

# ITT4300

Label Printer



**POSline**<sup>®</sup>

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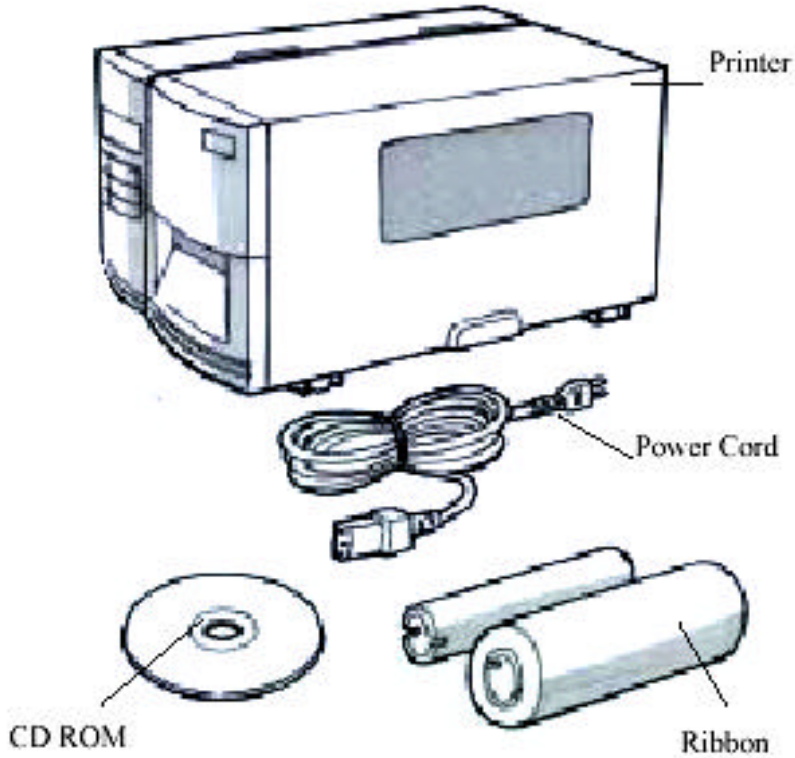
## Checking Your Box

**Receiving the box of your printer**, you are advised to check first for the possible shipping damage. There are two ways you can do it:

1. Inspect the outer appearances of both the box and the printer for possible damage.
2. Raise the top cover of the printer to see if the media compartments are in order.

If damages did occur, immediately file the claim to the shipping company for settlement.

**Having performed the primary inspections**, next step, please check whether you have received the following accessories together with the printer. If there is any item missing, contact your local dealer to get it.



## Power Supply

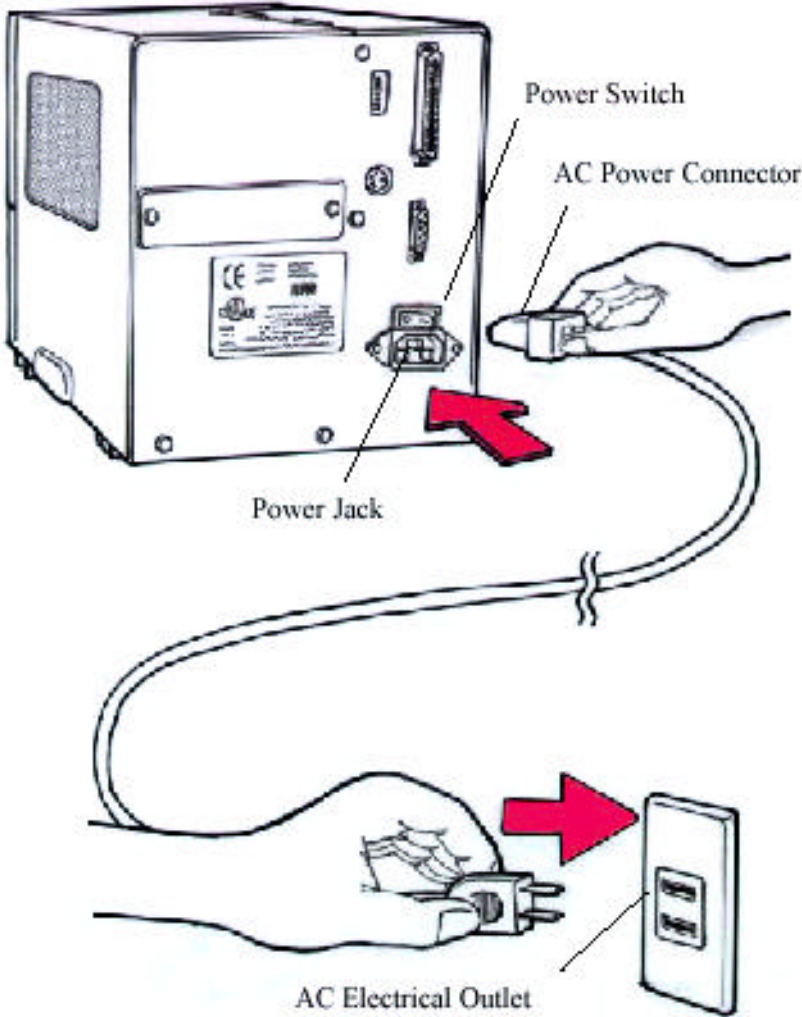
### Setting up the Printer

Before setting up the printer you should first consider the following:

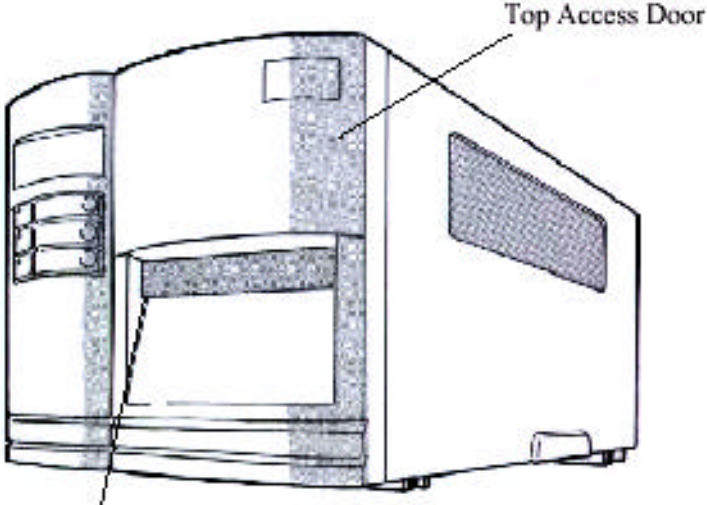
- Find a solid flat surface with adequate room for the printer. Make sure there is enough room on the top side for the media and ribbon access.
- The location should be near the host or terminal. Consider the distance between host and printer for the communication cable (serial or parallel cable)
- Clear the ground and isolate from other electrical cables for the power adapter.
- Connecting the Power Cord

**Note: For ITT4300, make sure the power switch on rear panel been switched to correct position and fit local power source.**

