** is configured for either a 115V or 230V power supply, which can be determined by checking the specification label on the machine. Connect only to a power outlet with a grounded contact.
- Power must be off before plugging in any accessory, connecting to a computer and before performing any maintenance on the printer.
- Do not expose the printer to any moisture, or use in damp or wet areas.
- The printer will operate with the cover open when necessary. This is not recommended, as it might allow debris to collect within the printer. If the printer must be operated with the cover open, extra care must be taken to avoid allowing hair, jewelry, clothing, etc. near the rotating parts.
- During the printing process the printhead will become hot. Use extra caution when touching the printhead.

3. Unpacking and Delivery Contents

Unpacking

Please inspect the **Gemini's** packaging and contents immediately after receipt for possible damage during shipment. The Gemini is shipped in a styrofoam package and is enclosed in plastic to reduce the chance of moisture damage during shipment.



Please keep the original packaging in case the printer must be returned.

Equipment Supplied

Your **Gemini** shipping container will contain the following standard components:

- Gemini Thermal Transfer Printer
- Power Cord
- Cardboard Core for the transfer ribbon rewinder
- Gemini User Manual
- Gemini Windows Software Diskette

Note : We offer additional items that may be included in your initial shipment.
Compare the delivered accessories with your order.

4. Printer Component Location

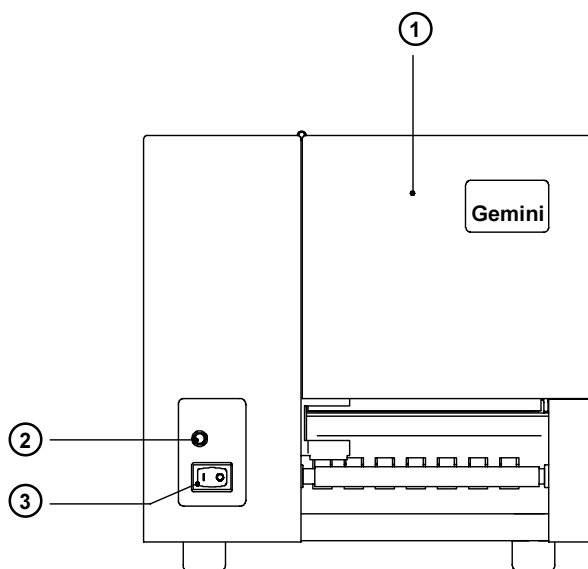


Figure 4 a Front view

- 1 - Cover
- 2 - Power LED
- 3 - Power Switch

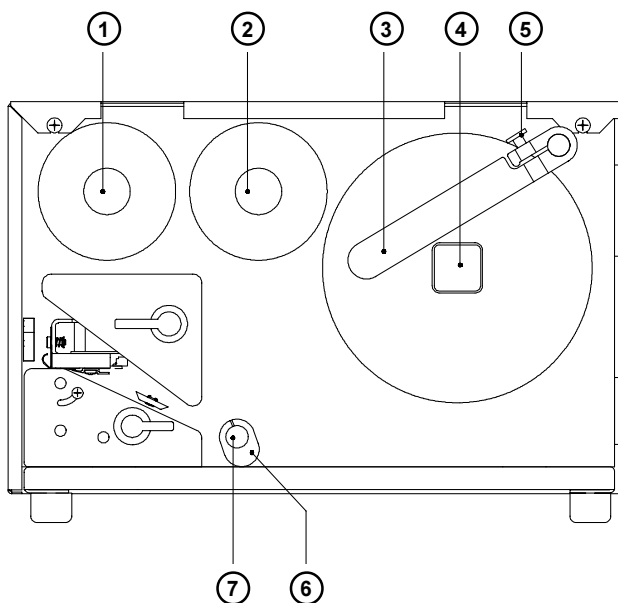
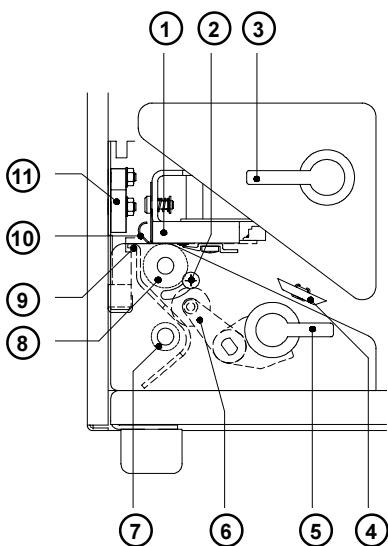
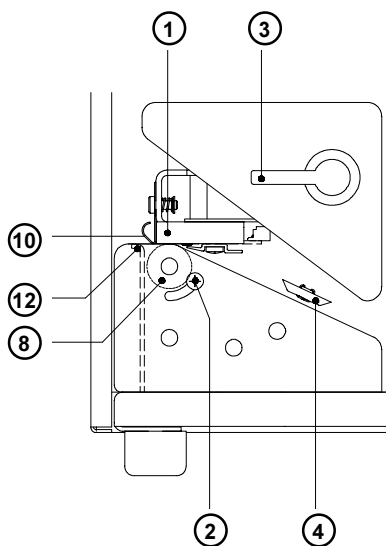


Figure 4 b Side view (with cover open)

- 1 - Ribbon Take Up Hub
- 2 - Ribbon Supply Hub
- 3 - Media Retainer
- 4 - Media Hub
- 5 - Media Retainer Knurled Screw
- 6 - Media Guide
- 7 - Media Assist Bar



Gemini TD



Gemini T

Figure 4 c Detailed View of the Print Mechanism

- 1 - Thermal Printhead
- 2 - Printhead Adjustment Screw
- 3 - Printhead Locking Lever
- 4 - Label Edge Sensor
- 5 - Dispenser Locking Lever
- 6 - Dispenser Locking Roller
- 7 - Dispenser Drive Roller
- 8 - Media Feed Roller
- 9 - Tear-Off / Peel-Off Plate
- 10 - Transfer Ribbon Shield
- 11 - Present Sensor
- 12 - Tear-Off Plate

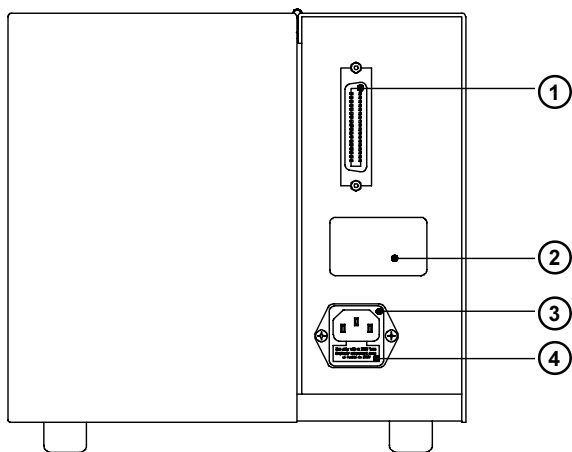


Figure 4 d Rear View

- 1 - Centronics Parallel Port
- 2 - Specifications Label (power supply and voltage information)
- 3 - Power Cord Connection
- 4 - Fuse Holder

5. Connecting the Printer

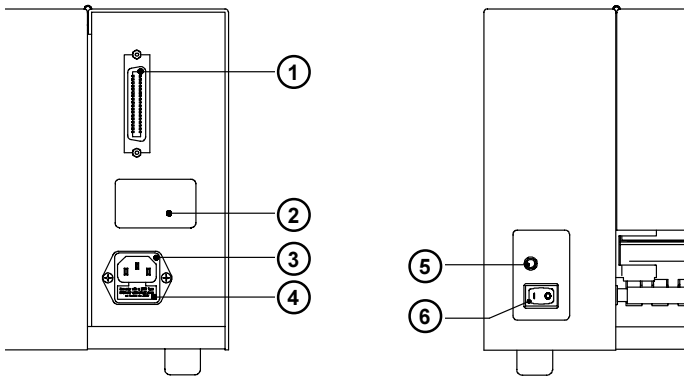


Figure 5 Connecting the Printer

Connection to a Computer

The **Gemini** is fitted with a Centronics parallel interface which uses a 36-pin port (1).



Obtain a standard parallel cable in a length suited to your needs (not exceed 10 feet in the length) and use it to connect the printer to your computer.

Ensure that the interface cable is correctly grounded.

Connection to Power Supply



Check that your available power supply voltage corresponds with the voltage shown on the printer's specification label (2). The voltage requirement shown will designate either 230 V/50 Hz order 115 V/60 Hz. **Do not** connect the printer to the power supply until the voltage has been verified.

After inserting the power cord into the power supply socket (3) at the rear of the printer, connect the power cord to a **grounded** power outlet.

Switch the printer ON with the power switch (6). If the status LED (5) does not light up, check the fuse inserted in the power supply module (3) by removing the fuse-holder (4). Ensure that a fuse of the correct rating is installed :

800 mAT for 230 V

1,6 AT for 115 V

6. Media loading

Processing Mode

The **Gemini** can be operated in two different processing modes. In addition, two methods of operation are possible. The mode and method of operation desired dictate the method of loading the label stock.

When in the **Batch Mode**, the labels are printed without pausing. The labels exit the printer out the front, still attached to the backing strip.

When in the **Demand Mode**, labels are printed one at a time. The printing cycle is then stopped until the label has been removed. When the present sensor registers the label has been removed, an automatic backfeed is performed and the next label is printed and fed forward to the demand position.