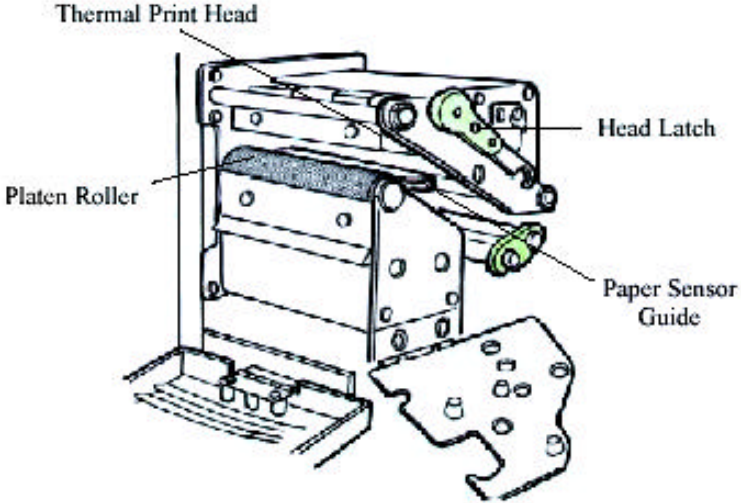
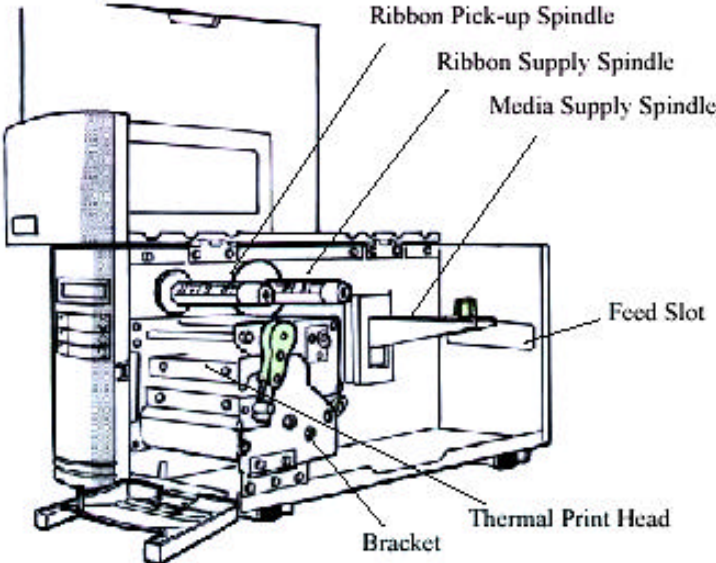
- Leave the power switch at the "O" position.
- Connect the power supply plug to the power jack and the other end to your AC source.



# Parts and Features



Front Access Door





## Loading the Ribbon

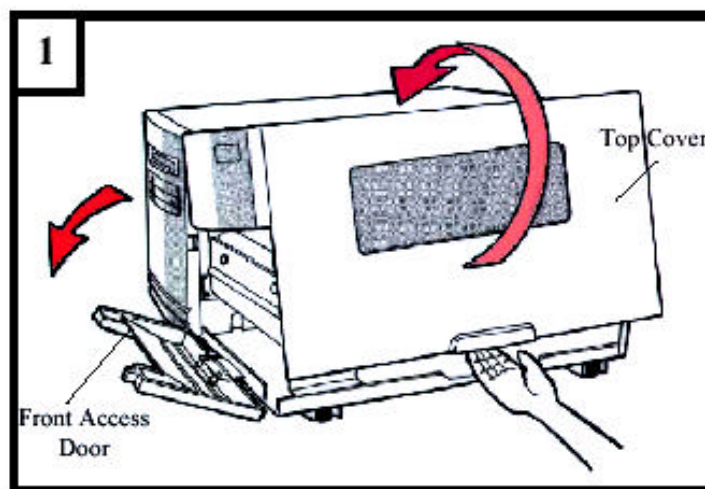
**Notes:**

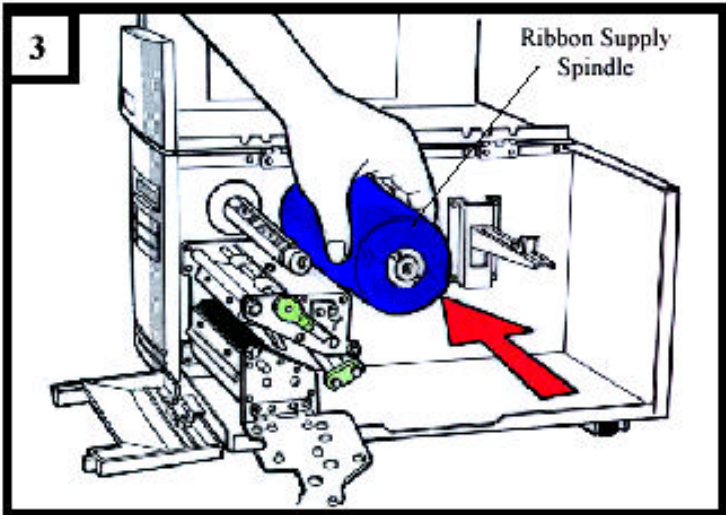
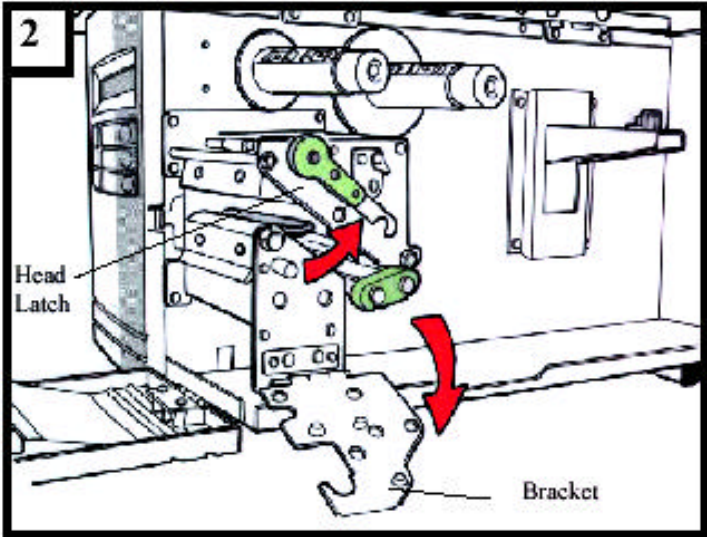
- 1. This section is applicable to the transfer thermal printing.**
- 2. Attached ribbon is coating inside.**

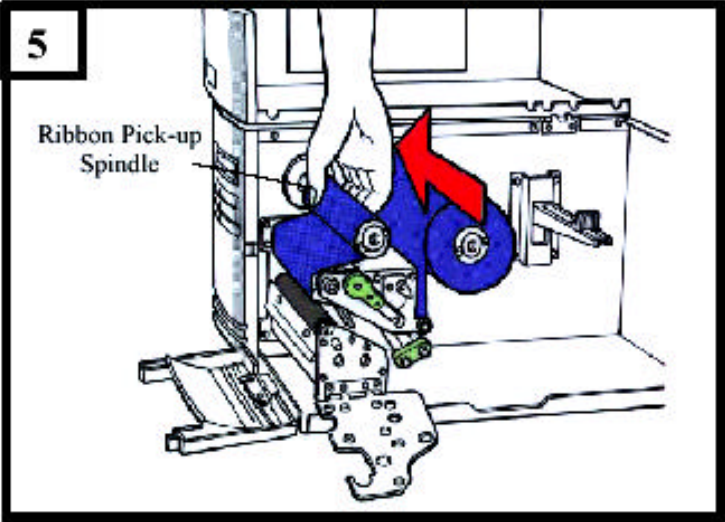
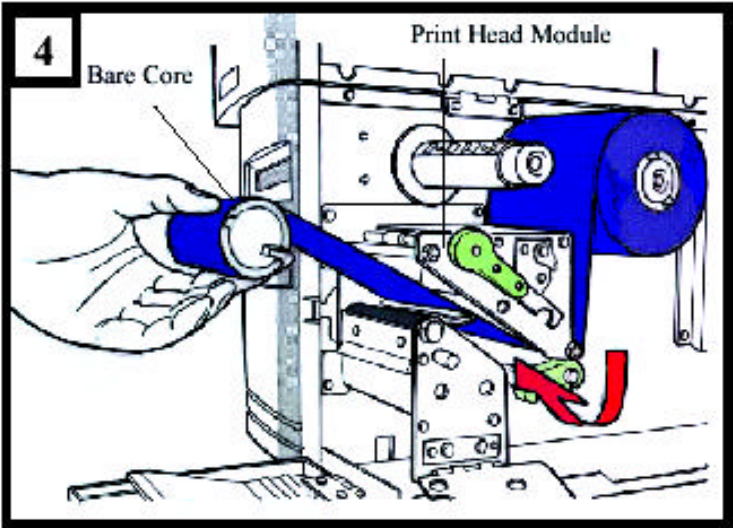
1. Lift the top access door and the front access door to expose the compartment. ( Figure 1 )
2. Push the head latch by anti-clockwise, and then fold the bracket. ( Figure 2 )
3. Unwrap the ribbon roll pack and separate the ribbon roll and the bare core.
4. Insert the ribbon roll into the ribbon supply spindle. ( Figure 3 )
5. Lead the bare core through the print head module. ( Figure 4 )
6. Attach the edge of the ribbon on the bare core and wind it a little bit onto the core.

**Note: The dull side of the ribbon should be faced down.**

7. Insert the bare core into the ribbon pick-up spindle. ( Figure 5 )
8. Turn the pick-up spindle to ensure the ribbon is tightly wound.







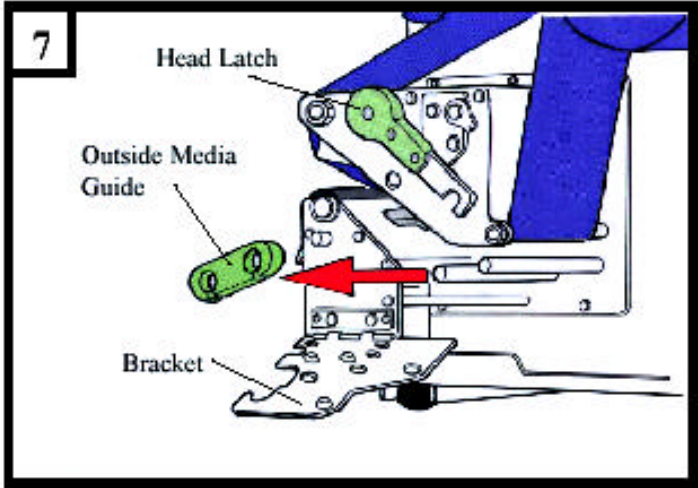
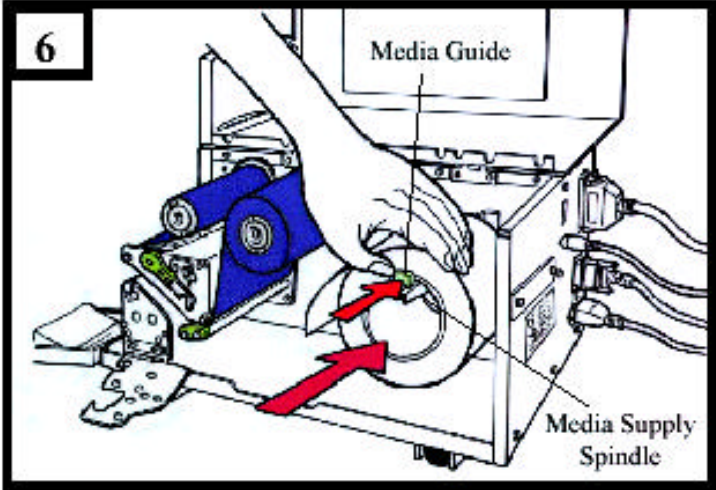
## Loading the Media

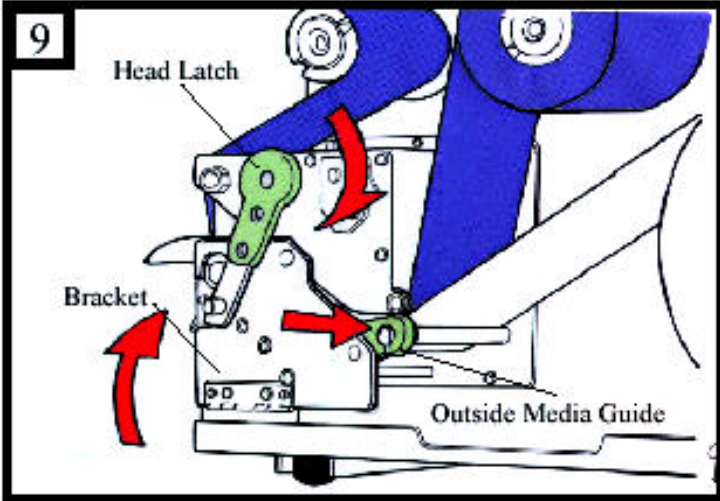
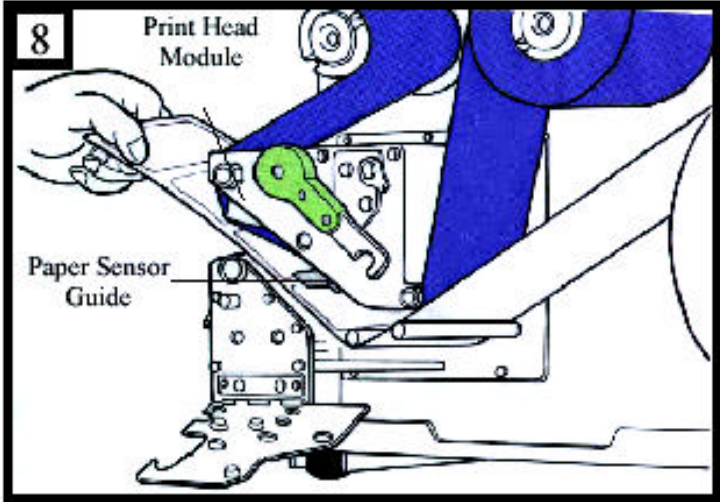
The ITT4300 printers can be operated in three different options: standard, peel-off, or with a cutter.