The **Demand Mode** operations are available with **Gemini TD** only.

Note: When editing the labels in the dispense mode, make sure that the label area that lies directly underneath the sensor is only printed up to 50% (black). A further blackening may cause malfunctions of the present sensor.

While processing in Demand Mode, the following operation methods are available :

For **Tear-off** operations, the labels are loaded so that they exit the printer straight out the front, as in Batch Mode. The label exits the printer, still attached to the backing. (How far the label protrudes can be adjusted with Presentation Position parameter in Printer Setup). When the label has been torn off, the present sensor registers the removal and the next label is printed.

For **Peel-off** operations, the labels with the backing strip fed down below the peel plate before it exits the printer. For successful peel-off, the backing strip must not be perforated between the labels. As the backing strip is pulled down, only the label exits the front of the printer. In effect, the label is peeled-off of the backing, while remaining attached by only a narrow edge. (The edge width can be adjusted with the Presentation Position parameter in Printer Setup). When the label is removed, the present sensor detects the removal and the next label is printed.

The following steps describe media loading for the Gemini. Steps 1-7 are common to all processing modes and methods of operation. In the remaining steps, loading for the different operating modes and methods of operation is detailed separately.



Loading Labels

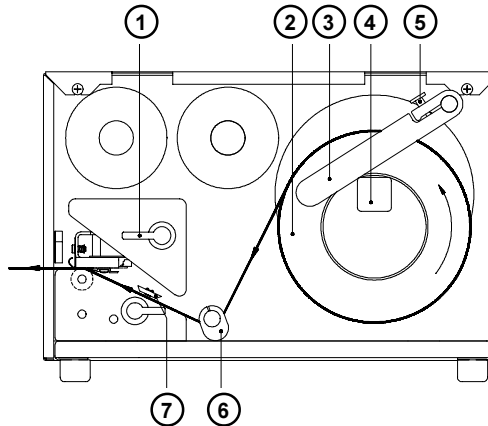


Figure 6 a Media Loading - Part 1

1. Raise the printhead by rotating the printhead lever (1) clockwise until it stops.
2. Loosen the media retainer knurled screw (5) and swing the media retainer (3) upwards.
3. Place the roll of label stock (2) onto the media supply hub (4).
4. Swing the media retainer (3) downward and inward until it rests on the media supply hub (4), against the side of the label roll. Retighten the knurled screw (5) .
5. Slide the media guide (6) outward, allowing enough clearance for the label stock's width when loaded.
6. Unroll a length of label stock from the media roll. From the side, slide the media under the media assist bar and inside the media guide (6) as shown in Figure 6a. It is particularly important to ensure that the media strip slides correctly under the arm of the photocell assembly (7).

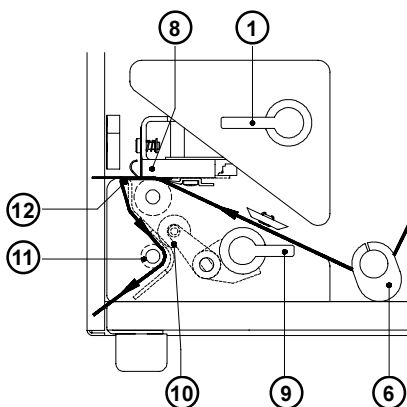


Figure 6 b Media Loading - Part 2

7. Continue feeding the label strip between the tear/peel plate (12) and the thermal printhead (8) as shown in Figure 6b.

Batch Mode Loading and Demand Mode with Tear-Off Loading

8. Route the media strip forward straight through the front of the printer as shown in Figure 6a.
9. Check the position of the media guide (6) and if necessary, slide it inward until it lightly touches the sides of the media strip.
10. Adjust the media roll to remove any slack, then lower the printhead by rotating the printhead lever (1) counterclockwise until it stops.



Make sure that the dispenser locking roller (10) is open. This helps to keep the wear at the roller low.

Demand Mode with Peel-Off Loading

8. To prepare for feeding the media down through the dispenser mechanism, remove a few labels from the backing. Fold at least an inch of the backing up to create a double-layered, stronger leading edge for easier loading.
9. Adjust the media roll to remove excess slack, then lower the printhead by rotating the printhead lever (1) counterclockwise until it stops. Tension on the media is needed to complete loading.
Click the Feed-button at the Gemini Control Panel (see chapter 8) to synchronize the media feed.
10. Rotate the dispenser locking lever (9) clockwise until it stops to lift the dispenser locking roller (10) from dispenser drive roller (11)
11. Feed the folded backing strip downward in front of the peel plate (12) and behind the dispenser drive roller (11) as shown in Figure 6b. Continue feeding the backing strip through until the leading edge appears below the dispenser drive roller (11).
12. Grasp the edge of the folded backing strip and pull it through. Then close the dispenser locking roller by rotating the dispenser locking lever (9) counterclockwise until it stops.
13. Check the position of the media guide (6) and if necessary, slide it inward until it lightly touches the sides of the media strip.