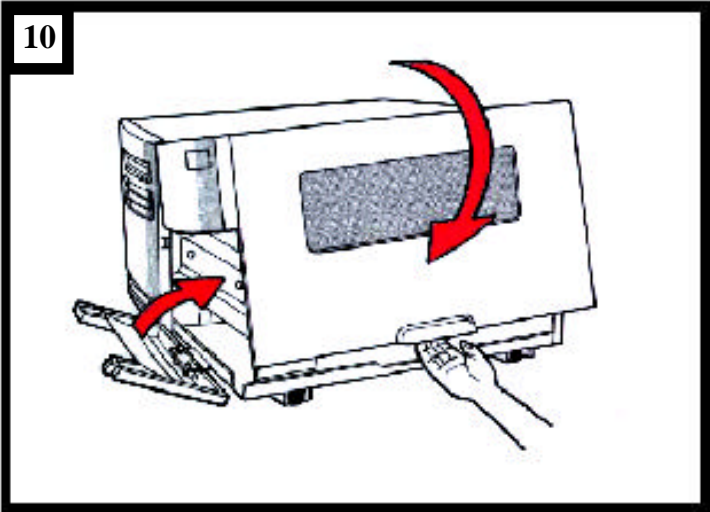
- Standard mode allows you to collect each label freely.
- In peel-off mode, the backing material is being peeled away from the label as it is printed. After the former label is removed, the next one will be printed.

### Standard Mode

1. Insert the media roll into the media supply spindle and move the media guide to the inside. ( Figure 6 )
2. Push the head latch by anti-clockwise, and then fold the bracket.
3. Remove the outside media guide. ( Figure 7 )
4. Lead the Media through the print head module and under the paper sensor guide.( Figure 8 )
5. Put back the outside media guide, close the bracket, and buckle the head latch. ( Figure 9 )
6. Close the top access door and the front access door and then turn on the printer or press the "FEED" button if the printer is already on. ( Figure 10 )





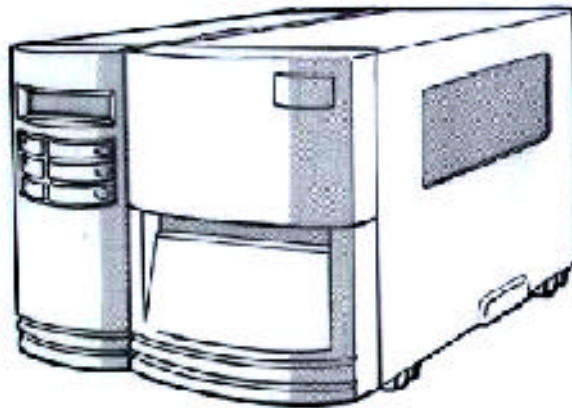


## Operator Controls

### Front Panel

The front panel includes

- 3 LED indicators (READY, MEDIA and RIBBON)
- 3 buttons (FEED, PAUSE and CANCEL)





## LED Indicators

There are three LED indicators on the front panel, "READY", "MEDIA" and "RIBBON". These indicators display the operation status of the printer.

- **READY**

The READY indicator will remain lighted except if any of the following conditions prevail.

- The printer is at PAUSE state.
- A fault condition

- **MEDIA**

The MEDIA indicator will remain on for the normal operation of the printer.

Blinking – Media run out

- **RIBBON**

ON – under thermal transfer mode with ribbon installed.

OFF – under direct thermal mode. ( no ribbon installed )

Set by Windows driver or command.

Blinking – Ribbon run out

## Buttons

There are three buttons, each having two basic functions.

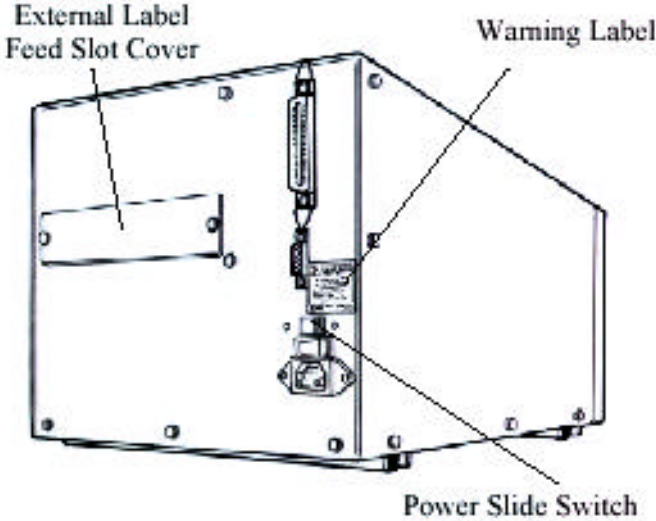
Button	Under normal condition	Pressed the button and turn on the power simultaneously
FEED	Feeds a label.	Performs a self test and a configuration report will be printed.
PAUSE	<ul style="list-style-type: none"> <li>• Stops the printing process.</li> <li>• Resume the printing after press it again.</li> </ul>	Perform the media calibration.
CANCEL	Interrupts and deletes the printing task. Forces the printer to continue working after an error had been solved.	Resets the settings at E2PROM.

**Notes:**

- 1. We suggest you make "media calibration ".**
  - after the first time installation
  - after change different type or size of media
- 2. After calibration the printer will save the related parameters (reflection characteristics, label length, etc.) to E2PROM. Without correct calibration the gap detection is easily lost during printing especially for small labels (less than 1.5 inches in height).**
- 3. Before calibration, the media and ribbon must be loaded properly and move the label sensor to correct position.**
- 4. After self-test, the printer is at dump mode, If you need normal operation, you must press CANCEL to restart the printer.**



**There is a power slide switch for voltage selection. Set correct voltage (115V or 230V) otherwise the printer will be damaged.**



## Performing Calibration

After the media and label are loaded, it is necessary to do the calibration for the label sensor.

1. Press and hold the PAUSE button.
2. Turn on the power.
3. The printer will feed the labels for 12 inches.
4. Finally the "READY" message is displayed, the READY and MEDIA indicators stop blinking and remain illuminated.

**Note:**

***This procedure is very important and must always be carried out after installation and every time the media type is changed. Failure to do so will result in the gap and label-empty detection being incorrect.***

## Printing Configuration Report

### Performing the Self Test

1. Turn off the printer. Press and hold the FEED button.
2. Turn on the power.
3. When the message "SELF TESTING ..." is displayed on the LCD and READY indicator blinks, release the button.
4. The printer will print out a configuration report.
5. Finally the "READY" message is displayed and the READY indicator stops blinking and lights up.
6. The following information will be printed on this report.
  - Font list
  - DIP switch settings
  - Hardware configuration and status
  - Label parameters
  - Firmware version

**Note:**

***After self test the printer will enter character dump mode. For normal operation press the CANCEL button to stop dump mode.***

## Resetting the Printer to Factory Default Settings

If you would like to reset the printer to its factory defaults after certain commands have been sent or settings changed:

1. Turn off the printer. Press and hold the CANCEL button.
2. Turn on the power.
3. When the message "E2PROM RESET ..." is displayed on the LCD and READY indicator blinks, release the button.
4. Finally the "READY" message is displayed and the READY indicator stops blinking and lights up.
5. The following parameters automatically reset.
  - Label parameters
  - Heat (Darkness)
  - Speed
  - Symbol set (language)
  - Others for specific emulation

**Notes :**

- 1. All settings stored in non-volatile E2PROM cannot be destroyed even by turning the printer off.**
- 2. The settings of DIP switch can not be reset.**
- 3. It is necessary to perform label sensitivity calibration after resetting.**
- 4. The printed label count can not be reset.**

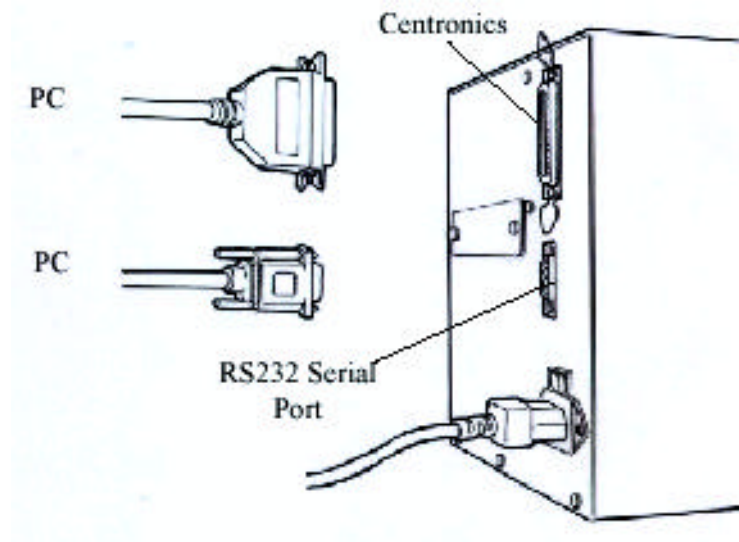
## Hooking up the Printer & Computer

### Connecting the Printer to Your Host

1. You can connect the printer with any standard Centronics cable to the parallel port of the host computer.
2. Alternatively you can connect the printer with a serial cable to the RS232C port of your computer or terminal. (for PC compatibles, the RS232C port is COM1, COM2 or COM3.)

**Note :**

**Using Centronics allows for a much higher communication speed than the use of a serial.**



## Communicate with the Printer

The bundled printer driver can be applied to all the applications under Windows 2000/ 98/95, Me, Windows NT and XP. Through this driver you may run any popular software applications e.g. MS- Word and print out the contents by this label printer as long as they are for Windows.

### Before installation

1. Check the contents of the driver to ensure it is complete.
2. Make a backup copy of this driver.
3. Read the README.TXT file for installation guide and change notices.



## Installing Driver

**Note:**

**Before installation, please make sure your “user’s right” is up to the level of ‘Administrator’.**

1. Click the “Start” button.
2. Select “Setting”, then select “Printers” and double click the “Add Printer” icon. Click “Next”.
3. Click the “Network” or “Local” button and click the “Next” button.
4. Click “Have Disk”, click the pull- down menu to select CD ROM driver path.
5. Click “Browse” button.
6. Select the proper directory for installation:
  - WIN95
  - WIN98 -WIN2000
  - NT4.0
  - .
  - .
  - .
7. The driver name “Label Dr. 200” (or Label Dr. 300) will appear in the “List of Printers”, click “Next”.
8. Select “Replace Existing Driver”.
9. Select the communication port for the label printer. For parallel port, select “LPT1:”, “LPT2:” or “LPT3:”, for serial port select “COM1:” or “COM2:”.
10. After the related files have been copied to your system, the installation is complete.
11. If you need to print from the label printer, set “Label Dr. 200” (or Label Dr.300) as the Default Printer.

## Set the Parameters

After installing the driver, you can follow the path below to set parameters:

Start → Settings → Printers → Label Dr. → Properties

The parameters include:

**Ports** Select the IO port to link with the printer. The port may be one of parallel (LPT), serial (COM), net work port or file.

**Paper size** Select the proper size on the menu.  
If there is no desired size, select "Custom" (only in Win98/95/Me) to define the paper size.

**Create a new size** Define paper size in Win 2000/NT4.0.

**Orientation** Set portrait or landscape according to the print direction.

**Paper source (Media type)** T/T stands for thermal transfer (ribbon) mode and D/T for direct thermal mode (without ribbon).

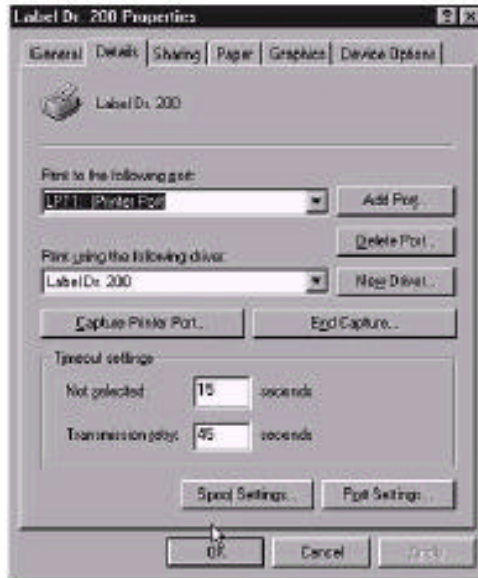
**Media choice (Darkness)** Set the heat value or darkness from this field. The darkness value ranges from 0 to 15.

**Copies** This function designates the number of printed copies of each page.

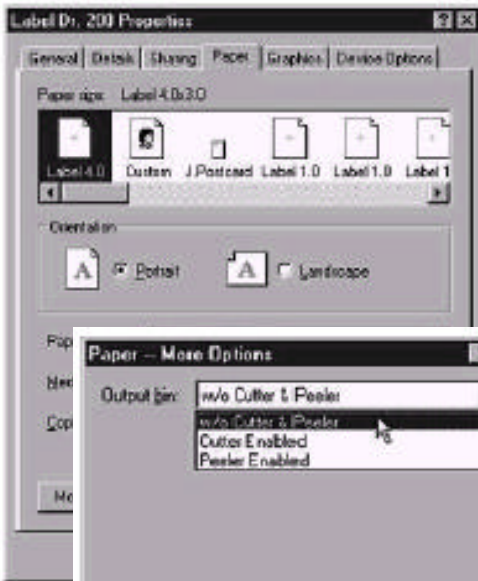
**Device options (Speed)** Set the printer speed; ranges from 1 to 4 IPS

For Win 98

- Ports
- Properties menu  
 → click "Details"  
 → select the IO port  
 → click "OK"



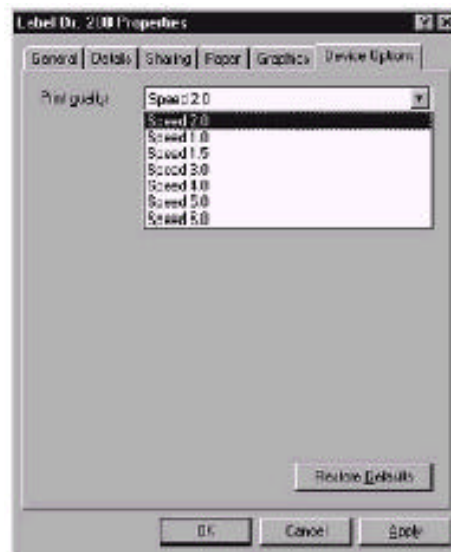
- Paper size
  - Orientation
  - Paper source (Media type)
  - Media choice (Darkness)
- Copies Properties menu  
 → click "Paper"  
 → click each item to  
 → select desired parameter  
 → click "OK".