If you do not use the printer an extended period of time, lift the printhead to avoid possible flattening of the print roller.

Ribbon Loading

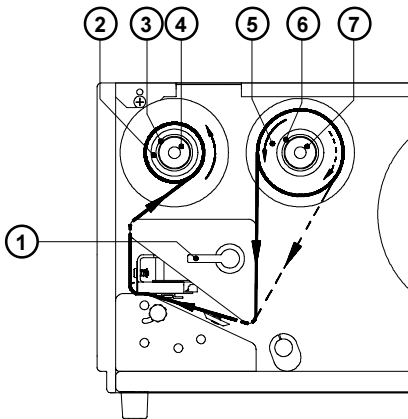


Fig. 6c Loading thermal transfer ribbon

1. To lift the printhead, turn the printhead lever (1) clockwise until it stops.
2. Slide the roll of transfer ribbon (5) onto the ribbon supply hub (6) as far as possible.

Pay attention to the side of the ribbon material which is coated with ink ! The inked side is generally the dull side. When the ribbon is inserted, the inked side must face the opposite side of the printhead !

In Figure 6 c, the solid line shows the path of inside wound ribbon, and the broken line represents the path of outside wound ribbon.

3. Turn the knurled knob (7) until offering resistance and so jam fast the transfer ribbon (5) at the ribbon supply hub (6).
4. Slide an empty cardboard core (2) onto the ribbon take up hub (3) and jam fast it by turning the knurled knob (4).
5. From the side, feed the transfer ribbon along the path as shown in Figure 6d, then attach it to the core (2) using adhesive tape or a label.
6. Turn take up hub (3) in order to smooth and stretch the ribbon.
7. To lock the printhead, turn the lever (1) back counterclockwise.

7. Adjustments Concerning the Labels

Adjustment of the Printhead Support

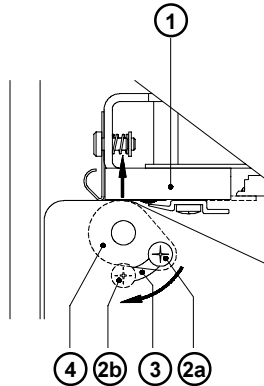


Figure 7 a Adjustment of the Printhead Support

When printing narrow label stock (width less than 2.5" or 60 mm), it is possible that the printhead will come into direct contact with the drive roller. This will lead to premature wear on the printhead. In addition, the printhead will be at a slight angle to the label, and this uneven pressure may result in an inconsistent image density from one edge of the label to the other. To correct this problem, the printhead support (4) should be adjusted.

Adjust the printhead support as follows:

1. Loosen the locking screw (2).
2. Move the locking screw (2) as required within the adjustment slot (3). This will cause the cam shaped printhead support (4) to rotate, in effect, providing a higher or lower base on which the printhead mounting (1) rests.
3. When using wide labels, start with a setting of "2a"; this places the printhead support at its' lowest position, providing the most complete contact of the printhead to the drive roller along the entire width. When using very narrow labels, a setting of "2b" is recommended; this places the printhead support at its' highest position, reducing contact of the printhead with the drive roller at the outside edge.
At the adjustment criterion, check the quality of the print image.
4. Retighten the locking screw (2).

Adjustment of the Transfer Ribbon Feed

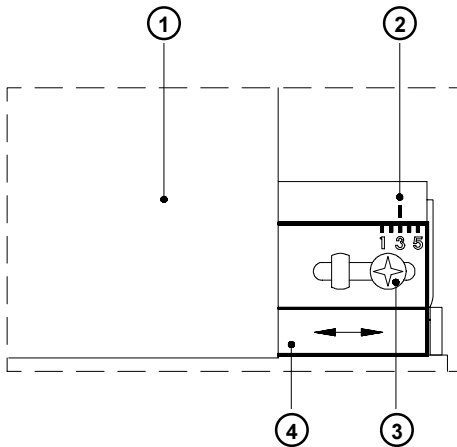


Figure 7 b Adjustment of the Transfer Ribbon Feed

If creases, lines or black patches appear in the print image resulting in a poor print quality, this may be caused by wrinkles in the transfer ribbon (1). To remove the wrinkles, the tension of the ribbon should be made even from the left to the right by moving the ribbon shield (4) up or down.

1. Loosen the locking screw (3).
2. Shift the transfer ribbon shield (4) sideways into the direction of the wrinkle. Moving it to the left will increase the tension on the left. Use the scale (2) provided to monitor the adjustments made. If the screw is in position "1", the tension is highest on the outside, and if it is in position "5", the tension is highest on the inside.
3. After completing the adjustments, tighten the securing screw (3).

8. Installing and Using the Software

Introduction

The diskette(s) provided with the printer includes installation files to install the following:

1. Gemini Windows Printer Driver - The interface between the printer and your Windows application, which also provides the capability of printing barcodes using its special built-in fonts.
2. Barcode Display Font - Provides a general representation of a barcode on the screen to assist in field placement during label design (Not intended as an accurate representation)
3. Gemini Control Panel Application - Provides control of the printer and current print job.

Gemini drivers are available for Windows 3.1X and Windows 95/98 as well as for Windows NT 4.0 and greater.

Installation information

Depending on the Windows version used, the Gemini Printer software needs to be installed through

either : the setup program of the software package

or : via the Add Printer Wizard.

Detailed information regarding the installation of the Gemini Printer software are to find in the "readme.txt" file of the applicable software package.


Updates

Updates for the Gemini Printer software are available on the internet at :

<http://www.tharo.com>

The Gemini Control Panel Application

The Control Panel Application is necessary to provide control of the printer. It is possible to print to the **Gemini** without having started this application. But, without it, there would be no way to check status, see error messages, check number of labels remaining, pause the printer, and so on. Detailed information on the options currently provided with the Gemini Control Panel is available through Online Help, and will not be included here.

To start the application, (double-)click on the Gemini program group, then (double-)click on the **Gemini** icon . Once started, this application should be left open as long as the printer is turned on.

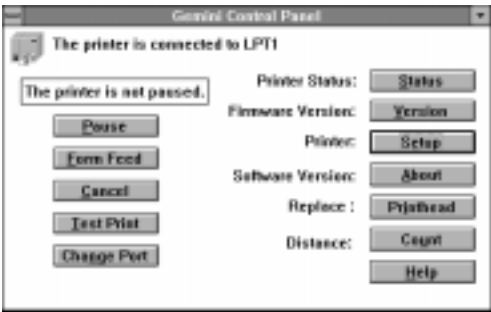


Figure 8a Startup window of the Gemini Control Panel under Windows 3.1X, Windows 95 and Windows 98



Figure 8b Startup window of the Gemini Control Panel under Windows NT 4.0

Gemini Test Print

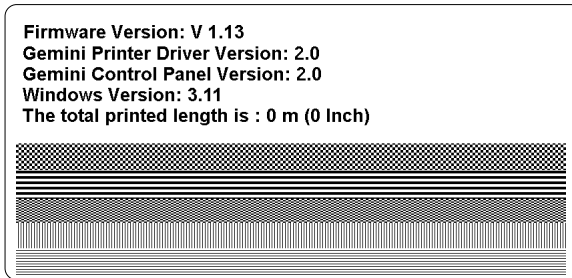


Figure 8c Gemini Test Print Example

The test print on the **Gemini** Label Printer is available by clicking the 'Test Print' button in the Gemini Control Panel Window (Figure 8a,b). The Test Print contains a test pattern and the following information:

Firmware Version:

The **Gemini's** current firmware version.

Gemini Printer Driver Version:

The current version of the Gemini Windows Printer Driver.

Gemini Control Panel Version:

The current version of the Gemini Control Panel software.

Windows Version:

The version of Windows the Gemini Control Panel software is running on.

Total Print Length:

The total length in inches and meters that the **Gemini** Printer has printed.

Printer Setup

Printer Setup is performed on an as-needed basis. Generally, when any printer is installed, various options such as operating mode or paper size may need to be modified from the default setting. With the **Gemini**, in addition to the usual printer default values, barcode symbology selection should be made. The **Gemini** driver provides a long list of available sybologies in various ratios and multipliers. From this list, you must select those symbologies that should be made available to your Windows applications. Detailed information on the features and options currently available in Printer Setup is available through Online Help, and will not be included here.

Printer Setup can be reached in a variety of ways. This can take place from Windows Control Panel-Printers group, or from various application software in the Printer Setup function. In addition, the Gemini Control Panel application provides the most convenient, direct access to Printer Setup.