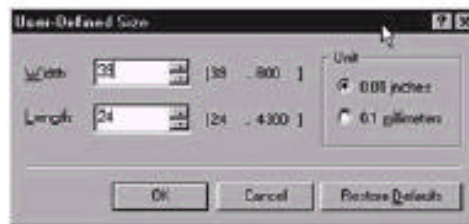
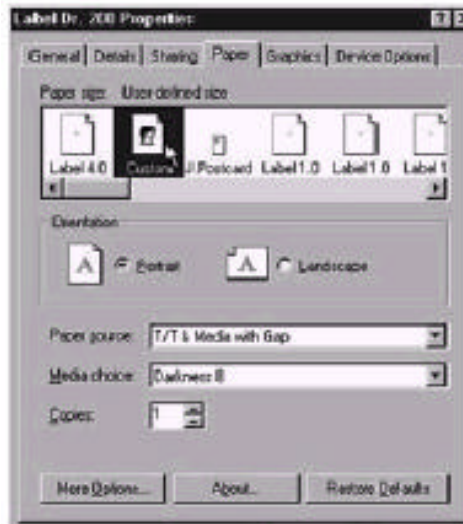
- Output bin (Accessory setting)

- Properties menu
- click "Paper"
- click "more option"
- select Enable/ without cutter, peeler
- click "OK"

- Print quality (Speed)
- Properties menu
- click "Device Options"
  - select parameters
  - click "OK"

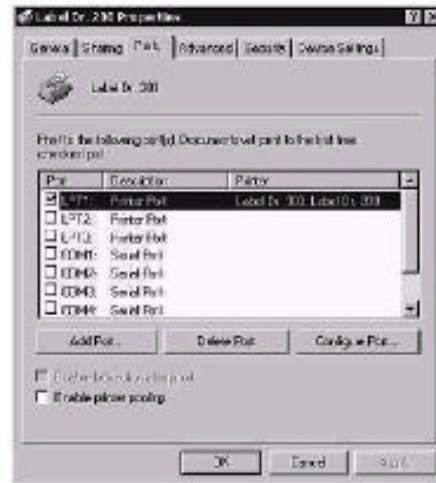


- Create User-Define Paper
- Properties menu  
→ click "Paper"  
→ select "Custom"  
→ User-Define size  
→ set up a new size  
→ click "OK"

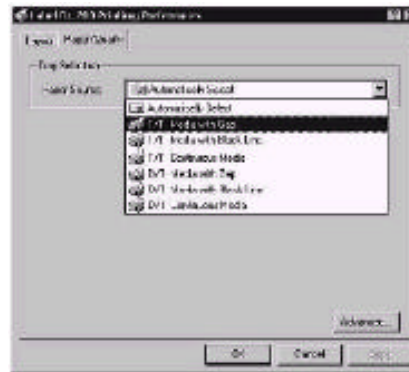


For Win 2000

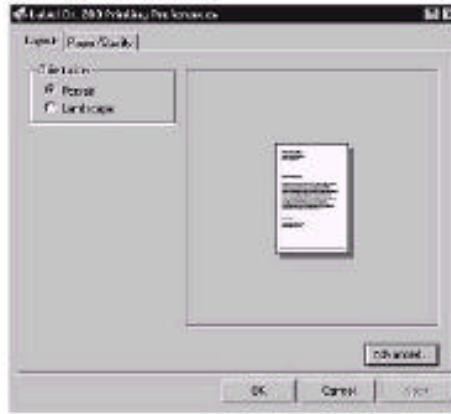
- Ports
- Properties menu  
 → click "Ports"  
 → select the IO port  
 → click "OK"



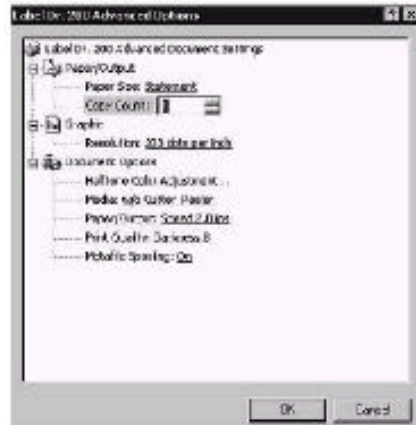
- Paper source (Media type)
- Back to Printers menu  
 → Label Dr.  
 → right click to get pop-up menu  
 → select "Printing Reference"  
 → click "Paper Quality"  
 → select media type  
 → click "OK"



- Orientation  
Printing Reference menu  
→ click "Layout"  
→ select "Portrait"  
or "Landscape"  
→ click "OK"



- Paper size
  - Copies
  - Media choice (Accessory setting)
  - Paper/ Output (Speed)
  - Print quality (Darkness)
- Printing Reference menu  
→ click "Layout"  
→ click "Advanced" button  
→ click each item to select the parameters  
→ click "OK"



- Create a new size Printer menu
  - right click to get pop-up menu in blank space
  - select "Server Properties"
  - enter a form name for the new form in "Form description for"
  - reset the paper size in the specific squares of the "Measurements"
  - click "OK"





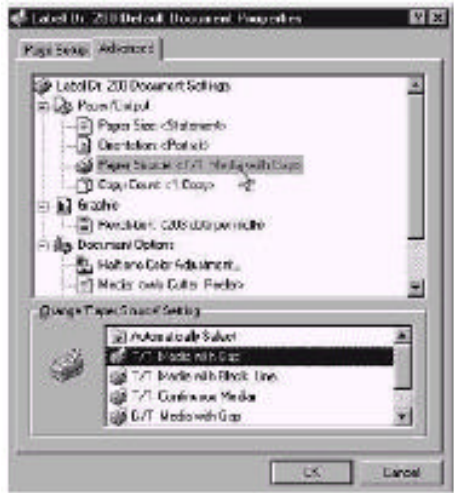
For NT 4.0 and XP

- Ports
- Properties menu  
 → click "Ports"  
 → select the IO port  
 → click "OK"



- Paper size
- Orientation
- Paper source (Media type)
- Copies
- Media choice (Accessory setting)

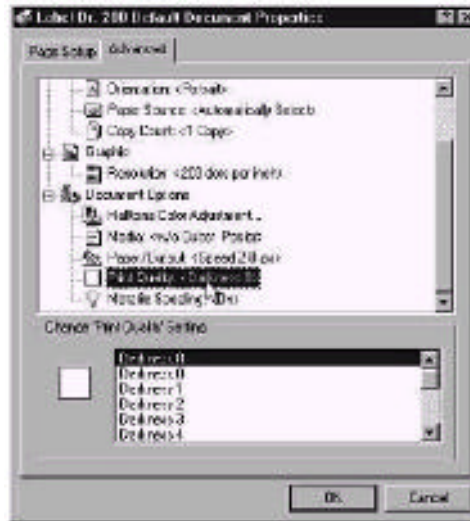
- Printers menu  
 → Label Dr.  
 → right click to get pop-up menu  
 → select "Document Defaults"  
 → click "Advanced" button  
 → click each item to select desired parameter



- Paper/Output (Speed)
- Print quality (Darkness)

Default Document menu  
→ click "Advanced"  
→ click each item to select desired parameter  
→ click "OK"

- Create a new size  
Please refer to the procedure of create a new size on Win 2000.