Printer Setup Windows under Windows 3.1X, Windows 95 and Windows 98

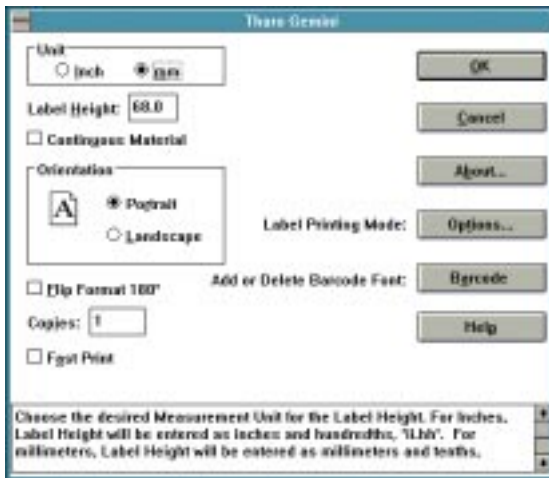


Figure 8d Printer Setup - Main Window under Windows 3.1X / Windows 95 and Windows 98

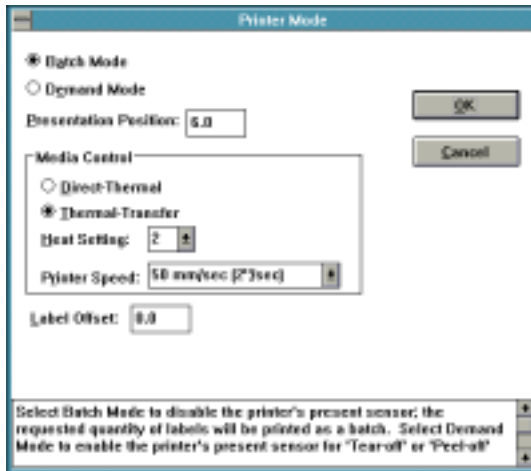


Figure 8e Printer Setup - Printer Mode Window
under Windows 3.1X / Windows 95 and Windows 98

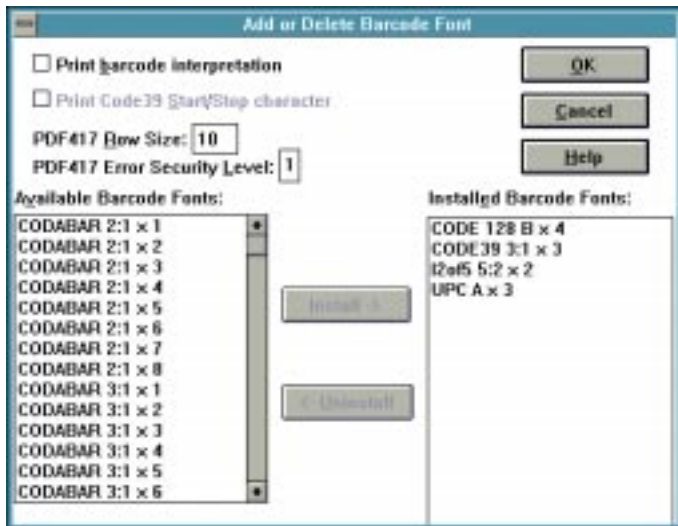


Figure 8f Printer Setup - Add or Delete Barcode Font Window
under Windows 3.1X / Windows 95 and Windows 98

Printer Setup Windows under Windows NT 4.0



Figure 8g Printer Setup - Printer Properties Window under Windows NT 4.0
Window accessible from Gemini Control Panel by the "Properties" button only



Figure 8h Printer Setup - Document Properties Window under Windows NT 4.0 (Overview)



Figure 8i Printer Setup - Document Properties Window under Windows NT 4.0
Section "Print Mode and Media Control "



Figure 8k Printer Setup - Document Properties Window under Windows NT 4.0
Section "Bar Code Options"

Printing from Windows Applications

Printing to the **Gemini** is accomplished in the same manner as printing to any other Windows installed printer. The **Gemini** must be selected as the default printer by using either Windows Control Panel-Printers or the application in use. What can be printed and how printing is initiated is then dependent on the application being used.

The following is a general description of the steps required to print a label:

1. Select the **Gemini** as the default printer.
2. Start the Gemini Control Panel Application by (double-)clicking the icon, then minimized if desired.
3. Specify the label size, processing mode, etc. with Printer Setup.
4. In your Windows Application, set the margins to 0 and set the page size to match the label size specified in Printer Setup.
5. Design the label, considering the label's dimensions, even if your application does not display a work area that matches the actual label size. place text, graphics and barcode fields within the dimensions of your label.
6. If possible, use Print Preview to assist in proper field placement.
7. Print a single test label to see actual layout and size of the fields. This is the only way to see an accurate representation of barcode fields.

The ease with which a label can be designed, and the results that can be achieved, depend directly on the software being used. the range of software types, including word processors, databases, spreadsheets and graphic applications, offers a similarly wide range in results.

To assist the user in designing labels, variety of topics is available in the **Gemini's** Online Help. These topics include general tips and techniques that are independent of the specific software being used. Also included are observations and tips regarding label design and printing with specific Microsoft® and other vendor applications.