## Troubleshooting

Generally, when a malfunction or an abnormal condition occurs, the “READY” LED will keep blinking and printing and communication between the host and printer will stop.

To understand what the problem, please check the LEDs first:

### A. Problems on media

Blinking Indicators	READY and MEDIA
LCD display	MEDIA OUT

Possible Problems	Solutions	Remarks
Missing gap	<ul style="list-style-type: none"> <li>. Check the media path</li> <li>. Check the position of label sensor.</li> </ul>	If you use continuous media, check your application software and driver. You should select <b>continuous</b> .
Media out .	<ul style="list-style-type: none"> <li>. Supply the media roll</li> </ul>	
Media not installed .	<ul style="list-style-type: none"> <li>. Install the media roll</li> </ul>	
Media jam .	<ul style="list-style-type: none"> <li>. Recover the jam</li> </ul>	

If everything is OK try to make the label sensor calibration.

**B. Problems on ribbon**

Blinking Indicators	READY and MEDIA
LCD display	MEDIA OUT

Possible Problems	Solutions	Remarks
Ribbons has run out	Supply the ribbon roll	Does not apply to direct thermal. If you use direct thermal, set bit 1 of DIP switch to OFF.
Ribbon jam	Recover the jam	not for direct thermal.
Ribbon sensor error	Replace the ribbon sensor	not for direct thermal.

**C. Other Problems**

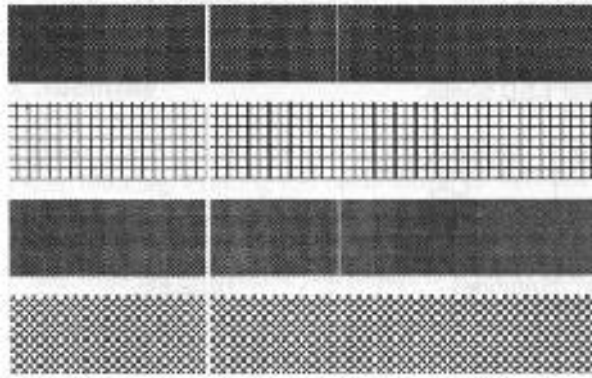
Blinking Indicators	READY
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LCD display	Possible Problems and Solutions	Remarks
SERIAL IO ERROR	. Inconsistent baud rate, format or protocol between host and printer . Check bits 6 ~ 8 of DIP switch Refer to section 2 for DIP switch.	Not for Centronics
MEMORY FULL .	. Check the graphics and soft fonts from host. . Make sure to delete the graphics and soft fonts if they are no longer used by the application software.	

**Note:** After the problems have been solved, press **CANCEL** to continue printing.

#### **D. Miscellaneous**

- The host shows “Printer Time out”.
  1. Is the communication cable (parallel or serial) connected securely to your parallel or serial port on the PC and to the connector on the printer ?
  2. Is the printer power turned on ? If the power cord is connected, the power switch is at position ‘1’ and the power LED is still not illuminated, call for service.
- The data has been sent, but there is no output from the printer. Check the active printer driver, it should be Label Dr. for your Windows system and the label printer. Check the emulation and the print (command) file.
- Vertical streaks in the printout usually indicate a dirty or faulty print head. Clean the print head first, if they still persist, replace the print head.



- Unstable ribbon roll rotation.  
Check the label path and make sure the head latch is securely closed.
- Poor printout quality.
  - . The ribbon may be not qualified.
  - . The media may be not qualified.

- . Adjust the Darkness (heat temperature).
- . Slow down the print speed.
- . Refer to the following paragraphs and clear the related modules.

### **Recovery**

In order to continue your print jobs after any abnormal conditions have been recovered, simply press the CANCEL button or restart the printer. Make sure that the LED indicator is illuminated and not blinking and remember to resend your files.

### **Addendum**

If you use small labels ( label height is less than 30 mm ) and the area near top is unprintable you can adjust the top margin slightly by the following procedure.

1. Hold FEED ( or PAUSE ) button and count the blink times for READY LED. Each blink stands for 1 pixel.
2. Release the button.
3. Restart the printer.
4. Send data to printer to print again.
5. Check the print position.

If you make calibration again the slight adjustment will be reset.

## Caring for your Printer

Before maintenance be sure to turn off the printer power.

### 1. Cleaning the print head( TPH)

Turn off the printer, open the cover, print head module and remove the ribbon. Rub the print head with a piece of cotton which has been moistened with alcohol. Check for any traces of black coloring or adhesive on the cotton after cleaning. Repeat if necessary until the cotton is clean after it is passed over the head.

**Note :**

***The print head should be cleaned at least every time the ribbon is replaced and more often depending on actual usage and conditions.***

### 2. Cleaning the roller

Using a cotton moistened with alcohol, clean the roll and rip off the attached glue.

**Note :**

***The roller should be cleaned whenever it has been in contact with foreign materials such as dust or adhesives.***

### 3. Cleaning the media compartment

Clean the media compartment with cotton which has been moistened with a mild detergent. Every time a media roll is printed this compartment should be cleaned to reduce the incidence dust.

## Reference Technical Information

### 1. General Specification

Specification	Model ITT4300
Print method	Direct thermal and thermal transfer
Resolution	203 DPI (8 dots/mm)
Printing width	0.1"~ 4.09" (25 ~104 mm)
Printing length	0.5"~ 45" (13 ~1143 mm)
Printing speed	2~ 4 ips (51~ 104 mm/ s)
Memory	512K bytes DRAM 512K bytes Flash ROM
CPU type	16 bit Microprocessor
Media sensor	Reflective
Display	LED indicators x3
Communication interface	Centronics parallel RS- 232 serial
Maximum label roll diameter	8 in.(203 mm) outside diameter 1.5 in.~ 3.0 in.(38 mm ~ 76 mm) inside diameter
Media type	Roll-feed, die-cut, continuous, fan-fold, tags, ticket in thermal paper or plain paper.
Label indexing	Black stripe and gap
Ribbon types	Wax, Wax/resin and Resin ; Coating inside
Ribbon size	OD 3 in. (76mm) ID 1 in. (25 mm)
Compact size	W9.8" x H10.2" x L16.0" (W250 x H260 x L410 mm)
Weight	24.6 lbs ( 11kg )
Power source	110/ 220 VAC +10%, 50/ 60 Hz
Agency listing	CE, UL, CUL, FCC class A FCC class B
Operating temperature	40°~100° F (4°~38° C) 10~90% non condensing
Storage temperature	-40°F ~140°F (-4°C ~60°C)
Windows driver	for Win 3.11, 95, 98, 2000 and NT
Printer emulation	PPLA or PPLB



## 2. Fonts, Bar Codes and Graphics Specification

The specifications of fonts, bar codes and graphics depend on the printer emulation. The emulation is a printer programming language, through which the host can communicate with your printer. There are two printer programming, they are PPLA and PPLB.