9. Error Messages

If an error occurs while operating the **Gemini**, a message box is displayed on the screen and the printer is paused. After solving the problem, the print job is continued by clicking OK in the error message window. If the problem is corrected, the print job will continue. However, If the problem still exists, the message box will reappear.

Additionally, an error is indicated by a **rapid blinking** LED on the printer's front panel. A **Slow blinking** LED indicates the printer is paused.

The following table contains a reference of error messages, possible causes and solutions to the problems.

Error Message	Possible cause	Solution
The printer is out of label stock	Label material has run out.	Insert new supply roll, click OK
	Label is not inserted properly in the label sensor photo cell.	Check paper edge, then Click OK.
The printer is out of ribbon	Ribbon has run out.	Insert a new ribbon.
	Printer is loaded with thermal labels for direct thermal mode, and no ribbon is loaded, but the software is set for transfer printing.	Cancel print job. Correct software for direct thermal mode. Start a new print job.
Cannot find gap	On the label material, several labels are missing.	Click Formfeed button in Gemini Control Panel until the next label on the material is accepted by the printer.
	The label format size specified in the software is different from the actual label size.	Cancel print job, change label format setting in the software and start new print job.
	Continuous (endless) media is loaded, but the software is not set for continuous media.	Cancel print job. Correct the media type to continuous (endless) in the software. Start a new print job.

10. Maintenance / Cleaning

The **Gemini** is designed with a minimum of maintenance requirements. The most important concern is the regular cleaning of the thermal printhead. This will guarantee a consistent quality print image. It will also help to avoid premature wear of the printhead. Otherwise, maintenance is limited to an occasional general cleaning.

Adjustments are needed only on an occasional basis. In general, the printer will not vary its performance. Adjustments may be necessary by a change in media (see chapter 7). If a very narrow or thick media will be used, adjustment of the printhead support may be needed. If a different type or width of ribbon is loaded, adjustment of the transfer ribbon feed may be needed to maintain wrinkle-free operation.



Before beginning any maintenance, turn off the power and disconnect the power cord!

General Cleaning

Remove particles of dust and paper that have accumulated inside the printer with a soft brush.

Wipe the cover with a standard non-abrasive cleaner as needed.

Accumulations of dirt on media rollers and guides can impair the smooth movement of media. After removing media, remove deposits with isopropyl alcohol and a soft cloth.

Cleaning the Media Feed Roller

Accumulations of dirt on the roller can lead to impaired material transport.

Clean the roller as follows:

1. Open the printhead.
2. Remove labels and ribbon from the printer.
3. Remove all deposits with isopropyl alcohol and a soft cloth.

Cleaning the Thermal Printhead

During printing, the printhead will accumulate dirt such as paper dust or particles of ink or back coating from the ribbon. This accumulation can cause a deterioration of the print quality. To correct or avoid this problem, the printhead should be cleaned at regular intervals.

Frequency of cleaning:

Direct Thermal printing: - at every label roll change

Thermal Transfer printing: - at every ribbon change



Do not use sharp objects for cleaning the printhead.

Do not touch the protective layer of the printhead with your hands.

To clean the printhead:

1. Turn the printer power off, and disconnect the power cord.
2. Raise the printhead as far as possible.
3. Remove the labels and the ribbon from the printer.
4. Clean the surface of the printhead with a cleaning pen, or use a cotton swab dipped in isopropyl alcohol.
5. Let the printhead dry approximately 2-3 minutes before powering on and restarting the printer.

Removing Labels from the Dispenser Roller

On occasion, a label might become wound around the Dispenser Roller during a Peel-Off operation (Gemini TD). This might happen, for example, if Presentation Position is not set correctly. To remove the label(s) :

1. Turn the power off. This will allow the rollers to be turned.
2. Rotate the printhead locking lever clockwise to the open position.
3. Soak a paper towel with WD-40 or similar solution.
4. Rotate the dispenser locking lever clockwise to the open position. Feed the soaked paper towel into the dispenser area and place it down between the rollers.
5. Continue feeding the soaked paper towel through by rotating the Media Feed Roller with the palm of your hand. This will cause the Dispense Drive Roller to rotate and feed the paper towel through.
6. Wrap the soaked paper towel around the Dispense Drive Roller as completely as possible and leave it for about 5 minutes. When the WD-40 has softened the adhesive, remove the paper towel.
7. Begin peeling through the layers of label until you can grasp a section. Pulling all layers from an area at once, rather than peeling each layer separately generally works best. Grasp a section with your fingers or tweezers and pull it away from the roller.
8. When the area facing out has been cleared of label(s), rotate the Media Feed Roller to cause the Dispenser Drive Roller to turn. Continue rotating and peeling the exposed label off.
9. When all the label(s) and adhesive have been removed, remove the traces of WD-40 by thoroughly cleaning the entire area with isopropyl alcohol on a soft cloth.
10. After the area has dried, remove any shredded bits of paper towel, cloth or label with a soft brush, or blow-out the area with a can of compressed air.