### **Printer Programming Language A, PPLA**

Specification	Model ITT4300
General fonts	7 alpha- numeric fonts, OCR A and OCR B
ASD smooth fonts	6, 8, 10, 12, 14 and 18 points
Symbol sets for smooth fonts	USASCII, UK, German, French, Italian, Spanish, Swedish, and Danish/ Norwegian
Courier fonts	8 symbol sets (PC, PC- A, PC- B, EAMA-94, Roman , Legal, Greek and Russian)
Soft fonts	Downloadable PCL fonts
Font expandability	1x1 to 24x24
Bar code types	Code 39, Code 93, Code 128/ subset A, B, C, Codabar, Interleave 2 of 5, UPC A/ E/2 and 5 add- on, EAN-8/13, UCC/ EAN-128, Postnet, Plessey, HBIC, Telepen and FIM. MaxiCode PDF417 and DataMatrix (2D symbologies).
Graphics	PCX, BMP, IMG and HEX formats
Stand- alone operation without host	ArgoKee

**Printer Programming Language B, PPLB**

Specification	Model ITT4300
General fonts	5 fonts with different point sizes
Symbol sets (Code pages)	8 bits: code page 437, 850, 852, 860, 863 and 865. 7 bits: USA, British, German, French, Danish, Italian, Spanish, Swedish and Swiss.
Soft fonts	Downloadable soft fonts
Font expandability	1x1 to 24x24
Bar code types	Code 39 (checksum), Code 93, Code128/ subset A, B, C, Codabar, Interleave 2 of 5(checksum), Matrix 25, UPC A/ E 2 and 5 add- on, EAN-8/13, Code 128UCC, UCC/ EAN, Postnet, German Postcode. MaxiCode and PDF417 (2D symbologies).
Graphics	PCX and binary raster
Stand- alone operation without host	Connected with ArgoKee

**Notes:**

**1.As the font board and flash modules use the same connector they cannot function simultaneously.**

**2.**

Model	ArgoKee connected to RS-232 Serial Port	PC keyboard connected to PS/2 port
<b>ITT4300</b>	<b>V</b>	

### 3. Interface Specifications

#### **Introduction**

This appendix presents the interface specifications of IO ports for the printer. These specifications include pin assignments, protocols and detailed information about how to properly interface your printer with your host or terminal.

#### **Serial**

- The RS232 connector on the printer side is a female, DB-9.

Pin	Direction	Definition
1	In	DSR
2	In	RxDData
3	Out	TxDData
5	-	Ground
6	Out	DTR
7	Out	RTS
8	In	CTS
9	Out	+5V

**Note :**

**Pin 9 is reserved for KDU (keyboard device unit) only, therefore do not connect this pin if you are using a general host like a PC.**

**Connection with host:**

Host 25S (PC or compatible)	Printer 9P	Host 9S (PC or compatible)	Printer 9P
DTR 20 .....	1 DSR	DTR 4 .....	1 DSR
DSR 6 .....	6 DTR	DSR 6 .....	6 DTR
TX 2 .....	2 RX	TX 3 .....	2 RX
RX 3 .....	3 TX	RX 2 .....	3 TX
CTS 5 .....	7 RTS	CTS 8 .....	7 RTS
RTS 4 .....	8 CTR	RTS 7 .....	8 CTS
GND 7 .....	5 GND	GND 5 .....	5 GND

Alternatively you can just connect the 3 wires in the following way.

Host 25S (PC or compatible)	Printer 9P	Host 9S (PC or compatible)	Printer 9P
TX 2 .....	2 RX	TX 3 .....	2 RX
RX 3 .....	3 TX	RX 2 .....	3 TX
GND 7 .....	5 GND	GND 5 .....	5 GND
pin 4	<input type="checkbox"/>	pin 4	<input type="checkbox"/>
pin 5	<input type="checkbox"/>	pin 6	<input type="checkbox"/>
pin 6	<input type="checkbox"/>	pin 7	<input type="checkbox"/>
pin 20	<input type="checkbox"/>	pin 8	<input type="checkbox"/>

The most simple way to connect to other hosts (not PC compatible) or terminals is:

Printer		Terminal/ Host
Pin 2-RxData	.....	TxData
Pin 3- TxData	.....	RxData
Pin 5-Ground	.....	Ground

In general as long as the data quantity is not too large or you use Xon/ Xoff as flow control, there will be no problem at all.

**Baud rate:** 2400, 4800, 9600, 19200 and 38400.  
(set from bits 6 ~8 of DIP switch for X-2000+/3000+)

**Data format:** always 8 data bits, 1 start bit and 1 stop bit.

**Parity:** always non parity

**Handshaking:** XON/ XOFF as well as CTS/ RTS (hardware flow control).

If you run an application with the bundled printer driver under Windows and use the serial port, you should check the above parameters and set the flow control to "Xon/ Xoff" or "hardware".

### ***Parallel (Centronics)***

The parallel port is a standard 36- pin Centronics. Its pin assignments are listed as following.

Pin	Direction	Definition	Pin	Direction	Definition
1	In	/STROBE	13	Out	SELECT
2	In	Data 1	14, 15		NC
3	In	Data 2	16	~	Ground
4	In	Data 3	17	~	Ground
5	In	Data 4	18		NC
6	In	Data 5	19~30	~	Ground
7	In	Data 6	31		NC
8	In	Data 7	32	Out	/Fault
9	In	Data 8	33~36	~	NC
10	Out	/ACK			
11	Out	BUSY			
12	Out	PE			

### ***Auto Polling***

Both the serial and parallel ports are active at the same time on this printer, i.e. data can be received on either one, however no provision is made for port contention. If data is transmitted to both ports simultaneously, it will cause the data in the received buffer to be corrupted.

#### 4. ASCII TABLE

	0	1	2	3	4	5	6	7
<b>0</b>	NUL			0	@	P	`	P
<b>1</b>	SOH	XON	!	1	A	Q	a	Q
<b>2</b>	STX		"	2	B	R	b	R
<b>3</b>		XOFF	#	3	C	S	c	S
<b>4</b>			\$	4	D	T	d	T
<b>5</b>		NAK	%	5	E	U	e	U
<b>6</b>	ACK		&	6	F	V	f	V
<b>7</b>	BEL		'	7	G	W	g	W
<b>8</b>	BS		(	8	H	X	h	X
<b>9</b>			)	9	I	Y	i	Y
<b>A</b>	LF		*	:	J	Z	j	Z
<b>B</b>		ESC	+	;	K	[	k	{
<b>C</b>	FF		,	<	L	\	l	
<b>D</b>	CR		-	=	M	]	m	}
<b>E</b>	SO	RS	.	>	N	^	n	~
<b>F</b>	SI	US	/	?	O	_	o	DEL