11. Printhead Horizontal Alignment

For optimum print quality, the line of the heating elements on the printhead must be parallel and aligned correctly to the print roller. This alignment has already been performed in the factory. Nevertheless, it may become necessary to adjust it.

A misaligned printhead causes a poor print quality which appears as described below :

- the print image looks generally light, spotted, and irregular; or
- the print image appears uneven from one side to the other.

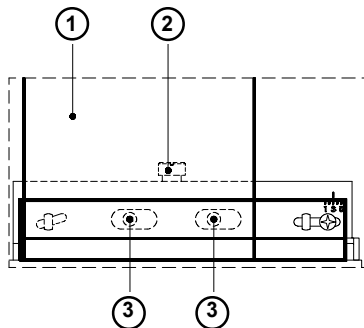


Figure 11 Printhead Horizontal Alignment

Adjust the printhead as follows :

1. You may leave the transfer ribbon (1) inside the printer, and simply poke through it with your tools.
2. Loosen the locking screw (2) on the printhead by half a turn. This will allow for the required horizontal adjustment of the printhead.
3. By turning the two screws underneath (3) you may shift the printhead as follows :
 - The overall distance for adjusting is .1 in or 2.5 mm.
 - By turning the screws clockwise, the printhead will be shifted backwards. (about .02 in or .5mm per turn)
 - Adjust in small steps ! (quarter turns only)
 - First, turn both screws constantly until at least one side of the print image is optimum.Following, adjust the screw which is located at the side of the label where the quality is still poor.

4. Note, that the printhead must be opened after every single adjustment step to make the change effective.
5. Tighten the locking screw (2).
6. Perform a test print, for instance a wide black line over the whole width of the label, and review the results.
7. Repeat steps 2 to 6 as necessary to complete the adjustment.

12. Troubleshooting

The following information covers common printer problems and possible solutions. Additional troubleshooting information on both hardware and software related problems is available in Gemini's Online Help.

Poor print quality - smears or voids appear within the printed image.

The printhead is dirty. Clean the printhead (Page 35)

The ribbon is creasing. Adjust the transfer ribbon feed (Page 24)

Poor print density - the image is too light or too dark.

The heat setting is too high or too low. Adjust the heat setting with Printer Setup.

The wrong ribbon/paper combination is being used. Check with your Dealer for recommendations on media.

The resistance value has not been adjusted for the printhead currently installed. Check the value preceding the ohm (W) sign on the printhead and enter it under Windows 3.1X/ Windows 95/ Windows 98 in the Gemini Control Panel, Replace Printhead function or under Windows NT 4.0 in the Gemini Control Panel, Printer Properties, Set Printhead Resistance function.

Print density is uneven - the image is light on one side of the label.

The printhead is adjusted for a narrow label.
Readjust the printhead support (Page 23).

The printhead is out of alignment. Adjust the printhead (Page 37)

Printer form feeds more than one label at a time

Media is loaded incorrectly. Make sure media is beneath the arm of the photocell assembly (7), as shown in Figure 6a.

Label edge sensor photocell needs adjusting or is malfunctioning.
Call for Service.

Printer will not turn on

Voltage of the printer and power supply do not match. Check that the printer is configured for the correct power supply.

Fuse is blown. Remove the fuse holder from the power supply module and inspect or replace the fuses as needed.



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EC-Conformity Declaration

We declare herewith that as a result of the manner in which the machine designated below was designed, the type of construction and the machines which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health.

In the event of any alteration which has not been approved by us being made to any machine as designated below, this statement shall thereby be made invalid.

Description:

Transfer Printer

Type:

Gemini T

Applied EU Regulations and Norms:

- | | |
|--|---------------------------|
| - EC Machinery Regulations | 98/37/EU |
| - Machine Safety | EN 292-2:1991+A1:1995 |
| - EC Low Voltage Regulations | 73/23/EEC |
| - Data and Office Machine Safety | EN 60950:1992+A1:1993 |
| | EN 60950/A2:1993+A3:1995 |
| | +A4:1997 |
| - EC Electromagnetic Compatibility Regulations | 89/336/EEC |
| - Threshold values for the Interference of Data Machines | EN 55022:1998 |
| - Limits for harmonic current emission | EN 61000-3-2:1995+A1:1998 |
| | +A2:1998+A14:2000 |
| - Limits of voltage fluctuation and flicker | EN 61000-3-3:1995 |
| - Immunity characteristics-
Limits and methods of measurement | EN 55024:1998 |

Signature for the producer

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Sömmerda, 10.07.02

Erwin Fascher
Managing Director